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The development of an 'actionable' E-Work life scale with reference to self reported well-being and job effectiveness

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Abstract

Work-life balance has been widely researched and many validated scales measuring the interaction between work and non-working lives currently exist. However, existing work-life balance scales are not related to applied actions or interventions and have not been linked to the emerging impact of e-working. E-working is now on the increase with forecasts for growth into the trillions worldwide by 2012. Whilst e-working has been linked to productivity gains, the impact of e-working on employees well-being and work-life balance has not been measured in depth. The purpose of this research was to develop a unique E-Work-life balance scale, with suggested 'actionable', applied interventions for individuals, supervisors and organisations, which would improve their e-working capability. The research also gathered self reports of job effectiveness within the new scale and of well-being using an existing well-being scale (SF36 v2).

Over 250 e-workers took part in the research, across five studies, both qualitative and quantitative data was collected. The research found that remote technology provided the ability to manage work-life balance for many participants. Whilst the scales found a high degree of positivity for e-working, negative aspects also emerged, including over-working. Well-being was reported as good amongst the e-workers, however, there were signs of tiredness and burn out amongst some of the sample. Gender differences were explored but not found to be significant in these studies. Other demographic variables such as number of dependants were also not found to be significant. However, role autonomy and role type were found to be important when considering e-working job effectiveness.

The classical method was used to develop the E-Work life scale which involved interviews, sorting methods, item reduction, checks for reliability, validity and factor analysis. The study was completed in three phases. Phase one reviewed

research on existing work-life balance measures and conducted eleven interviews with exemplar e-workers across five different organisations, and three sectors. Findings showed differences in the types of e-workers, their access to technology, ability to work flexibly and individual competencies. Ten themes emerged from thematic analysis including, trust, management style, individual attributes and autonomy over workload.

Phase two conducted an on-line survey testing the E-Work life scales, alongside an existing well-being scale. Over 250 e-working participants across 11 organisations and three sectors took part. Principal Component Analysis was completed to explore the dimensionality. Factor analysis supported items clustering into seven factors after item reduction, not all items in the sub-scales related to the postulated dimensions and further work would be required to demonstrate these links. Reliability of the E-Work life scale using Cronbach's alpha was found to be 0.8 after item reduction. Items were checked for face, content and criterion validity. A final uni-dimensional scale was produced containing 28 items.

Phase three provided a set of suggested interventions that related directly to the scale, these were developed and tested through qualitative interviews with ten expert e-workers. Findings from framework analysis of the interviews indicated that to curb the negative affects of e-working, an organisational culture based on rewarding outputs as opposed to presenteeism would be beneficial. Autonomy to manage workload and management style were found to be important indicators.

The E-Work life scale presents a unique contribution to research and practice by drawing together the impact of the two related topics of e-working and work-life balance. The scale is relevant to both employees and employers to improve their e-working capabilities. The scale included measures of job effectiveness and well-being further adding a new contribution to research in work-life balance. The

scale forms part of a developing consultancy tool which will be commercially viable. Further testing of the scale and postulated dimensions is required on diverse e-working samples to complete Confirmatory Factor Analysis and to develop norms. Further studies could focus on developing competencies for e-workers continuing to develop the e-worker classification which emerged from this research. Other future studies could build on findings investigating in more depth the mental health of e-workers.

Keywords: Work-life balance, e-working, remote working, teleworking, managing boundaries, role conflict, behaviours and skills, well-being, interventions, psychometric test development, job effectiveness, productivity.

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effectiveness**

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Chapter One: Overview

1.0 Background to the Research

Work-life balance has been the subject of research and policy over the last two decades. Government reports, such as the Department of Trade and Industries second Work-Life Balance Study (Stevens, Brown and Lee 2004), the Turner report on A New Pension Settlement for the 21st Century (Turner 2005) and the recent government consultation on flexible parental leave (Department for Business, Innovation and Skills 2011) provide continued impetus for ensuring that future work-life research keeps pace. Furthermore, legislation in 2011 will provide employees with the right to continue working after the retirement age. For many workers continuing to carry on working after retirement may not be a choice. These reports indicate that long hours, and in general a longer working life is expected in the future, options to work more flexibly are increasingly important for employees. Consequently, organisations are beginning to take work-life balance issues seriously and now consider the well-being of staff as part of their recruitment and work organisation policies. The emergence of technology that enables remote working (e-working) also has important implications for work-life balance, such as the flexibility to access work 24 hours a day. These technological advances have provided the ability to work from home and other remote locations. Many organisations have introduced e-working initiatives to retain employees and also to reduce costs.

As a reaction to the e-working trend organisations have needed to examine more closely working practices and related policy. Providing employees with the ability to work remotely has allowed organisations to expect employees to increasingly work in a global 24 hour culture, and with greater personal mobility. Whilst this flexibility may provide opportunities for both the employer and the employee, the impact of working in these non-traditional patterns has not been fully considered

in the research. Future predictions for numbers of e-workers stretch into the billions (Twentyman 2010). It is, therefore, salient timing for research to inform organisations of how e-working practices, in conjunction with work-life balance policies, might affect job effectiveness and well-being. The next section provides a short overview of the related literature.

1.1 Overview of the literature

Work-life balance was first defined during the 1980's, through research examining how differing roles, within different aspects of individuals' lives might create conflict and pressure. An early definition was the 'simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult compliance with the other' (Kahn, Wolfe, Quinn and Snoek 1964: 19). Greenhaus and Beutell (1985) used this definition and other research, providing a seminal paper that modelled three key antecedents to work-family role pressure (*time* devoted to differing roles, *strain* from participation in one role and not being able to complete the other role, and specific *behaviours* making it difficult to complete the competing roles). The two main roles considered were an individual's work role and their family role, e.g., mother, father, spouse. The antecedents were used to postulate the amount of conflict experienced (e.g., family pressures) by individual's juggling a number of roles. Previously, Kopelman, Greenhaus and Connolly (1983) had devised a set of scales to measure work-family conflict in relation to job and life satisfaction which served as a basis for Greenhaus and Beutell's model. These were the first set of scales in the area of work-life balance.

Since then many other scales have been developed in this area, including the development of bi-directional scales, work to family and family to work interference (Gutek, Searle and Klepa 1991). Work-life balance continues to be re-defined and is now more closely considered as the 'integration' of conflicting

roles (Burke 2005: 10), or as 'harmonisation' between the differing worlds of work and non-working lives (Guest 2001). These new definitions now need integrating into the development of new scales. Furthermore, many of the existing scales do not relate the measures to applied actions or recommendations that could help individuals improve their work-life balance (e.g., Thomas and Ganster 1995; Carlson, Kacmar and Williams 2000, Carlson, Grzywacz and Zivnuska 2009). Whilst work-life issues have been considered and measured in some depth, the impact of technology advances, which provide the ability to work remotely are less well researched. The majority of scales have also been developed in the United States of America leading to a lack of scales specifically aimed at Europeans. Research into the effects of e-working on work-life balance is now considered along with a definition of the term 'e-working'.

Defining the term 'e-working' was not readily available from the literature and there was no clear agreement by researchers to the term 'teleworking' (Madsen 2011: 149). The current research confirmed that the only clear definition found for e-working was 'working independently i.e., off site, using technology to communicate with other's remotely' (Nilles 2007:1). This definition was readily accepted by e-workers interviewed as part of the current study. Further comments were made by interviewees in the current study on definitions and these are discussed. Research on the effects of e-working has tended to focus on productivity gains, job control and supervision (e.g., Clear and Dickson 2005, Baker, Avery and Crawford 2006). However, some research has now started to focus on the impact of the boundaries between work and home (e.g., Kossek, Lautsch and Eaton 2006). Both benefits and drawbacks to e-working are starting to emerge, for example, how to manage employees effectively (Morgan 2004). Furthermore, a large scale study by Maruyama, Hopkinson and James (2009: 84) found that role autonomy and time management are important mediating variables to manage work-life issues when e-working. These studies show an increased interest in understanding the relationships between work-life balance

and e-working. Research is also now emerging that relates to e-workers well-being.

Health and well-being are being considered by researchers both in work-life balance and e-working. An example where e-working can affect well-being is when it crosses boundaries into the home. Hartig, Kylin and Johansson (2007) have investigated how the restorative properties of home may change when e-working. Restoration is considered as an antidote to stress in that it provides relief from work demands. However, when work takes place in the home environment then restoration may be limited. Hartig et al. (2007) compared home workers to non-home workers and found that, particularly for females juggling dual workloads of work and home, the restoration properties of home were less effective. Research has supported this finding; women experiencing a high level of work demands need to be able to find recovery time at home to mediate the effects of stress and fatigue (Mostert 2009: 5). If home demands are equally high then women may not find restoration from the home environment. This could mean there is a spill-over of effort as the domains overlap and compete for resources, leading to a lack of recovery time from work and stress related illnesses. Mostert concludes that 'women's health appears to be dependent on their capabilities to fine-tune their professional and private responsibilities' (2009: 5).

Other studies have focussed on the psychological and well-being aspects of e-working. For example, Mann and Holdsworth (2000) found that e-workers had higher levels of stress than office-based workers due to loneliness, irritability, worry and guilt. Whilst these studies show some negative aspects of e-working on health, e-working can have significant advantages for those wishing to work flexibly, for example, parents or those with caring responsibilities (Morgan 2004). Furthermore, research indicates role autonomy and status within the organisation may also be important mediating factors in how e-working impacts with work-life

balance (Kowalski and Swanson 2005). According to this research e-working has both positive and negative impacts and these need to be considered when studying the relationship to work-life balance. Both the physical and mental aspects of well-being will be measured in the current study using an existing well-being scale (SF-36 v2). The relationship between job effectiveness and e-working is now discussed.

Productivity is covered by research into e-working as it provides the justification for many organisations to adopt e-working practices (e.g., Baker, Avery and Crawford 2006). Productivity for individuals relates to their 'job performance' and can be defined as 'all of the behaviours we engage in while at work' (Jex 1998: 25). This definition is further related to the achievement of organisational goals, one of which may be to reduce or contain costs. The term 'job performance' should be distinguished between associated terms such as, effectiveness, productivity (cost), and utility (value). For the purposes of this research, 'job effectiveness' was considered the most relevant as it could be related to individuals self perceptions of performance. Further, Jex (1998: 37) indicates that job performance measures are really measuring effectiveness and not productivity as they usually do not have a costed element. Job effectiveness measures would be incorporated into the new scale to measure this aspect for this research.

The next section sets out the rationale for the current research.

1.2 Rationale of the research

The impact that increased e-working is now having on working and non-working lives and the consideration of work-life balance in the context of e-working leaves this area under researched. The rationale for this research is to investigate how work-life balance may be impacted by e-working, both the psychological and

practical actions that can be taken to improve e-working capabilities. Additionally, self reports of job effectiveness and well-being will be considered as part of the study. There are many measures of work-life balance and some research into the impact of e-working, however, scales drawing these two topics together pose a gap in applied research. This provides a unique opportunity to develop a set of 'actionable' measures that will be relevant to work-life balance and e-working. As already indicated previous scales have not provided specific actions to be taken as a result of the measurements. To improve both work-life balance and e-working then interventions would need to be applied. The scale would be aimed at three levels to ensure potential interventions could be suggested for individual e-workers, supervisors and organisations. The present research will provide a unique contribution to both e-working and work-life balance, adding to current research. The next section specifies the four unique attributes of this research.

1.3 Original contribution to research

The main focus of the research was to develop an E-Work-life scale that can be specifically used in the context of e-working. The original contribution of the work included devising and testing the scale, and providing 'actionable' measures, thus leading to suggested positive interventions for individuals, supervisors and organisations. The scales are versatile enough to use across all types of organisations, focussing on the practical aspects and working practices involved in remote e-working. Many work-life balance scales currently exist (e.g., Kopelman, Greenhaus and Connolly 1983; Gutek, Searle and Klepa 1991). However, the scale that was developed through this research is innovative and comprises of four unique attributes, thus contributing to research in this field:

- Actionability; the capability to provide a set of suggested practically applied interventions that could be actioned by individuals, supervisors and organisations following completion of the scale;
- Consideration of remote e-working practices and policies; the scale would be developed within an e-working context;
- European focus, to internationalise the North American work that has dominated work-life balance scales in this field to date;
- To examine self reports of well-being, using an existing scale (SF-36 v2) and to devise measures of job effectiveness as part of the new scale.

The research confirmed definitions in both 'e-working' and work-life balance with expert e-workers. It also considered what could be gained from existing work-life balance scales and current research into both topics. The following section sets out the research objectives.

1.4 Research objectives

To ensure the original contribution is met for the current research, the aims were supported by three key objectives:

- Devise an E-Work life balance scale that is 'actionable', that is actions derived from the scale will provide suggested interventions that could help individuals, supervisors and organisations.
- Test the validity and reliability of the scale by conducting a survey on a sample from a diverse population of remote e-workers, ensuring that any suggested interventions identified were fully explored with exemplar remote e-workers.

- Explore self reported associations identified through the literature between e-working, work life balance, well-being and job effectiveness.

To operationalise the research, the work was conducted in phases linked to the objectives, these are outlined in the next section.

1.5 Phases of the research

Three phases were identified to meet the research objectives:

1.5.1 Phase One: The development of the E-Work life scale

A series of interviews were completed with exemplar e-workers with the main purpose of collecting information to commence the scale development process. Furthermore, the interviews sought to clarify the terms 'e-working' and 'work-life balance' for the scale development process. The terms have common usage and everyday understanding but actual research based definitions would be defined.

The classical model to develop scale items was used to produce the draft scale. This approach provided a clear framework and structure to develop a scale (DeVellis 2003: 14). Existing measures of work-life balance were adapted alongside new items for the scale. A Q-Sort method was utilised to assist in the reduction of items.

1.5.2 Phase Two: Formulating and testing the E-Work life scale

An on line survey method was used to test the draft scale and to collect further information on e-working, work-life balance, key demographic variables and contextual information, e.g., e-working practices. Further information was

collected to seek additional data on job effectiveness to support an analysis of e-working practices. An existing well-being survey (SF-36 v2) was conducted as part of the on-line E-Work life survey. Analysis of the scale provided an exploration of the possible postulated dimensionality of the scale. Item reduction methods were utilised and the scales checked for reliability and validity. A draft scale was produced from the survey analysis.

1.5.3 Phase Three: The development of related suggested interventions

A set of suggested interventions were explored and confirmed through a series of interviews with exemplar e-workers. A final set of suggested interventions were produced to assist, individuals, supervisors and organisations in managing E-Work life issues.

These phases were completed alongside the specific methodology of scale development. This scale development process is described fully in chapter five under the general methodology.

1.6 Summary

The current research provided the basis for exploring the two related topics of work-life balance and e-working. The applied nature of the research gave insights into the relationship between two disparate fields of knowledge. Further, it examined the relationships at three key levels by individual, supervisory and organisational. The contribution is unique in providing evidence for a set of suggested interventions that can be taken forward by organisations. This will allow them to proactively improve aspects of e-working practices and the related work-life balance with employees.

1.6.1 Outline of thesis chapters

The thesis is presented in eleven chapters, the current chapter (one) provides an overview to the research. The other thesis chapters are now summarised.

Chapter two introduces work-life balance in the context of UK government policy and legislation. It provides an analysis of the socio-demographics as well as changes in employment and working practices. Implications for the impact of technology on work-life balance and well-being are discussed.

Chapter three provides a literature review of the theoretical and conceptual nature of work-life balance. As part of the literature review there is an examination of the definitions of work-life balance and how these interpretations have been used in business and academic related research. Existing scales of work-life balance are also reviewed in this chapter.

Chapter four defines the concept of e-working and reviews related research on job effectiveness and productivity. Measures of e-working are reviewed as well as issues related to well-being and e-working.

Chapter five provides the rationale for developing the E-Work life scale. It covers the scale development process detailing how the methodology has been interpreted and implemented for the current research.

Chapter six introduces and completes phase one, stage one of the research. This involved interviewing exemplar e-workers in preparation for developing and generating items for the E-work life scale. Thematic analysis was used to provide the emerging themes. The interviews also confirmed definitions of e-working and work-life balance for the following phases of the research.

Chapter seven completes phase one of the research. Items are generated for the E-Work life scale and validated using the Q-Sort methodology on a sample of exemplar e-workers.

Chapter eight commences phase two of the research by testing the newly devised E-work life scale using an on line survey method on a diverse sample of e-workers. An existing well-being survey is utilised alongside the E-Work life survey. This chapter provides an analysis of the personal and organisational characteristics of the sample to understand relationships between respondents views of e-working. It also provides the results of the well-being survey.

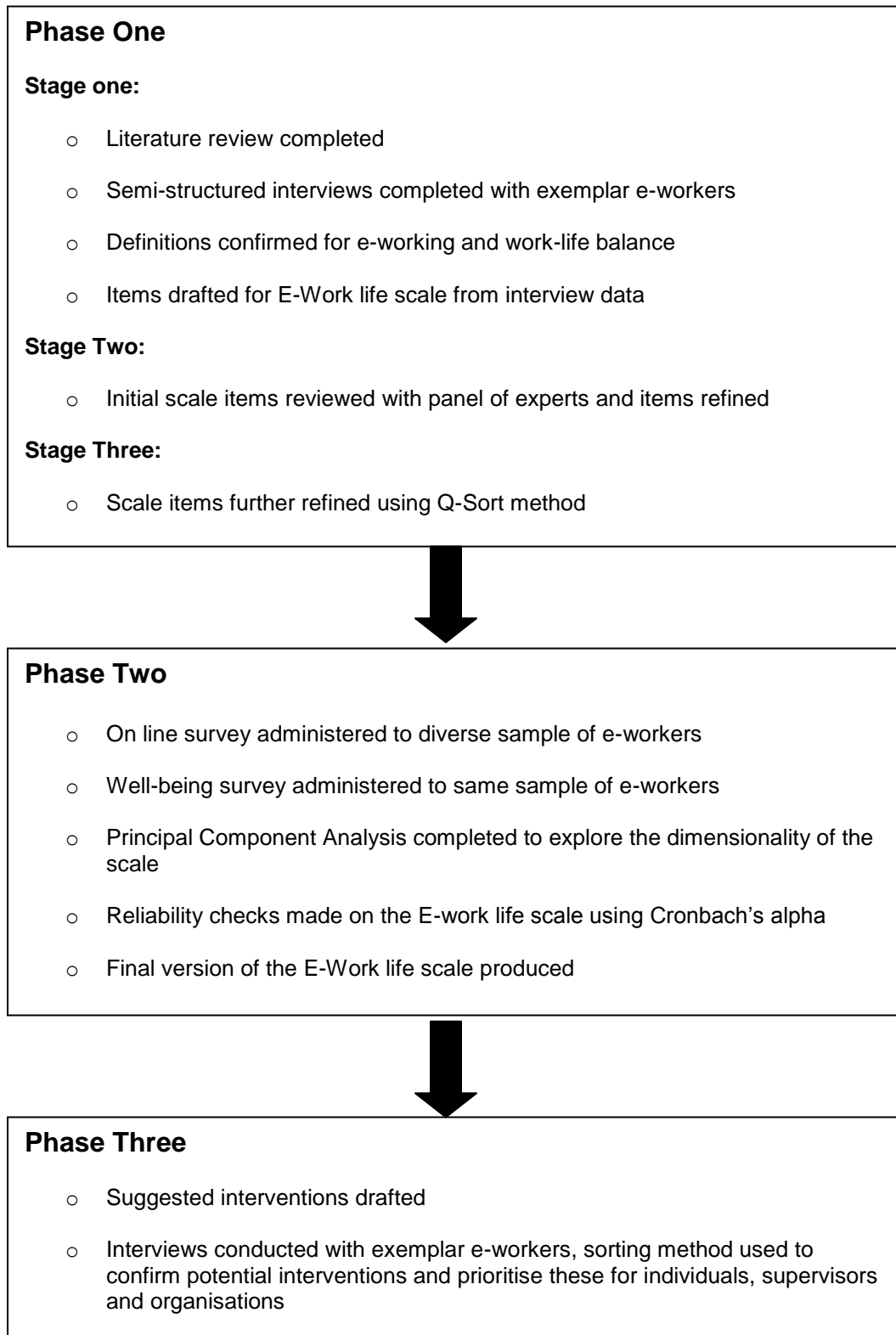
Chapter nine completes phase two of the research continuing the scale development of the E-Work life items by reducing the number of items and completing reliability and validity checks. Factor analysis is completed and the dimensionality of the scales explored. The E-Work life scale is finalised.

Chapter ten provides detailed of suggested supporting interventions for the E-work life scales and completes phase three of the study. These suggested interventions were developed using previous findings and tested on a sample of expert e-workers.

Chapter eleven discusses and provides conclusions based on the research into the development of the E-Work life scale. It reviews both the strengths and limitations of the research and future directions. This includes commercial use of the measures and further development of the scale.

The flow chart on the next page indicates how the studies progress, leading to the final development of the E-Work life scale.

1.6.2 Flow Chart to show phasing of the research



Chapter Two: Work-Life Balance Policy

2.0 Overview

This chapter introduces work-life balance in the context of UK policy and legislation, most of which has been developed since the late 1990s when the Labour government came into power. The 'New Labour' movement put work and family lives back onto the political agenda and legislation in this area has been growing since that time. Work-life balance as a topic has emerged over the last few decades of the twentieth century in response to women re-engaging with the employment market and the changing roles of parents. Changes in the economy over the last two years have affected organisations significantly, how this will affect work-life balance initiatives is not yet known. This chapter supports the current research by providing the legislative background and business impetus for implementing work-life balance policy.

2.1 Introduction

Re-arranging working practices to account for employees' needs is not a new development but has, perhaps become more prevalent due to differing social demographics and changes to the workplace. For example, an aging population, longer working hours, increased numbers of women in the workplace and changes in the type of work and industry available to workers in the 21st Century (Beauregard and Henry 2009: 9). In fact, a very early example of a work-life programme took place in the 1930s, when W. K. Kellogg Company rearranged its shift patterns to improve employee morale and efficiency (Lockwood 2003: 2). Employment in manufacturing, which dominated the earlier decades of the 20th century, has declined. In more recent decades manufacturing has been overtaken by the service industry, which accounts for approximately 75% of employment (Irwin 2000: 2). The more recent business imperative for employers focuses on improving and retaining employees and increasing employee

engagement. Providing greater flexibility for employees is seen by organisations through a 'business case lens' ensuring that the cost and benefits are considered (Beauregard and Henry 2009: 10). These changes to working practices have presented greater opportunities for women returning to the employment market.

For employees work-life balance has been gradually increasing in momentum as they become less satisfied with the imbalance encountered in their daily lives. Lifestyle and well-being for employees are gaining greater emphasis and this requires employers to become increasingly flexible in their approach to recruiting and retaining talented people (Deery 2009). The changing demographic profile and structure of society means that more people have caring responsibilities, not just for children but in an aging population, for elderly relatives too. Dual and single parent families may find they have to co-ordinate their working lives with their family needs and the management of these factors can help to reduce stress, sickness and absenteeism from work (¹Department of Trade and Industry (DTi) 2000: 6 and Deery 2009). Kodz, Harper and Dench (2002) found that demographic changes, a more diverse workforce, business imperatives and government policy have assisted in driving work-life balance up the political agenda, and redefining the way in which people work and want to work in the future. This research also found that employees experienced several obstacles and difficulties when trying to adopt work-life practices, including the impact on career progression, incompatible cultures and lack of infrastructure to support new technologies at work. Alongside these issues the UK has experienced a culture of long working hours. The following section examines the impact of these in the context of work-life balance.

¹ The Department of Trade and Industry (DTi) is now the UK Department for Business Enterprise Regulatory Reform (BERR)

2.2 Long hours

Long hours are still the norm for many and despite several attempts by the Government, the UK still has the longest working hours in Europe (Cooper 1999: 569, Cooper 2011 and Department of Trade and Industry 2004: 6). The Institute of Employment Studies (2003) found that those working longest hours were males aged between 30-49 years with children and employed in the private sector. This study also found that managers and professionals were the most likely to work long hours. In a recent audit of working hours, in the recession, it was found that generally there had been a reduction in working hours. However, even with this reduction there are still one in five people working 45 or more hours per week (Philpott 2010: 3). A CIPD study also found an increase in the number of people working shorter hours 16-30 hours per week, concluding that the UK now has a 'mixed hours' culture (Philpott 2010: 3).

When work is intensified through long hours, it can impact directly upon an individual's ability to manage work alongside life outside of work. This may also influence an individual's job and life satisfaction and well-being, as discussed later in this chapter. For many organisations flexible working policies are their only involvement with work-life issues. Work-life balance policies are increasingly found in the larger organisations, but for many smaller organisations the benefits may be more difficult to realise. More recently organisations have been using work-life balance initiatives and benefits to enhance their ability to recruit by providing flexibility for employees in terms of working hours, location i.e., ability to work from home and other locations (Cooper and Lewis 2005: 57). These features are all seen as essential elements of retention and recruitment policies.

Despite the effects of the recent recession the pressure to work long hours by British employees compared to those in Europe is still pronounced (Cooper 2011). Many employees in the past have indicated that they would 'rather work

shorter hours than win the lottery' (DTi 2002); thus it is not surprising to find that both employees and employers are changing their views on how work should be structured to meet their needs, especially during a recessionary period. Work-life balance is unlikely to disappear off the agenda of organisations given the importance given to it by individuals. The following section reviews the social and demographic changes associated with work-life balance policy.

2.3 Social and demographic changes

Social changes over the last few decades have resulted in more women returning to work and contributing to the family's finances. Research indicates that 'women and men in the workforce are now nearly equal, at 49% and 51% respectively' (Bond, Thomson, Galinsky and Prottas 2003, cited in Poelmans and Sahibzada 2004: 410). Further research also shows that women are now leaving child birth until later in life, perhaps delaying having a family due to economic and social changes including pursuing a career. The Office for National Statistics (2009) reported that 'the average (mean) age for giving birth in the UK continued to rise, from 29.3 in 2008 to 29.4 in 2009 and that mothers giving birth in 2009 were one year older on average than in 1999, when the mean age was 28.4.' Whilst this move towards increased employment may be positive for some women, it should be noted that those who have not worked, perhaps in order to raise a family, or have worked part-time in the past, have not been fully considered by pension arrangements. In some cases this has led to a significant shortfall in pensions and poverty for women in later life (Price 2005: 1). Whilst women continue to play multiple roles, issues related to work-life balance now impacts upon both genders.

Today concern for work-life balance affects both men and women. While traditionally women usually played a more primary role in child-care, the focus for previous research on the topic had centred on women's dual roles of work and

home (e.g., Greenhaus and Beutell 1985). This balance is changing as fathers' rights (e.g., to take more time off work to be with children) come to the fore. The role of fathers is still emerging and how men and women interpret time with the family can be different. For example, fathers tend to consider child care as direct contact with the children, whilst mothers consider this also includes domestic duties, such as doing the laundry (Burnett, Gatrell, Cooper and Sparrow 2010 cited in Kaiser, Ringsletter, Pina e Cunha and Eikhof 2010). Despite these changes it appears that women are still carrying out the majority of caring responsibilities including non-paid work such as housework and non-paid domestic labour (Emslie and Hunt 2009). Historically, the British Household Panel Survey (1995) found that when both parents were in full-time work the female still completed an extra nine hours a week of housework, not including time spent on child-care (Gershuny 1997). Later, Sullivan (2000) indicated that there was some leveling out in the distinction between gender division in domestic duties and an overall reduction in gender inequality in some of the more female associated tasks. In the same study Sullivan (2000: 452) indicated that whilst women still perform the majority of domestic work there was an increase in recent decades in males contributing to household work, this was particularly strong when related to families with dependant children. More recent research shows evidence of a convergence but not necessarily equity with women still providing a high degree of emotional support for the family (Kaiser et al. 2010).

As the demographic profile of society changes, this impacts on individuals via various social, political and economic forces. The changing nature and structure of families is a driver of family led policies (Bourhis and Mekkaoui 2010). For example, there are an increasing number of women returning to work after child-birth, with many families becoming dual earners, plus an increasing number of single-parent families (Bourhis and Mekkaoui 2010 and Emslie and Hunt 2009). Flexible working arrangements are seen as key to providing the means for parents to work effectively around family needs and remain in the employment

market. To manage their families and gain employment many women work part-time hours, however, this has been identified as a factor in low pay and lack of career development (Price 2005: 4). In the current decade both men and women have the right to ask for flexible working arrangements. This in turn is affecting the structure of work and how employees become engaged with their employers.

Legislation is catching up with these changes and in 2006 the government focused on improving the opportunity for single parents to return to the employment market by increasing access to child-care. Most research conducted on work-life balance focuses on the traditional 'nuclear' family (i.e., two parents living together with two or more children), as discussed further in chapter three. Single parents have generally been left out of the work-life balance initiatives. However, what previously may have been considered as the norm for a family is constantly changing. This arrangement of two parents and a certain number of children reflect what could be considered an idealised view of the family and are no longer entirely appropriate to the way that families are configured today (Emslie and Hunt 2009). The *post-modern* family is perhaps more reflective of the newer family forms including single parent families, parents with children in more than one family unit and child-free couples. This highlights the need to consider all demographic groups when conducting research in this area. There is now greater government focus and initiatives on enabling single parents (mothers in particular) to return to work. The role of carers has also become a focus of UK government policy. In April 2007, further work and family legislation was extended by the House of Commons to ensure that carers have the same rights to request flexible working as those caring for young children (HC 2006: 65). A recent government consultant on flexible working for parental leave seeks to address 'outdated notions of parenting and family responsibilities' (Department for Business Innovation and Skills 2011). The government through this consultation implies that flexible working should be considered for all.

The increase in the proportion of older people in the population, along with the depletion of pension provision, as highlighted in the Turner report (2005) has also influenced UK government policy. Important legislation in this area has now been passed. The employment age equality regulation (HC 2006: 1031) ensures that people are not discriminated against on the grounds of age. Employees will have the right to continue working until they are 65 years old so that compulsory retirement below this age is now unlawful. A further development means that with the agreement of the employer, workers now have the right to request working beyond the previous default retirement age of 65 (Direct Gov 2011). These changes mean that work-life balance will remain on the agenda for individuals who continue working much longer into their lifetimes than previously.

However, work-life balance has mainly been seen as mainly an issue for those in middle-age with children or other caring responsibilities, what are known as 'Baby Boomers' and 'Generation X', i.e., individuals born in the early 1960s to mid 1970s (Bibb 2008: 11). These demographic groups demand more from work and society than their predecessors (Shankar and Bhatnagar 2010: 75). In fact, Generation Y (Millennials), born later than Generation X are demanding even more from life than their predecessors. In particular, this generation is becoming increasingly aware that overall 'lifestyle' can be a bargaining tool for employment. They are more concerned with gaining a better quality of life than working in a standardised employment routine of fixed hours (Bibb 2008: 11). Companies such as Microsoft, IBM, BT and many more realise that to retain and attract talented employees, financial benefit by itself is not enough. Extra pecuniary incentives are required, including consideration of employees preferred life-styles and work-life balance (Deery 2009). Many companies have introduced work-life related policies which include career breaks and flexible working for all employees who can choose to use this for external activities and variable working weeks. These policies are seen to improve recruitment and retention of employees and are discussed in the following section.

2.4 Recruitment and retention

Demographic changes and expectations are helping to change employers' attitudes to work-life balance. Although, in the mid 2000s employment was relatively high, the work market offered less job security than in previous decades and employees were increasingly mobile, globalisation meant that work was not always local (Roberts 2007). As job security reduces, and mobility increases for employees, conversely, employers have turned to "softer" issues to retain and attract staff (Beauregard and Henry 2009). In particular, work-life balance policies may have been implemented to promote recruitment and retention of key staff. For example, 'Xerox UK (Ltd) reported a saving of over £1 million in the last five years through enhanced retention due to better work-life policies, including flexible work schedules and leave policies' (DTI 2003 cited in Poelmans and Sahibzada 2004: 412). Furthermore, Lloyds TSB reported savings of up to '£2 million a year between 1995 and 2000 by introducing policies which allow women to return to work after having a baby' (Financial Management 2001)

Whilst financial rewards are still important to employees, issues of flexible working hours and reduced hours may influence recruitment (Deery 2008). For example, in 2003 the Sunday Times survey of *100 Best Companies to work for* included a rating for ability to provide work-life balance (McCall 2003). This measure still existed in 2010 and is used to rate companies 'against how employees feel against stress, pressure and balance between their work and home duties' (Sunday Times 2010). According to the Price Waterhouse Coopers' international student survey of over 2500 students, 57% of respondents considered achieving a balanced lifestyle and having a rewarding life outside of work as their top priority in their future career (Price Waterhouse Coopers International Student Survey 1999 cited in DTi Business Case 2000: 12). More recent research conducted by the Association of Graduate Recruiters in 2009 confirms that young professionals consider work-life balance issues including

working long hours to be an issue despite their personal circumstances. Whilst they are keen to carve out a career, they do not want to be overlooked when it comes to flexible working and other work-life initiatives (Changeboard 2009). The Recruitment and Employment Federation (2011) summarises the following challenges facing employers as: the war for talent; leveraging technology candidate attraction; flexible and mobile working and the changing workforce demographic. Whilst the changing face of recruitment and selection is changing, the increasing use of technology is impacting the way work is structured.

Mobile working and effectively using technology raise important issues for working practices. Technology can have a huge affect on the restructuring of work and working patterns. The next section discusses the impact of technology on work-life balance policy.

2.5 The Implications of technology on work-life balance

Technology has developed substantially over the last decade, increasing access to a wider range of the population. According to a survey conducted by the Office for National Statistics (2010) there were '38.3 million internet users in the UK' which represented 77% of the UK adult population. Furthermore, of these 30.1 million accessed the internet everyday or almost everyday equating to '60% of all adults' (ONS 2010). Access to the internet can now be completed easily by using mobile technologies such as smart phones to access emails, texts and office applications. The impact this is having on working practices needs to be considered as working remotely from any location is now a realistic option. Many workers transfer this opportunity to working at home as well as working on the move, with work being completed at any time and in any location. In 2006, the Chartered Institute of Personnel and Development reported around 3 million home based workers (CIPD 2006). These figures are set to rise rapidly and future projections range into the billions (see chapter four for more details). This

ability to work remotely clearly provides some benefits for employees in terms of increased flexibility, however, this has not been solely driven by an improved provision for employees.

Working remotely has also been driven by employers who need employees to respond quickly to customer demand for speed, quality and flexibility across differing international time zones (Roberts 2007: 340). This means it may be one important driver of longer working hours, despite EU legislation. The pressure of the work environment is intensifying on the workforce with the requirement for increased access to information through technology (Vernon 2005). This 24/7 culture involves services becoming more accessible to consumers outside of normal working hours. This in turn requires flexible working contracts, variable working hours and mixed shift patterns (Roberts 2007). According to the UK Health and Safety Executive (2010), latest figures reveal that between 2008-2009, 9.8 million days are lost to organisations through the effects of stress and psychological illnesses. This increase although not proven could be affected by increased access to work through technology. However, conversely, several studies have shown that engagement to work, motivation and job satisfaction can be improved when flexible working options, including home working are available to employees (Hogarth, Hasluck, Pierre, Winterbottom and Vivian 2001: Bond, Galinsky, Kim and Brownfield 2005).

All these factors put the focus back to the employer to provide flexible benefits and consider an individual's life outside work. However, the take up for flexible working arrangements was limited in the early years. The Work Life Baseline study (Hogarth et al. 2000: 7) indicated that only 20% of employees worked from home, and that this was more likely to be available for and to be taken up by male professional employees. However, 62% of workplaces did offer some variance around working hours, such as variable start and finish times or term-time working. When employees take up these options then staff motivation and

satisfaction can improve significantly (Shankar and Bhatnagar 2010: 81-82). In this decade, e-working (which is defined in chapter four in more detail) is now much more prevalent, with organisations being able to provide facilities that can be used in the home. For example, call centre work can be completed and monitored by supervisors in the home environment. It is likely that the impact of having work in the home cannot be ignored, with no escape from domestic chores, the home worker may try to squeeze into a day a great deal more than a worker who is out of the home. Many individuals who work from home can work late into the night and whilst this increases productivity, it is usually unpaid and in the long term these extended hours, as already shown, can severely affect an individual's health (see chapter four for more details on health related research). Currently there are very few organisational policies which cover the effects of home working on employees.

Whilst these issues are now being faced by employers and employees in the UK, the rest of Europe and the USA have been addressing work-life balance for longer. The next two sections cover, briefly, the starting points for policies outside of the UK, including European Union countries, in the area of work-life balance.

2.6 European context

Work-life balance is seen to be a priority for policy within the European Union (EU) but there is considerable variation between national governments on the variety and type of support provided. The UK has not been the fore-runner in policies and is catching up with EU countries (e.g., Sweden) that have driven forward work-life initiatives such as extended maternity leave (Block, Malin, Kossek and Holt 2006). It has already been outlined that the UK workforce has the longest hours of all EU countries (CIPD 2003). Nordic countries introduced work-life policies have taken the lead in paternity leave for fathers, they are

perhaps, one of the most supportive welfare states across Europe (Block et al. 2006). However, whilst many policies are effective, some of the Nordic countries' policies have led to more women staying at home, with a return to the domestic division of labour in a more traditional pattern, i.e., men at work and women at home. For example, in Sweden although fathers have the equal right to care for children most women stay at home with children. There appears to be little cultural support for men to take long periods out of their working life (Jamieson and Morton 2006).

The EU European Working Time Directive (1998: 1833) recognised that long hours were becoming a politically important issue and legislation was passed in 1998 that would reduce the amount of hours worked by employees in a week to maximum average of 48 hours per week. This directive also covered rest breaks and a minimum of paid annual leave. EU countries were allowed to adopt the directive as part of their own legislation and to consider whether to 'opt in' in 'out' of the amount of working hours per week. The UK as part of legislation chose to allow workers to decide whether to 'opt in or out' of working the average number of hours, so employees may now decide to opt out of the weekly time limits and work for longer hours. However, with mounting pressure from Trade Unions it is likely this decision will be revisited. According to the government's Business Enterprise and Regulatory Reform department (BERR) 'member states reached agreement on a revised Working Time Directive at the European Employment Council on the 9th June, 2008. This will allow the UK to have greater labour market flexibility, whilst ensuring workers are treated fairly' (BERR 2009). The revisions included agreement to the 'opt-out', on-call time and multiple contracts. Once the Directive is progressed through the European Parliament the UK will be given time to implement any changes. Policy in non-EU countries is not reflected in the current research as it does not directly impact on UK legislation. However, chapters three and four cover academic research from all countries related to

work-life balance and e-working. The following section examines the international perspective to work-life balance.

2.7 International context

The United States of America (USA) has produced the majority of academic research on work-life balance over the last few decades. This was mainly driven by a seminal book written by Rosabeth Moss Kanter (1977) *Work and Family in the United States: A Critical Review and Policy Agenda*, which provided a review of the agenda for research and policy in work and family life. Since that time the political agenda has moved towards improving working legislation (as discussed in previous section) and larger companies, throughout the 1980s and 1990s, have been providing work-life policies to improve access to work. Initially these were more gender-specific, i.e., aimed at returning female workers with children, but have since been widened to include both genders and recognise other non-parental related life commitments (Beauregard and Henry 2009). A wealth of academic research literature on work-life balance exists in the USA and this is discussed further in chapter three.

As can be seen other countries were well ahead of the UK in terms of research and policy on work-life issues. The New Labour government from 1997 introduced socialised policies including those affecting the work place. The impact of this policy shift on work and families and research into work-life balance is now discussed.

2.8 UK Political context

Before the Labour Party came into Government in 1997, the policy focus on working families was less pronounced. The culture under the previous Conservative government was one of low taxation, high interest rates and

consequently, high unemployment (Devine 2011: 8). Due to an employers market work-life balance did not feature highly on the agenda. For those in work increasingly long hours became the norm, and for those seeking employment, geographic mobility increased in order to find suitable work (CIPD 2003). Conservative Prime Minister John Major tried, unsuccessfully, in 1993 to bring a more moralistic tone to policy with the 'back to basics' campaign, i.e., returning to family values and specifically looking to increase public probity and focus on social issues such as law and order and reducing support for single mothers (BBC News 1998). In fact, at the same time more women were returning to work after maternity leave, and dual earners in the family were becoming more frequent (CIPD 1999).

In 1997, Prime Minister, Tony Blair responded to the changes in the working environment by noting the stresses on families and firmly putting work and families on the political agenda. He set out in the 1997 manifesto that 'as many women who want to work should be allowed to do so', and with a need to develop 'family friendly' policies (Labour Party Manifesto 1997). There was some recognition that support for family life should be balanced with business needs. Rights for employees seemed to be at the forefront of their policy making with recognition for employees not to be forced to work over 48 hours per week, entitlement to an annual holiday and to request limited unpaid parental leave. These were seen as key measures that underpinned family life (Labour Party Manifesto 1997).

These ideals have been enacted over the last ten years in legislation. Some legislation has provided increased paid maternity and paternity leave, and the right to flexible working. However, other legislation, such as the European Working Time Directive (1998: 1833) has not been fully implemented in the UK. As already discussed in section 2.4 the UK allowed employees to 'opt out' from the weekly maximum of 48 hours per week. Working mothers and especially

single mothers continued to be encouraged to return to work through the Labour government's focus on providing child care for all, via tax credits and increased access to nurseries from an earlier age. The government continued to try to reduce its costs associated with paying out benefits and various back to work programmes were developed including through NHS provision, such as the 'Improving Access to Psychological Therapies' services (Layard 2006). The aim of these initiatives was to return workers to the job market. This ties in with research that indicates that spending long periods out of work may lead to more depression and less self esteem, this in turn can be associated with poorer well-being (Feather and Bond 1983).

As part of the changes in government during 2008, Prime Minister Brown continued the focus on work family policy. However, Lord Peter Mandelson, Secretary of State for Business, Innovation and Skills raised concerns when he saw issues such as parental leave as 'an attack on business' and potentially increasing costs for organisations (Oliver 2009). However, the change in government in May 2010 to Conservative, Liberal Alliance government ensured that work and family related issues remained on the agenda for organisations. For example, a recent announcement by the Employment Relations Minister indicated their intention to continue to create flexible and family friendly workplaces. 'The right to request flexible working will be extended to parents of children under 18 from April 2011 and a consultation will be launched later in 2010 looking at how to extend the right to request flexible working to all employees, and the design of a new system of flexible parental leave' (Davey 2010). They are also looking to overhaul the benefits system.

According to Cooper (2011), for the time being the UK's reputation for a long hours culture shows no sign of abating. The addition of improved technology now allows for a 24/7 culture to be the current working practice for many employees and the impact of this needs further investigation on work-life balance and well-

being. With a down turn in the economy during 2009, greater job insecurity and pressure to work more for less, means a power shift back to employers and less chance of work-life issues taking priority. Government policy of employment can play an important role in shaping the work life policy of employers and the next section discusses recent legislation in this area.

2.9 UK government policy on work-life balance

In 2000, the UK Government introduced the Work-Life Balance Campaign, which was instigated to raise employers' awareness to the business benefits that could be accrued through adopting work-life balance policies. 'The aim was to help employees gain a better balance between work and the rest of their lives.' (Hogarth, Hasluck, Pierre Winterbottom and Vivian 2001: 2). There were two elements to the campaign. First, a baseline study was conducted to include a workplace survey, including interviews with workplace head offices and a survey of people currently employed. The second part of the campaign provided a Work-Life Balance Business Challenge Fund for those employers wishing to take up work-life balance policies but who required help with funding. Funding set aside for this initiative amounted to £10.5 million. In an evaluation of the Challenge Fund a total of approximately 400 employers, representing nearly 1.2 million employees, received support (Nelson, Nemeč, Solvik and Ramsden 2004). The Work-Life Balance Business Case, produced in 2000 by the Department of Trade and Industry outlined to employers the advantages and disadvantages of introducing work-life practices. Some of the benefits mentioned included: recruiting skilled talented individuals to the organisation; retention of valued employees; a better customer service; improved performance and productivity; and reduction in absenteeism, sickness and stress. It also highlighted the cost of ignoring work-life policies, i.e., poor performance and productivity, higher staff turnover and inability to find talented employees (DTi 2000).

Findings from the wide-scale DTi surveys indicated a high level of support for work-life balance policies from both employers and employees. In 2003 the DTi surveyed a number of employers who had engaged in the work-life balance challenge fund (Nelson et al. 2004). The findings indicated that many of the businesses involved had chosen to use the work-life balance fund to help with recruitment problems and to grow their companies. Some wished to change their organisational culture, such as the Cleveland Police force who improved managers' attitudes towards flexible working options. A number of case studies from this survey indicate that new technology and capital purchases were sometimes required to support changes in flexible working practices, e.g., home working. The fund was deemed to have resulted in successful implementation of many sustainable initiatives in work-life balance (Nelson et al. 2004).

One criticism of government initiatives at that time was the primary focus of legislation on balancing parenting with work. During 2006 a Work and Families Act (HC 2006: 65) was implemented that included all types of carers and their work-life issues. This is discussed further in the next section.

2.10 UK Legislation

Changes in work demographics have meant for most families that both parents work, either in a full or part-time capacity. Organisational work-life balance policies can be categorised in two ways. There are those that provide employee assistance programmes, such as subsidised day care, allowing parents to work normal working hours. There are also those that allow employees to work flexibly, varying their hours. Both provide a means to consider the balance of work and family concerns (Bourhis and Mekkaoui 2010).

Several initiatives have been taken forward by the UK Government to help parents. The Working Families Tax Credit was introduced in 1999 to help families on lower incomes return to work. In particular, the focus of this scheme was to encourage single parents and women to re-enter paid employment. The New Deal for Lone Parents introduced across Britain in 1998, introduced previously, helped to provide lone parents with dependent children help with job searches, training and limited child-care. Further the Green Paper *Meeting the Childcare Challenge*, published in 1998, sets out the National Childcare Strategy 'The aim of this strategy is to ensure good quality, affordable childcare for children aged 0 to 14 in every neighbourhood, including both formal childcare and support for informal arrangements, by: raising the quality of care, making childcare more affordable, making childcare more accessible by increasing places and improving information' (Department of Education 1998). This supported women in providing opportunities to receive child-care support so they could return to paid employment.

Legislation relating to employment has been introduced since 2000. One major piece of legislation that has supported those in part-time employment was the Part-Time Workers legislation (2000: 1551). This ensured that part-time workers were prevented from being treated less favourably at work than their full-time colleagues. Measures included equity in pay and holidays. The government then passed the Employment Act (HC 2002: 22) which addressed policies for working parents. This directive gave new rights to working parents, including improved paternity rights, i.e., fathers were to receive two weeks paid leave and to request longer paternity leave. The impact of this legislation on work-life balance meant that fathers could now increasingly help with child rearing.

Legislation has continued to be developed providing more support for working parents. The House of Commons passed the Work and Families Act (HC 2006: 65) which came into effect in April 2007, was driven by the need to improve

access to work for those with caring responsibilities. Parents with children under the age of six are now able to request flexible working arrangements and will be extended further in 2011 to include those with children under the age of 18. Initially, other types of carers (i.e., those looking after aged relatives) had been excluded from the Act but it has now been amended to include their requirements for work-life balance. This is also the first time that carers of adults have been given the right to formally request flexible working arrangements from their employers. The increase in statutory maternity pay to nine months and the extension of paternal leave provides better financial conditions for those parents with caring responsibilities (carers already receive an allowance to assist with their responsibilities). This increased maternity and paternity leave also provides more opportunity for parents of very young children to better juggle work with caring roles.

For the legislation to achieve the stated policy aim of increasing flexibility for parents and carers, awareness needs to be continually raised so that all employees understand their right to request flexible working arrangements. In a survey of employers by the Chartered Institute of Personnel and Development and KPMG found that only around 1 in 10 employers surveyed thought that the Work and Families Act (HC 2006: 65) would be beneficial to their organisation (KPMG 2006). Some of the smaller organisations may find this difficult to implement, depending on the number of employees wanting to work flexibly. It is worth noting that some flexible work options that reduce income or lead to part-time work may significantly reduce pensions (and career development) will not be attractive to all employees. Therefore, take up of the Work and Families Act may be limited by employees financial requirements.

The financial argument for employers to consider work-life balance can hinge on the economic climate. The next section considers this debate.

2.11 Economic context

Two papers by the London School of Economics (Bloom, Kretschmer and Reenan, 2006: 2 and Bloom et al. 2011) have put the issue of productivity and work-life balance into an economic context. The research examined the differences between 'win-win' theory (i.e. organisations are not penalised through lack of productivity for introducing work-life balance initiatives) as advocated by the UK government, against the threat of globalisation to achieving work-life balance i.e., increased hours and less time available for leisure. The UK government policies in the last decade anticipated that if work-life balance is achieved then productivity will also be improved.

During 2009 to 2011 there has been a significant recession. The impact is much higher levels of unemployment than experienced in previous years. This provides higher levels of choice for employers when selecting staff for roles, and ultimately could mean it is again an employers market. This trend is important to studies into work-life balance as it means there could a shift in flexibility towards meeting employers requests for improved work-life balance. Employers may have fewer resources to support some of the schemes as they may need workers to fit with their own pressures and demands from customers. Naithani (2010: 152) suggests that the recession may inhibit the growth of work-life initiatives but organisations should consider that 'neglecting work-life balance due to recessionary pressures need to comprehend the long-term relevance of employee engagement and productivity and need to continue promoting work-life balance initiatives'. Naithani further considers that without the continuance of these types of worker related initiatives some organisations may struggle to survive in the medium to long term. Further research needs to be carried out to explore how changes in climate could affect the way organisations have respond to work-life balance initiatives.

2.12 Conclusion

In summary, this chapter has covered the social, political and economic context to the drivers of work-life balance over recent decades. Work-life balance is featuring in government policy and the way that organisations operate in the 21st century. Policies in work-life balance are influenced by the changing demographics, social change, gender distinctions and changes in the configuration, employment, family and household relations. Research should reflect these influences, for example, by evidencing links between excessive working hours and the impact of technology on these factors. The pace of change is unlikely to slow down and it is now imperative that the way technological changes and the associated working practices can affect work-life balance and well-being is fully researched. Economic influences on the job market became prominent again in 2009 and the full impact of this down-turn in the economy is not yet known, especially in the area of work-life balance. However, reducing work life initiatives will not assist organisations in the medium to long term, whereby, they will need to have retained loyal and talented employees (DTi 2000 and Naithani 2010).

Policy in work-life balance has been slow to emerge but the Labour government funded a significant amount of research to help both employees and businesses focus on achieving balance between personal and family life. It remains to be seen how the recession will impact on work-life issues and the amount of support that may be offered by the coalition government in 2011. Identified through this chapter is that policy can influence organisational practice. Government policy and research in work-life issues needs to be extended to reach all roles including single parents and non-traditional families. The next chapter covers the academic and business related research in work-life balance and identifies where gaps exist.

Chapter Three: Work-Life Balance Literature Review

3.0 Overview

The previous chapter reviewed the policy, social and economic context surrounding work-life issues. This chapter focuses on the theoretical and conceptual nature of work life balance. As part of the review of the literature there is an examination of the definitions of work-life balance and how these differing interpretations have been used in business and academic based research. Job effectiveness and well-being are discussed in relations to work-life balance. Gaps in the research and measures of work-life balance are reviewed in preparation for the development of the E-work life scales.

3.1 Introduction

As discussed in chapter two, work-life balance is an emerging concept that has engaged the interest of both academia and the business community. Whilst the business community has been concerned with employee retention and flexible working policies, academics have been studying the predictors and outcomes associated with conflict experienced trying to juggle the differing demands of work and non-work roles (e.g., Greenhaus and Beutell 1985, Carlson 1999 and Mauno, Kinnunen and Pyykko 2005). Historical academic definitions of work-life issues have focused on models and theories centred on the conflict and spillover between the roles of parent and worker in the domains of work and home. These definitions focused on the extent to which conflict between roles was occurring between work to family and family to work (Greenhaus and Beutell 1985; Kopelman, Greenhaus and Connolly 1983). Research also focused on segmentation of these roles and the way that some individuals may compensate for deficiencies in one role as set against another (Champoux 1978; Williams and Alliger 1994). The theoretical basis for this type of research and an analysis of the definitions are discussed further in section 3.2. Generally this research

implies a degree of negativity, considering the two roles as incompatible, when in fact more recent research has shown that many individuals survive, or may even relish the multifaceted nature of the differing roles (Rothbard 2001; Powell and Greenhaus 2010). Role variation and spillover into other roles could, in fact, enrich life in opposing domains. For example, Rothbard (2001: 677) found that role cross-over can provide psychological resources such as a transfer of experiences from one domain to another. These may be beneficial to the differing roles undertaken by individuals throughout their life course. So there are emerging debates within the field of work-life balance and previously held views on the topic are being challenged.

3.2 Defining work-life balance

Historical definitions of work-life balance consider role conflict and the negative impacts of balancing the two domains of work and family spheres (e.g., Kopelman, Greenhaus and Connolly 1983). The term 'work-life balance' has been debated in recent times with previous research considering it to be both a harmonious and holistic integration of work and non-work affecting the equilibrium of the whole person in all aspects of their lives (Bailyn, Drago and Kochan 2001). This type of definition implies conversely, that imbalance may be disharmonious to the individual. Guest (2001: 2) indicates there are three broad influences that affect work-life balance. These are developments at work, life outside of work and those relating to individual requirements. It could be considered that balancing these factors will lead to a well-balanced life. Guest criticises using the word "balance" as a descriptor of work and life, as it serves to suggest that an unbalanced life is not an acceptable or a happy life. He draws specific attention to 'work-life balance as a misnomer and serves simply as a convenient short hand for work and the rest of life' (Guest 2001: 9). In fact the 'rest of life' is more than family life but covers leisure time and other activities that are unrelated to work (Guest 2001: 9).

In response to this debate there has been a move towards using the term 'work-life integration' which does not imply that a 50:50 balance is always required or desired (Lewis and Cooper 2005). It could be considered 'achieving balance implies taking away from one sphere and applying it to the other' (Burke 2005: 10). Integration, however, indicates that work and life can be in proportionally different measures for differing people with variable circumstances. 'Harmonisation' may be a more realistic goal for work and non-work activities (Guest 2001: 9). The term work-life integration is a move away from the slightly negative connotations of 'work to family conflict', used mainly in academic literature (Lewis and Cooper 2005: 8). It could be considered that work and family have a positive impact on each other and it may not be desirable in all cases to separate out these domains, enrichment could occur for employers and employees through the multi-faceted nature of work and non-work activities and the overlap of experiences (Rothbard 2001). It depends on what is considered to be a harmonious balance for the both the employer and the employee. Furthermore, it is important to consider work-life balance as a much wider topic than for those who have families. The next section discusses definitions used by the business community when referring to work-life balance.

3.3 Business related definitions of work-life balance

Chapter two has already provided the background to policy and legislation supporting work-life balance. When defining work-life balance the business community tends to articulate work to family issues around policies which can be supportive to the family (DTi 2004). Such initiatives include flexible working, compressed hours, part-time hours, provision for childcare, maternity and paternity benefits and so on. The Department of Trade and Industry defines work-life balance quite broadly and does not mention families directly, i.e., 'adjusting work patterns so that everyone, regardless of age, race or gender can find rhythm that enables them more easily to combine work and their other

responsibilities and aspirations' (DTi 2004: 12). This definition is fairly typical of the business related concept to work-life balance focusing on working practices and how these might best be implemented for both employer and employee satisfaction.

The DTi further described work-life balance as being 'about employers and employees working together to find out how they can both gain from more imaginative approaches to working practices' (DTi 2000: 3). Work-life practices are considered increasingly by employers as policies that allow for differing work arrangements. The most frequently cited are: flexi-time, giving choices about working times; staggered hours, different finish and start times; time off in lieu, where extra time spent at work can be reclaimed through time off and compressed hours, allowing individuals to work the total number of hours over a shorter number of working days. Others included working at home and job sharing (DTi 2000: 3). These differing work arrangement show the wide variety of ways in which work can be organised to support issues around work-life balance. However, the concept of flexibility for employees needs to be considered more fully.

The implications from a survey commissioned by the European Foundation (2005) examined how to improve living and working conditions for employees across Europe. The survey found that flexibility could have a number of dimensions that affects both the worker and the employer. For example, negative flexibility, where the supervisor dictates the working time and one's tasks could result in unforeseen changes in working times or schedules, such as overtime. Conversely, positive flexibility would be where an employee could use the flexibility offered by the employer to meet their own needs. The other theme used in this study is the predictability of working times i.e., knowing what the working times would be in advance (European Foundation 2005: 11). These are useful themes but there are many other factors to be included when looking at flexibility,

such as access to technology, ability to work flexible hours and business needs. Issues related to home working and the implications of technology are discussed further in chapter four, which focuses on the concepts and issues affecting location independent working.

There has been a tendency recently to consider work and life as a juggling act as opposed to a finite balance that can be achieved (Jones, Burke and Westman: 2). The academic approach to work-life balance examines more closely the underlying constructs of work and family conflict and how these might impact on topics such as life and work satisfaction. The next section examines the theoretical basis for work-life balance, including how this topic has been defined by academics. The research has helped to provide an understanding of the underlying constructs that influence an individual's work-life balance.

3.4 Theoretical basis for work-life balance

3.4.1 Work-life balance and role conflict theories

Work-life balance as an academically researched topic began with the earliest studies in the late 1970s and early 1980s (e.g., Kanter 1977; Greenhaus and Beutell 1985). These focused on how family and work roles conflicted with each other, usually in one direction i.e., how the demands and requirements of an individual's work conflicted with his or her family role and life. The earliest mention of role conflict was in a paper by Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) which first identified interrole conflict between work and non-work roles in male workers. However, it did not go on to pursue the underlying causes of the conflict, concentrating only on work related stress and conflict within the work role. These early studies defined role conflict as 'simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult compliance with the other' (Kahn et al. 1964: 19).

Research on home and work roles continued during the 1970s, with perhaps one of the most notable quotations of the time, 'exploding the myth of two separate worlds' was cited in a book by Rosabeth Moss Kanter (1977) following her study of work and families in the United States of America. This began to dissolve the concept that the two domains could easily be kept apart.

Kanter's concept was further researched by Kopelman, Greenhaus and Connolly (1983) who took the idea of more integrated domains, examining the construct validity of a set of scales which set out to measure work conflict, family conflict, and interrole conflict. In this study work conflict was defined as 'the extent to which a person experiences incompatible role pressures within the work domain', whilst family conflict is 'the extent to which a person experiences incompatible pressures within the family domain' (Kopelman, Greenhaus and Connolly 1983: 200-201). Perhaps the most useful definition of interrole pressure is defined as 'the extent to which a person experiences pressures within one role that are incompatible with pressures that arise within another role' (Kopelman, Greenhaus and Connolly 1983: 200-201). The main purpose of this research was to assess the construct reliability of the measures that were purporting to measure the three types of conflict mentioned above. This study found that all three areas of conflict were present and validated measures of all three types of conflict, although it should be noted the sample size was relatively small for the study. The study also showed that the effects of work and family conflict could be linked to job satisfaction, family satisfaction and overall life satisfaction. Importantly, it also highlighted the need to consider the sources of the differing types of conflict, such as gender, occupation, spouse's employment, or combinations of these factors. Greenhaus and Beutell (1985) took this further and went on to examine sources of conflict between work and family roles.

The sources of conflict as presented in a model by Greenhaus and Beutell (1985: 78) indicates that the roles associated with work and family are also seen as

incompatible, i.e., interfering with each other and the sources of this conflict are investigated. This ties in with Kanter's (1977) view that there are no longer two separate 'worlds' and Kopelman, Greenhaus and Connolly's (1983) definitions of the differing types of conflict. Greenhaus and Beutell (1985: 78) provide an illustration of the differing pressures to be found in both the work and home domains. Work pressures included hours worked and inflexible work schedules, whilst home pressures included young children, spouse employment and large families. These pressures were seen to be incompatible, leading to strain, and affecting behaviours as an individual moved from one role to another. These were also affected by the time to fulfill one role as opposed to another. One criticism of this approach is that Greenhaus and Beutell only investigated one direction of conflict, i.e., work to family conflict. Later work by Gutek, Searle and Klepa (1991) investigated the bi-directional nature of work to family conflict as consisting of two components, family interference with work (FIW) and work interference with family (WIF). This provided further insights into the effects and differences between the directions of conflict. Gutek, Searle and Klepa (1991: 560-561) used measures in this bi-directional approach, which considered whether or not gender played a part in these two types of conflict. This study is discussed later in the section 3.7 on gender.

An assumption within the concept of role conflict is that participation in one role negatively affects participation in another role. Greenhaus and Beutell (1985: 77) offer a definition of work to family conflict as 'a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect'. This incompatibility then causes strain in the opposing domain. This model assumes that individuals have a limited amount of time, energy and psychological resources. Strain occurs when these resources are exceeded by demands from one domain to another. This type of role-strain hypothesis usually focuses on strain as an outcome of role demands, which can then affect satisfaction, health and performance. However, other studies, for example,

Williams and Alliger (1994: 26) have since considered that strain could be an antecedent for work-family conflict rather than an outcome. Other antecedents of work to family and family to work conflict include; gender, number of dependants, individual differences, work and family demands and family resources available. The diagram below (figure 1) summarises some of these antecedents and their related outcomes.

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Figure 1 Predictors and consequences of work-family conflict
(O'Driscoll, Brough and Kalliath 2006: 121)

In terms of role related antecedents, Greenhaus and Beutell (1985: 78) proposed that 'any role characteristic that affects a person's time, involvement, strain or behaviour within a role can produce conflict between that role and another role'. Some of the key pressures identified by Greenhaus and Beutell (1985) for the time aspect of family domain, are young children, spouse employment and large

families. Lack of support and the expectations about the family role add to the sources of conflict placed on the individual. This is set against pressures from the work domain including the number of hours worked, inflexible work schedules and shift work that add to the overall pressures of role conflict. The pressures identified in Greenhaus and Beutell's early paper are relevant to current research and much of the literature surrounding work-life conflict relates back to this early study for its conceptual basis.

The role of conflict between domains has been further investigated relating to the impact or spillover of moods and or feelings from one role to another; compensatory theories, whereby one role supports or replaces another; and role boundaries, whereby individuals ring-fence certain roles. These theories are now discussed further.

3.4.2 Spill-over, compensation and role boundary theories

Spill-over, compensation and role boundary theories all have the premise that differing roles overlap and impact upon each other, thus adding to the topic of how work-life conflict is defined and conceptualised. It is, therefore, relevant to group them together for discussion.

Firstly, spill-over theories show the inter-relationships between the domains of work and family. These theories differ to concepts of role conflict in that they look at the way in which psychological process can overlap, this does not always lead to conflict but can have both positive and negative impacts on each domain. The basis for these types of theories is that 'the experiences in one role affect experiences in the other' (Rothbard and Dumas 2006: 73). Research into spill-over has generally focused on emotions, so how mood, for example, can affect feelings in both domains. An example of this would be the mood from either a good day, or conversely a bad day at work, may spill-over into emotions felt

when returning home. Williams and Alliger (1994: 838) found that 'working parents were more likely to bring work related emotions home than they were to transfer family-related emotions to the work place'. Flexible working practices, including home working are now further impacting on the boundaries between work and home.

Studies are also emerging around flexible working and using the home as the work-place and how the merging of boundaries can impact on work and family living. For example, Baines and Gelder (2003: 233) found that when the home is used as a place for work, 'family members (spouses and children) are often incorporated into daily routines in ways not found in other areas of employment.' However, use of technology in the home, especially when it is required simultaneously for work and perhaps by younger members of the household for non-work activities, can become an area of conflict. According to Baines and Gelder (2003: 233) there may be a need to consider the 'rules and family practices about access for the younger generation.' This is a key point for those organisations that implement home e-working options for their employees. Spill-over theories tend to highlight the need to be able to move between the domains of work and home effectively. However, more recently they also raise the need to consider what happens when the home domain also becomes the work domain and how individuals cope with this change. Roles may also provide areas for compensation when one domain is not fulfilling.

Compensation models, 'refer to a relationship between work and non-work roles, whereby individuals attempt to make up for deficiencies in one role through greater involvement in another role (Jones, Burke and Westman 2006: 74). Research has shown that both men and women look for fulfillment in all areas of their life, but when one area is not completely fulfilled then they may look to another area for compensation. For example, Rothbard (2001: 673) found that women experiencing negative affects from the family became more engaged with

their working life. In a study which examined gender differences when related to work- life conflict and positive spillover, Powell and Greenhaus (2010: 525-527) found that females experienced higher levels of positive spillover than males. No gender differences were found for work-life conflict. Interestingly, Powell and Greenhaus also found that those who could segment their working lives from the family domain had lower levels of both work-life conflict and positive spillover. This could mean that whilst segmenting may reduce conflict the positive benefits of spillover may not be fully realised.

Theories of segmentation or 'ring fencing' the domains of work and home, relate to historical premises which considered work and home life as two distinct entities, perhaps in some ways associated with the outdated idea of men as breadwinners and women as home makers. This model has since been reconceptualised to consider that individuals try to keep the distinction between work and home domains in order to manage their work-life balance better. For example, a study by Piotrkowski (1979) showed that individuals may go so far as trying to 'suppress work related feelings when at home and vice versa' (cited in Rothbard and Dumas 2006: 74). This has been further developed to show that individuals may create boundaries between work and non-work activities (Kossek and Ozeki 1998). Campbell Clark (2000) developed these ideas further, especially around the concept of how boundaries are defined by individuals.

Campbell Clark (2000: 749) criticised both spill-over theory and compensation models as not providing specific means to 'adequately explain, predict and help solve problems that individuals face when balancing home and work responsibilities.' She also identifies that a main limitation with these theories is that the focus is mainly on negative emotions e.g., feelings of frustration. They do not consider fully the 'spatial, temporal, social and behavioural connections between work and family' (Campbell Clark 2000: 749-750). Zedeck (1992 cited in Campbell Clark 2000: 749) also considered the need to look more closely at

the relationship between work, families and organisations and the way that individuals relate their personal activities to provide them with personal meaning. Campbell Clark developed a theory based on borders to account for the gaps in previous theories. She examined approaches such as segmentation, whereby individuals kept the two areas of home and work apart, the benefit of this approach being that individuals could gain new energy from the differing domains. Conversely, individuals who have fully integrated work and family and a blending or non-distinction between the two provide a different approach through the merging of domains. Powell and Greenhaus (2010: 526) suggest that further research is required to see how individuals who prioritise family matters and prevent intrusion between the two domains of work and family.

Campbell Clark (2000: 767) does not recommend a particular approach to managing work-life balance as being ideal but advises that there are differences in individual cultures and preferences. Specifically, borders are defined by Campbell Clark as temporal, i.e., set hours of work, psychological rules created by individuals for differing thinking patterns and behaviours and emotions as appropriate to one domain or another. Borders can be permeable, flexible, blended, and crossed. These differences in managing borders between home and work are relevant to home working, remote e-working and other flexible working policies that allow individuals to begin to merge work and home life. The next section looks at what can be considered moderators and interventions in work-life conflict.

3.5 Moderators and interventions of work-family conflict and a work-family culture

Work to family conflict and the demands on individuals has been studied, not only in terms of how conflict can be generated between roles, but also what the moderating factors might be that can reduce such conflict occurring in the first

place. It is possible that these moderators or interventions may vary between males and females. Females, for example, may experience more family to work conflict due to family demands, whilst males may experience more work to family conflict because of work related pressures. This may switch-over, depending on who is the main breadwinner for the family. O'Driscoll, Brough and Kalliath 2006: 129) indicate from their review of literature that two types of moderator have been studied. First, those that directly reduce the amount of work to family conflict experienced. Second, those that occur between work family conflict and the possible outcomes, for example, strain, health and job performance. The diagram below (figure 2) indicates where these moderators are located.

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Figure 2 Moderation effects in relationships between job/family demands, work-family conflict and 'outcomes' (O'Driscoll, Brough and Kalliath 2006: 129)

The role of gender is an important topic in work-life balance research and is covered in section 3.7. However, social support as a moderator is covered in this section.

Social support has been researched as a coping mechanism for families that may need to reduce the negative aspects of work to family conflict. Social support comes in different forms relating to the differing domains of work and family. Work-related social support is usually offered by peers, colleagues, supervisors and line managers. Understanding supervisors who are sympathetic to the stressors related to family life can provide a supportive culture for employees and thus help to minimise the work to family strain (Thomas and

Ganster 1995). However conversely, colleagues without families may be less supportive and this could be referred to as a backlash to family-friendly initiatives (Poelmans and Sahibzada 2009: 415).

Non-work related support including spouses, grandparents and friends can also play an influential role in reducing work-family conflict. In particular, early studies found the role of a spouse is important in reducing conflict (Carlson and Perrewé 1999: 515). Carlson and Perrewé (1999: 533) also found an indirect link to the reduction of work-family conflict when social support was present. They concluded that social support was in fact an antecedent in the reduction of work-family conflict and affected satisfaction in both work and family life.

Social support may lead to a reduction in stress and strain related to work-family conflict, however, there is variable evidence to fully support this as a moderator alone. Parasurman, Greenhaus and Greenhaus (2002: 306) reported that there was little evidence to support the buffering effect of social support, although this could be due to understating of the role in previous studies. It is possible that whilst social support may not fully moderate work-family conflict, it does work effectively as an intervention to reduce the effect of stressors when experienced. There has been more recent research which has shown that family friendly policies and a culture of support for parents can be beneficial, for example, the work discussed below by Mauno, Kinnunen and Pyykko (2005).

The introduction of a 'family supportive culture' for employees struggling with work to family issues is being considered by organisations to help reduce work-family conflict and improve employee well-being (Mauno, Kinnunen and Pyykko 2005). The concept refers to an organisation's supportiveness or responsiveness towards employees' family-related needs. Allen (2000) conducted a study of over 500 employees and found that the perceptions of family-friendly benefits were related to improved job satisfaction and organisational commitment. Campbell

Clark (2001: 348) found that 'work-life balance was lower when employees had a large number of children and supportive supervision'. It has been recognised that a supportive work-family culture is associated with several positive well-being outcomes as shown in figure 3 (Mauno, Kinnunen and Pyykko 2005: 525). Through their study of five organisations they found a relationship between a perceived work-family culture and employees' self reported distress, which can be associated with well-being. The diagram shown in figure 3 illustrates where both positive and negative associations were found. The strength of this study is that it shows a direct relationship between family-friendly cultures and improved well-being. It does not, however, look directly at the other outcome variables of job satisfaction, commitment and turnover. This study was conducted in Finland but it has interesting recommendations for all global organisations, in terms of developing longer term family friendly policies and human resource strategies.

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Notes:

The complete lines show positive associations.

The dotted lines show negative associations.

Figure 3 Model to show relationships with supportive work family culture and work-family conflict (Mauno, Kinnunuen and Pyykko 2005: 521)

The next section covers the important topic of gender as a moderator in work life balance research. Gender underpins much of the early research into work-life issues.

3.6 The role of gender in work-life conflict

Following on from the last section which identified gender as a potential moderator, this section covers the role of gender in work-life conflict studies. Early studies of work-family conflict have extensively focused on gender as the main variable. Studies such as Duxbury and Higgins (1991) considered gender differences in work-family conflict (non-directional) and the potential for gender to have a moderating effect. They found that there was conflict between work and family. This had a negative impact on women's quality of work-life when compared to males (Duxbury and Higgins 1991).

It is important when studying gender differences to differentiate between types of work-family conflict, the first being work-family interference (WIF) and the second family to work interference (FIW). This distinction is important when looking at gender because FIW has been considered to be stronger for women than for men, and conversely, WIF stronger for men than for women (Gutek, Searle and Klepa 1991). These differences indicate that the domains of one area may be stronger than another in terms of time spent in each for the differing genders. In the past this has been related to the differences between males and females earning capacity and priorities in terms of the work and home domains. Males are traditionally considered to spend more time in the work domain, whilst females concern themselves with family responsibilities in the home domain (Emslie and Hunt 2009). However, this traditional view could now be challenged in terms of social expectations and demographics. For example, Carr (2002: 120) found that both work and family responsibilities are converging and that males are increasingly getting more involved in family life. However, it is still clear that many women continue to work reduced paid hours following maternity leave taking on the household responsibilities more than males (Sullivan 2000: 124). There are always exceptions and single parents clearly have extra pressure

when it comes to juggling home and work. Studies into single parents are limited highlighting the need for more research in this area.

The influences of gender on work-family interference studied by Gutek, Searle and Klepa (1991), who investigated conflict in both FIW and WIF using the rational approach and the gender approach. The rational approach considered the more hours spent on work, the more conflict will be perceived. This was contrasted against the gender view, that women would be more affected by family responsibilities e.g., housework and child-care, and would experience more FIW. Gender was seen to play an important part of the type and amount of conflict experienced. All participants in this study worked full-time to ensure comparability. In the rational approach it was predicted that there would be no difference between males and females in terms of work-family conflict. However, the study concluded there was support for the gender approach that women reported much higher levels of FIW than men, even when working the same amount of hours. However, WIF levels were similar for both men and women. Overall, the results provided some support for both views, that is, there was a high correlation between hours worked and conflict in either domain, thus more time spent in the home domain was likely to impact on the work domain and vice versa. However, it was apparent these relationships were stronger for women, the FIW hypothesis was not supported and this may mean that family roles are becoming more similar and not so gender specific.

More recent research on this topic supports the view that gender roles may be less important and indicates that strategies for dealing with family responsibilities may be converging. Differences, therefore, between male and females in terms of amount of WIF and FIW may be disappearing (Grzywacz and Marks 2000: 112). However, there was some indication that social support may work differently for each gender. This study showed that support could be more closely linked with WIF for females than for males. Again this ties in with studies of

moderators of work to family conflict. Furthermore, in a study conducted by Mostert (2009: 149) it was found that women's health may rely on being able to effectively juggle private and work lives to ensure the restorative effects of home are achieved.

The link between gender and work to family, or family to work conflict can be affected by another key moderator, the number of dependants living in the household and this is discussed further in the next section.

3.7 The effect of dependants on work-life conflict

Dependants can be considered to be family members who need care and guidance on a regular basis. This is usually considered to be children under 18 years of age, elderly relatives and those children and adults who are disabled, all requiring regular care. However, the main focus of work-life balance studies has been on families with children. It is important to note this indicates a significant gap in the work-life research i.e., how work-life conflict is affected by the role of carers for elderly and disabled relatives.

Recent studies on dependants have shown that those women without dependants worked significantly longer hours per week in paid employment than those that had dependants, around 40 hours compared to 36 hours (Brough and Kelling 2002). However, what is perhaps more important, is the impact that the total number of number of hours worked in paid and unpaid work has on an individuals' health. Unpaid work is associated with housework, child-care and family related tasks. Noor (2002) indicated that working hours per week differed by as much as 2.5 hours per day with women completing the extra time. Men on average work approximately 70 hours compared to women's 90 hours per week. These figures need to be qualified in that they relate to families with three or more children. More recent research by Hill, Mead, Dean, Hafen, Gadd, Palmer

and Ferris (2006) hypothesized that the ideal for families is 60 hours of paid work per week, this is split across both parents. In Hill et al.'s study which took place in International Business Machines (IBM), findings revealed a relationship between numbers of hours worked and job satisfaction, job performance and job flexibility. It was found that couples who restricted their working hours to 60 per week reported significantly greater family satisfaction and less work to family conflict. This finding is specific to those with families, however, it could be considered that couples without children may also have improved job and life satisfaction from working fewer hours.

These differences for families can be exacerbated by the ages of the children, for example, the presence of pre-school children are more demanding of child-care. Teenage children have also been found to produce significant demands on parents resulting in greater work to family conflict (Kim and Ling 2001; Major, Klein and Ehrhart 2002). However, the quality of child-care available to parents should be taken into account. Those with pre-school children may have options of nursery care available to them which could provide the ability to work extended hours. It should be noted that affordability and availability of child-care, or unpaid informal care may be less available for parents on low incomes. The next section focuses on individual differences in work-life balance and how these can be an important factor in understanding how this affects well-being.

3.8 Individual differences, well-being and the influence of work-life balance

There have been many studies over the years that have investigated the impact of personality dispositions on well-being related to work roles. For example, Beutell and Greenhaus (1985: 78) mention that individual differences may have an impact on an individual's experience of work to family conflict. They cite various studies which relate to type 'A' personalities', i.e., those who are demanding of themselves who have been found to present high work-family

conflict. This perhaps reflects the extremes of type 'A' personalities who may work longer hours and potentially travel more in their work, contrasted with type 'B' personalities who are less likely to make demands on themselves and their environment. Carlson (1999: 248) found that work-life conflict is known for its perceptual nature and it is likely, therefore, to be affected by personality predispositions. She specifically investigated different types of work-life conflict and found that type 'A's were in fact better at managing behavioural related work-life conflict (e.g., compartmentalising work and home activities). This could be due to type A's being organised and avoiding some of the behavioural issues concerned with incompatibility of roles.

Furthermore, it is important to consider both personal and individual factors when reviewing work-life balance. Warr (1996: 232) advocates that disposition is a key factor for well-being, and he provides a model which includes this as the overarching determinant. Underlying this model, Warr (1996: 225) advises that well-being can be measured through three specific axes; pleasure-displeasure, anxiety-comfort and depression-enthusiasm. What makes an individual feel good and bad are related to where the individual feels comfort within the scale. Warr indicates that affective well-being experienced at one point in time is a form of 'state' and related to well-being axes of anxiety-comfort and depression-enthusiasm. Warr (1996: 224) implies that personality disposition affects feelings, and that feelings affect well-being. An example of this could be when high job demands are associated with low well-being (increased anxiety), for example long working hours which leads to illness through stress related pressures. The emotional aspect of this model provides a good basis for exploring how work-life conflict is perceived by different dispositions.

One key aspect in relating Warr's work to issues in work-life balance is his model of determinants. This model encompasses job-specific well-being as well as context-free well-being (i.e., not related to work). These are, in turn, affected by

environmental influences in two forms: those that are job specific factors such as ambiguity of role and job security, and those that are non-work related such as family, social and spare-time activities. An individual's overall well-being has a strong influence on their job-specific well-being; job specific well-being also affects wider feelings (Judge and Locke, 1993 cited in Warr 1996: 227). These overlaps have been investigated through spill-over theory i.e., from work to home and home to work. A study that looked at male employees found that positive feelings about work spilled over into positive feeling after work (Warr 1996: 227). However, a more difficult day at work led to irritability and less engagement with home and social activities. Spill-over theory suggests an interaction between job-specific and context-free well-being. Tait, Padgett, & Baldwin (1989: 502) examined this further using gender as a basis for the study, and found that women had more adverse outcomes than men when job satisfaction and life satisfaction were compared, i.e., the correlations showed +0.16 for females and +0.31 for males. There is, therefore, evidence that job and life satisfaction interact. The next section looks more specifically at the interaction between work-life balance and satisfaction.

3.9 Work-life balance, job-life satisfaction and job performance

As can be evidenced from earlier sections in this chapter and especially from the previous section on individual differences, there have been many studies into job and life satisfaction related to work-life balance, including the early study by Kopelman, Greenhaus and Connolly (1983). These studies suggest that a good work-life fit i.e., the ability to successfully integrate working life with family life, can be related to flexible working practices and a supportive organisational culture. An example of a large study is the National Study of Employers (Bond, Galinsky, Kim and Brownfield 2005), which found that employees in more flexible workplaces are more likely to have greater engagement in jobs, stronger retention rates, less spillover from job to home, and home to job resulting in

better mental health (Bond et al. 2005: 9). Mauno Kinnunen and Pyykko (2005: 511) further provide evidence through a model which relates the effects of culture on work to family conflict and both physical health symptoms and negative job related mood. Findings indicated that a family-friendly organisational culture is associated with employee well-being. Performance can also be associated with family related conflict. This is supported by more recent studies which indicate that work-life balance can provide positive outcomes to job satisfaction and organisational commitment based on negotiating clear roles between family and work (Carlson, Grzywacz and Zivnuska 2009: 11).

Job performance ratings have been studied and specifically related to gender and the effect of family conflict. For example, Butler and Skattebo (2004: 559) found that overall the experience of a family conflict was associated with lower performance ratings but gender was a moderator in this relationship. Men who experienced a family conflict received lower overall performance ratings and lower reward recommendations than men who did not, whereas women were unaffected by the experience of a family conflict. Measurement in work-life balance has been provided from many different sources including job performance. A review is conducted of measures that have been derived to help further research and provide evidence for the study of work-life balance.

3.10 Measures of work-life balance

Since the 1970s there has been a developing focus on the number of roles individuals need to manage in their daily lives. Much of the literature on the subject of managing work and non-work has focussed on managing these sometimes conflicting roles. The interference between these roles and the differing types of conflict experienced eventually became further defined through research. Measures of role conflict have been available since the 1980s, such as those developed by Kopelman, Greenhaus and Connolly (1983). Greenhaus

and Beutell (1985) as discussed earlier, provided a seminal paper which triggered the development of many scales in this area, for example, work-family conflict became understood as relating to specific antecedents: time based, strain based and behavioural.

Fields (2002) provides nine measures of work-family conflict which have been available since the 1980's. Scales and measures of work-life balance can be divided into two categories, those that have been developed academically and checked for validity and reliability (e.g., Netemeyer, Boles and McMurrian 1996 and Stephens and Sommer 1996) and those that have been conducted as work based surveys (e.g., CIPD 2003). The government has also conducted regular work based surveys to review the impact of flexible working, as discussed in chapter two. Each type of measure is useful to the exploration of what has been measured previously in the field of work-life balance.

Measures of work-life balance can be further divided into several categories. These categories cover conflict and interference between work and family; and the role of social support on work-life balance. These main themes have been further sub-divided to look at strain, time and behaviour based conflict. More recent research (e.g., Carlson, Kacmar and Williams 2000) has also divided the interference scales into externally and internally based types of interference. Other derivatives include job-family role strain, job-marriage conflict, job-parent conflict, job-leisure conflict, job-home management conflict and items that look at control over the home and work environment. Carlson, Grzycacw and Zivnuska (2009) further developed scales to measure the specific outcomes of work-life balance, including increased job satisfaction, and organisational commitment. Appendix one contains a table of those scales that have been checked for validity and reliability. These validated measures will form part of the basis for the newly devised E-Work life scales and are discussed further in chapter seven where the scale item development commences. Appendix two contains those

surveys and empirical studies in work-life balance that were also reviewed in preparation for the scale development.

The 1990s and the 2000s have seen a continued focus on the interaction between work and non-work activities and the effects on well-being and relationships. Measures are developing but no current ones cover the impact of technology. Technological change has been a driving force behind many changes in organisational working practices. The overlap between the effects of technology on life outside of work requires further study. The next section highlights several further gaps in work-life balance research.

3.11 Gaps in the research

Recently, meta analysis of work-life balance research has shown that there are some critical gaps. For example, Parasuraman and Greenhaus (2002) in a review of work-life literature found an over emphasis on the negative impact of work to family conflict, when, as discussed in section 3.4 some research has shown that spillover of roles can provide some positive aspects between work and family life (e.g., Rothbard 2001). Eikhof, Warhurst and Haunschild (2007: 327) indicated that particularly for women, working longer hours could provide a form of escape from family life and work generally can be a source of life satisfaction and self-fulfillment for many. Research into work-life balance often misses these important aspects of work. Parasuraman and Greenhaus (2002) argue that there is not enough focus on the individual differences and personal characteristics as antecedents of conflict and stress. In fact, there is some research in this area, particularly by Warr (1996) but it is limited mainly to job satisfaction. The narrow focus on specific demographics such as 'nuclear' families, are no longer the only type of family arrangement and this focus is now out-dated, resulting in further research being required. For example, research should focus on how work-family conflict affects single parent families, couples

and individuals without dependants, and those with caring responsibilities other than children.

3.12 Conclusion

In summary, this chapter has covered a wide range of research that can help to define and apply the term 'work-life balance'. It has considered both academic and business related definitions of work-life balance. Work-life balance has been examined in terms of role conflict by researchers, considering the domains of conflict experienced from work to family life and vice versa. Early studies looked only at work to family conflict; however, it has been accepted that conflict can be bi-directional and the effects of family life on work have also been studied. Research has also reflected on the antecedents of poor work-family conflict, including, gender, number of dependants and individual personality and disposition. In most cases these have been found to influence the outcomes for those experiencing work-life conflict in terms of increased strain and stress, with some of the reported outcomes being poor health leading to a lack of life and job satisfaction. Moderating social processes have provided some relief in terms of managing the work-family conflict, such as social support and work related support. An organisational culture supportive of family needs is also seen to be effective in reducing stress and strain.

Gaps in the research indicate that some groups have been omitted from the research altogether. For example, there is sparse research on single parent families and those families that have differing parental arrangements due to divorce or separation. Another gap in research is that work and non-work issues are not just for families, those with caring responsibilities, other than, or in addition to, children may also experience similar strains. Terminology may also need revisiting when discussing work-life issues. For example, the term 'balance' could be outdated with the development of concepts of work and non-work

integration. Harmonisation of work and non-work roles may be very important to realise the positive benefits of integrating work and home lives and roles. Some studies are now finding that there are positive aspects to the multiple roles played by individuals. Individual differences and coping strategies have an important role to play in understanding work-life balance as what may be 'balance' for one could be 'unbalanced' for another. Future research should focus on some of the gaps identified in this chapter, continuing to develop an understanding of this topic both for business application and theoretical development.

Chapter Four: E-working Literature Review

4.0 Overview

The previous chapter reviewed the literature on work-life balance and the associated measures. This chapter defines the concept of e-working, reviews research on job effectiveness and the relationship to work-life balance and health. It also includes a review of measures of e-working. This chapter supports the current research by providing the literature which supports the concept of e-working in preparation for developing the E-Work life scales.

4.1 Introduction

Information Communication technologies (ICTs) have changed the nature of work and provided opportunities to work from multiple locations, including the home. Numbers of remote workers vary across countries, for example, the UK has around 3 million (CIPD 2006), whilst the USA has 28.7 million (Maruyama, Hopkinson and James 2009: 2). Forecasts for the growth in numbers of e-workers predict that by 2012 there will be 1.2 trillion remote workers worldwide (Twentyman 2010: 7), while Nilles (2007: 2) predicted 144 million e-workers across the Organisation for Economic Co-operation and Development (OECD) countries. A decade ago Bill Gates (President of Microsoft) predicted that by 2050 over half the population will operate from a home workspace (Handy 2001 cited in Morgan 2004: 346). Developments in technology, by themselves, cannot increase job performance. This usually requires an associated change in working practices, behaviour and new skills to be acquired (Kowalski and Swanson 2005: 243, Baruch 2000: 45). Furthermore, the organisation's management team need to re-consider the culture and the way that the whole organisation can be reshaped by using telecommunications effectively.

Many organisations adopt e-working practices to reduce costs, retain staff and to address environmental issues. Important issues which could prevent e-working, such as data security for off site working can now be addressed and there are very few reasons why mobile remote e-working cannot be adopted by organisations (Nilles 2007: 3). However, in a recent study completed by Vodafone, it was found that only two fifths (41 percent) of the 500 multinationals surveyed said they had a comprehensive mobile working solution in place (Twentyman 2010: 7). The main inhibitor found in the Vodafone survey was that a cultural change would need to take place based on trust. One of the drawbacks and also benefits to mobile working is engendering a culture of trust, since without trust e-working would not be effective as it relies on supervision from a distance and the honesty of the employee (Kowalski and Swanson 2005: 240). The importance of trust could be why some organisations are struggling to give their employees the flexibility to work remotely from home.

A key benefit of e-working is that it can help to provide a work-life balance which may retain talented employees (Deery 2009). Flexible working is a popular choice for many employees. Recruitment agencies are finding that approximately 85 per cent of those seeking work indicate they would be more likely to stay with their employer if flexibility was available (Twentyman 2010: 3).

There are many terms that describe remote working using telecommunications, such as, e-working, teleworking, and telecommuting. These all refer to the ability to work remotely. These terms which are used interchangeably in the literature will be defined in the next section.

4.2 Defining 'e-working'

'E-working' can be considered a generic term for using technology to complete work, either in the work place or off site (Sullivan 2003: 159). In the context of

this research the term 'e-working' or 'e-worker' is used to describe people who use technology to work remotely from the main group office at any time or place. In this study the research assumes that remote communications are utilised to communicate with the office. There are several terms used in the literature including, 'e-worker', 'teleworking' or 'teleworker' and 'telecommuting', these are now defined further to clarify the similarities and differences for the purposes of this research.

4.2.1 Key terms: remote e-working, teleworking and telecommuting

The terms 'teleworking' and 'telecommuting', in the literature, tend to be the North American equivalent of more widely used British term 'remote' or 'mobile e-working'. These terms in the past have been related specifically to working from home and a reduction in commuting but with no clear agreement on the definition of each term (Madsen 2011: 149). Haddon and Brynin (2005: 35) consider that 'teleworking' has a number of key aspects, which are, the use of technology for work, remote locations, contractual arrangements with the employer and flexible working time. 'E-working' has been used as a general term to imply the use of technology to enable work across differing locations. Previously, 'teleworking' and 'telecommuting' were restricted to describing home working and related to a reduction in commuting, but have since been expanded in their usage to cover different types of mobile working. E-working could be considered an over-arching terms which relates to all of these terms. Perez Perez, Sanchez and Pilar de Luis Carnicer (2003: 733) define 'teleworking' as 'a way of flexible working that enables workers to get access to their labour activities from different locations by the use of information and communication technologies.' A definition of remote e-working has been considered by Nilles (2007: 1) who defines this as 'any form of substitution of information technologies (such as telecommunications and computers) for work-related travel: moving work to the workers instead of moving workers to the work'. Nilles considers that e-working emphasises the 'location

independent aspect directly', whilst teleworking focuses more on 'travel substitution aspects' (Nilles 2007: 1). This ties in well with the notion that work can be completed anywhere and at anytime regardless of location. Baruch (2000: 35) indicates that teleworking has three components, which are, location independence from the work place; use of information technology; and a communication link to the organisation. All three terms (e-working, telecommuting and teleworking) indicate that there should be a significant element of work completed off site, in some cases this can be entirely from home. Other terms which are often used include; 'mobile telework', 'telecentres', 'functional relocation' and 'telecottages' (Morgan 2004: 346). Many of these terms refer to locally based facilities for e-workers or the relocating of functions, such as sales activities to a customer site or to home based facilities.

Sullivan (2003: 158) indicates that 'the search for a universally accepted definition of telework, that is suitable for academic research, has been the source of some considerable contention and debate.' This debate has highlighted the need to understand the differences and similarities associated with working from home and working remotely, including contractual arrangements, employment status, types of work completed and, in particular, the location of work. However, many of these debates seem more important now that technology has developed to such a degree that a large amount of work can be completed at any time or place. Employees being available and flexible to work outside of 'normal' office hours are often considered by employers to be part of the psychological contract. This can benefit both the employer and the employee, if technology is managed then the employer can have increased availability and productivity, and the employee can enjoy the benefits of working different hours to suit personal needs and to manage their work-life balance (Baruch 2000). Measuring the success of e-working has been important as manufacturers and employers seek to justify the costs. E-working will be used as the term for the current research as it provides an overarching definition of all aspects of remote working. The definition

of e-working will be re-confirmed in the e-worker interviews carried out in chapter six. The next section covers how e-working has been measured to date.

4.3 Measuring e-working

E-working has been measured both academically and by organisations seeking to market their technology developments. Many organisations want to be seen as 'leading edge', ahead of the game when it comes to increasing consumer experiences and enabling employees to use the latest means to improve their productivity and satisfaction with work. Academic papers include work by Baruch (2000) and Sullivan and Lewis (2001) whereby remote e-workers have been interviewed or surveyed for their views on the efficacy of e-working practices. This present research seeks to look at the impact of e-working on work-life balance and there are currently limited studies on how e-working has impacted these issues. One example is an early study of over 500 male and female teleworkers, Duxbury, Higgins and Mills (1992) looked at the early effects of remote e-working on work to family conflict. These findings indicated that men and women who teleworked after-hours, worked significantly longer than those workers who did not possess a computer at home where they could continue working. Gender differences were also found in this study, in that women were more affected by family issues interrupting work, whilst males experienced work interruptions inferring with family (Duxbury, Higgins and Mills 1992: 187). In a more recent large-scale survey, Maruyama, Hopkinson and James (2009) surveyed over 1500 teleworkers examining the effects of teleworking on work-life balance. Findings indicated that gender and having dependants were not significant but 'controlling working hours was the most important ability for sampled teleworkers to achieve a positive work-life balance' (Maruyama, Hopkinson and James 2009: 76). Working effectively with technology continues to be a priority for many organisations (Madsen 2011).

In the pan-European study conducted by Vodafone (mentioned in section 4.0), the efficacy of e-working and how technologies are being utilised for remote e-working are examined. Whilst the use of mobile technology is still limited, importantly, Vodafone found a change in employees attitudes towards using new technologies. No longer were employees considering these developments as 'golden handcuffs' provided by employers to extend working hours, but now recognised as a means to better balance work and personal life. This change in attitude allows companies to provide a 'win-win' situation attracting and retaining 'high-calibre' talent (Twentyman 2010: 3). Appendix three contains a summary of e-working measures that have been reviewed for the current research. In summary measures of e-working tended to focus on survey style questions and these were usually related to flexible working practices and only occasionally, as already discussed, to work-life issues directly. The following section now considers in more detail the benefits and drawbacks to e-working.

4.4 Benefits and drawbacks of remote e-working

Many employers want to consider how implementing e-working practices can improve job satisfaction for their employees, also importantly reduce costs and increase productivity for the organisation (Madsen 2011). Some of the benefits now recognised for employers of implementing e-working include: increased job satisfaction of employees; a positive impact on productivity as measured by the quality and quantity of work produced; reduced geographic constraints on the available workforce; and a higher level of commitment by employees to the employer (Baruch 2000 and Morgan 2004: 350-35). For the individual e-worker working remotely can provide a means to balance work and non-work commitments, through providing the opportunity to work flexibly.

One of the main challenges for organisations when adopting remote e-working is a change of culture. Technological developments have given organisations and

employees a new and flexible means to complete paid work. This affects both working practices and the timeframe within which work can be completed (Morgan 2004). Workers can now find themselves being able to access work remotely from their homes or other off-site locations. These advances have challenged the fixed temporal elements of working practices. For example, the 9am-5pm working day usually based in the office which requires the worker to be present in order to complete their paid work. This requirement to be present in the office to work, rather than to be productive in work is often referred to as presenteeism. Presenteeism more recently has also been defined as attending work when sick, potentially leading to under-performance and a lack of productivity by employees (McCormack 2009: 1). E-working requires the employer to shift away from presenteeism towards a culture based on trust and the delivery of specific outputs (Twentyman, 2010: 4). In turn, supervisors need to engender this climate of trust and help employees deliver against specific work goals to achieve high levels of productivity (Baruch 2000). They may need to manage a team that works entirely remotely and the related performance management systems and management style have to be amended to meet this new requirement (Kowalski and Swanson 2005: 244).

The benefits of teleworking according to Baruch (2000: 38) can be found on three levels, individual (e.g., less work related stress), organisational (e.g., higher productivity) and national (e.g., environmental). Baruch indicates that the benefits need to be considered alongside some of the shortcomings. Shortcomings would include potentially questionable job security, management control over remote employees and a less sociable society. In the survey he completed of 62 teleworkers across five organisations in the UK, most reported that teleworking had a positive effect on improving family and life stress. The survey also provided important observations regarding the skills and competencies for e-workers. When asked which qualities made a person 'fit for teleworking' responses included: self discipline, self motivation, ability to work on own,

tenacity, organised person, self confident, time management and computer literacy. In contrast qualities that would make the person 'unfit for teleworking' were: a strong need for a social life, and the need to be supervised (Baruch 2000: 43).

The challenges for employers considering implementing e-working usually concern 'an acceptance of the status quo, lack of impetus to change; co-ordinating teleworking across an organisation and management control issues' (Morgan 2004: 351). E-workers can also experience negative affects including 'social isolation, lack of professional support and visibility, impeded career advancement, difficulty in separating work and family, and over availability' (Mann and Holdsworth 2003: 198). Work intensification was also found in a study by Kelliher and Anderson (2010: 90) to be cited as having a negative impact on e-workers. They found that work intensified with remote workers extending their working day to include time they would have been travelling and sometimes beyond normal working hours. This extra concentration of work means that employees are working harder and longer because of the availability to access work via technology at home and/or remotely. This is supported by Baruch and Nicholson (1997 cited in Kelliher and Anderson 2009: 86) who found that 'home-based teleworkers work increased hours' beyond those of an office based worker. However, Kelliher and Anderson (2009) argue that the positive impact of removing commuting and work distractions could also lead to increased effort and outputs and higher satisfaction levels. Designing psychological job characteristics are seen as important factors for good e-working and the well-being of remote workers (Kossek, Lautsch and Eaton 2009). The way that e-working can affect an individual's well-being is covered in the following section.

4.5 Well-being implications of e-working

When the effects of e-working are considered on well-being, coping theory developed by Lazarus and Folkman (1984) is relevant. It is how individuals appraise and cope with stressors such as work-life conflict, increased work demands and so on, that might lead to higher or lower stress related illnesses. Lazarus and Folkman (1984) considered that appraising the threat of a situation is important in developing appropriate coping strategies (Jones, Kinman and Payne 2006: 186). Further it is considered through this theory that 'stress involves a transaction between individuals and their external world' (Lyons and Chamberlain 2006: 149). This is relevant to the current research as it relates to the way in which individuals cope with the differing domains of their lives including work and non-work. E-working practices can both alleviate stressors or add to them depending on the individuals circumstances. This section considers the effects of e-working on these stressors and whether or not e-working can ameliorate stress related health issues. It also briefly considers the affect of the physical aspects of sedentary behaviours when e-working, i.e., sitting for long periods of time.

Whilst the benefits of remote e-working are well documented (see section 4.4), the implications for health and well-being are now beginning to emerge. Studies in the last ten years have examined both the physiological and psychological outcomes for e-workers (e.g., Golden, Veiga and Simsek 2006, Hartig, Kylin and Johansson 2007, Lundberg and Lindfors 2002, Mann, Varey and Button 2000, Mann and Holdsworth 2003). Findings from these studies are mixed with evidence showing that the physiological aspects of e-working can be beneficial, including reduced blood pressure when working from home compared to working in the office. However, these benefits can be negated if work continues past normal working hours. Mann and Holdsworth (2003) interviewed 12 journalists who teleworked and found that there was decreased stress when compared to

office based workers but also increased loneliness. These teleworkers also experienced increased irritability and negative emotions, such as worry. This was attributed to social isolation and being unable to share the problem with colleagues (Mann and Holdsworth 2003: 203).

Adding to these concerns and according to recent research 'Musculoskeletal disorders (MSDs) are one of the leading causes of work related ill health and sickness absence within the UK' (Sang, Gyi and Haslam 2011: 419). Sang et al. conducted a series of semi-structured interviews, across four organisations revealing that some roles (e.g., peripatetic workers) may be affected by poor posture attained from working long hours and using the car as an office. This included the use of mobile phones and laptops. A further study of pharmaceutical workers by the same authors reveals that long working hours may lead to musculoskeletal problems, particularly occurring after prolonged periods of sitting (Sang, Gyi and Haslam 2010: 108). The pharmaceutical workers reported low back pain (67%) and nearly half reported neck and shoulder pain, other injuries included wrist, hand and elbow pain (Sang et al. 2010: 112). This research concludes that occupational health services and interventions need to be provided to those who work remotely. Restoration from work may also be an issue for remote workers and this is now discussed.

Whilst teleworking can provide a means to reduce stress it can also lead to over-work. It has been found that remote e-workers may experience overlap between work and home, thus reducing the restorative effects of home (Hartig, Kylin and Johansson 2007). Hartig, Kylin and Johansson (2007: 231) report in their study of 107 teleworkers that 'having a separate room for telework appeared to ameliorate spatial but not temporal or mental overlap of work and non-work life'. A possible problem of working at home means that the overlap caused by physically working at home can cause mental health related problems including over-work. For example, Hartig, Kylin and Johansson (2007) found the

psychological aspects of work, such as continuing to think about work may still remain after the computer has been switched off. Home is seen as a place of restoration and to mix work and home activities together in the same location may well have an impact on well-being. However, in a further study by Kossek, Lautsch and Eaton (2006) of teleworking professionals, they found that increased autonomy through teleworking resulted in a lower incidence of depression in women. Kossek, Lautsch and Eaton (2006: 362) consider that teleworking may provide women with the flexibility to control their work so they have the opportunity to be involved in both work and their family lives, giving a higher sense of well-being. There are a number of factors that can be considered to increase well-being including employee engagement and these are considered next.

Job satisfaction and organisational commitment can be contributory factors that are important for the well-being of e-workers. Kelliher and Anderson (2009: 89) conducted interviews with 37 flexible workers, who worked remotely or reduced hours. A theme that emerged was the intensification of work. As discussed in the previous section, one of the negative impacts of e-working is the possibility of over-working or working for longer hours than would normally be carried out in an office based environment. Kelliher and Anderson (2009: 63) found that 'remote workers experienced work intensification through greater extensive and intensive effort'. However, they also experienced higher levels of job satisfaction than those workers without flexible working arrangements. This willingness to work for longer seemed to stem from a sense of gratitude towards the employer for providing the flexibility. In the same study remote workers were found to have slightly lower stress levels than their colleagues who did not work flexibly. Stress was not measured physiologically but only by self report which is a limitation of this study. Job satisfaction is an important part of employee engagement and studies are now reviewing how retention rates can be improved through the use of e-working practices (e.g., Golden 2006).

Research (e.g., Golden 2006) has also examined the intentions of e-workers to quit their jobs. Job satisfaction often relates to turnover and given that e-workers achieve high job satisfaction it could be expected that intention to quit this type of job may be lower than for office based workers. Golden (2006) researched 393 teleworkers, focussed on work exhaustion and how this may relate to organisational commitment and staff turnover. Golden found that working remotely was associated with lower turnover intentions and a higher commitment to the organisation. It was postulated that remote working helped teleworkers to conserve energy they might otherwise use in an office environment. They were effectively avoiding contact and, therefore, creating a psychological distance from others (Golden 2006: 178). As can be seen in these contrasting studies the reduction in social contact can have both positive and negative effects for remote e-workers. While it could be that the personality type of the individual may mediate these outcomes, no research was found in this area to consider this possibility. Other factors may include positive and negative work environments which may also affect employees preferences to work remotely or in the office. This area needs further investigation to examine the moderating factors and employee attitudes in detail.

E-working has many features which can be seen to be compatible with improved work life balance. The next section reviews studies in this area.

4.6 E-working and work-life balance

The ability to work remotely is now provided by many organisations alongside other flexible working options. The UK government in 2006 (the Work and Families Act (HC 2006: 65) provided legislation indicating that those parents with children under the age of six could request flexible working arrangements with their employer, this has now been increased to under 16. Around the same time, remote ICT solutions continued to improve with facilities for workers to access

work files, email and other facilities such as video conferencing outside of the office. Remote access to work via technology has played a part in over-coming work-life balance issues for organisations wishing to retain skilled employees who may be returning from maternity leave and need to consider family arrangements. For some parents this provided a release from the restrictions of office based working, providing the organisation was able and willing to provide the appropriate facilities. However, there are negative impacts as shown by some studies into work-life balance, gender and teleworking (e.g., Hilbrecht, Shaw, Johnson and Andrey 2008: 454). These indicated that whilst teleworking provides the ability to combine the dual role of child care with teleworking, this resulted in very little time for personal leisure activities. They found that any spare time for females was re-allocated to housework or paid employment as opposed to time for themselves.

Gender roles have been explored further in relation to work-life balance and teleworking. Sullivan and Lewis (2001: 133-134) in a series of interviews with 14 e-workers and their co-residents (partners) found that perceptions between genders differed. Both genders reported a similar number of advantages to e-working, however, the content differed. Women cited managing their household tasks and child care situations as primary advantages, whilst males cited having quality time to be with the family. Sullivan and Lewis (2001: 134) indicated that females associate the home with paid work, whilst males considered working from home as 'being able to help out'. This a subtle difference but means there is less emphasis by males on what maybe considered the 'feminine connotations' of working in the home environment. It is clear from the discussion of the benefits of teleworking (see section 4.4) that improving work-life balance is an objective for many people both male and female. However, it must be considered that remote e-working is not just a work and family flexible working arrangement. Many organisations now expect employees to use remote based technology, such as smart phones and Blackberrys, to keep in touch with work

both inside and outside of work time (Vernon 2005). This has been exacerbated by a global culture where work needs to be completed with business contacts across the world working different times, meaning that contact may be required at all times of day and night. There has been very little research into the effects of using mobile technology. Hislop and Axtell (2007: 34) highlight the need for more research into the affects of working in differing remote locations, other than home. Remote technology provides ease of access to work, however, the effects of this on managing the boundaries between work and personal lives for e-working employees is now considered in the following section.

4.7 Managing boundaries, management style and autonomy

Technology provides a spatial link between the work and home environment. These boundaries can become blurred, with flexi-time and flexi-place working. Whilst e-working has been shown to have some positive effects, particularly for work-life balance, improvements in productivity and reduced stress levels, plus positive environmental impacts, there are some aspects which can be considered to be negative. E-working could lead to higher levels of autonomy for the worker and lower stress, however, this may depend on their job role and to a degree the level of trust given by their line manager. Low control or autonomy over work can lead to higher levels of stress experienced by the employee (Karasek and Theorell 1990).

Kossek, Lautsch and Eaton (2006) examined a group of 245 professionals' use of teleworking and their perceptions of job control and boundary management strategies. They found those who separated the boundaries between work and family and had control over where and when they worked reported positive individual well-being (Kossek, Lautsch and Eaton 2006: 361-362). One further important finding from this study was that teleworking may not in itself provide positive well being or reduce work-family conflict for professionals who already

experience high levels of job autonomy. Clear and Dickson (2005: 225) found those more senior in the organisation were given more autonomy to organise their own working times and workloads. Kossek et.al (2006) found that being given the trust to telework supported high levels of autonomy and could be fulfilling and productive for both individuals and organisations.

Trust is seen as a key factor when working from home because managers have to allow individuals to work flexibly but they also need to maintain control and communication channels. Kowalski and Swanson (2005: 240) consider that critical to the success of teleworking is top management support and formal policy followed by supervisory support and managerial training, including the use of informal and formal communication skills. The employee, in turn, requires support from the family and the setting of work and family boundaries, which may include employee training in teleworking. Employers can ameliorate the impact of these stressors and policies in e-working can be key to the success of organisations adopting e-working. The next section reviews how policies can assist both employers and employees to gain the full benefit of e-working.

4.8 E-working policies

The growth of e-working has not necessarily been supported by policies and procedures despite the popularity by many organisations providing access to remote working. Clear and Dickson (2005: 228) found that over 96 per cent of medium sized firms have remote access to enabling technologies such as email and the internet. However, organisations surveyed also reported concerns over security and possible high levels of investment in technologies, but the overriding disadvantage reported was a 'lack of employee supervision' (Clear and Dickson 2005: 229). Many organisations have developed policies on flexible working arrangements to meet government legislation but these do not always meet the requirements of employees working remotely using technology.

It is essential that employees know what the expectations are when they are remote e-working. These should be clearly defined, so that the psychological contract is understood (Morgan 2004). Misunderstandings and misinterpretations of what is required from the e-worker can lead to a break in trust and dissatisfaction for both the employee and the employer. Kowalski and Swanson (2005: 240) consider that appropriate support is required from the organisation as well as the need to provide training in order to produce effective e-workers. Clear and Dickson (2005: 229) found little evidence of teleworking training programmes in their survey, indicating that senior managers may not fully realise the need for staff to become competent e-workers so they may achieve the full benefits.

A policy for e-working may cover flexible working options but other issues need to be included as well, such as: security of data, access to work files, the provision of appropriate IT equipment, health and safety, legal issues plus the number of working hours and related health aspects. Working from home may involve other factors which need to be considered, for example, is it permissible for parents to take a break from work to collect children from school? Can an e-worker take time out to exercise? Social isolation should also be considered, so how many hours can be effectively worked from home? How will communication with other team members be maintained? Many organisations now have work-life balance policies but again these need to be considered alongside an e-working policy.

Policies for remote e-workers are likely to emerge as e-working grows in popularity and organisations need to ensure that issues such as security and data protection are maintained. The psychological and behavioural aspects also need careful management and the psychological contract is an important facet of

retaining skilled and talented employees. The following section concludes this chapter with considerations of possible future developments for e-working.

4.9 Conclusions and the future for e-working

E-working has developed rapidly over the last decade with more employers and employees embracing the challenge of alternative working styles and practices. Nilles (2007: 3) considered that 'technology has served as a primary red herring: the excuse why it couldn't possibly be suitable for our organisation. The technology was said to be too expensive, or too complicated, or too unreliable, or too insecure for our uses.' Face to face interaction may still be required for some attributes of work, however, the case for using 'poor technology solutions' as an excuse is no longer relevant. It could be argued that technology has reduced in cost, is more mobile and available to increased numbers of users, has increased in reliability and has many security driven features, including securing data for remote usage. Organisations need to consider the obvious benefits of mobile remote workers including more satisfied and productive employees. Communication methods using technology has also improved rapidly and it is now possible to attend virtual meetings retaining an element of face to face benefit. These methods have helped to reduce environment costs and associated expenses for the organisation. The mobile workforce is now a reality for many organisations.

Future technology holds out some interesting potential changes in how technology can be accessed. For example, unified communications will mean that technology devices, such as, laptops, smart phones and Personal Digital Assistants will start to be accessible from multiple devices. This may serve to improve the speed of business processes and provide the 'user' with a variety of means to access their information at any given time. Machine to machine interaction is a likely future development, whereby machines become more

intelligent and are able to pass information to each other without specific human interaction. These new smart technologies will have an effect on the remote e-worker. What is known is that in order for organisations to maintain a global competitive edge they should consider the impact and requirements on the mobile workforce (Twentyman 2010: 14).

4.10 Summary

This chapter has considered the terminology used to cover aspects of remote e-working and the benefits and drawbacks of e-working for individuals, supervisors and organisations. The effect of e-working on health and well-being has been shown to be largely positive. E-worker productivity is usually reported as good and supported by high levels of job satisfaction and employee engagement. Current trends suggest that e-working is going to increase in popularity both for employers and employees. The challenge will be to keep a pace of technological developments and ensure that these are aligned to both improved working practices and organisational policy to ensure there are benefits for employee well-being, efficiency and productivity.

Chapter Five: General Methodology

5.0 Overview

The previous chapters have reviewed the literature and provided a summary of the existing measures in work-life balance and e-working. This chapter continues to provide the rationale for developing the E-Work life scale and the scale development process. Scale development is a specific methodology and the purpose of this chapter is to set out the process, detailing how this has been implemented and interpreted in the current research.

5.1 Rationale for the research

The rationale for the development of the E-Work life scale is based on the increasing impact of technology on work and non-working lives, well-being and job effectiveness. E-working is usually associated with the positive affects of improved productivity, flexible working hours and reduced commuting (e.g., Baruch 2000). More recently, however, the negative pressures surrounding e-working have been linked with poor well-being which could affect job effectiveness (Hartig, Kylin and Johansson 2007, Mann and Holdsworth 2003). The development of the E-Work life scale will develop an understanding of issues in work-life balance, well-being and job effectiveness for e-workers, managers and organisations. The scale will help to identify areas for improvement, ensuring the benefits of e-working are fully realised.

E-working has increasingly been studied (e.g., Duxbury, Higgins and Mills 1992 and Sullivan and Lewis 2001) for its effects on workers' work and non-working lives, including boundaries between the two, so this ties in well with studies of work-life balance. Communications technology promulgates a working culture of 'anywhere, anytime, anyplace' (e.g., Nilles 2007) and whilst providing instant

access to work, it can also lead to high levels of stress with little time for recovery and no restorative time (Hartig, Kylin and Johansson 2007). The ability to work anywhere and at different times of the day naturally affects the amount of space and time left for other non-work activities. It can also impact on the quality of well-being and, subsequently, the performance of the worker. A study by Lundberg and Lindfors (2002) investigated the physiological aspect of teleworking on white-collar workers. They found that blood pressure was lowered after a week working from home. However, this positive physical aspect needs to be balanced with psychological and social factors that can affect lone e-workers and their communication with colleagues. A study by Mann, Varey and Button, (2000) indicated that remote e-working ultimately works best when organisations have considered how the social and communication requirements of e-workers can be integrated into remote working. Generally teleworking can improve job related satisfaction. Tremblay (2002) found that satisfaction with working from home was generally quite high, this was supported by feelings of greater autonomy. Measuring the impact of e-working when set against work and non-work pressures is now an important development for the study and effectiveness of e-working in the future. Work-life balance has tended to have more scales developed, although these have not been related directly to issues surrounding remote working.

Concepts relating to work-life balance have already been measured by existing scales including; social support, gender issues, blurring of boundaries, long working hours and role conflict (Greenhaus and Beutell 1985, Gutek, Searle and Klepa 1991, Kopelman, Greenhaus and Connolly 1983). Gaps in work-life balance research have been identified (Parasuraman and Greenhaus 2002), including the samples used to conduct the studies (e.g., a focus on more traditional family roles, single parents have not been so well studied). Furthermore, the new E-Work life scales being developed from the current research, will be linked to specific actions which may help individuals,

supervisors and organisations manage related issues before they become detrimental to well-being and impact upon job effectiveness. Providing the evidence for specific actions (actionability) for the scales is an important concept in this research. Many of the previously developed scales do not provide related interventions, for example, the work-life interference scales developed by Gutek, Searle and Klepa; Kopelman (1991), added to by Carlson and Perrewé (1999). Answers to these types of scales may simply show that role conflict is present, or that interference exists, i.e., between work-family and family-work. To provide a scale that is rooted in practical applied policy and theory will allow for suggested interventions to be constructed linking the measures with specific actions.

Measuring work-life balance in the context of e-working will bring a new and relevant contribution to research in both fields. In a recent survey Maruyama, Hopkinson and James (2009) found that controlling working hours for e-workers was important in achieving positive work-life balance. The current research considers working practices, e-working skills and behaviours, and particularly the integration between work and non-working lives.

The scale development methodology is now described in the following sections.

5.2 Research methodology

The research methodology employed for the development of the E-Work life scale was classical scale development (e.g., DeVellis 2003). In the following sections, a description of the process is detailed covering how it has been implemented in the present research. Both qualitative and quantitative methods were utilised. Data collection is covered in section 5.4. Firstly, in the next section an overview of the scale development process is described.

5.3 Scale development

Designing a new scale requires a specific process. As part of the initial scoping of the new scale it is important to define what a scale is and how it will be used in context. DeVellis (2003: 8) considers that 'measurement instruments are collections of items combined into a composite score, intended to reveal theoretical variables not readily observable by direct means, are often referred to as *scales*.' The purpose of devising scales, therefore, is to provide a means to measure behaviours that may not be directly observable (e.g., attitudes, opinions and inner feelings). It is also important the items that make up the scale have a 'common cause' and that they represent a 'shared common consequence' (DeVellis 2003: 11). Constructs are considered as 'not being directly observable or quantifiable', so for the scales to have meaning they should be grounded in theory and be measuring related constructs (Netemeyer, Bearden and Sharma 2003: 7).

Scale development is a precise process and although related to producing a questionnaire, the basis is set in theory. Questionnaires differ to scales in that they cover a broad range of activities, including business applications (e.g., sales or marketing surveys) which are not necessarily based on constructs or related to psychological theory (Oppenheim 1992). The construction of a scale in psychological research usually leads to the production of a psychometric tool, which has been tested and validated on diverse samples. Coaley (2010: 2) defines a psychometric tool as 'psychological measurement'. The important aspect of the psychometric measurement is that it focuses on the attributes of people and their individual differences, whereas, 'scaling is to determine how much of an attribute is present' (Coaley 2010: 4). The key benefit of measuring is that it reduces personal judgments and provides a means to test relevant theories (Coaley 2010: 4). In the current research a number of key theories will be utilised as a basis for the scale development process in work-life balance and

e-working. These theories, including role conflict, work-life interference set alongside job effectiveness and well-being were discussed in the previous chapters three and four.

5.3.1 The Classical scale development method

A scale of items can be developed using different approaches. The main two are Item Response Theory (IRT) and Classical scale development. The main difference between the two is that 'IRT has been used primarily for ability measures, whereas classical measurement theory concerns itself primarily with composites and more specifically scales, IRT focuses primarily on individual items and their characteristics' (DeVellis 2003: 138). For the purposes of the current research the classical approach has been adopted as it involves the development of a whole new scale with multiple items.

The classical method involves a number of key steps (DeVellis 2003). These are summarised below:

- Step one: Review literature and define theoretical basis for the scales.
- Step two: Generate a pool of items for the scale, check for face validity.
- Step three: Determine format for scale and check content validity by checking items with a panel of experts, asking to prioritise important items.
- Step four: Refine and reduce items.
- Step five: Administer scale to a relevant development sample (c.250-300).
- Step six: Evaluate items and complete exploratory factor analysis to check construct analysis.
- Step seven: Complete internal reliability checks using Cronbach's Alpha.
- Step eight: Reduce scale items.
- Step nine: Complete test-retest reliability on a different sample to that used for the development of the scale.

Step ten: Complete Confirmatory Factor Analysis.

Step eleven: Develop standardised scoring and norms.

The current research was exploratory and completed one to eight of the eleven steps. Further steps would be required to confirm the scale and to develop associated norms, which is beyond the scope of the current research as developing norms requires many years of data collecting over a variety of samples.

An important part of devising a new scale is the statistical method of factor analysis. The following section discusses the relevance of this process to the current research.

5.3.2 Factor analysis

Factor analysis is a method used within classical scale development which assesses the dimensionality of the constructs (Netemeyer, Bearden and Sharma 2003: 27). Dimensions are the number of facets that relate to the constructs, for example, intelligence may have a number of constructs which may define what intelligence and how it is constructed. Netemeyer et al. (2003: 18) considers that it is difficult to 'develop good measures without knowledge of the constructs dimensionality'. For the purposes of this research the dimensionality of the constructs of e-working and work-life balance were postulated using themes identified in phase one, through a series of interviews with exemplar e-workers and from the literature in both topics including an analysis of existing scales (see chapters six and seven for details).

Factor analysis can be carried out using two different methods, Confirmatory Factor Analysis (CFA) and Principal Components Analysis (PCA). PCA is normally used as an exploratory technique when first developing a new set of

items for a scale, it helps to identify possible underlying dimensions and commonalities which emerge from the data. CFA is used on a different sample once the scales have been explored and the dimensions identified. This process confirms the underlying dimensions and related sub-scales. For the purposes of this present research PCA was used as the nature of this study is to explore the possible dimensionality as postulated, opposed to confirming already known dimensions.

Whilst factor analysis provides a statistical technique to explore the scale, it is also important how the research can be hypothesized. The next section considers the most appropriate method for the current research.

5.3.3 Inductive and deductive hypotheses

An important aspect to the present research is that the process for devising underlying dimensions related to the theories is an inductive process. An inductive process allows for dimensionality to be explored through factor analysis techniques. However, a deductive process would also be used to test out any dimensions that emerged from the interviews in phase one along with the literature.

To accurately develop a new scale tests of reliability are essential, the following section details how checks of reliability will be utilised in this study.

5.3.4 Reliability

Reliability is an important issue when developing a new scale. There are three types of reliability. These are: test-retest reliability, alternative-form reliability, and internal consistency reliability (Netemeyer, Bearden and Sharma 2003: 43). When devising a new scale it is important that reliability checks are made to

consider the variability both between items in the scale and to also test that when the scale is administered more than once that it retains the same variability of scores across time. Reliability methods can also be used to check that the items are interpreted in the same way each time the scale is administered. For the purposes of the current study inter-item reliability checks would be made using Cronbach's alpha in order to help reduce and refine the items. Refining the items means that those items which have the lowest correlations to each other and therefore, the least relationship to the key dimensions can be removed from the scale. To confirm the scale, test-retest reliability would need to be carried out on a sample not related to the present study at a later date. Alternative-form reliability is when the item is re-paraphrased and used for a second item to check meaning. This type of protocol analysis is not required for the current research as all items were refined through the interviews with exemplar e-workers, so was not carried out as part of this present exploratory study.

The next section covers another important aspect of the scale development process, checking for validity.

5.3.5 Validity

In the previous section reliability was covered which checks for variability amongst the scale items. Validity is associated with the extent to which the scores can be attributable to the items (DeVellis 2003: 49). This means the ability for the scale to measure exactly what it is setting out to measure and to do this as accurately as possible when related to the underlying theories.

In the construction of a psychometric scale there are four types of validity which are important (DeVellis 2003: 51):

Face Validity - the degree to which an item makes sense to the test taker. The meaning should be easily understood from the wording. Poor face validity can lead to misinterpretations and incorrect responses to items.

Content validity - the degree to which the items reflect the theory and concept they are meant to be measuring.

Construct validity - how well do the items relate to the dimensionality of the scales, and is this multi-dimensional (many constructs) or uni-dimensional (one construct).

Criterion-related validity - is used to predict what is being measured. In this case do the E-Work life measures predict poor e-work-life or good e-work-life? Whatever is defined as the criteria for the scales should be used as the measure of their success. If the criteria are not set accordingly, sources of error may arise, leading to false positives and false negatives, so items which look as though they are conforming to the criteria but in fact are just randomly showing relationships with items. It is important, therefore, to set the cut off for criteria appropriately so that random unrelated items do not slip through the process.

All four types of validity are important for scale development and the present study considered all aspects as part of the development process. The following section now describes how the data was collected.

5.4 Data collection: mixed methods approach

The current research used a mixed method approach to data collection involving both quantitative and qualitative techniques. These methods provided the ability to draw on both the depth and breadth of data needed to develop a new scale. Qualitative data was collected through a triangulation method (Gibson and Brown

2009: 58) which employs different qualitative methods to gather data. Several qualitative methods were utilised in the current research, including the analysis of literature and interviews. Additionally, quantitative methods including a large on line survey were used to collect data from a large sample. These would be analysed using quantitative methods, for example, descriptive statistics, factor analysis, Cronbach's alpha and other techniques to explore the findings from the survey results (see chapters eight and nine). This mixed method to support the development of a scale as a psychometric tool is important for ensuring a strong theoretical basis supporting validity. In the next section the research objectives are covered followed by section 5.6 which sets out the phasing of the research.

5.5 Research objectives

The current research had three key objectives, these are to:

- Devise an E-Work life balance scale that is 'actionable', that is actions derived from the scale will provide suggested interventions that could help individuals, supervisors and organisations. (*objective one*);
- Test the validity and reliability of the scale by conducting a survey on a sample from a diverse population of remote e-workers, ensuring that any suggested interventions identified were fully explored with exemplar remote e-workers. (*objective two*);
- Explore self reported associations, identified through the literature between e-working, work life balance, well-being and job effectiveness. (*objective three*).

To ensure that the research objectives were achieved these were split into phases and are described below in the next section.

5.6 Phasing of the research

The phasing of the current research as already described follows a classical method for scale development. Each phase follows the steps as set out in section 5.3.1.

The first phase for the current study focused on gathering and providing data for the development of items for the E-Work life scale. The completion of the E-Work life survey including an exploration of the validity and utility of the scale formed the second phase, whilst the final phase developed suggested interventions.

A prerequisite for this study was to ensure that clear definitions of 'e-working' and work-life balance were agreed with e-workers, this would be carried out in phase one of the research.

The three main phases of the study related to the three key research objectives are detailed below.

5.6.1 Phase One: The development of the E-Work life scale (objectives 1 & 2)

Phase one focused on the development of a bank of items for the first draft of the E-Work life scale. It checked for face and content validity and used exemplar e-workers and experts to validate the draft scale. The stages of this phase are detailed below:

Stage one

This stage would extract definitions of work-life balance and e-working from the literature and employ a semi-structured interview technique with exemplar e-workers, confirming the e-working definition and defining e-working practices.

The interviews would be used to define e-working practices and issues around work-life balance. An initial bank of items would be developed for the E-Work life scale using existing literature and material from the interviews.

Stage two

A review of the initial scale with a panel of subject experts would ensure that the scales have content and face validity. The scale would be further refined following this evaluation.

Stage three

Using a further sample of exemplar e-workers the scale items would be prioritised using a Q-Sort methodology (Stephenson 1953). A Q-Sort provides the means to prioritise and group the items together. Findings from the Q-Sort would be used to evaluate the items refining the scale and a draft version of the scale developed, which would be tested in phase two.

5.6.2 Phase Two: Formulating and testing the E-Work life scale (objectives 2 & 3)

An on line survey administered to a diverse sample of e-workers would be used to test the draft E-Work scale and to collect additional data on job effectiveness and e-working practices, skills and competencies, emerging from the interviews with e-workers and literature review. An existing well-being survey would be conducted as part of the on line survey. This would test the criterion and construct validity of the scale.

Principal Component Factor Analysis would be completed to explore the postulated dimensionality of the scale and to identify any sub scales. Exploratory factor analysis of the scale would provide loadings between items and grouping

of items which would indicate the initial dimensionality of the scale. The internal consistency reliability test (Cronbach's alpha) would then be carried out to further reduce items. A final version of the E-Work life scale would then be produced.

5.6.3 Phase Three: The development of related interventions (objectives 2 & 3)

The focus of this phase would be to explore the E-Work life scale, including self reports of well-being and job effectiveness, leading to a set of suggested interventions being devised. These suggested interventions would be developed, explored and confirmed through a series of interviews with exemplar e-workers. This set of suggested interventions would assist individuals, supervisors and organisations to manage E-Work life issues. This would test the 'actionability' of the scale.

5.7 Ethical issues

Ethical consent was sought for the current research and was granted by the University Ethics Committee in March 2007 for phase one and June 2008 for phases two and three. The researcher adhered to the British Psychological Society's Code of Ethics and Conduct (2006 and 2009) and the Health Professions Council Standards of conduct, performance and ethics (HPC 2008) at all times. Ethical issues relating to the research will be discussed in more detail when presenting each phase. Organisations were approached to take part using a gatekeeper letter of consent, see sample contained in appendix four. Appendix five contains a sample of the consent form that would be used for participants and appendix six contains a copy of the participant information sheet.

5.8 Summary

This chapter provided the general methodology for the development of the E-Work life scale. It gave an outline of the classical method of scale development and detailed the phasing of the present research. The next chapter starts the scale development process by completing a series of interviews with exemplar e-workers. This commences the first developmental stage of the E-Work life scale.

Chapter Six: Phase One, Interviews with Exemplar E-workers

6.0 Overview

The main purpose of phase one of the current research was to explore the relationship between e-working and work-life balance and to commence the scale development process. Definitions of work-life balance and e-working would also be confirmed with the e-working sample. Phase one is split into three stages and this chapter completes stage one of the research. Exemplar e-workers were interviewed and the findings used as a basis for developing and generating items for the E-Work life scale. These interviews were completed in 2006 and it is noted that technology continues to develop at a fast pace. Some technology, such as, smart phones are much more prevalent now in the workplace. However, this was a mixed group of interviewees with some already using leading edge technologies to complete their work, whilst others had more limited access.

6.1 Context and aims for phase one

The main objective of phase one was to commence the scale development process and to develop the draft E-Work life scale. The phase contained three stages, this chapter covers stage one, and chapter seven, stages two and three. There were five specific aims with related outputs for phase one, each stage is indicated next to the aim below:

- Completion of a series of interviews with exemplar e-workers to explore the relationship between e-working and work-life balance, including confirmation of the definitions of e-working and work-life balance. Exemplar e-workers were defined as those having considerable experience as e-workers (more than 1-2 years) and therefore, able to provide expertise in the area of e-working. This sample included all types of e-workers, from those who only

worked remotely and those who partially e-worked, spending the rest of the time office based. These interviews would provide the basis for the development of a pool of items and also explore areas that could be used to develop actions and applied interventions (*stage one*).

- The development and generation of a pool of items for the E-Work life scale (*stage one*).
- Evaluation and refinement of the scale items by a panel of experts (*stage two*).
- Completion of the Q-Sort methodology on the pool of items (*stage three*).
- Production of an initial draft of E-Work life scale (*all stages*).

The next section covers the method used to collect data for phase one stage one via the structured interviews.

6.2 Method: E-working and work-life balance interviews

6.2.1 Materials

Using the literature on work-life balance and e-working, a semi-structured interview was developed. A semi-structured approach was used to ensure that both topics were covered and questions were formulated which related the topics together. The interview was piloted on a two e-workers. Feedback from the pilot was centred on the structure of the questions and these were re-adjusted accordingly. The interview was developed in a form which could be used for three types of interviews, face to face, by telephone or emailed to the interviewee and completed without the presence of the interviewer. The interview questions were split into six sections:

- The initial section was 'About You' and requested demographic details (e.g., age, marital status, number of dependant children and so on).

- *Section One* covered 'Your role', a description of the role type, e.g., 'What is your role within the organisation? Can you describe?'
- *Section Two* covered 'Access to Technology', including how much time was spent e-working off site, e.g., 'How do you work remotely, i.e., what type of technology and working practices do you use?'
- *Section Three* covered specific 'E-Working Practices', e.g., 'What activities do you complete through e-working on a daily/weekly/monthly or longer basis? Questions were also included in this section to confirm the definition of e-working.'
- *Section Four* covered the Measurement of e-working practices, including productivity, e.g., 'Do you feel that your productivity increases/decreases when e-working?'
- *Section Five* covered the definition of work-life balance and an exploration of the relationship between work-life balance and e-working, both positive and negative aspects, e.g., 'How do you feel that e-working affects your work-life balance positively/negatively?'
- *Section Six* asked for any further comments related to the topics of e-working and work-life balance.

A copy of the interview schedule is contained in appendix seven.

6.2.2 Ethical considerations

Organisations were approached by means of a gatekeeper letter that asked for their consent to approach employees to take part in the research (see appendix four). When consent was received, individuals were approached to volunteer. Once agreeing to take part interviewees were given a participant information sheet (see appendix six) containing full details of the research prior to the interview taking place. They were asked to sign a consent form (see appendix five) which indicated how the data would be utilised and their right to be removed

from the research should they no longer wish to take part. All information was collated anonymously and no organisation or individual named in the results and findings. The interview document asked for their name, however, this was only to clarify any points for the future analysis, names would only be used with prior permission.

6.2.3 Procedure

The semi-structured interview was scheduled to take 30-40 minutes. Interviewees were given a choice of completing the interview in person or over the phone. In some cases interviewees were unable to do either and completed the questions on their own, then returned the questionnaire to the interviewer via email. All interviews were recorded and transcribed after the interview from either an audio tape, personal computer recorded file or a word document and stored on a password protected computer. The interviews and questionnaires were collated together as one final document.

6.2.4 Participants

Five organisations took part in the research study, three from the private sector, one from higher education and the final organisation from the voluntary sector. Of these companies, one was a major blue chip company, one a medium sized company from the manufacturing sector, a further one was a UK based arm of an American based Consultancy. The other two consisted of a university and a learned society (charity). An approach was made to a member of the organisations senior management to ask if they would be willing for members of their e-working staff to be approached to take part in the first phase of the study. Once permission was granted participants were then recruited on a voluntary basis, but only used for the study if they had recent direct experience of e-working and also had the time to either take part in a 30-40 minute interview or to

complete a questionnaire via email. Twenty participants volunteered but out of these eleven participants took part in the interviews.

6.3 Data analysis

The data was analysed using the qualitative methods of thematic analysis. Thematic analysis is the analysis of data which looks for themes across the data collected, it does not impose a structure nor make assumptions about what might be found prior to collection. This process has been described by Braun and Clarke (2006: 79) as 'a method for identifying, analysing and reporting patterns (themes) within data'. Further, Gibson and Brown (2009: 128) consider thematic analysis as 'the examination of commonalities, the examination of differences and the examination of relationships'. These approaches were used to elicit the key themes to inform the item development for the E-Work life scale and, where relevant, to confirm the definitions of e-working and work-life balance for the research. Categorising of the data into themes has been kept at a high level as these would be most useful to developing specific areas for the scale sub-sets to develop. The data was read and re-read to ensure specific themes were captured.

To code the data each interviewee was given a reference code A1-12 and these are used along with the line numbers from the transcripts to reference the quotations used in the results and findings. The sector is also given as a reference i.e., P= Private, Pb= Public, V=voluntary. In an example of the coding method below, V=voluntary sector, A3 = interviewee reference code and L163-164 = line numbers from the transcript:

'a better quality of life outside of work.' (V, A3, L163-164)

To ensure concordance, the results from the thematic analysis and the coding method were observed by the supervisory team, and also checked by a colleague within the researcher's University. Several changes were made following this process, including the data selected under each theme, these amendments were made prior to the final analysis being completed. This analysis was also checked independently by a colleague from another University to ensure the data analysis was clear and unbiased.

The next section provides the results and analysis from the interviews.

6.4 Results and analysis of semi-structured interviews

6.4.1 Demographics, social and employment variables

Of the eleven participants more than half of those interviewed were female (seven out of eleven), of those seven females, five had one or more children. None of the males interviewed had children. Two respondents cared for one or more elderly dependants on a regular basis. The age range was between 22-65 years with an equal majority in the 22-35 years and 46-55 years categories, with only one outlier in the age 56-65 years category. The mean age for males was 22-35 years, whilst the mean age for female participants 46-55 years.

There was a mix of marital status between genders. Males were either single or co-habiting, none were married. Whilst three out of the seven females were married the rest were either single, co-habiting or did not report their marital status. The split between public and private organisations was six employees in the public sector and five in the private sector, out of those, seven were managers or professionals and the remaining four reported 'other'. In terms of employment, six worked full-time, three part-time (less than 21 hours per week)

and three part-time (more than 21 hours per week). Details of the quantitative analysis can be found in appendix eight.

The next two sections use the data collected from the interviews to provide confirmation for the current research of the terms, work-life balance and e-working.

6.4.2 Defining the term: work-life balance

The interviewees were asked if they had heard of the term 'work-life balance', out of all the eleven respondents only one had not heard the expression. The remaining ten interviewees had encountered the phrase and had a clear idea about what this represented to them personally. For many of the interviewees the following quotes summed up their understanding of what work-life balance meant to them:

'a better quality of life outside of work.' (V, A3, L163-164) and *'it's the ability to balance work commitments with those of your outside life (family and friends etc.)'* (P, A10 L111-112)

Included in the interviewees responses were ensuring work did not adversely affect stress levels and ultimately health, for example *'balancing these aspects keeps my stress to a minimum'* (Pb, A4 L101).

The idea of a *'win-win'* was mentioned in that employers have a committed work force and employees a better quality of life outside of work. The quote below illustrates how demanding work hours can impinge on non-work life:

'The work ethic in the UK has been very intense, a lot of businesses in London City and places like that have wanted more than their pound of flesh and have

expected people to be in the office until 9pm at night. It can be very exhausting and I have seen a lot of people break down as a result of it, so what it boils down to is balancing your life with that of work and a win for both.' (V, A2 L170-174).

Only five of the interviewees had children as dependants and only one mentioned this aspect when related to the definition indicating that work-life balance for her was about managing her young child and that working differing hours had helped to manage this better. Ultimately she noted that without this degree of flexibility then she would not be able to work as many hours. Her quote below illustrates how this has enabled her to fit work and non-work pressures together successfully:

'...it revolves around my toddler, I couldn't have gone back to work to this job if I couldn't have home worked, I am allowed to work 4 days a week, so it is about flexible work. And when he goes to school I want to work compressed or annualised hours. I'll be able to have more time in the holidays, that is all part of work-life balance.' (P, A6, L175-178)

These findings indicate that the interviewees understood the term work-life balance and although the meanings differed slightly with their different contexts, the majority understood it to be about *'striking the right balance between better work and life.'* (Pb, A5, L150). The findings from these interviews suggest that work-life balance as a topic is now well known amongst employees. The majority of respondents had encountered the phrase and had a clear idea about what it meant to them personally. They raised issues around managing stress and the flexibility of their employment hours, some finding hours more difficult to manage than others. Less than half of this sample did not have children as dependants and only one interviewee spoke about managing family commitments under the definition.

In chapter three both business and academic definitions of work-life balance were reviewed. The focus for employers retaining and attracting talented and committed employees by using flexible working practices, thus reducing their recruitment costs and increasing employee engagement (e.g., DTi 2000). Academic definitions focused on the conflict between the roles of working in one domain versus the balance with another, such as home life (e.g., Greehaus and Beutell 1985). From these interviews it can be seen that striking a balance may be to do with individuals own context and way in which they prefer to balance work and home commitments. For some this can be about fitting in a game of squash after work, whilst for others about working flexibly to help manage family commitments. However, as seen from one respondent the pressure to work more hours can be detrimental to health and this is something that she is personally concerned with how to manage when expectations from work are high.

For the purposes of this research the definition selected to base the development of the E-Work life scales is:

'a better quality of life outside of work and the ability to balance work commitments with those of your outside life [family and friends etc]'. Chosen from extracts from the current research of exemplar e-worker interviews (2006).

The next section follows a similar process to confirm the definition/s for e-working.

6.4.3 Defining the term: e-working

When the interviewees were asked about the term 'e-working', the majority of the respondents (seven) knew of the expression 'e-working' and related it to

involving the use of technology to work remotely. Working remotely was summed up by one respondent as:

'Working independently, no-one around and in your own time and space with flexibility.' (Pb, A4, L40).

The location of work was raised by two respondents indicating that it was about working anywhere and at any time, not just about from home. Locations included: working from hotels, airports, in client sites and generally any location that was not the office. This also included working across differing time zones. However, two further respondents suggested that in the business community 'e-working' was referred to as *'flexible working'*, because it is not just about technology but also working practices and balancing work and home life.

Several respondents (three) indicated that there should be no change in performance and access to work systems and files when working remotely. For example:

'To work seamlessly from any given location whether it be bus, plane, train or home.' (Pb, A5 L49-50).

'it is a means of continuing to work remotely but from an office base. It is continuing to use office services from a remote point so that the level of work is not significantly affected by not being around your desk.' (V, A2 L54-56).

In terms of completing work using technology one respondent indicated that *'it doesn't matter where you are, it's what you do that counts.'* (Pb, A5 L52-53). Following on from this one further respondent felt that e-working should *'involve a break from the office being able to do your job from anywhere in the world and*

also to be able to manage clients and contractors, again without the need to have face to face visits.’ (V, A3 L73-75).

Some interviewees (six) indicated that they would e-work for some of their working hours but spend the rest of the time in the office, this was described by one respondent as being a *‘partial e-worker.’* (V, A3 L79). The remaining five e-workers worked all of their hours remotely either from home or other locations.

All of the interviewees were asked to consider a definition obtained from academic literature on the topic of e-working. This definition of e-working was chosen from a meta-search of the literature on definitions of teleworking, e-working and telecommuting:

‘working independently i.e., off site, using technology to communicate with others remotely. For example, it could be defined as ‘any form of substitution of information technologies (such as telecommunications and computers) for work-related travel: moving work to the workers instead of moving workers to the work’ (Nilles 2007: 1).

Without exception all interviewees agreed with this statement was an accurate and succinct definition of e-working. Comments were few, and when given they added meaning to the statement or covered gaps, including:

One manager indicated: *‘an efficiency and cost effective role it can be seen to be a set of costs and has a different set of managerial requirements, i.e., so that targets/productivity can be monitored.’* (V, A2, L83-85).

‘the only thing it misses out is actually delivering systems to remote locations as well, this definition is very much based on the person but there are other aspects,

i.e., deliver your corporate systems to any piece of IT kit, i.e. mobile phone etc. to any part of the world'. (V, A3, L87-90).

Chapter four reviewed the literature on defining '*e-working*'. It was found that there are various different terms used in the literature on e-working, for example, 'teleworking' is used as a preferred term in the United States of America (USA) for what we might consider as '*e-working*' in the UK. Both terms describe the use of technology which enables work to be carried out remote from the normal work place. Teleworking has been further described in the literature to cover several different patterns of working remotely, i.e., the employee may not be home-based all of the time. The range may be very variable i.e., 'hot-desking', full or part-time at remote or satellite offices, the removal of individual desks for employees, 'hotelling', whereby workers spend a lot of time with clients and rely on them to provide office space (Mann, Varey and Button 2000: 669). This finding is supported in the current research as some of the interviewees worked different patterns of hours from variable locations.

Mann, Varey and Buton (2000) found there is difficulty in providing one clear definition of teleworking (e-working). However, after looking at over 50 definitions they found that the definitions relied on three main concepts: organisation, location and technology. These findings relate well to this study, for example, when the participants were asked to define '*e-working*' they mostly related this to involving the use of technology to work and communicate remotely with their organisation. Working remotely was further defined as '*working anywhere and at any time*', locations included: working at home, in hotels, at airports, in client sites and generally any location that was not the office.

In summary, this short quote sums up very succinctly much of what was said by the majority of interviewees in the current study when defining e-working:

'working independently, no-one around and in your own time and space with flexibility.' (Pb, A4, L40).

This quote relates well to the definition by Nilles (2007: 1) which was also confirmed as an accurate representation of e-working by the interviewees. Agreement to this definition by Nilles (2007) now provides a well supported and succinct definition of e-working for the purposes of this research alongside the quote from the interviews.

The definitions for both work-life balance and e-working have now been confirmed through the interviews, these would be utilised for the next stage of scale development (stage two) as detailed in chapter seven. The following section now covers the thematic analysis for the rest of the interview data starting with an analysis of e-working practices.

6.5 Thematic analysis

The data from the interviews were analysed by interview question and also by themes emerging. These themes emerged from all of the data collected and across questions to search for commonality, relationships and differences (Gibson and Brown, 2009: 128). The ten themes that emerged from the analysis of data are listed below, a description of their content is covered in each section:

Theme 1: E-working effectiveness

Theme 2: Role Autonomy

Theme 3: Individual differences, skills and competencies

Theme 4: Integration of e-working with work-life balance

Theme 5: Blurring of boundaries between non-work and work activities

Theme 6: Adaptive behaviours

Theme 7: Trust

Theme 8: Social interaction

Theme 9: Decision making

Theme 10: Productivity, measurement and performance

Under each theme, extracts from the interviewees data is provided to illustrate key findings and where appropriate are discussed and evaluated in relation to current literature.

Theme 1: E-working effectiveness

This theme was developed from interviewees responses to questions which asked them to describe any aspects to their own jobs which could be defined as e-working. All respondents, with the exception of one, named generic e-working practices, such as, teleconferencing, sharing documents, answering emails and so on. However, some did mention recent developments in e-working practices including white boarding (allowing all parties to share ideas on-line), and working remotely on client sites involving access to their office systems. It was also noted by two interviewees that e-working did not replace the need for face to face meetings, mainly for social reasons and the need to keep in touch with local changes that may not be picked up remotely. However, one interviewee indicated the opposite that e-working negated the need for face to face meetings and this was particularly useful managing a diverse base of clients who were based some distance away.

The efficacy of technology to e-work was raised as an issue, for example, one respondent had problems with connection speeds and potentially the implications of purchasing appropriate technology to use from home:

'connection speeds may be slower depending on what connection you have....web traffic can affect this as well and the need to purchase technology, e.g., broadband is often required but this can have tax implications.' (V, A1, L95). Another respondent indicated that *'there are still pockets in the country where broadband is limited and e-work is not good on a dial up connection.'* (V, A2, L146-147).

Further the need to reconsider a new life style and allocated space that fits with e-working was also raised by a respondent. For example: *'you need to have space and if you are in a small house this may be impossible. My husband only has a small portion of my office. Co-working could be difficult.'* (P, A6, L124-126).

The availability of technology and appropriate space to work were raised as concerns and could affect the ability to be an effective e-worker according to these respondents.

Interviewees indicated how they currently accessed e-working facilities. Nine out eleven respondents had access to a virtual environment (virtual team, sharing documents etc.), with a further eight out of eleven using some form of telecommunications, including mobile phones. Fewer had use of wireless technology (six out of eleven), but all had access to the internet via their organisation for checking emails and accessing work files. Seven out of eleven also worked off line. Other technologies that were mentioned were: web-chats, webinars, and MSN (Microsoft internet based services including 'hot messaging').

Respondents were asked to indicate the amount of time spent in a day on a particular e-working activity. An over-riding number of respondents spent a third of their time on email. Writing reports or other documents also took up a third of their time. Teleconferencing was not widely used, with only three respondents

noting that they spent around 20% of their time using this method. Web conferencing was used by three respondents but for no higher than 5% of their working day. Surfing the internet was variable with many noting this would not be part of their normal work but they may do this occasionally to research a project or topic.

From the interview data only those in professional roles (four), used more complex and leading edge technologies to enhance their working practices, including smart phones. It should be noted that the interviews were carried out in 2006 and new technologies including smart phones are now in more general usage. These findings may also show the differences between e-working at a professional level compared to those used by more junior members of staff completing clerical work. However, it should be noted that more managers took part in the interviews than clerical workers so these findings would need to be replicated.

The differing roles of this sample of e-workers emerged as an important contextual issue and this is covered next as a separate theme.

Theme 2: Role autonomy

Role autonomy emerged as a key theme when interviewees were questioned about their roles and the impact on e-working. Respondents provided details of their job roles, level of autonomy and details about how they used technology to e-work effectively. They were also asked about the balance between e-working and their organisational roles. Research literature also supports autonomy as a key issue for e-workers, indicating that 'people with high needs for autonomy may greatly appreciate its [teleworking] benefits: individual ability to work on their own is essential for teleworking' (Baruch 2000: 43).

Some respondents to the current research advised that whilst the balance of e-working was right for now, a change in circumstances or job role may affect their decision to carry on e-working in the same way. It should be noted most of the respondents were referring to working from home, only a small number (3) regularly travelled with their work. It was also noted that someone with less autonomy over their ability to e-work might prefer to work in the office. Having a team also affected one respondent's decision to limit home working to a certain number of days per week, noting that they needed to be visible for staff purposes.

It became clear from this analysis that e-working roles varied between those at a lower level of job role and those at a higher level (i.e., managerial/professional level) of job role within an organisation. Those at a lower level tended to have less access to different types of technology (a home computer) and were restricted when they could use the work-related software, for example, between specific allocated time slots. Conversely, those at a professional or managerial level appeared to have access to various types of e-working technology within their role, and able to use these as and when they required, thus flexing their working hours. The quotation below illustrates this finding:

'it is also about your role in an organisation, the lower down you are potentially the more responsible for keeping it going. There is a temptation to work more.'
(V, A2, L182-183).

An analysis of these roles and working practices of the e-workers interviewed led to a typology being devised. Appendix nine contains details of the classifications related to technology and working practices as found in the current research. The typology helps to categorise e-workers and starts to clarify the different strata within the e-working community. This is useful as it is suggestive that the different levels in an organisation have differing levels of control over when and

what they can use to e-work. This in turn is related to differing management styles and organisational cultures which may permit different levels of trust to employees in terms of completing their work tasks.

This categorisation considers that e-workers can be classified according to an e-working type, that is, frequency of e-working (e.g., from those having access to e-working 24/7, at the other end of the scale to those who are restricted to e-work at certain times as set by the organisation), access to differing types of technology (software and hardware), and related e-working practices. It should be noted that e-working can be carried out within a work environment, such as, roving surgeons using Personal Digital Assistants, or IT workers liaising remotely with a number of contractors. These types of working practices are not specifically related to this study but have been noted. At present only three levels in the classification have been identified but these may be refined when this is considered later in the current research on a larger study.

The following section looks at the theme of individual differences in e-workers and continues to explore preferences in e-working.

Theme 3: Individual differences, skills and competencies

Research by Baruch (2000) suggests that individual differences and, in particular, specific competencies and skills are key when considering requests for home working. Baruch's work with professionals and managers considered how it may be possible to identify an '*effective e-worker*'. It is important to consider that whilst e-working has some clear advantages for both employers and employees, individual differences and motivation can play a part in the success or otherwise of remote e-working. Interviewees were not asked specifically what attributes effective e-workers would demonstrate, this data emerged from an examination of questions relating to being an effective e-

worker. Attributes that emerged included too little motivation, one interviewee quoted that:

'I enjoy coming into the office more than staying at home...I've found that in the past I have been slightly lazy at times, stick on the TV.' (V, A1, L100-101).

Others noted that they had to be disciplined, an *'I'll do it later mentality' and then not do it'*. (V, A3, L133-134) reflects the need to remain focussed when e-working. Not surprisingly the other extreme was also found to be present, that is, too much motivation to e-work outside of normal working hours and not knowing when to stop.

Several interviewees said they had become addicted to switching on the computer and working in the evening, for example:

'I can be on the computer at 2am, this is not good for sleep.' (Pb, A4, L82-83). And one reported that *'mental exhaustion/burnout but that may be more about the role I perform and the company for whom I work – however, e-working definitely impacts because of the instant or easy access it facilitates.'* (P, A8, L95-97).

These comments indicate that motivation to complete work and perhaps personality type may have an impact on ability to be an effective e-worker.

Furthermore, these findings are also not surprising given the variability in individual's preferences and abilities to deal with work demands and stress. Stress models which focus on the ability to take control of the amount of work and the support available, (Karasek 1979), infer that it is not a high work load that leads to stress but that it is the circumstances surrounding the control of that work and whether or not social support is available, that can cause stress related

problems. Theories that relate to motivation and internal stressors (over-commitment) when related to external stressors, (e.g., high work demands) can lead to high effort but not always high reward (Chimel 2000). This is particularly relevant in e-working as work demands and the effort required to complete the work may not be as obvious as they would be if carried out in the office (e.g., staying late in the office) and could, therefore, be overlooked by line managers. Conversely, individuals who are not motivated by working from home, or remotely may under perform and require strong external motivators (e.g., financial rewards) to complete the work as would be expected when under closer supervision in the office.

Interestingly, from this current study respondents indicated they had the balance between e-working off site and working in the office about right for them. Some would like to do more e-working, and one in particular saw it is a skill that needed to be practised and learnt, for example, '*would probably enjoy a little bit more e-working, just so that I can learn, so that it helps me in my career.*' (V, A1, L136-137). This ties in with Baruch's (2000) research that there could be specific competencies for e-working. It was also noted in the current research that a more junior member of staff with less autonomy over their flexibility to e-work might prefer to work in the office where working hours are more clearly defined. Having a team also affected one respondent's decision to limit home working to a certain number of days per week, noting that they needed to be visible for staff purposes.

The next theme looks at how e-working integrates with issues surrounding work-life balance.

Theme 4: Integration of e-working with work-life balance

The interviewees were asked about how they effectively integrated their non-work and working lives when e-working. In particular, the interview focused on how e-working had impacted their lives overall and asked them to illustrate, with examples, both the negative and positive aspects.

All respondents indicated that e-working had improved their ability to work in a more flexible manner. This sometimes resulted in working outside usual working hours, such as on Sundays or in the evening but many said they would prefer to do this in order to prepare for the next day, or for an important work event or deadline. The following quotation sums up this type of response:

'Very useful in improving work and I am a great believer of flexi-time where it is possible to do so, of course, I have no worries about doing some work at home on a Sunday if it is going to pay dividends at work the following day. I can fit my life style in with my private life.' (V, A2, L106-109).

A number of respondents also noted this type of flexible working was important to them in managing their 'other' non-work lives, for example, one respondent noted:

'...[I've] been very successful in improving my relationships too. Good to work out of the office and get back home, yes you are still working but you are with your family.' (V, A3, L113-115).

One respondent also indicated that having increased privacy when working off-site was useful to working practices:

'I could not do my job being office based in the environment we are in at the moment, simply because of the human resources nature of work, being home and being able to work in isolation where no-one can hear my conversations, which could be wrapped around staffing issues, disciplinary issues makes it poignant for me to be away from the office.' (Pb, A5, L80-84). Also worth noting was a preference for surroundings, *'the office was open plan and I could not concentrate, so for me becoming a home worker fairly quickly is a must.'* (P, A6, L82-84).

The majority of respondents further indicated that e-working helped improve efficiency both for work and themselves, for example, being able to work late but from home:

'email is helpful because I don't have to stay in the office to communicate with colleagues in different time zones, I often have teleconferences in the evening which are best conducted from home.' (P, A8, L72-75).

Another example of this was where work could still be completed whilst travelling ensuring that communication is kept with colleagues:

'Quite successful in improving work if you are in an airport or hotel room whilst you are travelling, it does not mean you are completely out of the picture so you can carry on.' (P, A11, L63-65).

Further the following quote shows how e-working can have a positive effect for both the employer and the employee:

'No lost days from work working off site and being flexible meant I was able to deal with family emergencies and bereavement. This has had a very positive effect on my life.' (P, A10, L84-86).

Overall, respondents felt e-working had improved their work and non-working lives significantly. Their responses could be divided into two categories, those where e-working has positively affected their personal lives in some way, and, those where work processes have benefited from flexible working practices associated with e-working.

The majority of examples cited (12 out of 17) related to improvements in interviewees' personal lives through working either at home or utilising e-working technology. In summary these improvements included:

- releasing time to be spent with families;
- reductions in time spent commuting;
- reduced stress, as work could be done in advance of deadlines;
- avoidance of extra child-care requirements e.g., taking less time off as annual leave;
- ability to flex working times;
- doing the household chores at different, less busy times;
- aided time for personal or domestic duties (e.g., letting the plumber in, attending doctors appointments during the day etc.);
- reduction in time off sick;
- the ability to e-work providing extra ability to work more paid hours;
- reducing time spent off work as sick leave.

The majority of respondents indicated that there were few negative aspects associated to e-working and their work-life balance. These are discussed where they occur under each theme.

The interaction between different domains continues in the next theme with the integration of work and non-working lives when e-working looking specifically at the blurring of boundaries.

Theme 5: Blurring of boundaries between work and non-work activities

This theme emerged from many comments made about how the boundaries between home and work could merge when e-working and in particular how these impact other family members, health and the ability to work 24 hours a day, seven days a week. The interviewees in the current research did show some signs of over-working and indicated the need to manage home and work boundaries carefully.

Addiction to e-working, for example, ignoring family commitments, preferring to work instead, not knowing when to stop working for respite so that it damages health, including logging onto to work past normal hours and over-working are all examples from the interviews of where e-working has can outweigh the benefits of flexibility. The detailed examples below from the interviewees illustrate that the pressure to work and review emails can impact on non-work hours causing the e-worker to work into the night and bypass boundaries between work and home. Some of this might be choice but it still has a limit on the amount of time left for non work and respite from work activities:

'You can become addicted to it, it is there so you just start work, that is, when you return from holidays you know you will have a large number of emails sometimes over 300, so I nearly always spend time filtering emails before I go back to work.' (Pb, A4, L77-83).

'Too long working into the night albeit that can be negative against your life, this depends on whether this is enabling you to catch up on work. This then relieves stress as you have the ability to react quicker.' (Pb, A5, L113-115).

A further respondent reported that extended hours e-working could be to do with the pressure from the organisation, however, having access to e-working facilities makes this worse:

'mental exhaustion or burnout but that may be more about the role I perform and the company for whom I work, however, e-working definitely impacts because of the instant or easy access it facilitates.' (P, A8, L95-97).

These comments suggest that whilst technology makes work flexible and easier to access, it is still important to manage boundaries. The ability to over-work is perhaps a temptation for those who are highly conscientious and motivated in completing their work. The blurring of boundaries has arisen as a key issue for e-workers and a clear distinction between work and home appears to be essential to ensure that overlap does not become negative. Many of the respondents advised that they can become better at managing their home and work lives as they developed their e-working skills. However, one respondent noted that constant access to work can lead to exhaustion:

'the blur between work and home is badly affected. I work 12-14 hour days as a norm and it is impacting my well-being. Clients can always reach me, by mobile or email. I get no time to recover from jet lag or early morning trips to the airport and long days consulting on client sites. I don't think I'm a productive because I'm so exhausted.' (P, A8, L83-88).

The blurring of boundaries was predicted by most respondents (7 out of 11). One solution offered to this 'blurring' was consideration of 'contracting' with partners

regarding the number of hours (and when) worked at home. Individual differences in both their ability to e-work effectively and the way they manage this with relationships are noted as important factors in the success of e-working policies in the future, for example:

'Depends on individual, can't be enforced you enforce and it will have an effect on their life in general. Not for everyone. Should not be imposed on everyone. Differing personalities may be affected by home working.' (Pb, A5, L157-159)

Managing boundaries is a strong theme through this research and the following quotations sum up the need to take responsibility when e-working:

'No, blurring will not get stronger, it is pretty much there, certainly with me personally I know where I want to put the boundaries, and getting used to doing this e-working thing, you need to be clear in your mind where you need to draw the line for yourself. So I don't see it getting worse. A new e-worker might have more difficulty setting boundaries, whereas a more experienced one can say I know I've got access but I won't do it now.' (P, A11, L118-122)

'[e-working will be] More prolific, but it will be how the individuals can cope with that and compartmentalise these different aspects of their life.' (V, A1, L169-170).

'I have been advised that I need to draw strict boundaries to get my life back'. (P, A8, L121).

Interestingly, one respondent indicated that working from home had improved their partner's understanding of their work and now took more of an interest. Although this would probably need to be tempered with the amount of time spent at home working. For example:

'My partner doesn't know the details of my work but takes more of an interest in what I do. I cannot talk about the sensitive issues, but is quite good for family to see what I do. Brings them closer to what I'm doing and understand the pressures better. Can use them to bounce ideas off them get new ideas. There is a limit, work should not become the family life. I'll contract with my partner on the hours done flexibly.' (V, A2, L188-193).

Studies of both work-life balance and e-working have been concerned with the overlap and management of the boundaries between work and non-work time. This is particularly relevant for those who work from home or travel with work on a regular basis. For example, teleworking as discussed earlier has been found to be very productive however, the down side to this may be that some of this extra work is conducted in non-work allocated time.

Comments from the current study reveal the need for individual's to manage their time and to ensure they are clear when they are working and when to close down the technology and put the focus back to non-work activities. Jackson and Van der Wielen (2003: 41) indicated that male's obligations towards home life are fairly well defined and that males generally take on less tasks than women in terms of caretaking and domestic work. Women are further limited by the inability to work more overtime, this in itself can be career limiting when working extra hours and showing commitment are seen as important factors in career progression. Jackson and Van der Wielen (2003: 41) concludes that the subtleties of 'boundary analysis in social life need to be reconsidered. The differentiation between paid and unpaid work is not helpful and that it would be more productive to 'open the door between work and home'.

The next theme examines how e-workers have begun to adapt their behaviours to enhance the benefits of e-working.

Theme 6: Adaptive behaviours

This theme has emerged out of several comments relating to the adaption of behaviours when e-working. Those workers who have been e-working for some time appear to have developed their skills and behaviours to manage the overlap between work and home, an example from one respondent is shown below:

'The smart phone is left on and I can see emails constantly but I don't always respond straight away.... I don't do 24/7 like I thought I had to'. (Pb, A5, L120-121). Another reported that *'I'm very good at setting boundaries. I used to be worse but now that I live with my partner I am stricter. I have had to change my working patterns. (V, A3, L141-143).*

It is, therefore, important in managing boundaries between work and home that certain rules are implemented, which allow time for non-work activities to be completed. The blurring of boundaries has arisen as a key issue (see theme 5) for e-workers and a clear distinction between work and home appears to be essential to ensure that overlap does not become negative. Many of the respondents advised that they can become better at managing their home and work lives as they developed their e-working skills.

It is also clear from the interview responses that there is a need to have good planning when e-working. For example, it was better to schedule in advance specific work for completing when working from home. There was also a need to plan when time would be spent in the office versus off site, so that face to face meetings could be planned. One respondent mentioned that she had successfully managed her children's expectations when she was working at home:

'My young children understand that mum has to work at home sometimes and they have adapted to this working pattern. They know I'm working and they leave the room to watch TV etc. I make meetings on my office days so I do plan ahead. I also make appointments for doctors for days at home, it is important to do this.' (Pb, A4, L111-114).

This comment however, does highlight that there can be interference from family whilst working from home and that this 'dual tasking' may affect concentration unless effectively managed by the e-worker. Most responded in the same way indicating their priority would be work and would not put family first unless a specific family crisis arose or had been planned in advance. One respondent commented that their work culture was such that long hours working both in and out of the office were the norm, so work would immediately take priority over any other commitments.

Various strategies for coping with the mix of work and home responsibilities and priorities were noted such as, completing a 'things to do list', *'decanting everything from my brain in the morning, if there is the washing to do, then log on to the computer, [I] mix two together'*. (Pb, A5, L163-164). This respondent also used a type of software package which triggered her to take a regular break i.e., *'I love you' software, to prompt you to care of yourself, interrupts your session every 20 minutes to tell you to walk around the house take a break etc.'* (Pb, A5, L165-166). These provide examples of interventions that could be related to the E-Work life scales 'actionability'.

Another respondent indicated that a social network at home was useful when home working:

'it is crucial to be disciplined when e-working. My home work is always a priority, but I am always able to combine the two effectively, with good support from my

husband. I think without a good home network, this might prove difficult for some.' (P, A7, L160-163).

Thus, social relationships were found to be important in this study and in general work-life balance studies support this view in that social support mechanisms are vital to allow many women to work (Carlson and Perrewe 1999). Theme eight covers this area in more detail.

Some experienced e-workers appear to have adapted their behaviours and drawn boundaries around when it is suitable to be contacted out of hours and when it is not, for example:

'I have been phoned on a beach in India to say something has gone wrong. Much rather know about big issues, rules to my team are don't bother me with unless it is substantial. Could say that is intrusive, but I put myself up for that I just like to know' (V, A2, L176-179).

The responses for this section focused on the need to have good planning when e-working. For example, it was better to schedule in advance specific work for completing when working from home. There was also a need to plan when time would be spent in the office versus off site, so that face to face meetings could be managed. Family, social and leisure time also needed to be considered and the exemplar e-workers indicated that planning all of these activities ensured that a balance could be maintained.

The next theme looks at the important issue of trust.

Theme 7: Trust

Trust is a theme arising from the data collected across all sections of the interview. Kowalski and Swanson (2005: 243) indicate that 'probably the most critical factor for success in teleworking is trust'. One area which arose frequently was the difficulties of building trusting relationships between peer groups or between managers and staff when face to face contact is limited.

One interviewee described her feelings of trust as being:

'you do not build as trusting a relationship as you might do if you were working together.' When you are physically with someone you have a little bit of banter – when on the phone more business-like.' (P, A6, L92-95).

Electronic networks cannot fully replace the need for personal interactions and the related artifacts taken for granted in office work. This means it is necessary for joint goals and objectives to be created in a culture of trust to e-work effectively, such as 'performance reviews that are based on what teleworkers have accomplished and which goals have been met' (Kowalski and Swanson 2005: 244). This ties in with issues around the trust required to manage decentralised teams. The interviews in the current research found that those at a lower level in the organisation felt less in control and that support was not always available when they needed it for home working, as shown in the quotations below:

'There appears to be some flexibility, one license between two people but there are some restrictions [on times].' (P, A12, L67-68).

'Start times are so early it may mean there is no-one there to support queries. No support out of office hours.' (P, A12, L79-80).

On the theme of managing trust effectively one interviewee advised that *'There is a need to plan work more precisely and trust is involved in e-working practices so how these are monitored is important.'* (V, A3, 172-174).

Clerical staff from one private sector organisation said that whilst all their work was completed through teleworking they were monitored very closely by IT systems, which checked their log-in times as well as the amount of work completed. They also have limited times when they could access the software. Baruch (2000: 37) considers that some 'telework situations present a case where an invasion of individual privacy becomes feasible through simple control mechanisms.' This differed considerably to the professional/managerial group of e-workers who tended to have more control over when and how they worked remotely, for example one public sector project manager quoted:

'You feel like your own boss, you can manage time yourself.' (Pb, A4, L48).

The current research also reported improvements to work which has benefited from e-working to include: working outside of normal hours to prepare for deadlines; encouraging managers to work longer hours, then allowing them to recoup this time at a later date, or working from home to complete the extra work; sharing documents; working from home allowed for a reduction in the amount of sick leave taken, as opposed to when having to travel to work. However, it was also noted that some work is more amenable to e-working, such as project management, whereas, other roles are more difficult to supervise. This is illustrated by the following two quotations, both from the same interviewee:

'I rely on [staff members] trust, project management is easy to do, using tried and tested methodology, Prince 2 for example.' (V, A2, L138-139).

'Some deliverables are tangible others not so, and that is where the fear factor comes in, with some cultures that don't want to go the e-working route, because there is a cloud of mis-trust'. (V, A2, L135-137).

These findings also relate to theme two, role autonomy, whereby differing roles were found to be more compatible with e-working.

There is no doubt that there are advantages to the employer as well as the employee when e-working is utilised effectively by employers. However, there is a need for the manager's of e-workers to adjust to the differing demands that e-working practices have when managing staff remotely. They may well have been used to managing staff under one roof and with supervisors to check daily work, however, e-working now means a disparate work force who communicate mainly via technology. These demands are both psychological in terms of adjusting to a different psychological contract engaged with employees, involving trust that the work will completed both to the quality expected and in the timescales required; but also the practicality of having differing staff functions in a diverse set of locations (Jackson and Van der Wielen 1998: 45). It is worth considering that new technology can create differing business models and working practices for both the managers and their staff, as Handy considered in the 1990's this virtual environment would need a 'turnaround of thinking' (Handy 1995 cited in Jackson and Van der Wielen 1998: 11).

As already mentioned in this section face to face interaction can be reduced through e-working, the next theme looks at the issues surrounding social interaction.

Theme 8: Social interaction

Social interaction with colleagues is a theme which emerges from research into e-working. Kowalski and Swanson (2005) found that communication and support from colleagues were two critical success factors in successful e-working. The third factor was trust which has already been covered in the theme 7. Social isolation has also been covered by Baruch (2000) which could be related to personality type. As already mentioned in theme three, individual differences, Baruch indicates that those who have a 'high need for a social life' may find e-working more difficult (Baruch, 2000: 43).

In the current research being able to manage social interaction when away from the office and missing social cues when e-working were raised by two respondents. One respondent was very positive about the social aspect indicating that:

'some say they miss social company but I don't feel isolated. The husband is at home.' (P, A12, L75-76).

Whilst the second interviewee mentioned that e-working practices, such as teleconferences were not always easy to manage, particularly if an individual decided to dominate the call, no visual signals were available to close down this person.

'the more vociferous on a teleconference are harder to shut up, no visual signals to use, for example, a kick under the table. You do need a very strong chair to run teleconferences.' (P, A6, L98-100).

Another interviewee indicated they would probably prefer to work in the office:

'I'm probably a person who would enjoy coming more into the office rather than staying at home.' (V, A1, L100-101).

These findings suggest that e-working may not be the first preference for some employees. Kowalski and Swanson (2005: 242) indicate that 'new communications skills are necessary to prevent teleworkers from feeling isolated.' This is apparent from the current research (see theme one) in that skills to manage e-working practices, such as teleconferences are required, as are skills to effectively manage time spent when home working. New technologies are now providing easier access face to face such as Apple's iPhone which uses FaceTime. This provides the means to see the other person when speaking and therefore connect with body language and social cues more easily. Video conferencing is becoming more accessible providing the means for home workers to take part in meetings which otherwise they may have only been able to interact verbally. Social networking internet sites have opened up on-line access to socialising and whilst these were not considered in this research it is likely they will continue to become popular as a remote means to interact with others.

The next theme looks at how decision making is affected by e-working practices.

Theme 9: E-working and decision making

Decision making is a wide topic and this study did not seek to address the issues of decision making in general, only those that may relate to e-working. There was very little response from the interviewees so it is difficult to comment other than most respondents generally felt that e-working did not affect the quality of decisions made, the quotation below sums up many of these responses:

'any decisions I have to make regarding my work are not affected in any way by e-working. This is because the communication link between my home and office is outstanding, along with very efficient feedback and a constant link during my working hours. I have instant access to all emails that are sent as circulars to the office and able to communicate any problems by email or phone with an almost instantaneous response. Without this, e-working might not be as effective, and could subsequently fail'. (Pb, A7, L106-112).

Several of the respondents indicated that the quality of decision making was not affected by e-working and that it provided greater access to real-time and information 24/7. E-working allows decision making to be made outside of normal work hours due to the availability of information. The quality of this type of decision making could be questionable, given the time of day and whether or not other parties have been adequately consulted, for example, a respondent questioned whether *'a midnight decision is a good one'*. (Pb, A5, L129).

It may also be that decision making using technology requires slightly different working practices, such as scheduling video conferences with remote e-workers. What emerged as being important from the interviewees responses was to utilise good communication skills, so that all relevant stakeholders can be involved. Proximity can also be a factor which may effect decision making as illustrated in the quote below:

'Because in my team we all work off site (not always from home) and, or e-work no decisions are taken without each other. My boss is based with one of colleagues in ...and clearly they do have a closer relationship than with anyone e else.' (P, A6, L129-131).

One respondent indicated that *'the decisions would have to be the same both on and off site'* (Pb, A10, L81). Whilst another felt that e-working would affect

decision making: *'Yes it would. I think inevitably part of any work decision in the knowledge economy'*. (P, A8, L91-92).

Access and availability of knowledge have arisen as key issues from the interview data, in making decisions and communicating with appropriate colleagues and clients. The current research has highlighted the role of email and other messaging devices to ensure that information can be communicated and it is likely that decision making has been speeded up by this medium. There is no research in this area to evaluate these findings against at this time.

The next section looks at the theme of productivity and performance.

Theme 10: Productivity, measurement and performance

Productivity and work performance are probably two of the most researched topics in the area of e-working. The process for measurement and the actual measures of e-working were found to be variable in the current study. Measuring the success of e-working was reported by respondents in several different ways from formal measurements, for example, regular surveys, informal self measures to the number of emails completed in a day. For those who reported measuring e-working there were some differences in monitoring; those in Managerial or executive roles tended to measure themselves and report this back to their organisation. Whereas, those in lower level clerical roles are managed directly, via specific work completed and sometimes accessed on-line by direct access to their computer systems. It was also interesting to find that several organisations did not measure e-working and in fact did not in some cases recognise e-working practices, for example:

'no my organisation does not officially recognise e-working or teleworking, this is only at the managers' discretion and as such does not measure e-working practices'. (V, A3, L151).

This lack of formal acknowledgement of e-working practices avoids measuring both the effectiveness of e-working but also the affects it could be having on individual e-workers. As discussed in theme three, individual differences, it is apparent that some personality types may be highly motivated to over work, whilst others under motivated and are less productive.

In terms of actual productivity most of the respondents to this study reported their productivity increased, particularly when working from home. The reasons cited for this included:

- ability to lock oneself away and work quietly without interruption;
- working at home was helping to ensure work was completed before going back into the office;
- useful to work off site when writing large documents;
- avoidance of social processes in the office e.g., making tea for a large group;
- avoidance of the problems associated with working in an open plan office such as noise and lack of privacy.

These findings are supported by literature on the topic, for example, in a study comparing virtual, home and office workers carried out by IBM in 2003, it was found that teleworking improved both productivity and job performance (Hill, Ferris and Martinson 2003). Hill, Ferris and Martinson also found that virtual and home working improved job motivation and job retention. However, Jackson and van der Wielen (1998: 40) indicated that working at home is useful for work when longer stretches of time are required to ensure that quality work is produced. Office work, conversely is seen as a series of meetings (of varying usefulness) and other office related distractions which do not provide time for 'incubating' ideas. However, Jackson et al., (1998: 40) also noted that some home workers found themselves more available by working at home, in that they were easier to contact, through email and other remote communications.

One respondent from this study indicated they found e-working productive, but only up to certain point:

'Increases up to the point of burnout, when it decreases. My measures of productivity are key deliverables around client relationship management, process deliverables and writing assignments [such creative tasks, which are most impacted when exhausted.]' (P, A8, L102-104).

It is not surprising to find that some types of e-workers are prone to burn out. In a study by Duxbury, Higgins and Mills (1992: 187) they found that after surveying 19 organisations the spill-over into personal time (i.e., overtime) of those who used a computer at home for work was 'significantly higher than for those without a access to a computer'. Although it has been found that teleworking may reduce some stressors (Baruch 2000) there is a need to ensure a good fit with personality types and individual differences. The competencies for an e-worker (Baruch 2000) are a starting point for understanding the training requirements and personal skills required to become a successful e-worker who can manage their stress levels. This may be particularly important for those in the professional/managerial typology (see appendix nine for typology) who are increasingly using a wide variety of locations and differing technologies to complete their work.

From the current research it was also interesting to note that two respondents felt more productive in a work environment, both indicating that sitting at their usual desk was more productive. The first quotation relates to being psychologically at work, whilst the second relates to the quality of work produced whilst travelling.

'I would say decreases when I'm away [from the office]...it's a psychological or mental thing, you're at work sitting down at your desk, whereas you are in your comfort zone [at home]'. (V A1, 123-127).

Answering emails at an airport may not be as productive as working at a desk in the office, as indicated in the quotation below:

'Actually when I'm e-working I'm not actually as productive as when I'm at my desk. If I'm checking my email at the airport I probably won't be able to be as productive as when at my desk. More productive overall when at my desk.' (P, A11, L90-92).

The first example may tie in with personality type and motivation as covered in theme three of the current research, and the second needing the structure and work ethic and environment engendered by a group working together.

In summary, there was a varying response to home e-working, in particular, it was noted by one respondent that home workers had lower targets than those working in the office because the technology could sometimes slow them down. In this respect there is clearly more work to be done to improve access to the same facilities as office workers. However, it appears for some respondents that a quieter environment in which to work, with less distractions, was more productive, for example, report writing was better done away from the office. The opportunity to work more hours than in the standard office environment should not be ignored as this could lead to health problems later.

This concludes the section on the thematic analysis of the interviews. The next section provides a short summary.

6.6 Summary - interview themes

Ten key themes emerged from the data analysis. Conducting interviews with exemplar e-workers has allowed for an insight into how e-workers operate on a daily basis. There is commonality in terms of a definition of e-working, covering the communication, location and technical requirements and this can be used further to support the scale development as the research progresses. Working practices and styles appear to differ depending on a range of factors including organisational culture, and individual preferences. Flexibility to manage their workload also appears to differ depending on status within the organisation. Most interviewees considered that the option to e-work improved their lives outside work, however, this could need careful management to avoid lack of concentration and motivation for some individuals. Actions emerged from the interview data which can be used to contribute to the 'actionability' of the E-Work life scales. Each of the themes that have been identified will be considered alongside the related literature to define items for the E-Work life scales. The following section provides an overview of the findings related to interviewees responses to policies on work-life balance and e-working.

6.7 Policies on work-life balance, flexible working and e-working

As part of the interviews, interviewees were asked if their organisations had policies on e-working and work-life balance. Findings indicated that these policies were very limited with only one respondent confirmed knowledge of a work-life policy in their public sector organisation as shown in the positive quote below:

'Flexible working, which I feel is a credit to the organisation which obviously gives us a choice, the organisation puts over a lot of good things about work life balance, which in my previous role with another organisation there wasn't that

much there was pressure to perform at work and for longer as well so that is the good thing about the policy we have on work life balance.' (V, A1, L190-194).

Most of the other interviewees indicated that they were not aware of policies related to e-working or work-life balance but many felt that human resources provided advice on flexible working options. At times it was felt these policies may exist but were perhaps hidden away in employee handbooks but generally not referred to on a frequent basis.

This finding is supported in the research in that many organisations whilst supporting work-life initiatives do not always formally put this into a formal policy. However they are concerned about advertising their flexibility when it relates to their outward reputation and the perception of attractiveness to potential employees. Bourhis and Mekkaoui (2010) completed a study to review if family friendly organisations were more attractive when recruiting new employees. They found that many organisations offered family friendly practices and used these to increase their reputation for recruiting quality candidates. They also found that organisations offering teleworking as an option were more attractive to some potential candidates looking to manage their work life balance (Bourhis and Mekkaoui, 2010: 110).

6.8 Overall Summary

The purpose of phase one, stage one of the study was to elicit detailed information from e-workers on their experiences of e-working and the effect of these on their work-life balance. The interviews also provided ideas for developing the 'actionability', i.e., applied interventions of the E-Work life scales. This investigatory study was carried out to set the groundwork for a much larger study (a wide scale survey in phase two), which would measure the impact of e-working on work-life balance. The current study sought to confirm definitions of

both e-working and work-life balance in this context and also to consider how e-workers might be categorised in terms of their e-working practices. The way that e-workers experienced both the benefits and disadvantages of these working practices related to their work-life balance were also investigated. Issues surrounding productivity, decision making and the psychological contract were also discussed with interviewees.

Each interview generated a large amount of data on the research topic. Interviews generally took 1-2 hours, longer than the 30-40 minutes predicted, the extra time added greatly to the depth of this research. It is important to note, at this stage, that there were two limitations to phase one, stage one of the study. Firstly, the small number of participants (eleven), however, this was considered sufficient for this stage of the research, given the qualitative focus and the relevance of interviewees that took part. Gibson and Brown (2009: 57) indicate that it is important that the sample is representative of the topic being studied. In the current study a small number of exemplar e-workers were selected for their specific qualities and experiences they would be able to share as e-workers. This limitation was balanced with a breadth of experience obtained through the use of different sized organisations, three different sectors and a cross section of roles. However, it should be noted that the small numbers of participants from each sector would not allow for comparison across sectors. Secondly, that it was not possible to interview an e-working male parent. However, this was not seen as a problem at this stage of the study, providing phase two includes this category.

The analysis of the findings provided clear advantages and disadvantages in how e-working interacted with work life issues. These are now discussed.

6.8.1 Advantages to e-working

The benefits of e-working from the current study show benefits to both the employee and the employer (although these benefits were not checked directly with an employer, this is an area for future investigation). The added flexibility allowed employees to work around both work and non-work commitments, whilst employers could benefit from the additional commitment and productivity found in the e-workers.

Many interviewees indicated that the increased flexibility provided by e-working allowed them to work in a more flexible manner and released time for non-work activities. Releasing time to be spent with families; helped with child care; aided time for personal or domestic duties. These findings are fairly standard, and tie in well with other research into the benefits of flexible working practices such as the second work-life balance study completed by the DTi (Stevens, Brown and Lee 2004). This study found that take up of work-life balance policies was improved when flexible working practices were made available to workers. The Chartered Institute of Personnel and Selection (CIPD) also found the health benefits, in terms of the reduction in stress for working parents when working times and hours can be varied to suit child care requirements (Sofres 2002).

A number of respondents from this research noted flexible working was important to them in managing their relationships. There is little research available at this time on the impact of e-working on personal relationships, most of the current research focuses on the social isolation aspect of working at home or away on business. For example, Mann, Varey and Button (2000: 678) looked at the psychosocial aspects of home working and found that 57% of those teleworking felt some kind of social isolation. The current research found both positive and negative aspects to the social isolation experienced in e-working, for example, having a quiet private space to work with no interruptions was seen as an

advantage. However, it also supported the study by Mann, Varey and Button (2000) which found that the negative aspects related to a lack of human and social contact. The impact of e-working on personal relationships outside of work is an area for further research.

Mann, Varey and Button (2000) further found that the advantages to teleworking generally outweighed the disadvantages (as did in the current research). It was apparent from the current research that women had benefited greatly from flexible working options and that it had, in some cases allowed them either to return to work more quickly, after maternity leave, and or to work more hours. It had also allowed them some flexibility in terms of managing both child-care and other non-work situations. These findings tie in well with the government's policies, for example, the Work and Families Act that gives all employees the right to request flexible working (with children under the age of sixteen or with caring responsibilities) this may have helped these individuals (HC: 2006 [65]).

The next section discusses the disadvantages identified in the current research by the exemplar e-workers.

6.8.2 Disadvantages to e-working

The current research did not identify a large amount of disadvantages to e-working with the benefits largely outweighing the negative aspects. However, the negative aspects identified focused on, an inability to manage a workload which had no time limits, work commitments which led to over-working leading to stress and burn out, and either high motivation to work past normal hours or conversely a lack of motivation to work when not under supervision. Social interaction was mentioned as being potentially important to commence work relationships but after this was seen as less important in that rapport once established could be maintained remotely. Social interactions when working at home were not

covered in detail in this research but there were few comments to illustrate this being a negative issue.

A review of the literature on the disadvantages of e-working raises issues such as, working longer hours, working when sick, isolation, a lack of support and reduced career progression (Mann, Varey and Buton 2000: 678). The current research agreed with Mann's list, with the exception of career progression which was not raised but also added the blurring of boundaries, availability of technology and space, the management of e-workers, and the role being appropriate to e-work. Mann and Holdsworth (2003) investigated the problem related to teleworking and health. In their research they found that office based workers experienced more stress than e-workers and that whilst e-workers maybe tempted to work longer and sometimes whilst sick they experienced good well-being. This current study, found that over-working whilst e-working could affect health and possibly induce burn-out, this would need further investigation. Baruch (2000) researched how managers perceived the pitfalls of e-working and found similar to the current research that key competencies for effective e-workers where important, such as self discipline and self motivation.

The next section reviews the presence of policies on work-life balance and e-working in organisations.

6.9 Conclusions

The current research has found support for a number of key themes in the existing research of both e-working and work-life balance. It is clear that there is an important relationship between the boundaries between e-working and the effects this can have on work and home life. Findings from the interviews indicate that organisations vary in the amount of formal acceptance they have of home working and accordingly how it is measured. The higher ranking members

of organisations appear to have more flexibility and variability in the type of technology used. However, in some cases the increased access to technology and the 24/7 culture of some workplaces has led to increased hours and potential burn out. The typology defined as a result of the current research should be further tested. It would also be beneficial to consider how the competencies for e-working and their potential relationships with personality types can be further developed to support an individual's work-life balance.

The importance of having policies in place is often overlooked by organisations, particularly when informal procedures or certain localised practices become acceptable. However, if the line manager moves on or if a problem arises with quality of work, or productivity slips this is often when e-working becomes an issue. The psychological contract is very important and if employees consider that others are having extra benefits then this also provides an area for dissatisfaction. Often those employees who do not e-work because of their role type may feel disadvantaged and occasionally left with work that their e-working colleagues may have left behind. Getting the balance right for e-workers and all employees is best supported by a clear policy which means that e-working is set in context of the employment contract.

The next chapter (seven) uses the themes elicited from the exemplar interviewees continuing the next stages of the scale development process.

Chapter Seven: Phase One (steps two and three) E-Work life Scale: Item Generation

7.0 Overview

The previous chapters have reviewed the literature on work-life balance and e-working and set out the classical approach and methodology associated with scale development. Data has been collected from exemplar e-workers to define the constructs and to provide a basis for developing test items. The main focus of this chapter is to generate items for the E-Work life scale and to validate these with exemplar e-workers.

7.1 Introduction

Scale development has a specific procedure, the method chosen to develop the E-Work life scale was the classical approach (as described in chapter five). The first step associated with this process, reviewing the theoretical basis, has been completed. The steps relating to item generation are completed in this phase of the research. This process involved selecting items from existing scales for adaptation and developing new items. Items which are adapted will be taken from previously validated scales and will assist in providing a level of reliability and validity for the new scales. All items will be reviewed and prioritised using methods which allow for reduction and further adaptation of the items.

This next section sets out the methodology used to develop the items.

7.2 Method

The classical method for developing the scale and the overall general methodology has been described in chapter five. Section 5.3.1 of chapter five

outlines the scale development steps. This chapter covers steps two to four of the process, including item generation, checks for validity and initial item selection and reduction. This process will prepare a set of draft items to be tested in phase two (see chapter eight) through the on-line survey.

Literature on classical scale development indicates it is 'important to determine clearly what you want to measure' (DeVellis 2003: 60). The first stage of the scale development process ensured that work-life balance and e-working were clearly defined and relevant scales were chosen that linked to these concepts and related constructs. The findings from the E-Work life interviews with exemplar e-workers and the literature on work-life balance provided the definitions and themes which will be considered as part of the scale development process. The next section sets out the definitions that will be used to develop the E-Work life scale.

7.2.1 Definitions of work-life balance

Work-life balance has been defined in different ways (as described in chapter three) as it varies according to the person's perspective and whether the focus is by the individual managing their non-working life, or by the organisation improving working practices and developing appropriate policies. As these aspects will be used to develop applied interventions for the scale, then both definitions needed to be considered for the item generation. The first quotation confirmed through the e-worker interviews (see chapter six) below illustrates the 'individual view'. The organisational view was not re-confirmed through the interviews but is relevant to the scale development (see second quotation). Both of these definitions were used as the basis for the scale development process.

'a better quality of life outside of work and the ability to balance work commitments with those of your outside life [family and friends etc]'. Chosen from

extracts from the current research of exemplar e-worker interviews (see chapter six).

From the business context the DTi (2000) definition recognises the need for employees and employers to work together to find solutions:

'employers and employees working together to find out how they can both gain more imaginative approaches to working practices.'

The next section provides definitions for the e-working context of the scale.

7.2.2 Definitions of e-working

The interview study (see previous chapter six) asked the exemplar e-workers to comment on and agree to the definition by Nilles below:

'working independently i.e., off site, using technology to communicate with others remotely. For example, it could be defined as 'any form of substitution of information technologies (such as telecommunications and computers) for work-related travel: moving work to the workers instead of moving workers to the work' (Nilles 2007: 1).

Other definitions exist (see chapter four) but they are very similar to the Nilles definition. For the purposes of this present research the Nilles definition will be utilised. The quote below is taken from the interview study and also represents a common view of e-working:

'working independently, no-one around and in your own time and space with flexibility.' Chosen from extracts from the current research of exemplar e-worker interviews (see chapter six).

Agreement to the definitions above provided the basis for the E-Work life scale to be developed. However, it is also important to look at the constructs in detail. These are reviewed by examining existing scales, which will assist in developing postulated dimensions and to outline key constructs for the new scale. The next section also provides draft dimensions for the E-work life scale.

7.3 Postulated Dimensionality

To ensure the new E-work life scale had construct validity it was necessary to devise the key constructs, postulating their underlying dimensionality. Netemeyer, Bearden and Sharma (2003: 18) advise that 'it is almost impossible to develop good measures of a construct without knowledge of the construct's dimensionality.' Further DeVellis (2003: 53) indicates that construct validity relates to 'the extent to which a measure should behave with regard to established measures of other constructs.' These two aspects are considered in the following sections as part of the scale development process.

To devise the dimensionality of the E-work life scale it was necessary to collect information and develop ideas that would inform the underlying dimensions. The interviews with exemplar e-workers (see chapter six) had generated ten themes, see below:

Theme 1: E-working effectiveness

Theme 2: Role Autonomy

Theme 3: Individual differences, skills and competencies

Theme 4: Integration of e-working with work-life balance

Theme 5: Blurring of boundaries between non-work and work activities

Theme 6: Adaptive behaviours

Theme 7: Trust

Theme 8: Social interaction

Theme 9: Decision making

Theme 10: Productivity, measurement and performance

These themes and the literature reviews from previous chapters were useful to examine the key issues affecting e-workers. The table below identifies the existing work-life balance scales chosen for the study, their key constructs and justification for their choice. Currently no validated scales of E-working exist.

Table 1: Existing Work-life balance scales, key constructs and justification for inclusion into E-Work life scale

Author/s	Scales	Constructs	No of items	Justification for choice
Carlson and Frone, 2003	Work interference with family Family interference with work Scales based on Gutek, Searle and Kelpa, 1981	Internal vs. External influences on interference	12	Most items chosen from the internal conflict dimension which relates to internally generated preoccupation with one domain, for example, continually thinking about work when at home. External conflict relates to items which represent outward behavioural interference, e.g., a work deadline stopping an individual from attending a family function.
Stephens and Sommer, 1996 also used by Carlson, Kacmar and William, 2000	Time based interference	Time, strain, behaviour based interference with work and family	18	The time based questions have been chosen as this dimension relates directly to the amount of time that can be spent on e-working activities.
Campbell-Clark, 2001	Culture	Temporal flexibility, Supportive supervision, Operational flexibility	13	These questions relate well to the concept of e-working and work life balance. All dimensions have been covered.

Author/s	Scales	Constructs	No of items	Justification for choice
Allen, 2001	The role of organisational perceptions	Organisational family supportive measures,	14	Useful dimension related to working 24/7 and the amount of support provided by the organisation.
Kopelman, Greenhaus and Connolly, 1983	Work to family conflict	Work to family conflict	8	Covers the impact of work on family, both emotional and time based.
Sanders, Lengnick-Hall, Lengnick-Hall and Steele-Clapp, 1998	Career-family attitudes	Family focus, balance, career focus, dominance, spousal support, independence	50	This is a good scale but not easily related to e-working. The item chosen relates to the amount of housework completed by a family.
Bohen and Viveros-Long, 1981	Job family role-strain	Family/role strain/demand	19	These relate to strain and in particular the amount of effort/demand required to maintain a job and family. Some do also relate to the time dimension. One further question chosen relates to the effect of work on marriage.
Thomas and Ganster, 1995	Control over areas of work and family	Control – work/family	14	These relate particularly well to the amount of control an individual has over where and when work can be completed – therefore a good relationship with e-working.

The postulated dimensions were elicited from a mixture of both the interview themes and the literature review of e-working and work-life balance and their associated measures. These postulated dimensions were also devised partly using the draft typology (see appendix nine) of the differing levels e-worker, which was a key outcome from the exemplar e-worker interviews.

The following eight dimensions were devised and it was postulated that these would form sub scales related to the final E-Work life scale:

- **E-working effectiveness** (High scores indicate a highly effective and well developed e-worker, whilst low scores show a less effective, undeveloped

- e-worker). This was defined as using their skills and competencies, including self management to be an effective e-worker.
- **Work-life integration** (High scores show that work and non work life is well integrated, low scores indicates poor integration of work and non-work life). This is defined as the ability to integrate work and non work demands effectively. Poor work life integration may lead to problems on other dimensions such as e-well being.
 - **Role management/conflict** (High scores indicate a good management of multiple work-life roles, low scores poor management of multiple work-life roles). This is defined as being able to switch effectively between the different roles required such as parent, worker or carer.
 - **Managing boundaries** (High scores relate to poor management of boundaries between work and non-work activities (overspill), low scores indicate good boundary management between work and non-work activities (less overspill)). This relates to being able to switch effectively between work and non-work activities, by setting clear boundaries. This could mean setting clear boundaries for family members when e-working, or for work when completing non-work tasks.
 - **E-Well being** (High scores indicate greater e-well being using positive aspects of e-working), whilst lower scores indicate poorer e-well being (affected by negative aspects of e-working)). This is defined as being able to positively manage health and wellness issues whilst e-working, such as by taking effective breaks, exercising, social activities, and time out for respite from e-working.

- **E-Job effectiveness** (High scores indicates high e-job effectiveness, whilst low scores indicate lower e-job effectiveness). This relates to performing well as an e-worker, having appropriate technology and setting clear goals and targets to achieve a high work performance.
- **Management style** (High scores indicate a highly effective management style showing a good role model, whilst low scores reveal a less effective style and therefore, not an effective role model). This is defined by the e-worker in relation to how they perceive effective management skills. For example, the way in which a line manager or supervisor manages an e-worker effectively by using management practices and communicates with the team.
- **Trust** (High scores show a high degree of trust from supervisors and/or the organisation, whilst low scores indicate low trust from supervisors and/or the organisation). This is defined as the level of autonomy and responsibility afforded to the individuals whilst e-working.

The postulated dimensions provided the basis for developing the E-Work life scale and assist in providing additional questions in the subsequent E-Work life survey. The following section covers the generation of scale items.

7.4 Generating the item pool

7.4.1 Review of existing scale items

The process of item selection from existing scales involved reviewing all relevant known scales in work-life balance and reviewing individual items for their application in an e-working context. From the review of the existing scales and the production of the draft dimensions it was possible to select items from

existing scales and to define new items. All of the pre-existing scales and measures in e-working and work-life balance were identified through a search of the literature. Chapters three and four reviewed existing surveys and measures in work-life balance and e-working. Appendices one and two contain a list of all the previous scales and surveys that were identified for this study. Eight existing scales in work-life balance were selected to be used for the basis of the first set of items. Table 1, shown previously, provided the scales chosen for inclusion, including the justification for their choice. Items from the scales were selected according to the following criteria:

- Good fit to work-life balance and e-working literature and definitions
- Validated measures
- Ability to be adapted for e-working
- Related to the eight dimensions

The measures selected for use in the new E-Work life scale were chosen because they related well to e-working issues, particularly that of time and boundary management. They also fitted well with the definitions of e-working and work-life balance meeting the criteria for selection.

The E-Work life interviews (see chapter six) highlighted that the amount of control over e-working was important. Some organisations gave employees full access to e-working, whilst others restricted this to certain times and places. The amount of strain and work demand placed on individuals is relevant to remote working because there may be a lack of control over how much time is worked off site and therefore, the effect this has on family life and well-being. Some existing work-life balance items have been adapted but also some new ones added that relate to models of demand and control. Measures of burn-out were considered, particularly as one interviewee felt that burn-out could be an outcome of too much e-working. However, looking at these more closely they

covered exhaustion, cynicism and inefficacy. Whilst these dimensions are useful and can be related to e-working, they are generally covered by the measures of stress and effectiveness at work. To repeat them may only add more complexity to the analysis of the scales.

Overall 104 items were generated for the new E-work life scale. Of these 33 items were considered for inclusion from existing scales, see appendix ten for full list of items, including their origins. In order to ensure the items met the e-working requirements, the items from the pre-existing scales were re-worded. Face validity of the items was checked using an expert panel, see section 7.5.

The process to refine the items included looking for similar items, checking they met the criteria for the postulated dimension and that they had good face validity for measuring the e-working context of the scales. This reduced the items from 104 to 74 items. The 74 items are contained in appendix eleven. The next section covers the evaluation of these items.

7.5 Item Evaluation

In order to evaluate the 74 E-Work life items a panel of experts were recruited. The panel consisted of five members (two females and three males) all had experience of e-working for 5 years or more, and were aged between 40-62 years old. Two panel members were Professors, with academic and practical experience of both Health and Occupational Psychology. Two further members were both academics and practising Occupational Psychologists with knowledge of e-working and work-life balance research. The final member worked in the private sector with extensive experience of technology and e-working practices. The expert panel reviewed the items for comprehension and face validity. This review resulted in some wording changes and the addition of two extra items. Appendix twelve provides the full list of the 76 E-Work life items. Section 7.6.1

below utilises the Q-Sort methodology to further refine and prioritise the items using exemplar e-workers.

7.6 Q-Sort Method: item prioritisation and reduction

7.6.1 Introduction to the Q-Sort method

The purpose of this stage of developing the E-work life scales was to further refine the items developed in the earlier stages of the research. The final items would be used to form part of the E-Work life web-based survey (see chapter eight). In total 76 statements (the Q-Sort method usually refers to scale items as statements) had been developed through a series of interviews with exemplar e-workers, an examination of the literature and an analysis of existing work-life balance scales (see appendix twelve). The Q-Sort method (Stephenson 1953 and Brown 1996) was chosen to refine the statements as it allowed respondents to categorise the statements according to what they considered to be those of the highest and lowest priority. Other methods that could have been used to refine the statements would have been simply to ask a group of e-workers to prioritise these or to use a survey tool to ask e-workers to prioritise. The benefit of the Q-Sort method was that it provided the ability to factor analyse the results, and therefore, explore the potential relationships and groupings between statements. The Q-Sort method could also provide both quantitative and qualitative data, which can help to systematically refine the number of statements.

7.6.2 Background to Q-Sort methodology

The Q-Sort methodology was developed by British physicist-psychologist William Stephenson (1953) specifically for the study of behaviour (Brown 1996). The purpose of the Q-Sort methodology is to examine an individual's points of view, that is, their subjective thoughts and perceptions by means of a statistical method. Stephenson used factor analysis to analyse correlations between

individuals' points of view. The method groups together like minded individuals as 'factors'. This helps the researcher consider groups which have a shared way of thinking about a topic. It also helps to consider where there are differences between the groups. The main strength of this method is that it collates subjective views together so that they may be analysed quantitatively.

The Q-Sort method requires that participants sort the statements into pre-defined categories according to a normally distributed scale e.g., +4 to -4. (Stephenson 1953). This can be administered in two ways, either through a face to face interview, whereby cards are used with the statements written on and participants are asked to sort these into categories, or through the use of an on-line version of the Q-Sort, which allows the participant to complete the survey remotely in their own time. This latter method provides a link that can be emailed to participants.

7.6.3 Q-Sort aims

The purpose of using a Q-Sort method for the scale development was to ask e-workers and experts to categorise the 76 statements (scale items are usually referred to as statements in the Q-Sort process) according to their preferences. This process would be used in conjunction with the criteria identified in section 7.4.1 to measure the dimensionality to reduce the statements to approximately 20-30 which could then be used in a wider scale web-based survey. In order to facilitate the process participants were asked to allocate the 76 items (see appendix twelve for a list of items) into their preferences (see section 7.6.4) relating to the umbrella question:

E-Work Life Preferences: How well do these statements reflect your perception of work-life balance in the context of e-working?

In summary the research objectives for this stage of the study were to:

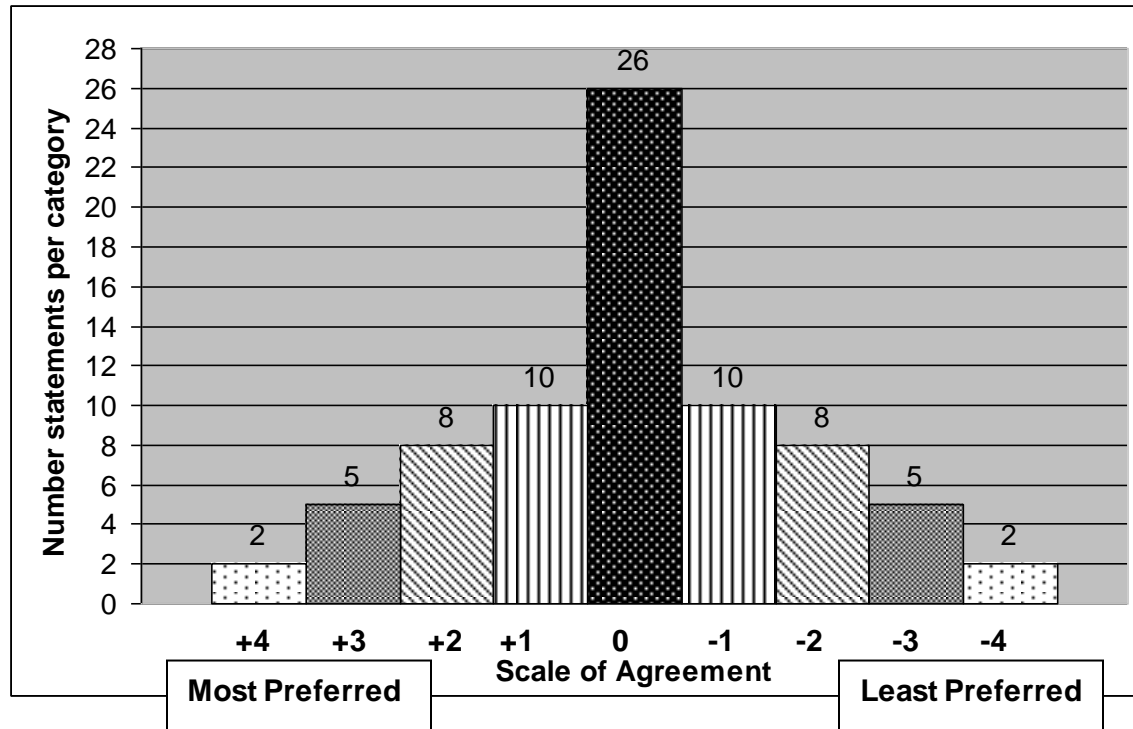
- Gather the opinions of e-workers on the relevance of the questions to their e-working and work-life balance by ranking/prioritising the statements;
- Reduce the number of statements from 76 to approximately 20-30 for the next phase of the study i.e., a web-based survey to a large number of e-workers;
- Continue to collect demographical data on e-workers, including age, gender, numbers of dependants, role type and basis of employment;
- Refine the e-worker typology developed through the earlier interviews. Participants were asked to comment on the draft typology, see appendix nine.

The next section sets out the procedure used for conducting the Q-sort process.

7.6.4 Q-Sort procedure

The participants used an on line Q-Sort link sent to them via email. Using this approach they were asked to allocate the 76 statements into pre-defined categories according to their preference, as related to the umbrella question (see previous section). A nine point scale was used from most preferred statement (+4) to the least preferred statement (-4). The graph below illustrates how many statements the participants were asked to sort into each category.

Graph 1: Detailing the pattern of statement allocation across the quasi-normal distribution.



7.6.4.1 Sample

As the sample for this study consisted of e-workers who generally work off site and have access to computer equipment, it was considered that the on-line Q-Sort method would be a more suitable approach. Over 100 e-workers were contacted to take part in the study, however, owing to the length of time taken to complete the Q-Sort and the complexity only 13 responded. Several potential respondents made contact to advise that they found the procedure too long and complex to complete. This is perhaps not surprising as many of those approached were from commercial organisations and may not have been able to take time out to complete the research. Although the data is limited to the 13 that did respond, this provided the basis for an exploratory analysis and initial direction to which statements could be removed (Brown 1996).

7.6.5 Demographic information

The demographic variables of the 13 participants included two e-working exemplars that had taken part in the previous e-working interviews. Demographic information was not collected on the two experts only the 11 non-experts. Of the previous e-working interviewees a further one was able to take part in the Q-Sort.

Data from the 11 participants included gender, age and marital status. These were five males and six females. Their ages ranged from 22-55 years, with six in the 22-35 range. The majority (10) were married, with one single participant. Seven participants had one or more children, and four participants had no children. Of the two males with children, one had a single child and the second had two children, whilst the five females with children reported a single child each. Only one reported an elderly dependent. Eight of the 11 participants were from the public sector with the remaining three from the private or voluntary sectors. Six respondents reported professional roles, three managerial and two from other categories not defined. The majority worked full-time with only three working part-time hours (over 21 hours per week).

Work roles reported covered a wide variety of different organisational levels from Project Assistant to Co-Director. Various professional roles included Purchasing Manager and Senior Lecturers. The majority of respondents worked in a team with four participants responsible for managing teams.

7.6.6 E-working autonomy

At the same time as completing the Q-Sort, data was also collected regarding the e-workers' autonomy, use of equipment and working practices (see appendix thirteen). The categorisation of e-workers into a typology as contained in

appendix nine was seen as important to distinguish between the differing levels of e-workers.

Participants were asked to consider how they would categorise their e-working according to three bands. The three bands were:

- *Band one*: autonomous E-worker (technology mostly provided by the organisation, and the ability to work remotely without reference to a manager/supervisor)
- *Band two*: semi-autonomous e-worker (technology mostly provided by the organisation, able to e-work at specific times as agreed with manager/supervisor, although able to be flexible and individual tends to manage own work-load)
- *Band three*: Managed e-worker (generally uses own facilities e.g. home computer, specific days and times agreed with manager/supervisor to e-work in response to specific needs)
- *Other*, this was provided as an alternative as it could be possible for other types of e-workers to exist that were currently unknown – or there might be situations where combinations of the above classifications may apply.

Participants mainly fell into band one or two, with an even split, five in each, the remaining participant was in band three. Participants provided some comments suggesting that when e-working from home it was most likely that they would use their own home computers. Choice and flexibility about when to e-work was mostly reported by all e-workers, providing this was agreed or reported to their manager.

7.6.7 Q-Sort analysis

A ‘*varimax factor analysis*’ (Schmolck 2002) was employed to analyse the data. This mathematical test was used to simplify the correlations that existed between the 13 e-workers. This analysis is exploratory and although the numbers are low for factor analysis the Q-Sort method only provides grouping of the data for further exploration and confirmation later. This method does not complete the item factor analysis which requires much larger numbers and is completed in phase two (see chapter eight).

The Q-Sort approach enabled groups of like-minded individuals to be clustered together into sub-groups known as ‘factors’. The internet based programme PQMethod v2.11 was used to complete the factor analysis of the Q-Sort data (Field 2005). To determine the number of factors that would be valid and explain the data collated, ‘*Cattell’s Scree test*’ was used (Cattell 1966). The Scree test accepts components which lie before the inflexion point on a graph plotting: ‘*eigenvalues*’ (y axis) against the ‘*factor components*’ (x axis). The number of chosen factor (subgroups) was two for this study, where the graph plot is observed to flatten in a linear declining pattern (Cattell 1966). Four factors were initially identified but these did not have sufficient participants to warrant further investigation as the results would be over-personalised. The two sub-groups accepted for further analysis had an eigen value above 1.6 (see table 2 below). This incorporated 10 of the 13 participants into the final analysis.

Table 2: Detailing the cumulative and independent variation explained by each factor

Factor Component/ Subgroup	Initial eigen values			Rotation sums of squared loadings	
	Total	% of Variance	Cumulative %	% of Variance	Cumulative %
Sub-group 1	3.615	28	28	22	28
Sub-group 2	1.658	13	41	18	41

7.6.8 Q-Sort results and groupings

The higher the loading value (recorded in table 3 below), the more representative was that individual in upholding the views of their respective sub-population.

Those shown in italics indicate group one and those in normal text group two.

The respondents were labelled by using their level and an associated number to differentiate them from other respondents.

Table 3: Individual loadings for the sub groups

Respondent	<i>Sub-group One</i>	Sub-group Two
<i>Expert 2</i>	<i>0.5767</i>	
<i>Professional 1</i>	<i>0.8295</i>	
<i>Manager 1</i>	<i>0.8252</i>	
<i>Professional 2</i>	<i>0.6532</i>	
<i>Manager 3</i>	<i>0.5316</i>	
Manager 2		0.4044
Professional 4		0.5251
Professional 6		0.7646
Professional 7		0.4993
Professional 8		0.6490

7.6.9 Interpretation of results

The analysis of the rotated field illustrated a unique pattern of responses to the statements being explored. The current study evaluated the perceptions of 13 e-workers from three categories, professionals, managers and experts. The results of the Q-Sort illustrate that these three groups did not fall together but were mixed across the two sub-groups. Table 3 details the composition of the groupings. Those that only had one or less in a subgroup were not included, in this case their scores were also quite low i.e., below 0.1, as this would be too individualised. Another participant whose scores were similar across both factor sub-groups is an outlier, which cannot be incorporated because of the similarity, that is, it would be possible to place them in both groups.

The two sub-groups are slightly different in construction. Subgroup one had two managers, two professionals and an expert, whilst sub-group two had four

professionals and one manager. The differences are not wide enough to make any particular deductions, as other variables, such as their work environment or organisational culture may have had an effect.

As a result of the Q-Sort the e-workers were clustered into two groups of like-minded individuals, so it was possible to look at the commonality and differences of opinion between the two groups. This process will consider both those statements where there was consensus and those where differences of opinion occurred. Each statement had its own unique reference number, commencing with a 'B'. These were allocated at the beginning of the scale development when over 100 statements were generated. These reference numbers were carried through to the QSort to allow for the original source to be traced. The reference numbers did not relate to the number of statements which is 76.

7.6.10 Q-Sort overall group findings

In order to analyse the findings of the two groups, it was first necessary to look at the shared preferences and differences within each group. Following this the two groups were reviewed for their shared ranking of statements and opposing ranking of statements. Appendix twelve contains the full list of the 76 statements used. The Z scores are the standard deviation from 0 in a normally distributed curve, where statements with a high positive score are most preferred and those with a high negative score are least preferred by the sub group.

7.6.11 Within group findings

Appendix fourteen contains four tables that show the lists of the top and bottom ten statements most and least strongly preferred by sub-groups one and two. In general both groups have differing statements that they most or least preferred.

There was one exception in that B9 is in the top ten of most preferred statements for both groups.

Extract from sub-group one and two most preferred statements

B9 Having flexible hours when e-working allows me to integrate my work and non-work life

Sub-group one and sub-group two also had differences of opinion on the following three statements:

Extract from sub-groups one least preferred and sub-group two most preferred statements

B41 My e-working takes up time that I would like to spend with my family and friends or on other activities

B17 When e-working remotely I often think about work related problems outside of my normal working hours

B91 Constant access to work through e-working is very tiring and I often make work related mistakes I would prefer to avoid

Sub-group one included these statements in their bottom ten of least preferred statements, whilst sub-group two included these in their top ten of most preferred statements. The difference perhaps indicates that sub-group two was showing more concern about the negative effects of e-working on their non-work lives, whilst sub-group one may consider these less important. This is an important distinction and may relate to many different variables, such as the number of family members in the household, or their role within the organisation, affecting the extent of control they have over work or their own personal ability to switch off from work.

The next section considers the differences and similarities that are significant when the two groups are compared.

7.6.12 Comparison between groups

This section compares the findings of both groups when taken together to look for similarities and differences that are significant.

7.6.12.1 Distinguishing statements

Distinguishing statements where the groups scored most differently (top ten extracted with a difference of 4 or above between ranks. The participants could rank between 4 and -4). All of the statements listed in the table below are statistically significant at $P < .01$.

Table 4: Statements found to be significant

Reference No.	Statement	Group One Rank Score	Group Two Rank Score
B101	I know what it takes to be an effective e-worker	4	0
B98	I consider myself to be a competent e-worker	4	0
B97	I can completely balance my e-working with the rest of my life commitments	3	-2
B100	I am good at time management when e-working remotely and know when to stop working	2	-2
B104	My organisation provides training in e-working skills and competences	1	-2
B75	My supervisor gives me total control over when and how I get my work completed when e-working	0	4
B24	The time I spend e-working remotely keeps me from participating equally with my partner in unpaid activities such as house work	0	-4
B41	My e-working takes up time that I would like to spend with my family and friends on other activities	-2	3
B17	When e-working remotely I often think about work related problems outside of my normal	-3	3

Reference No.	Statement	Group One	Group Two
	working hours		
B91	Constant access to work through e-working is very tiring and I often make work related mistakes I would prefer to avoid	-4	2

It should be noted that whilst these results are statistically significant, the sample size is small so the variability across groups may be limited.

These results show the polarity between the two groups on certain statements.

7.6.13 Consensus statements

The consensus statements provide a list from both groups where they agree or almost agree on their preferences, appendix fifteen contains the full listing. All of the statements were not significant at $P < .01$, however some results were found significant at $P < .05$. The two tables below highlight the most and least preferred consensus statements. Overall the scores are not particularly high so they fell within the mid range -2 to 2 (with the exception of B54 which reported a 3). Some statements remained neutral at 0. Statements B46 and B54 are both also contained in the top ten most preferred statements for sub-group one.

Table 5: *Most preferred consensus statements*

*B46	<i>My family and/or close friends are supportive of me e-working from home and/or off site</i>	2	2
*B58	<i>If I am interrupted by family/other responsibilities whilst e-working from home, I still complete all of my work to the quality and standards as expected by my manager/supervisor</i>	1	2
*B60	<i>My supervisor understands my personal demands when I am e-working off site/at home</i>	1	2
*B99	<i>The reason I am a competent remote e-worker is that I have self discipline</i>	1	1
*B102	<i>I have adapted to e-working by developing suitable skills and behaviours</i>	2	1

B53	<i>I am happy with my work life balance when e-working remotely</i>	2	0
B54	<i>My supervisor/manager completely trusts me to manage my work when I am e-working from home/remotely</i>	3	2

* indicates significance to P<.05

Table 6: **Least** preferred consensus statements

*B21	<i>When e-working remotely I often think about things I need to complete at home</i>	-1	-1
*B23	<i>E-working remotely takes me away from my family and/or leisure activities more than I would prefer</i>	-2	-1
*B38	<i>My family/friends dislike how often I am preoccupied with my e-working whilst I am at home</i>	-1	-2
*B96	<i>I am not sure what to do to increase my performance as a remote e-worker</i>	-2	-1
B63	<i>The ideal employee according to my work place culture is one who is available 24 hours a day, every day to answer emails and other communications from work by e-working remotely</i>	-3	-2
B72	<i>Rest is not something I need when e-working remotely off site/at home</i>	-1	-3

* indicates significance to P<.05

7.7 Discussion

It is clear from these results that there are differences between the two groups of e-workers. However, there were few differences in the demographic characteristics of the two groups. The differences in Q-Sort preferences may be due to other factors such as, working practices, managerial practice and individual personality differences. Sub-group two contained more professional workers thus it may be useful in further study to analyse results by their type e.g., managers/professionals/those without line responsibilities. This may suggest that interventions should be tailored towards these different groups. From the

distinguishing statements, it could be hypothesised that sub-group one are slightly more confident e-workers. They seem to indicate a confidence in their skills and ability to use e-working effectively, whereas, sub-group two appear to show more concern about how much of their time and psychological processes it takes to e-work and the effect of this has on their work-life balance. It would be interesting to explore what the commitments of each group are in terms of life and activities outside of work and also their level in work in order to make further deductions.

The current study employed a small sample and care has to be taken when interpreting the results. However, as an exploratory exercise the results are useful and do provide some useful findings and direction. This information can be interpreted to help reduce the questions for the next phase and to develop some further lines of enquiry, for example, around e-worker behaviours.

The statements to be considered for the E-Work life on-line survey are the top ten preferred statements from each group and those consensus statements which are most relevant to the survey study. The remaining statements will be considered, particularly if they have group consensus but also against other criteria including: their actionability, that is, links to possible dimensions and interventions; whether they add additional depth and breadth to the study or for their relationships to the other variables being examined as part of this research, such as health and job effectiveness. Many of the statements refer back to the original categories and themes found from the e-working interviewees and the literature including; trust, boundaries and spill over, role conflict and supervision. These will be explored further as the E-Work life scales are developed.

The classification of e-workers autonomy was useful, but should be considered further to include specific e-working behaviours and the psychology behind e-worker's activities. It is found from the current study that provision of technology

is not the only important factor, in that individuals may chose to e-work according to their own motivation and behaviours or in response to managerial style. The typology will be further clarified in the E-Work life survey and interviews in phase three of the study.

7.8 Conclusion

Chapter six commenced the exploration of themes and dimensions for the E-work life scale. This chapter provided the items for the development of the E-Work life scale. Items were generated by both adapting statements from existing measures and developing new ones. The panel of experts and the Q-Sort methodology assisted in refining the items and suggesting which measures would be most successful in the E-Work life survey for phase two. This chapter does not conclude with the final list of statements (items) for the E-Work life survey (to be conducted in phase two) as these would require further refinement to fit the survey criteria and dimensionality of the E-Work life scale. Further data was also collected to develop the E-Work life typology and this will be clarified and discussed through the following phases (two and three).

Chapter Eight: Phase Two: The E-Work life Survey, Characteristics and Work Related Dimensions of the Sample

8.0 Overview

The two previous chapters commenced the development of the E-Work life scale and completed phase one of the research. The interviews with exemplar e-workers provided the basis for the scale development, together with an examination of the literature on existing scales. These were used to generate a pool of items. Various methods were used to refine the number of items resulting in a draft E-Work life scale. Factor analysis provided a preliminary exploration of the potential underlying dimensions of the scale.

Phase two of the research focuses on trialling and exploring the E-Work life scale using a diverse sample of e-workers. This data is further utilised in chapter nine to refine the scale items. Through this process an exploration of the underlying dimensions and themes will result in the development of possible interventions for e-workers (phase three of the study, see chapter eleven). The current chapter provides an analysis of the personal and organisational characteristics of the sample in order to understand the relationships between respondents' views of e-working. The following chapter refines the E-Work life scale through validity and reliability analyses.

8.1 Introduction and aims: Phase two

The main aim of phase two of the current research was to explore the E-work life scales in the context of an E-Work life survey completed on a diverse sample of e-workers. As part of this survey an existing scale of well-being (SF-36 v2) was utilised to provide self reports from the e-workers on their physical and mental health. The E-Work life survey was constructed to cover the key areas of the study, that is the descriptive statistics of the e-workers, issues in e-working

related to work-life balance, job effectiveness and well-being. To meet these needs the survey questions were constructed around:

- E-workers and their working practices and behaviours
- The revised E-work life scales, including job effectiveness
- An existing well-being scale (Health Survey SF-36v2)

Phase two provides the basis for analysing the E-Work life scale in the context of a wider survey. The survey itself produces contextual information to support the scale development. This chapter does not analyse the findings from the E-Work life scale as this was a detailed process that supported the development of the scale. The full analyses of the E-Work life scale are contained in chapter nine.

8.2 Contextual basis of the sample

The current study sought to analyse the characteristics of e-working and e-workers. Parasuraman and Greenhaus (2002: 300) identify gaps in the samples used for studies into work-life balance. These include, focussing on the negative aspects of work-life conflict as opposed to the positive, little research into the impact of individual differences and a narrow scope based on gender stereotypes of women's roles. Furthermore, many previous studies have focussed on the 'nuclear family' (married couples with 2.4 children), leading to single families and couples without children not being investigated in any depth. The present research seeks to address some of these gaps by widening the sample and looking at all aspects of work-life balance.

Previous e-working studies have tended to focus on teleworkers (static workers in one location, for example, home or a call centre) and not necessarily all types of e-workers, for example, those with multi-location mobility (Hislop and Axtell 2007). The current study was designed to select samples from a wider range of

e-working that varied in relation to modes of work. The definition that was used to define an 'e-worker' related to communication, mobility and access to technology was elicited from the interviews with e-workers (see chapter seven for further details).

Whilst specific organisations were approached, respondents also volunteered themselves to complete the E-Work life survey through a snowball effect (i.e., an email being passed on with the survey details). This had the effect of an unlimited sample with no restrictions, for example of job role, gender and marital status. A strength of the current study is that it allowed for all types of e-workers to take part and for them to self select participation.

8.3 Key variables

The work-life balance literature identifies several key variables and demographic information that may influence outcomes. These are, gender, number of children (under the age of 18 living at home), number of elderly dependants (cared for on a regular basis) and marital status (Parasuraman and Greenhaus 2002). In particular, gender can be considered a key factor for issues in work-life balance (Greenhaus and Beutell 1985) and as such this is considered throughout this analysis to evaluate whether the outcomes were affected (see section 8.3.1 below). Number of children, elderly dependants and marital status are also considered where appropriate in the analysis. Job role and status within an organisation may also be variables that could affect work-life issues and these are also considered in the current research.

8.3.1 Gender

Previous research into work-life balance and role conflict has indicated that males experience more work interference with family and females more family interference with work (Aryee, Luk, Leung, and Lo 1999). However, later

research considers that there may be fewer differences on types of conflict experienced between genders (Carr 2002). E-working is known to provide greater access to work for females, allowing them to manage both work and family commitments (Morgan 2004: 349). However, e-working research also highlights the differences related to gender. For example, Haddon and Brynin (2005: 44) found that e-workers differed in several ways related to their 'gender, educational, occupational and pay differences' related their autonomy and flexibility to e-work. Access to technology was found to differ when related to the status of different levels of e-workers. Haddon and Brynin (2005: 44) further found that females completing lower paid work were more likely to have more restricted access.

Haddon and Brynin (2005) found that Internet based remote e-working was more likely to be used by male professionals with greater access to technology. This implies that female e-workers may be in lower status work and may not have the flexibility or access to higher levels of technology. However, Haddon and Brynin (2005: 44) conclude that the type of roles completed by females working from home 'is associated with relatively high status work and not predominately with routine, low paid work.' It could be concluded that the difference for e-workers may be more about role status and access to appropriate technology as opposed to gender. The relationship between gender and work status related to e-working and issues surrounding work-life balance will be examined in the E-Work life survey.

8.3.2 Dependents

Much of the research into work-life balance has considered the affects of working at the same time as managing caring responsibilities. Having dependants has been found to increase demands and in some cases makes paid work more difficult (Jones, Burke and Westman 2006: 125). The work to family strain can

be increased and Greenhaus and Beutell (1985) considered this factor in their early research into the topic. Research on e-working has considered the effect on family lives which can be both positive, for example, by increasing flexibility for parents to manage child-care issues but also negative in that spill-over between work and home demands can occur. Kossek, Lautsch and Eaton (2005: 361) found that having higher job control was a predictor of lower work to family conflict. Thus, whilst dependants may have an effect on work-life balance this can be mediated where job roles have high levels of autonomy. Autonomy and role status are important factors for examining e-workers and the next section evaluates an emerging typology for e-workers.

8.4 E-Worker typology

The findings from the interviews and analyses in phase one (see chapters six and seven) supported a classification of e-workers and this is contained in appendix nine. The typology was further split into the 'developed' and 'undeveloped' e-worker classifying competencies, skills and behaviours associated with e-workers (see appendix sixteen). This classification is examined through the E-Work life survey to ascertain whether these characteristics are found in the current sample. The e-worker typology will be clarified as a result of the survey responses. Previous research supports the presence of specific e-worker characteristics. For example, Baruch (2000: 43) found that e-workers identified the characteristics of effective e-workers as having, 'self discipline', 'self motivation' and 'ability to work on own'. The current research aims to build on these findings whilst searching for other relevant skills, behaviours and competencies to further develop the typology.

8.5 Method

The E-Work life survey was completed as an on line survey tool (Survey Monkey), which could easily incorporate the E-work life scale and the associated

contextual questions for e-workers, and the SP-36v2 scale measuring well-being. This method was considered by the researcher as most appropriate given the nature of the participants as primarily remote e-workers. An on line survey method also provided the means to contain a number of questions surrounding the E-Work life scale, for example, questions investigating e-workers skills and competencies and their autonomy. These related to the literature and findings from the e-worker interviews, providing confirmation on a larger sample. Further reasoning for the on-line method included the need to reach a wide audience, as on line survey methods allow the survey link to be emailed to individuals, organisations and then forwarded by participants to others who may be interested to take part. This provides a useful self selection method.

As an incentive to engage potential respondents, they were offered the opportunity to enter a prize draw at the end of the survey for a Personal Digital Assistant donated by the Applied Research Centre for E-working at Coventry University. Ethical considerations to giving out incentives were considered but it was felt in order to gain the quantity and quality of respondents required for the study this would be enhanced by offering an incentive.

8.5.1 Participants

8.5.1.1 Recruitment of organisations

Eleven organisations, across three sectors, were approached to request participation in the current study to meet the required number of e-workers to complete the survey. This number was driven by the requirement for factor analysis, which identified the sample to be around 300 (Netemeyer, Bearden and Sharma 2003: 116 and DeVellis 2003: 88). Contact was made with organisations known to the researcher as having e-workers and in particular different levels of e-workers. These were then were approached directly to create a layered and contrasting sample of e-workers, from a variety of different sectors, including, private, public and voluntary. To keep the organisations names anonymous a

reference number was allocated, appendix seventeen contains the list of organisations and numbers of participants approached.

To help increase the diversity of e-workers taking part in the survey the researcher also emailed contacts who were already known to e-work. Those completing the survey could also pass on the details and survey link to others who may wish to take part, known as a 'snowball effect' (Goodman 1961). Additionally, the researcher also placed an advertisement in British Psychological Society's publication 'The Psychologist' and on the Special Group for Coaching Psychology web-forum to generate wide spread interest and completion of the survey.

8.5.1.2 Recruitment of individuals

Alongside the e-working organisations, individuals who were known to be e-workers also volunteered to take part. There was a 'snowball' effect in that the survey was forwarded on to other e-workers. This gave a potential for individuals to take part who were not in specific groups and gave the opportunity for those who were self employed to participate in the survey.

8.5.1.3 Exclusion/Inclusion criteria

The participants for the current research were not pre-selected, but asked to volunteer against the criteria that they should work remotely independent of location using technology, and consider themselves to e-work as part of their normal working activities. The specific amount of time spent e-working was not a criterion. No individuals were excluded from taking part in this research and all participants were welcome to take part in the survey whatever their e-working involvement.

8.5.2 Measures

8.5.2.1 Demographics and e-working items

The E-work life survey collected demographic information to cover the variables of, gender, age, number of dependants (both children and elderly) and marital status. To support the analysis in the context of e-working, the survey also included questions regarding the participant's job role, including management of teams and role autonomy. The survey contained nine sections, sample questions from each section are listed below:

Section One (demographic information collected as described above).

Section Two – Your Journey to Work, e.g., 'Do you commute to work?'

Section Three – Your role, e.g., 'Could you please briefly describe your role within the organisation?' and 'Do you have direct responsibility for managing people in your organisation?'

Section Four – Your Access to Technology, e.g., 'Please select from the list below the types of technology you use when e-working (e.g., Laptop, Smart Phone, Video conferencing)'

Section Five – Your E-Working practices, e.g., 'Using the list of working practices below, please tick those that you use when e-working remotely (e.g., email, mobile phone calls, teleconferencing etc.)'

Section Six - Measuring your E-working, e.g., 'Please indicate if your organisation currently measures e-working.' Follow on questions requested knowledge of how this was done.

Section Seven – Your E-Work life, the list of items from the scale are listed in the next section 8.5.2.2.

Section Eight – Your general well-being, the existing scale SF-36 v2 was utilised here. Example questions self reported rating of general health, questions are discussed in section 8.5.2.3.

Section Nine – Your comments, this section included questions on overall satisfaction with work-life balance and e-working plus any further comments to be added by the participants.

A full copy of the survey can be found in appendix eighteen.

Participants were also asked several open questions about their e-working and work-life balance in order to provide qualitative data to support the quantitative analysis. Note those organisations which agreed to take part are listed in the survey for ease of those taking part in the survey. However, they are not referred to again in the study so that the findings may be kept anonymous.

8.5.2.2 E-Work life scale

Items for the E-Work life scale had already been generated from the literature, interviews of e-workers and refined using the Q-Sort method (see chapters six and seven). The E-Work life scale items were measured on a five point Likert scale, which provided a rating from, ‘strongly agree’ to ‘strongly disagree’ with ‘uncertain’ as the neutral answer and ‘not applicable’ available to select. The scale was contained in Section Seven, Your E-Work life. A list of the items utilised in the E-Work life survey is shown table 7 below:

Table 7: List of E-Work life items utilised in the E-Work life survey

E-Work life items (39)
I know what it takes to be an effective e worker
My organisation provides training in e-working skills and behaviours
Having flexible hours when e-working allows me to integrate my work and non-work life
My e-working takes up time that I would like to spend with my family/friends or on other non-work activities
When e-working remotely I often think about work related problems outside of my normal working hours
I am happy with my work life balance when e-working remotely
Constant access to work through e-working is very tiring

E-Work life items (39)
When e-working I can concentrate better on my work tasks
I can completely balance my e-working with the rest of my life commitments
I can manage my time well when e-working
My supervisor gives me total control over when and how I get my work completed when e-working
My line manager completely trusts me to manage my work effectively when I am e-working remotely
I trust my line manager to advise me if I am not effectively performing whilst e-working
My organisation trusts me to be effective in my role when I e-work remotely
I trust my organisation to provide good e-working facilities to allow me to e-work effectively
E-working makes me more effective to deliver against my key objectives and deliverables
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations
When e-working from home I do know when to switch off/put work down so that I can rest
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted
My work is so flexible I could easily take time off e-working remotely, if and when I want to
E-working has a positive affect on other roles in my non-working life
My family dislike how often I am preoccupied with my e-working whilst I am at home
I can arrange for childcare/support to look after my dependants when I am e-working
When e-working remotely I often think about family related and/or non work related problems
I do not need to gain permission from my line manager before I can e-work from home
My line manager discusses sympathetically any issues related to my non work when e-working
My line manager allows me to flex my hours to meet my needs, providing all the work is completed
My line manager is a good role model for me in terms of e-working
I have total control over when and how I get my work completed when e-working
My line manager is a good role model for me in terms of work life balance
I feel that work demands are much higher when I am e-working remotely
I am highly motivated to work past normal work hours when e-working
My overall job productivity has increased by my ability to e-work remotely/from home
I have adapted to e-working by developing suitable skills and behaviours
I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time
My social life is poor when e-working remotely
I miss socialising in the office when e-working remotely
I know how to socialise using technology
Commuting to work increases my stress

8.5.2.3 Well-being measure (SF-36v2)

Chapter four covered some of the studies that have related health and well-being to e-working. In order to examine the relationship between well-being and e-working an existing measure of well-being was chosen. The SF-36v2 Health Survey developed in the USA by Quality Metric (Ware, Kosinski, Bjorner, Turner-Bowker, Gandek and Maruish 2008: 32) has questions which relate to both physical as well as mental health, examples included:

'How much bodily pain have you had during the last 4 weeks?'

'During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?'

'Did you feel worn out ?' (again over the last 4 weeks)

'Did you have a lot of energy?' (as above over the last 4 weeks)

'I am as healthy as anyone I know ?'

The rating scales varied according to the question type but generally these were 5 point scales with either 'Definitely true, True, Don't know, False, Definitely False' or, 'All of the time, Most of the time, Some of the time, A little of the time, None of the time.' Appendix nineteen contains a copy of the questionnaire. It is a well established measure of health and well-being that has been in practice since 1990's and has a well developed set of norms. According to the manual over 10,000 researchers have used the scales worldwide (Ware et al. 2008: 22).

Other measures of well-being were reviewed but eliminated on the grounds that many only included one dimension of well-being, for example, the DASS 21 and 42 (Depression, Stress and Anxiety scales) looks only at stress related problems (Lovibond and Lovibond 1995). These scales do not include the physical aspect to well-being which is important for e-workers. The main advantage of the SF-36v2 is that it covers the emotional, psychological, behavioural and physical

aspects of well-being altogether in one scale. The SF-36v2 has eight dimensions contained in the scales: Physical Functioning, Role-Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role-Emotional and Mental Health. These dimensions are relevant to the e-working sample as they relate to all aspects of what can be considered good health. E-workers may suffer from both physical and emotional aspects. All these dimensions could not all be found in other scales, whereby usually only one aspect was usually present as with the DASS 21. Additionally the SF-36v2 could be adapted to relate to e-working although it was considered better to keep the scales in their current format, ensuring validity.

The SF-36v2 measures were measured according to the publishers' requirements and included a variety of answer types. Permissions were granted to use the measures for a period of one year.

8.5.3 Design of the survey

The survey was specifically designed to collect information on e-workers and to gain data from respondents on the E-Work life scale for validation purposes. To cover these aspects and to incorporate the scale, the E-Work life survey was divided into nine separate sections. Appendix eighteen contains a copy of the E-Work life survey.

8.5.3.1 Pilot of survey

Prior to the main survey being administered a pilot of the E-work life survey was administered to 17 volunteer e-workers. They were asked to complete the survey, give feedback on the design, structure and to consider any improvements. They were asked to comment on the introductory email that would be sent to participants asking them to take part in the study. This process provided an initial face validity check for both the E-Work life survey as a whole and the E-Work life scale.

The majority of comments received from the pilot were about how the logic of questions as they were routed from one question to another in the survey. They also advised that the E-work life scale items needed to be broken into smaller sections so that it was manageable on screen for participants. This feedback was particularly relevant to the E-work life scale which contained 39 items. These items had been viewed on one page but following the pilot feedback these were broken down into batches of items for ease of completion. Survey questions were re-checked for routing and amended where necessary. No questions were removed from the survey at this stage, although some items were slightly re-worded for better comprehension and the numbering slightly altered. The introductory email worked well and with some minor changes was agreed for the final study.

The survey was revised and volunteers thanked. Pilot data was not analysed as it was minimal in number; however, it did provide an opportunity to check the procedure before the larger survey was administered and to explore any issues regarding the way data was going to be collected.

8.5.4 Procedure

An on-line survey method was chosen to administer the survey. This method was chosen to be compatible with the working practices of the respondents, the majority of participants would be completing the survey remotely in their e-working capacity. For those organisations or individuals that did not have the appropriate technology, a paper based version was also made available.

After completing a consent page, participants proceeded through the online pages in a linear order, completing each section of the survey. Some questions were mandatory, but most were optional. The survey was split into sections such that if a set of questions were not answered, other data could be collected.

The survey was designed to last for approximately 15-20 minutes to ensure that participants did not become tired with the numerous questions and chose to leave the survey early. This length of time was also considered a good amount of time for an on-line survey given previous experience from the researcher.

Organisations known to have e-workers were contacted directly by means of an introductory email, containing a letter, which described the study and asked for consent to approach employees to take part (see appendix four). Once consent was received from the organisation, an email was sent to the contact to include the survey link (see appendix twenty). This was then sent out by the contact to the employees, this email included information regarding participation in the study. Responses to the survey were collected directly into the on line survey anonymously so the contact would not know who had completed the survey and their response. This email to participants also included a message to promote the 'snowball effect' that is, participants were asked if they knew of other e-workers that may wish to take part.

The on line survey contained an introduction to participants that further described the study and explained the anonymity of data. Participants were also informed on a separate page in the on-line survey that the collection of data would be secure and only used for the purposes of the study. They were also advised that individual reports would not be produced due to the anonymity of data.

The intended sample size for the survey based on previous research (Netemeyer, Bearden and Sharma 2003: 116 and DeVellis 2003: 88) was around 300. Considerable time had been allowed for the survey, over three months and a large number of organisations had been contacted. When responses totalled 255, given the length of time allowed and the need to complete the research the responses were monitored and a decision was made to close the survey.

Sufficient data had been collected to carry out exploratory analysis, although it had been hoped to achieve a higher sample of around 300. Netemeyer et al. (2003: 116) advises that a smaller sample can be used to complete exploratory factor analysis successfully.

After closure of the survey the results were transferred to an excel spreadsheet and then into SPSS format ready for analysis. Data was cleaned and cases with insufficient data removed (five cases were removed).

8.5.5 Ethical Requirements

The current study conformed to the British Psychological Society's Code of Conduct and Ethics (2006 and 2009) and the Health Professions Council's standards of conduct, performance and ethics (HPC 2008). In order to take part in the survey participants were sent an email (see appendix twenty), usually via the organisational contact, which set out the details of the research and details of how and where the research would be used (see appendix four for gatekeeper letter). Confidentiality was essential in this study and participants were assured that any responses given could not be traced to individuals and that either themselves or their organisations would not be named in the research without prior permission (this assurance was contained in the E-work life survey, see appendix eighteen). Separate organisational reports using the survey tool were produced for organisations taking part and summaries of the findings shared as appropriate. Participants were advised that a copy of the final report would be available to them upon request.

In order to check consent had been received the first question in the survey asked participants to give consent. If they did not answer 'Yes' then they were routed to the end of the survey and no data collected.

To ensure diversity and that no-one was disadvantaged if they did not have the appropriate technology, then paper copies of the survey were made available.

All data from the research was stored according to the Data Protection Act (HC 1998: 29). The data was not personalised and at no time were individuals named during the analysis or reporting. Culture and diversity were considered when devising the survey to ensure full access, religious preferences were not recorded.

8.6 Results and Key Findings

8.6.1 Analysis plan

There was a large volume of data obtained from the study. It was, therefore, important to devise an analysis plan prior to commencing the analysis phase. The plan was to report the responses and demographic information by frequencies and descriptive statistics. Cross tabulations, t tests and Chi Squared tests were used to investigate the differences between key variables. The qualitative data was categorised and themes developed in order to group the data into a manageable source. Where it was not possible to extract themes a sample of the comments are provided. The E-Work life scale required intensive analysis and the findings are presented and discussed in chapter nine.

8.6.2 Response rates by sector

255 responses were obtained from the E-Work life survey. The data was cleaned with five responses being removed from the analysis as they were not considered sufficiently complete because more than two thirds of questions had missing answers. This provided 250 responses for analysis. The number of individuals approached could not be predicted due to the snowball effect, so the final percentage response rate was considered from those that were known or could be estimated, this amounted to 45%. Not all questions were mandatory and

the actual response rate per question varied from 68 to 250 responses. When analysed by sector 67% (N=156) were from the public sector, 17% (N=40) private sector and 16% (N=38) undisclosed. Appendix twenty-one contains the table showing participant numbers and response rates.

The paper based version of the survey was used by one participant.

The category of respondents who took part are defined by either their organisation or by a generic grouping, for example, 'other', 'retired', 'student'. The individuals who did not belong to a specific organisation or who wanted to keep this anonymous were characterised as 'other'. However, most of the affiliations are known and have been collected. Respondents were also given the option to remain anonymous and either tick 'other' or miss out the question entirely if they did not wish to be related to a specific organisation.

8.6.3 Descriptive analyses of demographic variables

Almost two thirds of respondents (63% N=158) were female, with 79% (N=198) of respondents married or co-habiting. The majority of respondents 84% (N=210) were aged between 25-54 years old, the mean age category was 35-44 years old. Just below two thirds 60% (N=150) of respondents did not have children under the age of 18 years living at home whilst 33% (N=90) indicated they had between one and two children. Only 7% (N=18) reported looking after 1-2 elderly dependants on a regular basis.

A full table containing demographic results by variable can be found in appendix twenty-two.

8.6.3.1 Analyses of demographic variables

To explore the nature of this sample further, gender was cross tabulated with the other key variables (marital status, age, number of children in the household,

number of dependants). The key findings indicated that of the 158 females 61% (N=97) were aged between 25-44 years old and 27% aged 45-54 years old (N=42). Of the 92 males 48% were aged 25-44 years old (N=45), 28% (N=26) between 45-54 years old and a further 14% (N=13) of males were aged 55-64 years. Of the females 78% (N=123) were married or co-habiting, whilst 82% (N=75) of males were of the same marital status. Females who were single and or living alone or with friends totaled 12% (N=20) a similar percentage was reported for males.

Females with no children were 64% (N=101) of the sample, whilst 53% (N=49) of males reported having no children. A small number of females had one child 18% (N=29) with 21% (N=19) of males also having one child. A slightly lower number of females than males reported having two children 14% (N=25) females compared to 18% (N=17) of males. A slightly higher number of females looked after elderly dependants on a regular basis 10% (N=16) compared to 3% (N=3) of males.

8.6.3.2 Summary of Chi Squared analysis of the demographic key variables

To check if the results of the key variables were significant compared to the expected outcome for these variables, Chi Squared analyses were completed. The analysis was carried out on the two variables where there was some variation in the results by simple frequencies. These were gender compared to marital status and gender compared to age group. The categories were re-grouped to ensure the count was high enough for the analysis. No significant relationships were found between gender and marital status. There was a relationship between gender and age group $\chi^2=4.719$, $df=1$, $p=.030$. This result indicated there were more females aged between 18-44 years old than expected

and fewer males in this group. There were, however, more males aged 45 or over years old than expected when compared to females in this sample.

The next section provides the results from the SF-36v2 health survey.

8.6.4 Well-being survey results (SF-36v2)

The SF-36v2 well-being survey data was analysed using descriptive statistics. Cross tabulations were included to assess the differences between the key variables of gender and role autonomy.

The overall responses for the well-being survey ranged between 192-199, a response rate of approximately 79%. One participant was pregnant and their answers are included, but it was noted in their comments that this was a different level of their well-being than usual for this period of time.

When asked about their general health half of the respondents reported this was excellent or very good 50% (N=127), and a further 22% (N=56) good. When general health was analysed by the key variable gender, a Chi Squared test did not find significant differences. When general health was analysed by age, the majority of respondents reported good to excellent health with 68% (N=41) of the 35-44 years old age group reporting the highest levels.

Respondents were asked to consider statements about their current health and expectations. The majority of the sample reported excellent levels of current health at 61% (N=149). Respondents were asked how long they had been e-working. When this was cross tabulated with general health, high levels of health were reported across all of the years of e-working experience but peaking at 2-5 years, with those e-workers reporting good to excellent levels 90% (N=83).

Respondents were asked if typical daily activities, such as climbing stairs were limited by their health. The responses were mainly negative with only 27% (N=67) of respondents who indicated some limitations with the more vigorous activities, such as running and lifting heavy objects. It can be concluded that this sample have very few physical limitations (see graph 2 relating to general population norms).

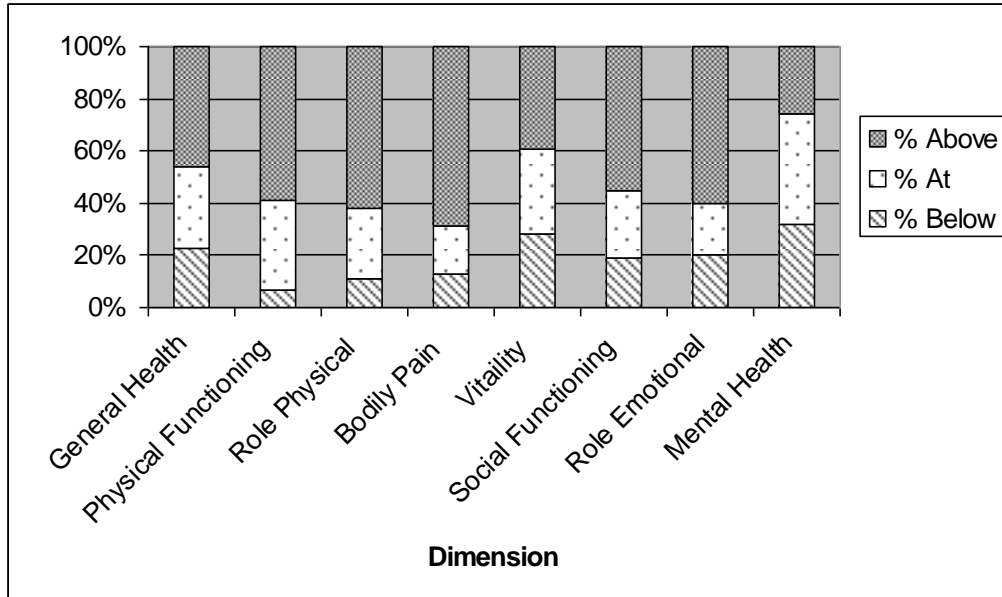
Respondents were asked to indicate if during the past four weeks how much time they had spent on problems with their work or other regular daily activities as a result of their physical or mental health. The results show that for some respondents 29% (N=72) they sometimes accomplished less than they would like as a result of emotional problems. The majority of respondents indicated they did not experience physical problems, although 21% (N=41) did report having taking extra effort to perform work or other activities.

When asked directly about their emotional feelings (including tiredness, happiness, calmness and so on) over the last four weeks, the results provided mixed responses. The respondents indicated some negative emotions such as feeling worn out 37% (N=92) and tired 52% (N=130), whilst positive emotions provided results of feeling happy 69% (N=183), 61% (N=152) and having a lot of energy some, to all of the time. The norms in graph 2 indicate a slightly higher level of poor mental health than when compared to the general population.

This data was checked against the norms provided by the SF-36v2 for the general population. The SF-36v2 uses eight dimensions, such as, vitality, mental health and social functioning to group together the scores. The results as shown in the graph below indicate that when the current sample was compared to norms against the general population for the eight dimensions, that in general these scores were higher than for the general population. The exception was for

mental health, for which 32% of the E-Work life survey respondents were reported as being below average.

Graph 2: Percentage of current sample whose scores were above, at, or below the general population norms



The SF-36v2 provides norms to screening for depression and when the current sample is compared to the general population norms, no difference was found.

The next section of the survey examined the role of autonomy and working practices, these results are now reported.

8.6.5 E-workers' job role and autonomous working practices

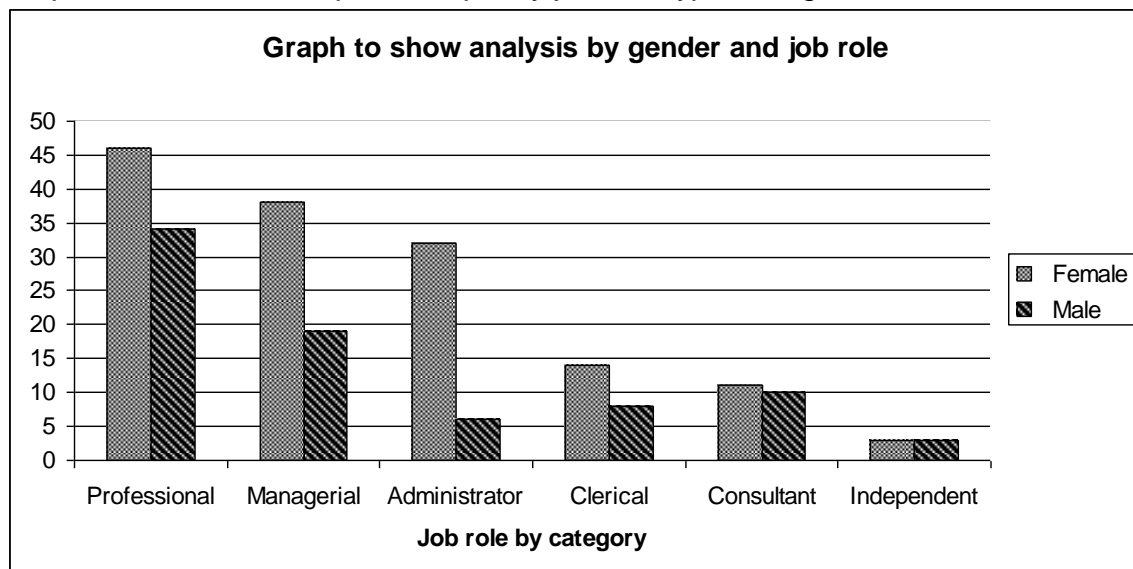
Due to the disproportionately high number of public sector e-workers and low number of private sectors e-workers responding to the survey, no analyses were conducted by industry sector. The following sections describe some differences between the roles performed by e-workers responding to this survey.

8.6.5.1 Job titles and categories

Respondents were asked to provide job titles and a description of their role. These responses were classified by the researcher into six categories, which were: professional, managerial, administrator, clerical, consultant and independent. The 'independent' category refers to those who are self employed. The above categories were sufficient for including the wide range of roles, Chief Executive to VDU operators and from a range of different industry sectors and vocations including IT, teaching, nursing, purchasing, psychologists etc. The largest category was 'professionals' at 32% (N=80) closely followed by the 'managerial' category at 22% (N=57).

When split by gender and role type, graph 3 shows higher proportions of female professional/managerial/administrators in this sample than males. When the Chi Squared test was performed and the categories collapsed into professional and administrator, the results were not found to be significant.

Graph 3: Number of responses split by job role type and gender



From the answers to an open ended question when participants were asked to describe their jobs, a wide variety of roles were recorded. Examples of responses are given below to illustrate the diversity:

- Deal with customer queries by web and post. (Clerical)
- Project leader for team that designs and develops national promotion exams for the police. (Managerial)
- Lecturer, Researcher, Course Director, PhD supervisor, leader of research group, conduct income generation activities such as training. (Professional)
- Work with GP Practices to improve patient data quality, Information Governance Standards and analysis of Practice data to improve overall service to patients. (Managerial)
- Managing Director of small consultancy. (independent)

8.6.5.2 Contracted employment

A further question was asked of respondents to elicit information regarding their basis for employment. Those that responded to this question 73% (N=183) worked full-time, 13% (N=32) worked on a part time basis and 10% (N=25) indicated they were self employed. No respondents were reported to be retired or unemployed. When respondents were asked if they had flexibility over when and how they completed their work, 45% (N=112) said 'yes', with only 4% answering 'no', a further 44% (N=110) answered 'sometimes'.

8.6.5.3 Work group participation

When participants were asked if they formed part of a team that had shared goals and activities, 79% (N=197) answered 'yes' and 14% (N=34) 'no', the rest answered 'not applicable'. A further category was devised from the data to account for several participants who reported they were part of a client work group, this only accounted for 1% (N=3) of responses. For those who answered positively to this question, 36% (N=89) had 1-6 people in their main work group,

28% (N=71) 7-15 people, 8% (N=21) 16-29 people and 5% (N=13) 30 or more people.

8.6.5.4 Responsibility for managing people

The majority of respondents, 59% (N=148) indicated that they did not have responsibility for managing people. Just under a third of respondents, 32% (N=81) indicated they had responsibility. Some in roles such as consultant or project manager reported responsibility across teams. These accounted for less than 2% (N=3) of the respondents. Of the 32% (N=81) that answered positively, 17% (N=42) had 1-6 people, 8% (N=19) 7-15, 3% (N=7) 16-29 and 6% (N=15) 30 plus people. When further asked how many of their employees were working remotely, 16% (N=40) had 1-6 people, 3% (N=7) 7-15 people, 2% (N=6) 16-29 and 2% (N=4) 30 or more. The categories were collapsed in order to complete a Chi Squared test for gender but the results were not found to be significant.

8.6.5.5 Autonomy and control over workload

When respondents were asked if they had control over their work load, for example, setting own work goals, work patterns and location, 31% (N=77) answered 'yes', 14% (N=34) 'no' and 49% (N=123) 'sometimes'.

8.6.6 E-working technology and e-working practices

To understand the variability in e-working it was important to consider the working practices and availability of technology and experience of the sample. Information was also collected on other methods of flexible working, such as, term time only working and so on. The survey also asked participants how often and by what means they commuted.

8.6.6.1 E-working experience

Of the e-workers that responded to the amount of time they had been e-working 24% (N=51) had gained 0-1 years experience, whilst 65% (N=140) had been e-working for 2-10 years. A further 11% (N=24) had over 10 years e-working experience. When asked how frequently they e-worked the sample showed variability with 17% (N=43) respondents answering 'more than twice a week', 9% (N=10) of respondents indicated they e-worked 'twice a week', and a further 6% (N=15) 'once a month', other frequencies were collected but only the main ones summarised here.

Respondents were asked to indicate the types of flexible working arrangements their organisation was committed to providing. There was a wide spread of responses, with several different types of flexible working practices available, including career breaks, nine day fortnights and term time working. The most popular were, flexible working hours at 51% (N=128) and part-time working at 40% (N=101). When asked if their organisation provided a family friendly policy only 22% (N=56) of the sample reported positively.

8.6.6.2 Work location and commuting

The respondents were asked to give information about their work location and commuting activities. 62% (N=157) of the e-workers answered positively to: 'do you commute to work?', only 15% answered negatively, with 21% (N=53) indicating 'sometimes'. Respondents were given a number of choices about how they commuted. The majority, 66% (N=165) answered that they commuted by car, public transport was the second most frequent as reported by 18% (N=46), while other methods including walking cycling, taxi, plane and so on, only amounted to very small percentages < 2% overall. There was variation in the duration of the commute with the highest at 25% (N=62) taking less than 30

minutes. No 'normal commute' was reported by 2% (N=2) and 'more than 2 hours commuting' reported by 3% (N=3).

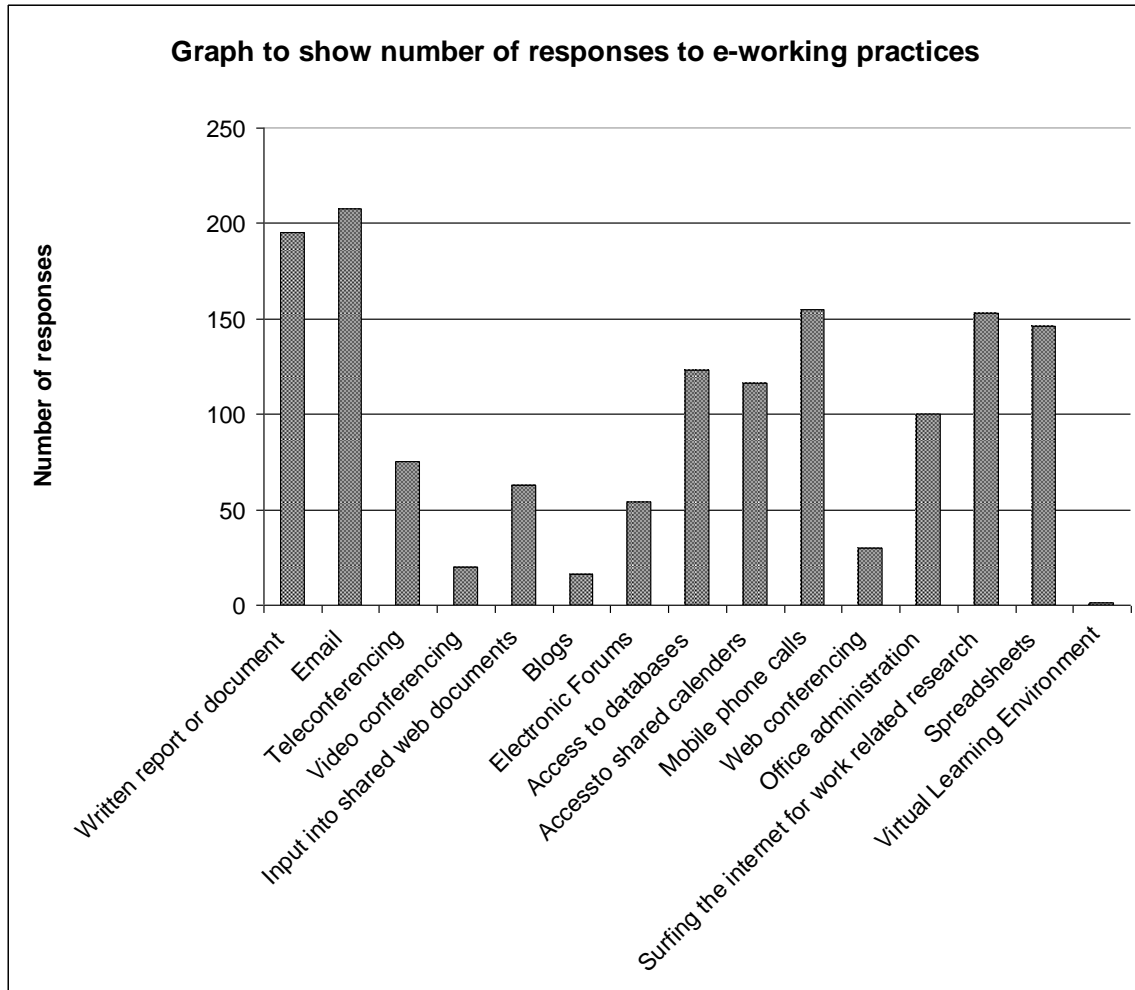
8.6.6.3 Access to technology

Respondents were asked to select from a list of 12 different types of technology they had access to and they were also given an 'other' category for items not included in the 12 types. Respondents could select more than one answer. The most popular answers were; using their laptop (77%, N=193) and using the internet via Broadband (78%, N=194). Those in the 'other' category reported using technology such as, memory sticks, instant messaging (MSN), wifi, Moodle, Google and mobile broadband.

When asked if they owned their devices, 52% (N=131) of respondents indicated their workplace provided all or some of the devices. A further 38% (N=96) indicated that they owned all or some of the devices themselves.

Respondents were then asked to indicate the different types of working practices used (as elicited from the e-worker interviews) when they e-worked remotely. Respondents could tick as many working practices as applied to their e-working. They could also add in other types of working practices if not already covered in the list, although responses generally covered the majority of those already identified. The graph 4 below shows the numbers of responses for the different types of e-working practices selected.

Graph 4: Frequency of reported e-working practices



Note: apart from blogs, social media was not covered in this survey but this is increasingly being used for e-working purposes, e.g., You Tube, twitter etc.

Respondents were asked if they had full access to the internal systems and technology they needed to complete their work when e-working remotely. The majority 61% (N=152) were affirmative, whilst 26% (N=64) answered this question negatively. Those who answered negatively were asked to give a reason. The main reasons given were lack of remote access to databases, inability to open files and documents remotely, passwords not working and unable to log onto internal networks, for example, the intranet and other work related software.

8.6.7 E-working skills and behaviours

A list of eleven skills and behaviours (elicited from the literature on e-working and the e-worker interviews) were provided for respondents to indicate their agreement to if these were required for an effective e-worker (using a five point Likert scale 'strongly agree' to 'strongly disagree and 'not applicable'). A full list of the skills and behaviours is contained in the survey, see appendix eighteen. There was strong agreement to all the skills and behaviours listed with 'self discipline', 'ability to work alone' and 'self motivation' providing the strongest agreement. Respondents were also asked to prioritise the same skills and behaviours in order of importance to themselves. The answers revealed the same high priority skills and competencies as already identified from the literature and related to those found in the e-worker interviews (see chapter six). Those considered least important were, self confidence, tenacity and ability to manage social relationships. Further skills and behaviours were also identified through the qualitative analysis.

Respondents were asked an open ended question about other skills, behaviours and competencies that were important to being an effective e-worker. There was a wide range of responses, which could be largely broken down into seven categories. All of the responses can be found in appendix twenty-three, using the distilled themes, with some example quotations from the respondents are listed below:

Theme 1: Social relationships, networking, communication and people skills

This theme groups together items that relate to communications and social skills, for example:

'I think a face to face relationship would need to have been built-up between colleagues for a person to feel comfortable undertaking this role.'

Theme 2: The practicalities of e-working

This theme relates to how individuals managed the material or practical aspects of e-working such technology, for example, patience was considered essential:

'A willingness to work outside of normal hours.' *'Patience (for when the IT systems that are essential to my work fail to operate efficiently - which is often!).'*

Theme 3: Trust

This theme which also occurred in the e-worker interviews (see chapter six) and draws together the need for trust between work colleagues, for example:

'Trust between managers and other team members is important and availability to anyone who is working in the office.'

Theme 4: E-Working Practices

This theme relates to those behaviours which are associated with effective working practices when e-working, for example, prioritising:

'Prioritising tasks is of vital importance.' *'Taking regular breaks and getting out of the house for walks or other exercise '(4.)* *'Ability to avoid distractions of surrounding environment'*

Theme 5: Application of skills and responsibility

This theme brings together comments related to taking responsibility for tasks and the skills used to become an effective e-worker, for example, a willingness to develop skills further:

'It may also be important to demonstrate higher than typical levels of integrity in the earlier stages of transitioning to e-working and telecommuting.' *'A clear idea of what you are going to accomplish - I see this as bringing together self-discipline, time management etc.'* *'Willingness to learn and develop. There is no organisational driver to maintain CPD if you are self-employed but it is still important.'*

Theme 6: Work-life issues

This theme draws together the skills and behaviours raised surrounding effectively around balancing work and home commitments, for example, the ability to 'switch off':

'Ideally a supportive family or getting your family to appreciate that you are working at home and not just available to do all household chores.' *'Ability to keep work space and home space separate and be able to switch off from work mode.'*

Other comments that did not fit into a particular theme included influencing skills, for example:

'Influencing skills - to try and get what you need to work in terms of time and space in a home environment, when you cant use position power in the same way that you might at work.'

The findings from this section of the survey indicate that 'self discipline', 'ability to work alone' and 'self motivation' were the most frequent behaviours and skills considered by this sample as necessary for effective e-workers. All of the skills were considered relevant, however, when respondents were asked to identify further skills and behaviours, these included 'concentration', 'trustworthiness', 'ability to compartmentalise work and home life distractions', 'common sense' and 'flexibility'.

8.6.8 Measuring e-working

Respondents were asked to indicate whether or not their organisation measured e-working. A small number responded positively to this question 11% (N=27), whilst a much higher number were negative 35% (N=88) or 'did not know' 38% (N=94), 1% (N=3) were self employed. Respondents were asked an open ended question about how e-working measurement was completed in their organisation. See appendix twenty-four for all of the responses. Analysis of the comments revealed uncertainty around how the measurement was carried out and the techniques used, including how this could be done effectively. The main methods reported were: timesheets, collating statistics, objective setting, service levels with clients, regular appraisal and regular surveys. For example, one respondent reported:

'Employee performance is measured via Balanced Scorecard mechanism in our organisation, it is also applied to e-workers.' However, others reported their organisation monitored mobile phone calls and could possibly monitor logging on and off times easily.

Alongside these methods the need to communicate regularly by phone or email with colleagues was reported, ensuring that outputs were achieved and issues discussed with the line manager. A number of respondents indicated high levels

of trust. For example: *'I am trusted to achieve the goals that I am set and to reach out for assistance if I have any difficulties. I have regular conference calls with my manager and team.'* Many of the e-workers also indicated a high degree of autonomy, which is reflective of this sample. For example: *'The vast majority of projects I manage are target driven so I would assume if I am meeting my targets then this is used as a measurement.'*

Respondents were asked if they measured their direct reports e-working productivity, 73% (N=158) answered negatively, 9% (N=19) positively. Those that did measure their direct reports e-working completed this mainly through discussion and setting or reviewing of work objectives. The quotations below show the variation in measurement practices:

'I am trusted to achieve the goals that I am set and to reach out for assistance if I have any difficulties. I have regular conference calls with my manager and team.'

'Via their electronic human resources system all working from home is recorded.'
(4)

'It is general work based than time based. So the job goals have definite measurement yardsticks for success or failure depending on project outcome rather than the time that has been put into the project.'

'Unsure how they manage it but they can see how many claims you have assessed, volumes and extract information for quality control and claims per hour, if you have settled the claim or rejected the claim.'

The next section examines the E-Work life survey responses to work satisfaction and policies.

8.6.9 E-working policies and satisfaction

Respondents were asked to indicate their awareness of policies in e-working and work-life balance in their organisation. When asked if the organisation had a policy on e-working, 30% (N=75) answered positively, however 44% (N=110) answered negatively or did not know. When they were asked about their awareness of work-life balance policies, 25% (N=63) answered positively, 12% (N=30) negatively and 37% (N=92) did not know.

When asked how satisfied they were with their current e-working, 67% (N=167) of respondents were very satisfied or satisfied. Satisfaction regarding their work-life balance was also frequently high as 60% (N=149) of respondents were either satisfied or very satisfied.

The responses for this section reveal that one third of the organisations included had policies for e-working, and approximately one quarter for work-life balance. These results may also be due to awareness and publicity of the policies. If a respondent was not aware of the policy they could not report knowing about its existence.

8.6.10 Changes in technology affecting ability to e-work

When respondents were asked if any changes were affecting their ability to e-work effectively, just over half answered negatively 51% (N=128) with only 13% (N=32) answering positively and 12% (N=30) answering do not know. Those who answered positively were asked a question about the changes. Content analysis revealed several problem areas. For example, changes in IT systems, such as the organisation migrating to new servers, software changes and upgrades. Other problems were also cited were poor remote IT support and the affects of the recession on reducing costs for remote working.

The majority of responses did not indicate a high level of changes that were currently affecting their e-working performance, however nearly a fifth of

respondents did identify areas that could reduce their e-working efficacy. With many changes taking place in technology and in restructuring of organisations it perhaps would be more surprising not to find any effects in the current climate of change.

8.6.11 Hints and tips for e-workers

Respondents were asked to provide hints and tips that could be passed on to other e-working colleagues. Responses were very wide ranging and detailed, with four general themes being revealed. A small amount of comments are provided to illustrate the themes. All of the comments on hints and tips are contained in appendix twenty-five.

Theme one: e-working practices

This category brings together e-working practices and behaviours. Analysis revealed that respondents asserted a need to separate work tasks from home tasks, which could sometimes be achieved by finding a separate work space, for example:

'Try to keep an area just for work so that when you have finished work you can walk away and shut the door on it, both physically and mentally.'

Ergonomics were also mentioned by some as being important to ensure well fitted office furniture to support good health and safety, for example:

'Make sure you have a good chair if you sit at a computer all day.'

Being well organised helped to ensure that goals were achieved when working remotely and structuring the day was considered important. Many comments centered around good self discipline, such as, knowing when to switch on and

off, avoiding the tendency to work longer hours and taking adequate breaks. For example:

'You may not be able to complete all tasks despite working at home as you only have 7hrs. Organisation is important and self-discipline to concentrate on the tasks at hand. Structure day as if you were in the office to ensure you take required breaks and do not work beyond the required hours as this eats into your out of work life.'

Technology was also mentioned, indicating that it is important that adequate technology is available from the organisation. An example is:

'The only thing I would say is that technology needs to be improved in terms of IT problems. It seems like everyday there is a problem, which has been going on for a long time and nothing is resolved.'

Theme two: attitude and motivation towards e-working

Comments in this category revealed that there was a need to make use of the remote working facility and not to feel guilty that this opened up new possibilities and opportunities. For example:

'If you get the opportunity take it - I have managed to complete my work from different locations throughout the UK and even from Antarctica on holiday.' and 'try not to feel guilty about taking advantage of the situation. If you want to take 3 hours for lunch and your schedule permits then do it. Unless you reap some additional reward from a flexible policy the extra effort required to be self motivated etc. won't be worth it.'

Other respondents considered that working remotely does not mean you can work less and that it is important to continue working the full hours to achieve objectives. For example:

'Don't think working remotely gives you an excuse to skive, you should act as though you are working in the office. You only trip yourself up anyway as the work still needs to be completed, whether that is today or tomorrow. Better to stick to a full working day, in the office or remotely.'

Theme three: work-life balance

There were many comments in this category and commitment to both work and non working life were both reflected. Prioritising and being able to compartmentalise activities were considered to be helpful. The following quotation reflects many responses in this area:

'Be fully aware of what it required. Commit to new work or private life requirements sensibly. Prioritise and be aware of other's priorities. Be honest with yourself, family and colleagues about any unexpected pressures that may arise.'

Other respondent's comments focused around training oneself or others to keep work and non working lives separate. For example:

'train family early that if the door is shut, you're working and to pretend you're not there' and 'try to switch blackberry off at weekends/evenings - otherwise friends/family get annoyed.'

These comments reflect the need to switch off from some activities in order to fully focus on others. The final quotation is representative of tips offered by many

respondents to manage time and availability. Respondents advised others that they may appear available by being at home but this still means they have work objectives. An example is:

'Make it clear to people that although you are at home you are working and casual visiting is not encouraged - be clear when you are available and when you are not.'

A less frequent sub theme was 'trust'. The comment below reflects the need for trust when working flexibly:

'flexibility and shared trust with you employer regarding hours really helps e-working'.

Theme four: well-being, health and fitness

Many comments reflected the need to consider health and fitness. For example:

'Remember to exercise and to socialise!' Other respondents indicated it was important to retain a social life, 'don't let your social life slip away like I have, you can feel very isolated and then find it hard to get yourself back into that social life again.'

The benefits of remote working were considered and many comments reflected how it had helped them personally and could also be a means to retain skills for the organisation. The quotation below sums up this sentiment:

'I feel that everyone should have the opportunity that I have to experience working from home as it so beneficial to your working life. My working life is less stressful and my health is better for e-working. I have been able to continue

working past my retirement age due to e-working and therefore my skills are not lost to the company.'

8.6.12 Overall comments by respondents

As a closing question to the survey, respondents were asked to provide any final comments they would wish to add. Comments were very detailed and focused on the value of e-working, both benefits and drawbacks. Many of the comments reflected a positive attitude to e-working that it aided their work-life balance and ability to work more hours in some cases. However, interestingly, one comment reflects an alternative view:

'when people say 'no' to all the remote-working questions, they may mean they work on the premises...but they are still remote workers when they interact with those who are not on the premises'

All of the other comments reflected positive views. These are not categorised due to the variation within the comment and the context in which many are set. A full list of the comments can be found in appendix twenty-six. The sample below reflects the most popular topics:

'In a practical sense e-working surely has to be the future in an enlightened Society. It is madness for everyone to commute to work at the same time, causing stress to individuals, congestion and impact on the environment.'

'For me the introduction of flexi time has been the major factor in my work-life balance, by increasing it a lot. The ability to e-work has also increased my job satisfaction.'

'I love working from home. I feel in complete control of my work and it allows me to control my work-life, rather than being controlled by work!'

'Sometimes it feels like out of sight is out of mind, and other people in the organisation seem to think that because I and my team are out of the office so much, we are doing less work. This is infuriating, and if we had a proper e-working policy that made it clear that people could be trusted to manage their own time and workload, our lives would be an awful lot easier.'

'I have been an e-worker since the early nineties and have found that it is a fantastic way to work. I feel that I have been more productive than working in an office and your quality of life working from home is far greater.'

8.7 Summary and discussion of E-Work life survey results

8.7.1 The nature of the E-Work life survey sample

The respondents from the current sample can be summarised as being largely from the public sector, female and aged between 25-54 years old. The majority were married or co-habiting, with nearly two thirds with no children under the age of 18 years old living at home. Few respondents indicated they looked after elderly dependants on a regular basis. This sample was mainly employed in professional and managerial roles, working full time and had a high degree of autonomy and flexibility over managing their workload.

The majority of respondents were experienced e-workers, many having been e-working for over 2 years. The sample is skewed towards experienced e-working females in the public sector, many without children under the age of 18 living at home. Approximately one third of respondents were e-working on a regular basis, either every day including weekends or twice weekly. Laptops and personal computers with broadband access proved to be the most popular

technology used, with approximately one third of workplaces providing this equipment. Writing written document and reports, using email and answering mobile phone calls were the most used working practices. Nearly two thirds of respondents had access to the full range of office technologies remotely. In a study by Haddon and Brynin (2005) they found that access to technology could affect the ability to e-work effectively and that different roles had different types of access. The current research supported this finding in that the higher up in the organisation the e-worker the more access to newer technologies.

Half of respondents indicated their organisations were committed to providing flexible working hours, with over two thirds providing part time working as an option. Several other types of flexible working options were available. Bourhis and Mekkaoui (2010: 111) found in their investigation into family friendly organisations that personal leave and flexible scheduling were the most attractive to potential employees. Clearly flexible leave has become one of the most popular offerings to employees, tying in with government legislation and this is reflected in the current research.

The section of the survey that explored job autonomy and working practices, covered job roles, working hours, managing people, autonomy and flexible working. Two thirds of the respondents were from the public sector. Over two thirds of were employed full time, with only 13% (N=32) working part-time. Most of the sample were female professionals, managers or administrators. This ties in with other research in e-workers whereby many of the e-working roles are found to be at a professional or managerial level (Haddon and Brynin 2005: 42). Haddon and Brynin indicate from their research that 'teleworking is overwhelmingly a managerial and professional practice'.

Many of the respondents belonged to a work group, however almost two thirds of respondents were not responsible for managing people. Managing staff remotely

has not been covered in detail by research at this time. However, Baruch (2000) found that 'teleworking enabled managers and professionals to get better (perceived) performance due to their ability to work with interruptions.' As found in the current study trust between the manager and the e-worker is essential. Baruch (2000: 45) also found that there 'needs to be a culture of trust, from both managers and peers of the teleworkers. Also a culture of management where people are measured by results rather than attendance is appropriate for teleworking.'

The sample contains other types of less experienced e-workers who also worked at more junior levels within the organisation. This differentiation cannot be evidenced through the analysis of skills and behaviours in this survey, as respondents were asked only to consider how important the skills and behaviours were to be an effective e-worker, rather than if they actually demonstrated the skills and behaviours. However, certain skills and behaviours were considered more important i.e., 'self discipline', 'self motivation' and 'ability to work alone' this research supports other research in this area, this is supported by other research into individual differences in e-workers (Baruch 2000).

When using the variable of gender to perform comparisons both males and females report high levels of satisfaction with e-working which support the findings by Baruch (2000). Baruch's study also found that the impact on role demands did not decrease with the ability to e-work, but working from home did improve the relationship and support aspects. In the current study respondents were very satisfied with their work-life balance, which perhaps ties in with their high levels of autonomy. In a further study by Keliher and Anderson (2010) it was found that work intensified with flexible working hours, however, job satisfaction remained very high, the same could be perhaps considered for e-workers as they report being highly productive and also satisfied.

The current sample is perhaps an unusual sample for a study into work-life balance as many of the respondents were not raising young children. Other research into work-life balance has indicated that the presence of dependants increases home demands and can lead to a reduction in paid working time (Brough and Kelling 2002). It could be that since this study in 2002, e-working has become more acceptable for organisations and women are retaining their previous pre-maternity work roles. This conclusion cannot be supported by the current study due to the limited numbers of female parents but it could be a factor in higher satisfaction levels.

When health and well-being were examined, it was found that the majority of the population reported high levels of self assessed well-being. Not all respondents reported good mental health. It could be that e-working does have some mental health effects or that some respondents are perhaps working remotely due to existing health issues. E-working may in fact provide the means to complete paid work, which otherwise may not be possible. The area of mental health in e-workers requires further investigation.

8.7.2 Analysis of qualitative comments

Throughout the survey open ended questions were asked. The respondents provided depth in their answers. For example, further skills and behaviours were identified which increased the knowledge of how a 'developed' e-worker may use these to become an even more effective e-worker. Hints and tips were wide ranging and provide insights into both individual and shared working practices. The overall comments indicated and supported high levels of satisfaction with e-working and especially the positive impact it has on managing work-life balance issues. The sample did not have high numbers of parents and so adds to the research literature as it examines the work-life issues of those with and without children.

Research has not fully considered those workers who are not e-working and the impact that those who are e-working remotely has on them. There was only one comment in the current research but it should be noted that e-working can be considered by some as an opportunity that is not open to all. Many of the current sample were of high status and had high autonomy reflecting a high level of flexibility about when and how they worked. Consideration of those left behind in the office is a gap in the research that could be studied further.

A large number of respondents indicated they 'did not know' if their organisation measured the effectiveness of e-working. It could be that they are being measured but not in an obvious manner, or it may also be that this sample are highly autonomous and trusted by their line managers to work effectively remotely. Most of the respondents indicated that measurement would be carried out either by setting specific objectives or through their annual appraisal. This may mean that e-working productivity has been combined with their overall assessment. Other responses indicated that technology could be used to track log on times and use of technology, although this method does not necessarily track actual outputs. Surveys were used by one organisation but these require the participants to self assess and may not, therefore be a true reflection of e-working productivity. This is an area that could be explored further by organisations to ensure that e-workers are not over-working or in some cases under-working. As mentioned in previous section trust could be key to managing e-workers and it is their outputs as apposed to attendance that should be monitored to ensure productivity is met (Baruch 2000).

8.8 Conclusion

The E-Work life survey has provided a mechanism to test the newly devised E-Work life scales. The survey has also provided insightful information about how e-workers perceive their satisfaction and effectiveness. E-working practices and their use of technology has provided the grounding for further research, in

particular about the skills and behaviours e-workers adopt to perform their e-working roles effectively. The findings indicate that work role, individual differences and the way tasks are performed when e-working are all important to consider for those embarking on e-working. Many organisations are not providing policies for e-workers, nor measuring their performance, these areas present a gap in applied practice and requires further research.

The results from the survey will be considered further in relation to the analysis of the E-Work life scale in the subsequent chapter (nine).

Chapter Nine: Phase Two: E-Work life Scale: Analysis and Item Reduction

9.0 Overview

In the previous chapter, phase two of the current research, an E-Work life survey was developed and the results and findings for the demographic information and contextual aspects of the survey were analysed. This chapter continues the scale development of the E-Work life items by reducing their number, completing checks for reliability and validity, including exploring their dimensionality. In the subsequent chapter, phase three develops potential interventions which relate to the E-Work life measures through a series of qualitative interviews with exemplar e-workers, this completes the studies undertaken for this research.

9.1 Introduction

This chapter covers the analysis and findings from the section of the E-Work life survey that contained the E-Work life scale items ('your e-work life', sections 19-21, see E-Work life survey in appendix eighteen). The purpose of the work completed in this chapter is two fold; firstly, to refine and reduce the measures within the scale and secondly, to explore the dimensionality of the measures. The E-Work life items, 39 in total, which form the scale were derived from interviews with e-workers and refined using a sorting method. Both were completed in phase one (see chapters six and seven). The main purpose for this section of the E-Work life survey was to pilot the newly devised E-Work life measures to enable further refinement and analysis. Validity and reliability checks were also completed.

DeVellis (2003: 87) and Netemeyer, Bearden and Sharma (2003: 86) argue that checking validity is essential in developing scales. For the current study, content and face validity were assessed when the initial scale items were generated. Netemeyer et al. (2003: 121) refer to factor analysis as assisting in the

measurement of construct validity by providing factors whereby, similar items are grouped together. Factor analysis alongside reliability analysis provided a means to reduce the items contained in the scale. As recommended by Netemeyer et al. (2003: 122) Principal Component Analysis (PCA) was used with Cronbach's alpha reliability analyses to reduce scale items, and to explore the reliability and validity, including an exploration of the dimensionality of the new scale.

9.2 Context of the E-Work life scale (including key variables and dimensions)

In the previous chapter the work-life balance literature identified several key variables which are important when studying work-life balance. These are gender and number of dependants. Research associated with work-life balance has found that these factors may have an effect on the outcomes (Greenhaus and Beutell 1985, Carlson and Frone 2003). These variables are considered when analysing the results of the E-Work life scale.

The E-Work life survey provides the context for considering the efficacy and construct validity of the E-Work life scale. The measures contained in the E-Work life scale have been divided into eight postulated dimensions as derived from the previous studies as part of the current research (see chapter five for definitions). The eight postulated dimensions enabled the development of a framework to consider the dimensionality of the scales and the surrounding contextual issues. The postulated dimensions are:

- Dimension one: E-working effectiveness
- Dimension two: E-Work life integration
- Dimension three: Role management/conflict
- Dimension four: Managing boundaries
- Dimension five: E-well being
- Dimension six: E-job effectiveness

Dimension seven: Management Style

Dimension eight: Trust

The presence of the eight postulated dimensions will be considered through the inter-relations of the measures and explored further through factor analysis (see appendix twenty-seven for a copy of the items related to the postulated dimensions). Through the work completed in phase one, an E-work life typology was also developed. Evidence for this typology is further considered in the following analysis (see appendix sixteen for a copy of the typology). The following section covers the methods employed to analyse the E-Work life scale.

9.3 Method - statistical analysis

Data analysis of the E-Work life scale required several different types of analyses in order to examine their dimensionality leading to the reduction of items. To meet these requirements the E-Work life scale was analysed as follows:

- 1) By response rates
- 2) Frequency distributions
- 3) Descriptive statistics, including analysis by key variable
- 4) Pearson's Correlations of items within scales and by dimension
- 5) Item analysis (to check evidence for the E-work life typology)
- 6) Principal Component Analysis (factor analysis)
- 7) Cronbach's alpha to check the internal reliability of the scales

The findings from analyses 3), 4), 6) and 7) were utilised to assist in the reduction of the number of items in the scales. Principal Component Analysis was also used to consider the postulated dimensionality of the scales and any underlying sub-scales. The correlations in 4) provided patterns for the findings that assisted validity checks. Those were taken a step further in 5), where the items within the categories were correlated to consider the inter-relationships

between the scale items. The item analysis in 5) was also used to explore evidence for the E-Work life typology.

In order to manage the analyses, the items were identified as specific reference numbers (EWL1-39) as shown in table 8 below:

Table 8: List of E-Work life items and associated reference numbers

E-Work life Scale Items	Negative worded statements = N <i>(all the rest are positively worded statements)</i>	Ref
I know what it takes to be an effective e worker		EWL1
My organisation provides training in e-working skills and behaviours		EWL2
Having flexible hours when e-working allows me to integrate my work and non-work life		EWL3
My e-working does not take up time that I would like to spend with my family/friends or on other non-work activities	N	EWL4 (R)
When e-working remotely I do not often think about work related problems outside of my normal working hours	N	EWL5 (R)
I am happy with my work life balance when e-working remotely		EWL6
Constant access to work through e-working is not very tiring	N	EWL7 (R)
When e-working I can concentrate better on my work tasks		EWL8
I can completely balance my e-working with the rest of my life commitments		EWL9
I can manage my time well when e-working		EWL10
My supervisor gives me total control over when and how I get my work completed when e-working		EWL11
My line manager completely trusts me to manage my work effectively when I am e-working remotely		EWL12
I trust my line manager to advise me if I am not effectively performing whilst e-working		EWL13
My organisation trusts me to be effective in my role when I e-work remotely		EWL14
I trust my organisation to provide good e-working facilities to allow me to e-work effectively		EWL15
E-working makes me more effective to deliver against my key objectives and deliverables		EWL16

E-Work life Scale Items	Negative worded statements = N <i>(all the rest are positively worded statements)</i>	Ref
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations		EWL17
When e-working from home I do not know when to switch off/put work down so that I can rest	N	EWL18 (R)
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted		EWL19
My work is so flexible I could easily take time off e-working remotely, if and when I want to		EWL20
E-working has a positive affect on other roles in my non-working life		EWL21
My family do not dislike how often I am preoccupied with my e-working whilst I am at home	N	EWL22 (R)
I can arrange for childcare/support to look after my dependants when I am e-working		EWL23
When e-working remotely I often do not think about family related and/or non work related problems	N	EWL24 (R)
I do not need to gain permission from my line manager before I can e-work from home		EWL25
My line manager discusses sympathetically any issues related to my non work when e-working		EWL26
My line manager allows me to flex my hours to meet my needs, providing all the work is completed		EWL27
My line manager is a good role model for me in terms of e-working		EWL28
I have total control over when and how I get my work completed when e-working		EWL29
My line manager is a good role model for me in terms of work life balance		EWL30
I do not feel that work demands are much higher when I am e-working remotely	N	EWL31 (R)
I am not highly motivated to work past normal work hours when e-working	N	EWL32 (R)
My overall job productivity has increased by my ability to e-work remotely/from home		EWL33
I have adapted to e-working by developing suitable skills and behaviours		EWL34
I am not overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	N	EWL35 (R)

E-Work life Scale Items	Negative worded statements = N <i>(all the rest are positively worded statements)</i>	Ref
My social life is not poor when e-working remotely	N	EWL36 (R)
I do not miss socialising in the office when e-working remotely	N	EWL37 (R)
I know how to socialise using technology		EWL38
Commuting to work increases my stress		EWL39

It should be noted at this stage that items EWL5, EWL7, EWL18, EWL22, EWL24, EWL31, EWL32, EWL35, EWL36 and EWL37 were negatively worded in the survey. These were re-worded and the scores reversed for the purposes of the analysis. These items are labeled with an ‘R’, for example EWL5R (see table above).

Prior to analysis the E-Work life survey data was cleaned (see chapter eight for details). Non-respondents (N=5) were removed as well as any unusually scored answers that appeared to be invalid, that is, they were inconsistent with the main results (N=1). The E-Work life scale items were checked and coded for non-applicable answers and missing cases (values). Missing cases, in particular, have an impact on Principal Component Analysis and this is discussed later in section 9.7.

For the E-Work life scale, respondents were asked to indicate their preferences against each item according to a five point Likert scale, see table 9 below for details and scoring. ‘Not applicable’ was available as an option, as some questions may not have applied to all respondents. Whilst this use of the Likert scale is not interval data (in that numbered scores have not been used for each type of response) they are frequently used by psychologists in this area of

measurement and it is normal to use factor analysis with these types of answer preferences (Oppenheim 1992: 195-200 and Netemeyer, Bearden and Sharma 2003: 100).

Table 9: Scoring utilising the Likert scales for the E-work life scale

5 point Likert scale	Scoring
Strongly agree	1
Agree	2
Uncertain	3
Disagree	4
Strongly disagree	5
Not Applicable	6

A diverse population of e-workers self selected to take part in the survey and whilst several discrete groups were surveyed, the organisational group response rates were not considered high enough for direct comparison. The numbers of e-workers were spread across 11 organisations plus many individuals who also took part but did not reveal their affiliation. This meant that whilst the number of participants when grouped together were adequate for factor analysis, (Netemeyer, Bearden, Sharma (2003:123) advise that factor analysis requires a large sample in order to be valid), individual group numbers based on organisation type, were in some cases low. To be able to carry out useful comparisons across organisations or by sector would have required higher numbers in each of the organisational categories. Findings from the survey demographics indicated that the sample was skewed towards female, professionals from the public sector, and had few respondents across different organisations (see chapter eight for full analysis).

9.4 Results and findings

9.4.1 Response rates

The E-Work life items were contained in a separate section of the survey and each scale item was responded to using the 5 point Likert scale as described in the previous section. Responses to the items were not mandatory as a 'forced choice' method may have prompted people to leave the survey early should they become frustrated with the number of responses required (N=39). For the purposes of analysis the items were numbered EWL1-EWL39 (see table eight).

In total, 250 people self selected to respond to the E-Work life survey. The average response rate was N=187 for the items contained in the E-Work life scale. The highest response rate for a particular question was 209 for EWL1 (*I know what it takes to be an effective e worker*) and the lowest response was for item EWL23 (*I can arrange for childcare/support to look after my dependants when I am e-working*) with 68 responses. The low number of responses for item EWL23 may relate to the fact that 60% (N=150) of respondents to the overall survey did not have children, 'Not applicable' was, therefore, the most frequent answer for this item. This result ties in with the finding from the previous chapter that a high proportion of this survey sample was not responsible for caring for children. 'Not applicable' was an option for all items and for the majority of the statements responses to this were minimal.

Missing cases (values) per item accounted for an average of 63 respondents. EWL23 again had the highest number of missing responses at N=182, followed by EWL 26 (*My line manager discusses sympathetically any issues related to my non work when e-working*) at N=124 and EWL 28 (*My line manager is a good role model for me in terms of e-working*) at N=90. The lowest statement with missing answers was EWL 1 (*I know what it takes to be an effective e-worker*) had N=41 missing.

9.4.2 Frequency distributions of E-Work life items

Frequency distributions were completed on all of the individual E-Work life items. Overall, it can be deduced, from viewing all of the items together, that the items are responded to agreeably (see graphs in appendix twenty-eight). A histogram was completed of the total scores. This showed that the data had a good distribution of scores overall (to view graph see appendix twenty-nine). A further graph showing the mean scores is also contained in appendix thirty. This graph indicates that six items have much higher disagreement (EWL2, EWL5R, EWL20, EWL25, EWL32R and EWL37R).

The scores for kurtosis are distributed away from 0 (both negatively and positively) indicating that the data is not normally distributed. However, the histogram (in appendix twenty-nine) of total scores indicates that overall scores provide a more even curve. These results indicate that there is large amount of agreement to the items and the results are, therefore, slightly skewed towards agreeing with the items. Overall the responses were positively skewed. This could be a response to social desirability pressures or that the scale items were worded such that they provide high probability for agreement.

9.4.3 Descriptive statistics

This section details and analyses the statistics for each item contained in the E-Work life scale. Appendix thirty-one contains the full list of items and their respective descriptive statistics including, mean, standard deviation, mode and median (those items that are negatively worded are marked with an (R) all of the other items were all positively worded).

To ensure that the descriptive results can be interpreted correctly, reference to the likert scale and scoring should be made as described in the previous section. This is important to read in conjunction with the actual item wording (see section

9.3) table eight so that the results can be interpreted. In table eight the words appearing in italics and bold have been added to the negatively worded questions so they can be read in the positive direction, however, respondents would have read and answered these without this additional positive wording.

The overall mean number of responses to the scales was N=187. When the negatively worded questions were reversed the overall mean was 2.4, the mode 2 (agree) and the median 2 (agree). Item EWL23 had a well below average response rate, and as such can be considered an outlier. When this is removed N=190 and the mean 2.3, it has no effect on the mode, median or minimum and maximum figures. The total score mean was 84.

What can be identified both from the descriptive statistics and the frequency graphs is that six of the individual items did not conform to the pattern of agreement within the scale. These items are shown in table 10. The items indicate some disagreement and could be considered for further investigation and in some cases the development of 'actionable' interventions. The two negatively worded items EWL5 and EWL37 also indicate that whilst they have been agreed with, they are negative responses.

Table 10: Descriptive statistics for non-conforming E-Work life scale item findings

Scale Item	N	Mean	SD	Median	Mode	Comment
EWL2	183	3.48	1.11	4	4	Disagreement to: <i>my organisation provides training in e-working skills and behaviours.</i>
EWL5 (R)	207	3.74	1.06	4	4	Agreement to: <i>when e-working remotely I often think about work related problems outside of my normal working hours</i>
EWL20	198	2.79	1.07	3	2	Uncertain response to: <i>my work is so flexible I could easily take time off e-working remotely, if and when I want to.</i>

Scale Item	N	Mean	SD	Median	Mode	Comment
EWL30	167	2.88	1.10	3	2	Uncertain response to: <i>my line manager is a good role model for me in terms of work life balance.</i>
EWL37 (R)	194	3.06	1.28	3	4	Some responses are 'uncertain', others 'agree' that they <i>miss socialising in the office when e-working remotely.</i>
EWL39	182	2.84	1.35	3	4	Some 'uncertain' responses and others 'disagree' that <i>commuting to work increases my stress.</i>

9.4.4 Summary

The results of the descriptive statistics indicate a wide range of response rates to the E-Work life individual items. This might be expected as the questions were not mandatory and the respondents were self selected, which meant they could choose items they preferred to answer. Some participants may have opted not to respond to an item if they felt it was not relevant. There was a wide range of responses to 'uncertain' (score 3) to some items, indicating non-committal, lack of knowledge, or perhaps a poorly worded question. For example, whether or not their organisation had a work-life policy. The item EWL23 reported a high number of 'not applicable' responses, which suggested that many of the respondents did not need to arrange for childcare or support dependants whilst they were working. This does not result in the question being invalid, but that it did not meet the requirements of this particular self selected sample. Therefore, in terms of the development of the scale, this was not an item that could be thoroughly examined in the current analysis. However, it may be more relevant to a sample with a higher rate of dependants.

The frequency distribution, when the negatively worded questions were adjusted for, showed a very positive response to the questions. High positive response rates are not unusual in surveys due to a desire to socially conform (Netemeyer,

Bearden and Sharma 2003: 83). The negatively worded questions had been useful and assisted in breaking the positive pattern at times, enabling more varied responses. The high level agreement to EWL5 is an example of where a negatively worded item shows a significant difference. Whilst it was agreed to, the negative wording means that in fact individuals were thinking about work after hours. This finding indicates that the wording of the items could be important in terms of identifying the nuances in behaviour related to e-working and work-life balance.

9.5 Analysis of key variables

Gender and number of dependents were found to be key variables in previous research of work-life balance. In the current study the number of respondents with dependants was too low (33% (N=90)) to find any significance. The spread of gender was skewed towards female respondents with 63% (N=158) female. A number of Chi Squared analyses were carried out on the gender related data. When related to the EWL1: *I know what it takes to be an effective e-worker*, however, the category counts were too low and none were found to be significant. Section 9.6.1.2 considers the key variables by dimension, using both descriptive and correlation analyses.

9.6 Analysis of scale item correlations

In order to fully analyse the E-Work life scale it was important to consider the relationships and associations between the items. For this purpose the Pearson's correlation co-efficient analysis was completed on the full set of responses for the E-work life scale *EWL1-EWL39*. The Pearson's correlation method was chosen for consistency with the findings from the Principal Components Analysis. Although the data may be considered to be non-parametric due to the skewed nature, it is unusual in scale development to a use non-parametric test to analyse

scales (Netemeyer, Bearden, Sharma 2003:121), plus the overall analysis of scores indicated a more even distribution.

9.6.1 Overall correlation results

When developing a scale it is important to look for patterns amongst the data and in particular, for those items that have high correlations with other items, as this means they could be measuring a similar construct. Conversely, those items that have a negative correlation with other items need to be considered for removal as these items could be measuring an unrelated construct.

A review of the Pearson's analyses highlighted that many of the results were significant at $p < 0.05$ and $p < 0.01$ indicating some strong relationships between items. However, it is important to consider the effect size when viewing these results, that is, the strength of a relationship between the variables. According to Field (2005: 32) effect size is 'a measure of the magnitude of the observed effect'. When viewing Pearson's correlations Cohen (1988 and 1992) suggest a relationship between effect size and variance. Field (2005: 32) cites this, for example, as $r = 0.10$, whereby the effect explains 1% of total variance. Pearson's r 's for these analyses were variable, and therefore, only a few of the correlations account for the highest percent of the variability. The correlations below indicate the highest found in these analyses.

Table 11: Correlations and variability of closely related items

Items	Ref	r =	P <=	% variance
I am happy with my work life balance when e-working remotely	EWL6	.656	0.01	43%
I can completely balance my e-working with the rest of my life commitments	EWL9	.656	0.01	43%
My line manager is a good role model for me in terms of e-working	EWL28	.625	0.01	39%
My line manager is a good role model for me in terms of work life balance	EWL30	.625	0.01	39%
I can manage my time well when e-working	EWL10	.528	0.01	27%
I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	EWL35	.528	0.01	27%

Items	Ref	r =	P<=	% variance
(Negatively worded)				

The highest positive correlation was between EWL6 and EWL9 at $r=0.656$, $p<0.01$. The variance associated with the effect size for the items ($r=0.43$) showed a variance of 43%. These two items appear to be measuring a similar concept and could be easily combined. The next highest positive correlation was between EWL28 and EWL30 which was significant at $r=0.625$, $p<0.01$, where $r=0.39$, shows 39% variance. It is an interesting finding that these two items relate to each other so highly, as they are not measuring the same topic area but have a positive relationship with each other, perhaps because they are measuring role model.

Overall the majority of measures had positive correlations with no particular item standing out. The highest negative correlation was between EWL10 (*I can manage my time well when e-working*) and EWL35 (*I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time*) $r=-0.528$, $p<0.01$. However, when the analysis was carried out with the item reversed the correlation became positive. EWL35 could be changed to read 'I am **not** overloaded....'. In general, EWL35 provided the majority of negative correlations. If this item is retained consideration should be given to re-wording positively.

9.6.2 Results of correlation analysis by E-Work life dimensions

Pearson's correlations were carried out according to the preliminary work which identified the items as belonging to certain postulated dimensions (see chapter seven). A two tailed analysis was completed, as the results were exploratory, using the findings from the literature to examine these further. Occasionally, one tailed analyses were completed to test specific findings. The key findings from the analysis were combined with the results from the descriptive statistics to

produce an analysis per dimension, this analysis is contained in appendix thirty-two, including the related Pearson's analysis tables. Table 12 (see section 9.6.4) indicates where the findings from these analyses are used to refine the items.

The next section considers the results of the E-Work life survey at a micro-level by viewing individual cases related to the E-Work life typology.

9.6.3 Item analysis

To examine the E-Work life typology (see appendix sixteen) in greater depth, several individual cases were analysed to assess responses to individual items at a micro level. Findings showed that there were some differences in e-working effectiveness, for example, there were two opposing participants, indicating different patterns of response. Where one was clearly indicating they were not managing their e-working and work-life integration (see appendix thirty-three for analysis). This further demonstrates the polarity associated with the postulated typology between the developed and undeveloped e-worker (see appendix sixteen for details of the typology).

This detailed item analysis provides insights into the data. Whilst this study has found high levels of proficient e-workers, it can be seen that not all were proficient in this category, as evidence can be found of the less developed e-worker. The next section presents a final analysis of the E-Work life scale prior to completing the factor analysis.

9.6.4 Summary

This section has taken the information gathered using descriptive statistics alongside the correlations to explore the responses to the E-Work life scale items. This process has helped to consider items in depth and providing a means to explore content and construct validity.

From the analyses completed in the previous sections some key findings have emerged regarding the individual items within the scale. Several items have now become candidates for potential alteration, amalgamation or removal. These are summarised in table 12.

Table 12: Selected E-Work life items for removal, amalgamation or alteration

Item	Reason
I am happy with my work life balance when e-working remotely (EWL6)	EWL6 and EWL9 have similar wording and are highly correlated. Re-word to form one item.
I can completely balance my e-working with the rest of my life commitments (EWL9)	As above.
I can arrange for childcare/support to look after my dependants when I am e-working (EWL23)	Consider for removal, this may depend on the sample but has not worked for this group of respondents.
My family dislike how often I am preoccupied with my e-working whilst I am at home (EWL22R) When e-working remotely I often think about family related and/or non work related problems (EWL24R) I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time (EWL35R)	EWL35R could be re-worded positively to be in line with similar questions. However, EWL22 and EWL24 have simpler wording. There is a need to select one question of this type from this category.
My line manager is a good role model for me in terms of e-working (EWL28) My line manager is a good role model for me in terms of work life balance (EWL30)	When taken together these are highly correlated. These statements could be merged to form one item.
My social life is poor when e-working remotely (EWL36R) I miss socialising in the office when e-working remotely (EWL37R)	These are very closely related and could potentially be combined into one item.

This short summary provides a list of those items that have been identified through the simple analyses. These results should be re-considered following the outcome of factor analysis and the reliability analyses detailed in the next two sections.

9.7 Factor analysis of the E-Work life scale

9.7.1 Introduction

Principal Component Analysis (PCA) was selected as the analysis method as it provides a tool to conduct exploratory factor analysis (Field 2005: 619 and DeVellis 2003: 127). PCA can provide both a method to assist in reducing the number of items in a scale and also to explore any underlying dimensions.

When using PCA, the components (or factors) are estimated in such a manner as to represent the variances among the items in the scale as economically as possible, with the fewest number of meaningful components (dimensions) as possible (Netemeyer, Bearden and Sharma 2003: 121). Furthermore, 'those items for which little variance is explained are considered as candidates for deletion, that is, to reduce the number of items in the scale' (Netemeyer, Bearden and Sharma 2003: 121).

For the PCA to work well a large sample should be used. This is estimated differently in various literature Netemeyer, Bearden and Sharma (2003: 116) consider that 'rules of thumb for exploratory factor analysis techniques range from a minimum sample size of 100 to a size of 200-300.' Other recommendations consider a sample size related to the number of respondents per item (usually 5-10 responses). The average number of responses to the E-Work life scales was N=187. When item EWL23 is removed the average increases to N=190 (38 measures x 5 = 190) which allows for both of these requirements to be met. In the initial run of the factor analysis EWL23 is retained for completeness and to consider the degree of variation.

To check the sample was suitable for analysis three measures were utilised:

- 1) The communality, is the proportion of variance within a variable, (Field 2005: 630) indicates that the communalities are the degree to which the data is common. This should be 0.6 or greater. The lower the communality the higher the sample should be.
- 2) Bartlett's test of Sphericity measures whether the variance-covariance matrix is proportional to an identity matrix. Checking that the diagonal elements of the matrix are equal. (Field 2005: 724).
- 3) Kaiser Meyer-Olkin (KMO) is a measure of sampling adequacy, this is 'the ratio of the squared correlation between variables' (Field 2005: 735).

9.7.2 Method and results

Prior to completing the analysis, 11 items that were worded negatively were changed so that all responses were positive (see section 9.3, table eight for re-worded items). Missing cases (values) were coded as a discrete number (6) for the PCA analysis. It is important to acknowledge the missing cases so that the analysis can recognise these. This is particularly important when running the different types of analysis pairwise or list wise as missing cases need to be excluded from factor analysis.

Run 1: Method

The Principal Component Analysis was run through SPSS, with the Kaiser Meyer-Olkin and Bartlett's test of sphericity selected. Field (2005: 642) recommends that values of 0.5 are acceptable, generally the nearer to 1 the more compact the factor analysis. Correlation matrices, tests for multi-collinearity and anti-imaging were all selected to check the data further. The anti-imaging tests also check for sampling adequacy and should be above 0.5 for each correlation (Field 2005: 642). All of these requirements were met.

For the actual factor analysis extraction, the un-rotated factor solution was selected in order to assess the improvement of the rotation due to rotation. Eigen factors were selected to be over 1, the number of factors was not restricted. Rotation varimax was used initially to find the first run of results, however, direct oblimin was used in the second run as many of the variables were related, this did not prove significant. The Anderson-Rubin method was selected (Field 2005: 646) which ensures that the factor scores are uncorrelated. The cases were run listwise.

Run 1: Results

This analysis resulted in only N=36 (from an original number of 68-250, numbers of responses varied per item) respondents being selected for the PCA. The reduced N was because there was an inconsistent number of missing cases across the data set. As such, the analysis tool SPSS picks up data with complete entries (that is with no missing data) thus N=36 was the highest number that could be found when the option list-wise was selected. This resulted in the majority of the data set not being used. These results cannot be used for factor analysis as the N is too low. Due to the high level of missing cases the data was run again as pair-wise.

Run 2: Method

It was decided that owing to the limited number of N in the first run that the data set should be re-run as pair-wise this would collect more of the data from the variables, as list-wise does not include any variables with missing data. All other selections remained the same.

Run 2: Results

Running the data analysis again, pair-wise produced a variable N, with the highest N=207 and the lowest N=68. The pair-wise approach did include all the data present, only excluding the datum missing from a participant as opposed to excluding the whole participant who has missing data as in the list-wise analysis. The anti-imaging correlations identified 10 items below 0.5 which according to Field (2008: 648) are candidates for removal. Nine factors were found the highest with unique variances of 22% and the lowest at 2%. The cumulative percentage variance shared with other measures was 60.67%.

The correlation tables were scanned for items that were over 0.9 but none were found. The significance table was scanned for those items with a majority of correlations over 0.5, EWL39 was found to be the only potential candidate for removal. The determinant value is 5.13 (.000513) which is greater than the necessary multi-collinearity value of 0.00001. Multi-collinearity is, therefore, not a problem for this data. The KMO test was 0.6 and Bartlett's test for Sphericity 0.9. Both provide adequacy in the sample.

From the analysis nine rotated factors were found. The analysis was suppressed for factor loadings under 0.4, Field (2005: 637) recommends this for a sample size of between 200-300 so that factor loading +/-0.1 are not displayed in the output. The results are contained in appendix thirty-four.

Run 3: Method

The pair-wise method was used again but this time the ten low anti-image correlations were identified and removed. These were items: EWL4R, EWL37R, EWL12, EWL23, EWL25, EWL26, EWL28, EWL29, EWL30, EWL39. The factor loading remained at 0.4 as in the previous run.

Run 3: Results

This run provided no further items to be reduced. The KMO and Bartlett's test were now improved giving good results for the sampling adequacy at 0.8.

The factors were reduced to seven after this run of the analysis. The cumulative % variance remained at 60.67%. A full table of results can be found in appendix thirty-four.

The PCA provided nine and seven factors consecutively which can now be compared with the postulated dimensionality of the E-work life scale. The next section explores this potential dimensionality.

9.7.3 E-Work life scale – dimensionality

This section, through the findings of the factor analysis, provides a means to consider the inter-relations of items through grouping factors based on their individual loadings. These loadings provide areas of similarity. Two runs were completed of the PCA which provided factors. Run 2 (completed with all scale items) provided nine factors and run 3 (with a reduced number of scale items) provided seven factors. Appendix thirty-five, section a) contains the full results from both PCA runs. Table 13 below shows the factors from the final run of the PCA including loadings.

Table 13: Principle component analysis results by factor (Run three results with reduced items)

E-Work Life Items		Factor Loadings	Factor
When e-working from home I do not know when to switch off/put work down so that I can rest	EWL18R	.738	1
My family dislike how often I am preoccupied with my e-working whilst I am at home	EWL22R	.712	1

E-Work Life Items		Factor Loadings	Factor
Constant access to work through e-working is very tiring	EWL7 R	.694	1
I am happy with my work life balance when e-working remotely	EWL6	.635	1
I feel that work demands are much higher when I am e-working remotely	EWL31R	.615	1
When e-working remotely I often think about work related problems outside of my normal working hours	EWL5 R	.564	1
I can completely balance my e-working with the rest of my life commitments	EWL9	.569	1
I am highly motivated to work past normal work hours when e-working	EWL32R	.524	1&2
I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	EWL35R	.519 (1) .578 (5)	1&5
My social life is poor when e-working remotely	EWL36R	.512 (1) .582 (5)	1&5
When e-working I can concentrate better on my work tasks	EWL8	.729	2
My overall job productivity has increased by my ability to e-work remotely/from home	EWL33	.729	2
E-working makes me more effective to deliver against my key objectives and deliverables	EWL16	.733	2
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations	EWL17	.547	2
My line manager allows me to flex my hours to meet my needs, providing all the work is completed.	EWL27	.687	3
My supervisor gives me total control over when and how I get my work completed when e-working	EWL11	.652	3
Having flexible hours when e-working allows me to integrate my work and non-work life	EWL3	.521	3
My work is so flexible I could easily take time off e-working remotely, if and when I want to	EWL20	.624	3
E-working has a positive affect on other roles in my non-working life	EWL21	.422 (2) .461 (3)	2&3
My organisation trusts me to be effective in my role when I e-work remotely	EWL14	.747	4
My organisation provides training in e-working skills and behaviours	EWL2	.654	4
I trust my organisation to provide good e-working facilities to allow me to e-work effectively	EWL15	.545	4

E-Work Life Items		Factor Loadings	Factor
I trust my line manager to advise me if I am not effectively performing whilst e-working	EWL13	.437 (4) .528 (5)	4&5
I can manage my time well when e-working	EWL10	.547	5
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted	EWL19	.643	6
When e-working remotely I often think about family related and/or non work related problems	EWL24R	.627	6
I know how to socialise using technology	EWL38	.627	6
I know what it takes to be an effective e worker	EWL1	.682	7
I have adapted to e-working by developing suitable skills and behaviours	EWL34	.570	7

It can be deduced from this analysis that 29 measures fell into seven factors. When the factors were grouped together by the most common factor groups, some items were clearly clustering together. The clustering indicates where the factors show some similarity but it is not clear how the sub scales could be defined from this analysis. To test the eight postulated dimensions (see appendix thirty-nine for definitions), these were mapped against the factors that emerged from the PCA analysis. Whilst there was some limited evidence of the postulated dimensions, these would need to be reconfirmed on a further sample, and explored through confirmatory factor analysis. Appendix thirty-five (section b) illustrates the items by common factor group compared to the eight postulated dimensions. Given the early stages of this research, all of these results would need to be verified in later analyses.

9.7.4 Summary of the factor analysis and scale reduction

The purpose of this section was to explore the measures to find those items that could be considered for potential elimination from the E-Work life scale. The analysis also produced information on specific factors that grouped together. These were used to explore any underlying dimensions. It should be considered

that even though the analysis gives an indication of those to be removed, other considerations should be taken into account through other analyses that has been conducted. For example, it is apparent that EWL4R and EWL5R interact to provide useful possible interventions and therefore, should not be removed at this stage from the developing scale.

The PCA identified ten items for consideration of removal from the scales: EWL4R, EWL37R, EWL12, EWL23, EWL25, EWL26, EWL28, EWL29, EWL30, EWL39. These results are combined with those from the previous section 9.6.3, whereby items were identified for removal, alteration or amalgamation through previous analyses. These earlier results and the PCA results are now combined in the table fourteen below. Table 14 also summarises the actions required to finalise the E-Work life scale.

Table 14: Results from analyses of the E-Work life scale, areas for reduction, amalgamation or alteration

Measure	Pearson's Correlation results	Principal Component Analysis results	Action/s for consideration
My e-working <i>does not</i> take up time that I would like to spend with my family/friends or on other non-work activities (EWL4R)	None	Identified for removal	Should not be removed as found to have a good interaction with EWL5R.
I am happy with my work-life balance when e-working remotely (EWL6)	EWL6 and EWL9 have similar wording and are highly correlated		Retain.
I can completely balance my e-working with the rest of my life commitments (EWL9)	As above		Remove from scale.
My line manager completely trusts me to manage my work effectively when I am e-working remotely (EWL12)		Identified for removal	Remove from scale.
I can arrange for childcare/support to look	Consider for removal. This may depend on the sample,	Identified for removal	Remove from scale.

Measure	Pearson's Correlation results	Principal Component Analysis results	Action/s for consideration
after my dependants when I am e-working (EWL23)	but has not worked for this group of respondents.		
I do not need to gain permission from my line manager before I can e-work from home (EWL25)		Identified for removal	Remove from scale.
<p>My family dislike how often I am preoccupied with my e-working whilst I am at home (EWL22R)</p> <p>When e-working remotely I often think about family related and/or non work related problems (EWL24R)</p> <p>I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time (EWL35R)</p>	EWL35R could be re-worded positively to be in line with similar questions. However, EWL22 and EWL24 have simpler wording. There is a need to select one question of this type from this category.		Remove EWL35R and EWL22R – retain EWL24R as it succinctly covers all three statements.
My line manager discusses sympathetically any issues related to my non work when e-working (EWL26)		Identified for removal	Remove from scale.
<p>My line manager is a good role model for me in terms of e-working (EWL28)</p> <p>My line manager is a good role model for me in terms of work-life balance (EWL30)</p>	When taken together these are highly associated. These statements could be merged to form one item.	Both identified for removal	Remove EWL28 and adapt EWL30.
I have total control over when and how I get my work completed when e-working (EWL29)		Identified for removal	Remove from scale.
<p>My social life is poor when e-working remotely (EWL36R)</p> <p>I miss socialising in the office when e-working remotely (EWL37R)</p>	These are very closely related and could potentially be combined into one item.	EWL37R identified for removal.	Remove EWL37R from scale.

Measure	Pearson's Correlation results	Principal Component Analysis results	Action/s for consideration
Commuting to work increases my stress (EWL39)		Identified for removal	Remove from scale.

If the actions are taken forward from this table, 29 statements will remain in the E-Work life scale prior to the reliability tests carried out in the next section.

9.8 Internal reliability analysis: Cronbach's alpha

Cronbach's alpha (α) analysis is a commonly used method to find the internal reliability for scales (Field 2005: 666-667). It also serves as a useful technique to remove further items from the scale. Netemeyer, Bearden and Sharma (2003: 126) advise that any items falling below an alpha rating of α 0.8 should be considered for removal from the scale. This ensures that the degree of variance is adequate.

Some problems were encountered with this technique for the E-Work life scale as there were many missing cases. As Cronbach's alpha runs on list-wise calculations only those items with the highest number of missing cases needed to be removed to gain a high N. All items required to be reversed scored for this technique to be run accurately. SPSS analyses are contained in appendix thirty-six.

Run 1

This first run of Cronbach's Alpha provided $\alpha=0.882$. This result meets the criteria for good internal reliability. However caution should be exercised owing to the number of missing cases leading to a very small $N=36$. The next run (run 2) of the analysis took out the items identified for removal via the PCA process and

also had the positive effect of increasing the number of participants responses included in the analyses.

Run 2: PCA removals only

Cronbach’s alpha analysis was run (with reversed scored items) with the ten measures removed as identified by the PCA. This run took account of the items identified for deletion by the PCA: EWL4R, EWL37R, EWL12, EWL23, EWL25, EWL26, EWL28, EWL29, EWL30, EWL39.

Run 2: Results

The results found 99 valid cases, 29 scale items were included with $\alpha=0.875$. At this stage removal of item EWL 32R would improve the $\alpha=0.881$, however, this item was retained due to face and content validity.

Run 3: All measures identified and removed (PCA and descriptives)

Run 3 includes all items for deletion as described in section 9.7.5. and outlined in table fourteen, including those identified through the PCA in section 9.7.3 for reduction. The following items were removed from this run of the analysis: EWL9, EWL12, EWL23, EWL25, EWL26, EWL35R, EWL22R, EWL26, EWL28, EWL29, EWL37R and EWL39. The number of cases valid increased to 102 and the number of scale items was 28. Table 15 below shows the statements in full.

Table 15: List of final deleted items for run two of Cronbach’s alpha

Measure	Action/s for consideration
I can completely balance my e-working with the rest of my life commitments (EWL9)	Remove from scale.
My line manager completely trusts me to manage my work effectively when I am e-working remotely (EWL12)	Remove from scale.
I can arrange for childcare/support to look after my	Remove from scale.

Measure	Action/s for consideration
dependants when I am e-working (EWL23)	
I do not need to gain permission from my line manager before I can e-work from home (EWL25)	Remove from scale.
My family dislike how often I am preoccupied with my e-working whilst I am at home (EWL22R) When e-working remotely I often think about family related and/or non work related problems (EWL24R) I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time (EWL35R)	Remove EWL35R and EWL22R. Retain EWL24R as it succinctly covers all three statements.
My line manager discusses sympathetically any issues related to my non work when e-working (EWL26)	Remove from scale.
My line manager is a good role model for me in terms of e-working (EWL28) My line manager is a good role model for me in terms of work-life balance (EWL30)	Remove EWL28 and adapt EWL30.
I have total control over when and how I get my work completed when e-working (EWL29)	Remove from scale.
I miss socialising in the office when e-working remotely (EWL37R)	Remove EWL37R from scale.
Commuting to work increases my stress (EWL39)	Remove from scale.

In summary, eleven measures were removed from the E-Work life scale, leaving a total of 28 measures. Appendix thirty-seven provides the full list of E-Work life items with the items italicised in bold which have been removed. The final Cronbach's alpha score was lower than the original with all the items included, however, at $\alpha=0.851$ it meets the criteria to support good internal reliability. The next section provides the final version of the E-Work life measures as defined through the factor analysis and reliability analyses.

9.9 Final version of E-Work life Scale

The final set of E-Work life measures are contained in appendix thirty-eight. Those items containing emboldened, italicised text indicate the positive wording added for the purposes of analysis. This additional wording can be removed for a bi-directional set of scales, or if preferred to keep uni-directional the bold,

italicised text should be retained. One item has been re-worded (EWL30) and the amendment is shown in bold text. The final E-Work scale following analysis has eleven items removed from the original set of 39 items, giving a final set of 28 measures at this point in the research.

9.10 Summary

The E-work life items contained in the E-Work life survey have been analysed using approaches such as descriptives and frequencies. The key variables have been examined, where possible, using both descriptive statistics and other methods, for example, Chi Squared test. Findings were not significant, in most cases, for the key variable of gender. The key variable of number of dependants was not examined due to the low number of responses. The items have also been analysed by the postulated dimensions which had been found through the literature and interviews.

A reduction of the scale items was carried out using the methods of Principal Component Analysis (PCA) and internal reliability using Cronbach's alpha. These alongside considerations given to the results, from all of the analyses, provided a reduction of 11 items. The PCA also provided seven potential factor groupings for consideration. Cronbach's alpha did not identify further items for removal as the alpha score met the criteria. Whilst analyses have provided a useful exploration of the items, the scales cannot be considered as finished. Further reliability tests (e.g., test, re-test) and confirmation of underlying sub-scales and dimensionality is required along with a larger sample to undertake Confirmatory Factor Analysis. The development of norms and testing of the measures, alongside performance measures, would provide extra validation of the scales. Appendix thirty-eight contains the final E-Work life scale formulated through this analysis.

Chapter Ten: Phase Three, the Development of Actionable E-Work life Interventions

10.0 Overview

Phases one and two of the current research focussed on the development of the E-Work life Scale. Phase two involved the refinement of the scale and an exploration of the potential underlying dimensionality. This final phase (three) aims to link the results from the E-Work life scale in phase two to potential interventions relating to the 'actionable' nature of the E-Work life scale.

10.1 Introduction to phase three

The main objective of Phase three of the research was to develop a set of suggested interventions that related to the E-Work life scale. Exploration of the E-Work life scale resulted in a typology (see appendix sixteen) this has begun to define the competencies of e-workers. To support the scale development process it was necessary to collect data from a number of different sources. This helped to ensure checks for content and face validity were completed thoroughly. To continue this process, and identify related potential interventions for the E-Work life scale, the method of triangulation has been utilised. Triangulation provides a means to 'investigate the same idea or concept from different viewpoints' (Gibson and Brown 2009: 58). This process involved a series of interviews with a sample of exemplar e-workers. These suggested interventions were developed using qualitative analysis from the previous phases. Each intervention was related to a postulated E-Work life dimension (see appendix thirty-nine for details of the dimensions). As the factor analysis did not fully support the postulated dimensionality, these dimensions are now to be referred to as descriptors, until Confirmatory Analysis has been completed. The focus

was to elicit new information and test out the suggested interventions on exemplar e-workers.

The current research has been partly inductive, exploring intuitive aspects through the findings of the interviews and survey. However a more deductive approach was used in the previous chapter to explore the E-Work life scale. In this chapter a mixture of inductive and deduction approaches continues. The interview findings were analysed using framework analysis (Gibson and Brown 2009). Framework analysis applies a structure to the findings so that they can be related to specific categories. The categories, utilised for this process were the eight E-Work life descriptors (previously postulated dimensions), as identified in the previous phases.

Phase three concludes this stage of the E-Work life scale development and provides links to a preliminary set of 'actionable' interventions associated with the scale.

10.2 Aims

The main aim of this phase of the research was the completion of a series of interviews with exemplar e-workers to explore their views of what might constitute E-Work life interventions. This led to the production of a set of suggested 'actionable' interventions that could be related to the E-Work life measures, with identification of possible links to practice. The interviews also provided further confirmation of an e-working typology for undeveloped or new e-workers.

10.3 Method

10.3.1 Materials

The materials used for conducting the interviews consisted of a paper based semi-structured interview. The interview was designed based on findings from the E-Work life interviews in phase one and the E-Work life survey completed in phase two. The purpose was to explore how exemplar e-workers managed their own remote e-working and work-life balance. Example questions included:

- Demographic details (including gender, age and number of dependants)
- Information about the job role being performed.
- Details about their e-working experience, e.g., 'How long have you been an e-worker (in actual years)?'
- A self assessment of where the participant felt their e-working/work-life balance experience was at that point in time (see below for more details).
- Questions were based on ascertaining potential e-working interventions, e.g., 'In your experience what assistance would you provide a new e-worker in order to be effective in managing work remotely and their non-work lives (as an individual, from line management and with support from the organisation)?'
- Questions centred around E-Work life interventions, e.g., 'Can you describe the way you have organised yourself to be an effective e-worker?'

The interview was piloted on two e-workers, feedback indicated that the content of the interview worked well and no amendments were required. Demographic data was collected as part of the interview. A copy of the interview is contained in appendix forty.

Interviewees were also asked to self assess themselves to gain an indication of their current perception in terms of their e-working, work-life balance experience and their access to technology. These indicators provided an easy way of checking the interviewees' perceptions of where they perceived themselves to be at the time of the interview. This self assessment process was being tested as it could be used when assessing large numbers of e-workers pre and post use of the E-Work life scale (see appendix forty for the interview proforma including details of the self assessment indicators).

Participants were asked to self assess themselves using a rating scale of 1-5, whereby 1 = an 'undeveloped' e-worker and 5 = a 'developed' e-worker, 'satisfactory' was labelled as the mid point. A short explanation was given on the interview and repeated verbally as to the meaning of 'developed' and 'undeveloped'. This ensured that all interviewees had the same definition.

Draft interventions were formulated by the researcher from the previous literature on work-life balance and e-working, and the E-Work life interviews with exemplar e-workers in phase one. Further data to support the newly devised interventions was elicited from open comments made by respondents to the E-Work life survey. The suggested interventions were transferred to cards and participants were asked to sort the cards, according to their own priorities. The potential interventions were produced to include one intervention per card and were colour coded for the three levels, being explored, that is, the individual, supervisory and organisational. There were 21 suggested interventions for the individual and supervisory levels and 16 for the organisation level. Each intervention was related to an E-Work life descriptor (previously postulated dimensions), as devised in phases one and two of the research. Appendix forty-one contains the list of descriptors as related to the suggested interventions.

10.3.2 Procedure

The semi-structured interview was scheduled to last for 30-40 minutes, but in many cases the interviews ran over time with the longest lasting 1.5 hours. Before the interview took place participants were asked to give a pre-assessment rating using a 5 point scale, of their perception of their work-life balance, e-working skills and behaviours and access to appropriate technology and support to work remotely. The interview also contained the e-worker typology and interviewees were asked to confirm its face validity, or to suggest changes to improve face validity (see section 3 of appendix forty).

A protocol was devised (see appendix forty-one) for the intervention card sorting process and a script used to ensure each participant received the same information. The sorting was carried out face to face by seven participants. Where this was not possible those being interviewed over the telephone, three participants received a spreadsheet and were asked to prioritise the interventions, from the highest priority to the lowest. The participants were asked to sort the cards into three piles by type (individual, supervisory and organisational) and in priority order. If completing on-line then the participants used a spreadsheet of each level of intervention and re-arranged in priority order. For the purposes of identification and recording by the researcher each suggested intervention was coded so that it could be related to the E-Work life descriptor (previously postulated dimension). A copy of the suggested interventions related to the descriptors are contained in appendix forty-one.

All interviewees were asked to complete a consent form prior to the interview taking place and, where appropriate, gatekeeper letters were used to gain organisational consent (see appendix four). The interviews in the main were carried out face to face, with each interview being audio recorded. Where this was not possible, interviews were conducted over the telephone and the

telephone conversation recorded. Interviewees were advised that they could withdraw from the study at any time and that all information collected would be kept confidential, and secure according to data protection legislation. All interviews were transcribed for analytical purposes.

10.3.3 Participants

Three organisations were approached, one each from the public, private and voluntary sectors. All three organisations had taken part in phases one and two of the study, but not necessarily the same individuals in all cases. Three different levels were approached from within the organisations, senior management, administrative and professional (e.g., project manager). As part of the interview participants were asked to categorise themselves by type into one of four categories: Professional, Executive/Senior manager, Supervisor/Line Manager, Administrative. The aim was to test the suggested interventions on a wide range of levels within the organisation and across three different sectors.

10.3.4 Data analysis

10.3.4.1 Semi-structured interview data

The interview data was transcribed verbatim and then collated together as one document for analysis. Each participant was assigned a reference number (A1-A12) in order to keep the participant anonymous for reporting purposes. The supporting information contains a copy of the transcripts. Two participants were unable to take part but were assigned a number (A10 and A12, no data exists for these two reference numbers). The transcription was written up verbatim from the recordings and numbered by line. The transcripts were read and re-read by the researcher several times and analysed using framework analysis (Gibson and Brown 2009: 178). This process used the eight descriptors (previously

postulated dimensions) identified in the earlier research phases to categorise the data. The data was categorised according to the three sectors, the four role types and the three different levels of interventions. To analyse the data further the eight descriptors were used as part of the framework analysis. Other descriptors were checked for in the data but all data collected fitted into the current E-Work life descriptors. See thirty-nine for definitions of the descriptors.

To ensure concordance, the results from the framework analysis and the coding method were observed by the supervisory team, and also checked by a colleague within the researcher's University. Several changes were made following this process, including reframing quotations, these amendments were made prior to the final analysis being completed. This analysis was also checked independently by a colleague from another University to ensure the data analysis was clear and unbiased.

In order to analyse and categorise the information the following coding (table 16) was employed for framework analysis of transcripts:

Table 16: Coding for the framework analysis

Sector codes	Role codes	Intervention level codes (used when required)	E-Work life descriptor codes
P= Private Pb= Public V = Voluntary	Pr = Professional SM= Senior Manager LM = Line Manager A = Administrator	O= Organisation S = Supervisory I= Individual	EWE = E-Working effectiveness WLI = Work Life Integration RM = Role Management/Conflict MB = Managing Boundaries EWB = E Well Being EJE = E-Job effectiveness MS = Management Style T = Trust

An example from the transcript coded analysis is:

Interviewer: Would you want them to do a period of probation before giving them this equipment or do you see that as part of the job?

Interviewee: Reference A7

‘Yes, they probably would. I suppose it depends, if it was a now situation they would probably not have immediate access and immediate provision to work

from home, they would be working from here. Then when we have decided if things seem to be working alright, say after a three month period, yes, they would be given the trust and the items to be able to carry on working outside work hours. Or if there is a particular situation which means it would be easier for them to work at home, we have had the situation before, doesn't happen very often, say e.g. if there is a technical problem, or server problem, or even a weather problem which has happened as well, heavy snow, then they have the access and ability to continue working from home using the equipment that we have supplied there is no problem.' **Example dimension codes (EWE, T) Example interview codes (A7, P, Pr, SM, O).**

10.3.4.2 Card sorting

The card sorting results were recorded on a spreadsheet by each participant reference (A1-A12) and recorded according to the priority order. Each suggested intervention was also related to a descriptor by means of a code written on each card.

10.4 Results

10.4.1 Demographic variables

Ten remote e-workers took part in the research. The gender was split evenly with five females and five males taking part. The ages ranged from 32 years to 51 years. Out of the sample nine were married and one participant co-habiting. Half of the sample (five) had two dependent children, of the remaining (five) three had one child and two had no children. None of the participants had elderly relatives they cared for on a regular basis. In terms of level within the organisation, most of the participants (7) recorded themselves as 'Professional', two participants as 'Executive or Senior manager' and one as 'Supervisor/Line manager'. Some

roles which may have been considered 'Administrative' by the researcher were categorised by the participants as 'Professional', thus leaving the Administrative category empty. Some interviewees wished to record that they also had Line Manager or Senior manager responsibilities. All the interviewees were employed on a full time basis.

The majority of the participants managed a team (7 out of 10). The team sizes ranged from 1 to 56.

10.4.2 Self assessment results

From the self-assessment part of the interview, interviewees rated themselves on a five point rating scale of, whereby 1 = an 'undeveloped' e-worker and 5 = a 'developed' e-worker, 'satisfactory' was labelled as the mid point. The highest score possible was 15 (developed e-worker) and the lowest 0 (un-developed e-worker). When the three assessments were totalled for each individual the scores ranged from 9.5 to 15. The results indicate that the majority of this current sample according considered themselves to be 'developed' e-workers.

Interviewees were also asked to give their length of e-working experience, five participants reported 10 years or over experience, and the remainder between three and eight years experience. From the self assessment scores all participants assessed themselves as experienced or 'developed' e-workers.

10.5 Framework analysis of interview data

10.5.1 Method

Framework analysis is a technique whereby, pre-defined categories are applied to the data (Gibson and Brown 2009: 178). The interview data was initially

categorised using the eight descriptors (postulated dimensions) as elicited from previous phases. Once the data was coded each participant's data was merged into one document using the headings from the semi-structured interview. Not all data was required to be coded as some related to the typology or policy, these were written up separately.

The results were written up by the interview questions and the main points discussed with examples to support the findings from the interview data.

10.5.2 Analysis by question and category

10.5.2.1 The 'developing' e-worker

Interviewees were asked to share their experiences and describe assistance they would provide for in order for a new e-worker to be effective in managing work remotely and their non-work lives. Interviewees were asked to do this by individual, supervisory and what they would expect from their organisation (see section three of appendix forty). The data was coded as described in section 10.3.4.1.

The main findings from this question were that on an individual level the responses could be categorised under e-working effectiveness (EWE) or e-job effectiveness (EJE). Of these EWE was mentioned 27 times, and EJE 20 times. The majority of responses focussed on the types of technology used to conduct e-working and the strategies used to manage themselves whilst e-working. Some interviewees mentioned the security of their equipment and data whilst working off site and made suggestions about how this could be managed. The quotations below give examples of e-working and e-job effectiveness:

'Just being organised generally otherwise you find yourself sitting at home and you haven't maybe thought enough about what you are going to be doing at home do so you lose the time and it just drifts. So in order to maximise the efficiency of e-working you do need to think quite carefully about your work load and prioritisation. Because obviously there is some work you can only do in the office so also you need to be aware of that.' (EWE, EJE). (A4, V, Pr, I)

'Obviously the key thing is access to appropriate technology so a laptop, printer, decent broadband width etc. or it won't work properly and you'll just get frustrated.' (EJE). (A3,V,P, I)

Aspects related to work-life integration, role conflict and managing boundaries indicated that some parents adopted differing working patterns to work around their caring responsibilities. Replies from three interviewees with children indicated they would structure their day to work around the children's activities, such as working whilst they were at nursery or school then starting work again later in the evening to complete tasks. E-working was felt to provide extra flexibility to manage the differing roles. The quotation below sums up this type of response:

'I think it is important to have certain times when you are working where you know you are not going to be interrupted. Whilst it is possible to work with the children depending on their ages and how they are feeling and things like that obviously you can't do anything that requires a great amount of concentration, that is, you can check through your emails. But I would say having a specific time, for example., when the children are at school, nursery or after they have gone to bed ,when you know you have a certain specific task that needs your attention you can do that, also to try and find a place where you can work, and that is your work place.' (MB, RM, WLI). (A4, V, Pr, I).

In summary, the advice offered to new or developing e-workers centred around; ensuring they have appropriate technology and the associated support; encryption or a tight security to ensure the data is protected, especially when travelling with work related equipment. Three interviewees suggested that e-working should be a voluntary option, as it may not be suitable for all employees. Most new e-workers indicated they required a settling in period to become familiar with the different way of working and communicating with colleagues.

Four interviewees mentioned personality, with the view that e-working could be more suitable for differing personality types. However, there was no agreement on what these would be, with one interviewee suggesting that extroverts, whilst usually preferring social interaction in the office, would simply use the telephone more often to speak to people when e-working. Further, it was suggested that introverted personalities may enjoy working alone, but could become isolated if social interaction was not required of them. Obsessive types and 'workaholics' were mentioned as perhaps being less able to know when to stop working and switch off to gain respite. Motivation was also discussed and whether or not the individuals had high levels, it was felt that those with low levels or who did not enjoy their job, may not be suitable for e-working.

Pre-planning, organising remote work and ensuring there is a designated and prepared environment, particularly when working from home, was seen as important by the majority of interviewees. One interviewee suggested that new e-workers consider their work-life integration and speak to significant others before e-working to ensure that boundaries were known and managed effectively. Taking regular breaks and communicating with other team members were also noted as important in ensuring good well-being and to avoid social isolation. The majority of the comments were practical and described ways to improve or become an effective e-worker. However, one further interviewee noted that some caution should be considered when working hours beyond office time:

'...I do a lot of my admin work in the evening when the children are in bed. I find that is easier to concentrate and sit (RM, MB, WLI). As long as they have got the support, there should not be the assumption that they have to do that, you don't want it to become custom and practice just you've done it because it suits you that you always have to do that to deliver the work on a regular basis and this should not become accepted as custom and practice.' (MS, EWE, EJE). (A5, Pb, Pr, I, S)

The next section of the interview focussed on how supervisors could assist new and developing e-workers. The most common categories from this section were E-Working effectiveness (9), Management Style (9), Trust (7) and e-job effectiveness (7), work-life integration also featured highly (6).

In terms of management style, most managers (7) interviewed adopted a fairly flexible style in which they would focus on measuring the outputs of e-workers, as opposed to the time or hours worked. This flexibility worked both ways. Managers expected staff not to be rigid about when they worked remotely, to be present in the office for meetings and team activities, managing their work and non-work requirements. Individuals responded to this by ensuring that there was communication with the line manager regarding flexible requirements. Further, several managers indicated they would expect productivity to be maintained or even improved by working at home, as there would be less interruptions. The quotations below typify the management style that was indicated by the interviewees:

'As a manager I would expect an e-worker to achieve target, would I be precious about the time they take, no, it is about targets and task management...the environment and their role.' (EWE, EJE, MS). (A2, V, SM, S).

'We are giving them the flexibility to work from home or remotely 1-2 days a week or from one of our remote sites one or two times a week if it provides benefit. It can save coming into the office, update emails, you make the decision. I purposely do not encourage fixed days, I think that is bad in a way, if they have to come in for a meeting they have to come in, I don't like strict rigid rules for staff on e-working, I like encourage the paradigm for staff to be flexible enough to make their own decisions, but they have to be free and available to come in for regular team meetings, events apart from that the hours they work is up to them.' (MS, EWE). (A11, P, SM, S)

Management style also tied in very closely with trust. Trust was felt by many managers to be a two way process. The e-worker was trusted to carry out the work, in turn the e-worker should do what is asked of them. When trust breaks down this can be a problem. One manager indicated that whilst they were happy to manage work flexibly and according to the individual's requirements, they had needed to invoke specific performance management techniques when performance levels had dropped. The quotations below show the two sides of trust when e-working:

'From a line management point of view there is a real element of trust and respect and that goes both ways, so you need to feel that you are trusted by your line manager to actually do what you intended to do.' (EJE, T). (A3, V, Pr, S).

'...I know the people that are likely to take the 'mickey', you can tell from when emails have come into you, what time (emails) have been sent, you know if you have given someone a task to do and they have not completed it successfully, and they say they have been 'working from home'. I would say that I manage it flexibly. There has been one instance of a staff member said they were working from home, and I've asked them to deliver their paperwork they said they were

working and they haven't been able to deliver it, so I've had to invoke performance management there.' (MS, T). (A5, Pb, Pr, S).

Others aspects that were covered under this section included ensuring good health and safety procedures were in place, particularly for home e-workers.

When asked what support the organisation could offer a new or developing e-worker, a large amount of responses from the interviewees related to e-job effectiveness. Many interviewees indicated the importance of providing appropriate technology and access to systems, including appropriate security and safety. It was suggested that an e-working policy and appropriate training should be provided. Health and safety was seen as important and using existing schemes to maintain well-being, for example, free eye tests for VDU workers. The quote below is typical of the expectations many of the interviewees had of their organisation:

'The organisation needs to do three things, firstly needs to have a very solid policy for e-working in place, so that you know exactly where you are and what you should be doing, secondly it needs to have good management in place so people know what is expected of them and know how well they are performing, good lines of communication, however you want to do. Third it needs to provide the right technical and physical framework for that person to be effective that doesn't necessarily sit well with an IT strategy that says that everyone gets the same computer with the same software loaded on it.' (EJE). (A6, Pb, SM, O).

A further issue that was discussed under this section was the impact on those who do not e-work and are left behind in the office. It was argued by one interviewee that those that are e-working are helping those in the office more as they are able to be more productive. Further comments in this section related to

isolation of the remote e-worker and the need to communicate effectively with those remaining in the office.

The following section covers the impact of emerging technologies and whether these are important for e-workers.

10.5.2.2 Consideration of new and developing technologies for e-workers

There were two types of comments about new technologies. Type one, from those participants that felt they had enough technology to replicate their current office conditions remotely; and type two, those that indicated new technology was essential to future development. One interviewee suggested that technology should be related to the role where some roles would require a minimum, whilst others may benefit from the latest technology. Generally it was felt that technology developments had led to the current situation, whereby work could be completed across many different locations and time zones. It was suggested by one interviewee that any future IT developments, used by organisations, should be considered with the e-worker in mind. This quotation reflects the efficacy of IT developments to support e-working remotely:

'an e-forum you can access anywhere in the world, we've had members log in from New Zealand, Crete etc. so being able to access that technology forum from any part of the world is great.' (A9, V, Pr).

Environmental efficiencies were mentioned as an important side effect of using more capable technology, such as, avoiding the need to print documents or to travel. Cost was also noted as an issue, for example:

'Obviously now days the cost tag comes into play as well, so if we could afford to do it we certainly would be doing it, but it always has to be evaluated, the benefits versus the cost.' (A7, P, Pr).

The following section covers interventions identified by the interviewees.

10.5.2.3 Suggested E-Work life interventions

This section of the interview focussed on asking interviewees for ways in which they or their organisation had managed e-working. These comments were used to consider further ideas for suggested e-work life interventions (see section 4 from appendix forty).

When asked about what the organisation had done to support their e-working, many of the responses again related to e-job effectiveness (EJE) and e-working effectiveness (EWE). The main tenet was that the organisation had permitted them to work from home, and or remotely, and in return they needed to manage their time effectively ensuring they knew how to use the appropriate technology. Time management was seen as a key skill for e-working effectively.

When asked about being an effective e-worker, and for some this meant working more hours, many felt that the organisation had a role to play, an example quotation is below:

'.....it must be planned and must be targeted and the expectation of the organisation of what is required has to remain realistic. If the organisation doesn't get their part right re e-working, then it could lead to pressure situation, people could become workaholics and they become isolated.' (EWE, EJE, EWB, WLI). (A2, V, SM, O). This could lead to an intervention for the organisation regarding

training supervisors to understand and effectively communicate with e-workers, ensuring they do not over or under work.

Trust and autonomy also came out strongly with interviewees indicating that this was essential in terms of being line managed:

'I think that we are basically trusted to manage our own workloads, I think they know that we will get the job done and I think now they don't really care how we do that, they are happy [if we work] in the office on the train or at home, so long as the work gets done.' (EJE, T). (A4, V, Pr, I & O).

A further comment indicated that whilst e-working added flexibility to manage ones own time, more was expected by the employer and work-life balance was not necessarily considered, for example:

'Yes I think they have helped it has also gone hand in hand with more is expected of you. I think we are quite well aware of different means and different ways of communicating with each other so we are quite good at trialling those and finding out the best way of doing that. We are quite open to new ideas I still don't think that necessarily means that you get everything in perspective or it is organised with a good balance. We generally put a lot of stress/emphasis on the work side of things versus the life and family side of things.' (EJE, WLI). (A7, P, Pr, I, S & O).

Using employees to consider trialling different communication methods could be a useful intervention for both individuals and the organisation.

The next series of questions focussed on how e-workers organised themselves when e-working. These comments varied between the way they used technology effectively, and how they integrated their work and non work

commitments. When the comments were analysed, half of the comments related to e-job effectiveness (EJE) and e-working effectiveness (EWE) with a further quarter relating to work-life integration and managing boundaries. The remaining comments related to role management, e-well being and trust.

Interviewees varied about how they organised themselves in terms of flexibility and their work demands. Some indicated they were 'on call' 24/7, working across different time zones, whilst others were able to organise themselves similar to an office working day. Various e-working practices were indicated, such as sharing calendars, documentation, project updates and repositories for data. Sharing this information with colleagues added to the communication and ensure that the team, wherever it was based, could continue to work effectively. Some interviewees used a smart phone or 'Blackberry', when travelling, at meetings or just to keep updated outside of normal working hours. This type of equipment was limited to senior managers and executives in this sample. Other levels of staff had mixed feelings about being given access to work emails outside of normal hours, considering it may add to an increasing workload and affect their work-life balance adversely.

The majority of interviewees indicated that they organised themselves either well in advance of e-working or on the day, ensuring work was prioritised and they had enough to keep them busy during the day. Several also indicated they were prepared should they not be able to access IT systems and would ensure they could continue to work effectively. Many had a clear strategy and indicated that setting clear goals and objectives was important to avoid time wasted and to achieve outputs. A clear intervention emerging was that individuals should consider planning how best to use time effectively when e-working and to ensure they have enough variety should IT systems fail.

Most interviewees indicated that working remotely was particularly suitable for increasing productivity, although this did have an impact on extending working hours. Writing reports or completing pieces of work that required a quiet environment and concentration were considered as the most effective types of work for remote working. However, this could have the effect of working longer hours to complete the work, for example:

'I probably do more hours at home than I should do, you do end up working more, I'm more productive in terms of writing, as I'm not getting the disturbances, I can switch off and concentrate, I'm still on the phone. I will have broken up my work and objectives for the day, to make sure I get whatever I need done. I do compartmentalise a little bit, I do take time off for lunch and the odd breaks. I can imagine myself being much more productive for the company at home than I would be if I was here (EWE, EJE).' (A11, P, SM).

Interventions inferred from the data related to setting daily targets, compartmentalising work and home issues and scheduling in appropriate breaks.

Work-life integration and managing boundaries between work and home was mentioned by a quarter of interviewees. This research sample were exemplars of remote e-working so many had considered their work-life balance and put in place working practices to manage the requirements from their differing roles. Compartmentalising between work and non work requirements was not limited to those with children and generally helped all e-workers to organise themselves. The previous quote and the one below indicated the need to compartmentalise between work and non-work commitments:

'Yes I try and compartmentalise as much as possible because obviously my children are very young so it would be difficult to work with them around, so I arrange child care or I do it in evenings after they have gone to bed. I think that

because I have sort of got it to a well oiled machine really my e-working it doesn't impact on my home life at all unless I'm having a very busy time but it does happen every so often but this would be same if I was working in the office until 7pm at night.' (WLI, RC, MB). (A4, V, Pr, I). This quotation suggests that for some e-workers scheduling time for work and time for family can provide a good balance. Although it is accepted that working longer hours can impact family life as could staying late at the office.

Well-being when e-working was considered by most interviewees as important to consider, taking regular breaks, exercise where possible and ensuring that not too many hours were spent in one specific posture as indicated by the following quote:

'When e-working you can be less likely to take a break. Yes, the other day I was still in my pyjamas late in the day, my member of staff had not eaten at 4pm. People can sit there for eight hours.' (EWB). (A12, P, SM)

One interviewee indicated that they integrated work and non-work activities, wherever possible, so when exercising they could also be solving or considering a work problem, or occasionally when at a sporting event they would also be asked about their organisation.

Generally, the reason that many interviewees indicated they found e-working a positive experience was that they could flex their hours around their personal requirements, whether this be caring for the children, taking exercise or spending time on a hobby. The ability to stop thinking about work and focus on non-work activities varied with this sample, some considered that it would not be possible to switch off from their role, and especially when solving difficult work related problems. Others felt that stopping work at a particular time was important to be able to switch to other roles and responsibilities. The quote below indicates that

e-workers may be creating their own balance and definition of what e-working means to them. Many of the e-workers indicate that enjoying their role inspired them to work in an integrated way, for example:

'... it suits me as I enjoy what I do so I try and combine where possible home and work. Re my work life balance I do not work late in the evening and only work weekends if I have to, but if I do need to work I can do so. It is my own balance I create. A few years ago I would have physically needed to carry on working until 9pm and I have worked to midnight if I've needed to do extra hours in the past.' (EWE, EJE, WLI). (A11, P, SM, I). This quotation shows flexibility around the role but the individual has decided on specific hours in order to manage the balance.

In summary, a number of interventions were suggested, most of these had already been incorporated into the list being tested by the interviewees.

The next section considers whether or not e-workers are measured by their employers.

10.5.2.4 Measurement of e-workers

Interviewees were asked if they managed e-workers and, if so, the processes put in place to measure their productivity. There were only six responses from managers and these focussed on setting specific tasks, deadlines and outputs to be achieved through e-working. Generally the focus was on performance as indicated in the quote below:

'It is about performance and about judging that performance, to say to someone go work at home for the next two years and give them nothing to do. Or if you

say go to work from home for two years and do a specific job. If you have criteria you can easily see what is going on.' (A2, V, SM)

Two interviewees indicated that it could be about finding the right person to fit the role. If deadlines had longer lead times then the individual would need to be capable of setting themselves interim goals. Being available and communicating effectively with the office was also raised by three interviewees as important, so that the line manager could contact the person during working hours.

The following section covers the use of organisational policies in e-working and work-life balance.

10.5.2.5 Organisational policies

Three interviewees were involved in setting policies for their organisation, and commented on how satisfied they were with the current policies in e-working and work-life balance. Of those setting policy, one aspect was how to consider working practices across different countries and which government directives that would apply. Another interviewee indicated that they worked on trust, but considered that the tools given through work for e-working purposes could be abused both in work time and outside of hours.

The ten interviewees could not all recall the details of the e-working policies. Two interviewees indicated they were working on new policies or that they would like amendments to existing policies to keep pace with changes.

10.6 E-worker typology

Respondents were asked to consider and review an e-working typology that was developed as an output from phases one and two. The typology has been

updated, see tables 17 and 18, to reflect comments given by the interviewees. Comments ranged from considering e-workers attitudes and personality to their e-working equipment and environment. Additions to the typology are noted in italics.

Table 17: Revised e-worker typology for **undeveloped** e-worker

	Undeveloped or novice e-worker
E-working skills & Experience	<ul style="list-style-type: none"> • Does not have appropriate technology available (<i>services may become unavailable e.g. internet, so appropriate back up would need to be in place</i>) • Does not fully utilise technology that is available • Has poor e-working practices, <i>does not consider or plan ahead which work activities are best suited to remote working</i> • Ineffective when working off site • <i>Does not understand an “outputs based culture” and may revert to presenteesim</i> • <i>Does not have suitable remote working environment set up</i> • <i>Does not manage the impact of own remote working on those remaining in the office</i> • None or very little feedback from supervisor on how to improve • Un-trusted e-worker. <i>Level of trust may also relate to role type and level within the organisation</i>
Behavioural Competencies	<ul style="list-style-type: none"> • Unable to control own workload • Work flexibly, but allows work to spill over into other life commitments. <i>Unable to stop e-working</i> • Does not manage time effectively • Does not have self discipline or motivation to work alone • Is a poor communicator when e-working • Has poor organisational skills • <i>Poor attitude towards work</i> • <i>Personality type/traits may not be manageable or akin to e-working (obsessive, workaholic)</i> • <i>Psychologically unsuited to remote working</i>
Outcomes	<ul style="list-style-type: none"> • Has poor work life integration • Is monitored to e-work by supervisor • Family/friends are not supportive when e-working • Has poor relationships outside work

	Undeveloped or novice e-worker
	<ul style="list-style-type: none"> • High stress levels and poor well being (high absenteeism) • Poor social life

Table 18: Revised typology for **developed** e-worker

	Developed or expert e-worker
E-working skills & Experience	<ul style="list-style-type: none"> • Fully utilises technology (<i>is prepared if services become unavailable eg. internet is not accessible</i>) • Has appropriate technology available • <i>Fully considers the impact of their own remote working style on those remaining in the office</i> • Good e-working practices, <i>considers and plans most effective work to do went remote e-working</i> • Effective when working off site • <i>Understands outputs based culture required for e-working</i> • <i>Has suitable remote working environment set up</i> • Feedback from supervisor on productivity • Trusted e-worker - <i>level of trust may also relate to role type and level within the organisation</i>
Behavioural Competencies	<ul style="list-style-type: none"> • Controls own workload well • Works flexibly. Work does not spill over into other life commitments • Manages time effectively • Self motivated and self disciplined to work alone • Communicates well when e-working • Is well organised • Good fit with personality traits/type or they are managed effectively • <i>Psychologically suited to remote working in terms of coping with behavioural requirements</i>
Outcomes	<ul style="list-style-type: none"> • Has good work-life integration. <i>This may vary and be defined by individual needs</i> • Is completely trusted by supervisor • Family/Friends are supportive when e-working • Has good relationships outside of work • Low stress levels and good well being (low absenteeism) • Good social life

10.7 Sorting analysis

Interviewees sorted a number of cards, which contained draft interventions on three levels (the individual, supervisory and organisational). Appendix forty-one contains the full list. Interviewees were asked to prioritise the cards in order of importance. Each of the three levels were analysed using descriptive statistics (mean, median, percentiles and mode). Further analysis was carried out using the Friedman test to assess if there was significant variability between the interviewees results. For each level significance was found (see table 19). Finally t tests were conducted to elicit further differences; however these results were not conclusive and did not add further information than already elicited by the descriptive statistics. The top three interventions elicited from the Friedman analysis are shown in table 20, alongside the descriptive statistics.

Table 19: Friedman analysis results of E-Work life interventions

Intervention Type	Number of interventions	N	Friedman test result
Individual	21	10	$X^2(21) = 33.46$, $P < 0.05$
Supervisory	21	10	$X^2(21) = 55.69$, $P < 0.001$
Organisational	16	10	$X^2(16) = 67.77$, $P < 0.001$

Table 20: Top three most preferred interventions for each level

Intervention Level	Intervention (N=10)	Median	Mode	Percentile Range (25 th -75 th)
Individual	Engender trust by delivering against objectives and requirements (IT1)	4	4	1.75-6.75
	Keep well organised when e-working (IT2)	7	2	2.75-12.25
	Be available for work communications when required/expected (IT3)	4	2	2.00-12.25
Supervisory	Be a good role model for e-	2	2	2.00-10.50

Intervention Level	Intervention (N=10)	Median	Mode	Percentile Range (25 th -75 th)
	working (SMS1)			
	Ensure that e-workers understand what, when, how they need to deliver to appropriate quality expected (ST1)	3	1	1.00-6.00
	Be a role model for work life balance (SMS2)	4	1	1.00-13.50
Organisational	Encourage a culture of trust that is based on outputs and productivity as opposed to presenteeism (OT1)	2	1	1.00-3.00
	Provide a policy on e-working requirements e.g. core hours, expectations etc. (OMB1)	4	3	3.00-5.00
	Provide E-Work life policies and resources for flexible/e-working options (OWLI1)	4	4	3.75-6.00

The preferred interventions indicate that trust is a key dimension for the individual. Trust also appears strongly in the other two levels. Management style and, in particular, demonstrating how to be a good role model featured strongly for the supervisory level. At an organisation level there was a high level of agreement that a culture of trust should be engendered with supporting e-working policies.

Whilst this process was useful to explore the potential top three interventions for each level, it could be concluded that a sample of 10 interviewees was small and allowed only for exploration of the data rather than providing conclusive results. This process was not used to refine the interventions further. It is recommended that these results are further tested on a larger sample.

10.8 Discussion

This final phase of the research sought to provide, and further develop, a number of key outputs. The first of these was a set of suggested applied interventions that would support the E-Work life scale and provide the 'actionable' partner to the measures. Secondly, this phase further developed and checked the face validity of the remote e-worker typology of the 'developed' and 'undeveloped' e-worker by clarifying and adding to the classification. Thirdly, the interviews provided qualitative data that gave insights into how new and existing e-workers could be more effective in managing their E-Work life. In addition, the use of a set of self-assessment measures assessed interviewees own perceptions of their effectiveness in e-working and work-life balance. This process could be used alongside the E-Work life scale to evaluate whether self perceptions alter after having completed the scale. The consideration of what e-workers require in order to be effective, the E-Work life typology and the self-assessment tool could be combined as part of the E-Work life measurement process to help individuals improve their e-work life balance and organisations develop more effective e-workers. Future developments are discussed further in the final section of this discussion regarding the development of the E-Work life tool.

A series of draft 'actionable' E-Work life interventions had already been devised from previous phases, and the interviews carried out in this phase prioritised these draft interventions. Each postulated intervention related to an E-Work life descriptor (see appendix forty-one). These suggested interventions work on three levels, the individual, supervisory and organisational. These levels were re-confirmed by the interviewees as being useful for considering the different types of interventions required to meet the differing needs of e-workers. The card sorting analysis indicated that there were differences between interviewees and the top three most preferred interventions were elicited from this analysis. Trust featured strongly in all three levels and providing a good role model was seen as

important to those supervising e-workers. Culture and setting appropriate policy were identified and moving to a culture based on outputs as opposed to presenteeism was the most popular intervention at an organisational level.

The application of framework analysis to the qualitative data obtained through the interviews used the eight descriptors (postulated E-Work life dimensions). This enabled the data to be explored and analysed in a structured manner. Specific areas that were covered in the interviews included how to become an effective e-worker.

When considering how new or less developed e-workers may become effective, many comments from the interviews focussed around obtaining appropriate technology and how to adapt working practices to e-work in the most effective manner. Literature on e-working also focussed, in the early days, on the types of technology used, the business up-take of technology and how working practices could be adapted to provide greater productivity (DTi 2004 and Morgan 2004). Using new and developing technologies to support different and improved remote e-working, was supported by this sample. Some participants felt they had better technology when remote working, whilst others felt this could be improved by their organisation. The focus on technology developments promoted strongly by suppliers of technology to increase functionality, mobility, and convenience, however, more recently the press has started to report some of the negative affects of these developments on non-work life (Twentyman 2010).

There has been little research on how new technologies can effect the different expectations and working practices that may impact individuals non-work lives when implemented. Hislop and Axtell (2007) indicate those teleworkers who work spatially, across a number of different locations, have generally been neglected by research. Hand held devices, such as, the development of the 'Blackberry' or smart phone, are good examples of technologies that have

enabled greater functionality for e-workers, and given employees 24/7 hour contact with the office and colleagues wherever their location. The inability to switch off from work activities, including sometimes when taking leave and/or on holiday, can lead to non-stop working for some employees (Golden 2006). In the current study, interviewees reported both the negative and positive effects of this type of technology. For example, positive comments related to being able to communicate and work off-site with clients, or with colleagues in international locations, keeping up to date with work when absent or sick, when previously these activities may have been difficult and sick leave may need to have been taken. Some of these comments need to be treated with caution as they may be affected by role type, for example, senior managers may be more enthusiastic about the ability to work for longer and whilst sick. Negative comments focussed on an inability to gain respite from work by being 'switched on to work' 24/7. Other research is supportive of these findings, for example, Hislop and Axtell (2007) indicate that whilst mobile devices (e.g., smart phones) are becoming part of working lives for many people, the effects these devices can have on individuals work-life balance has not been thoroughly investigated, presenting a gap in the research. A meta analysis revealed very little research on e-workers who used hand held technologies on a regular basis (Hislop and Axtell 2007: 39). Further, Schlosser (2002: 402) indicates that 'there has been little investigation into the ways in which employees are adapting to these wireless technologies'. The current research has started to investigate some of these issues as many of the participants were using new technologies for their e-working.

The interviewees in this study were able to suggest strategies (that could be translated into interventions) to manage the negative effects of new technologies, for example, knowing when to switch off the mobile phone or PDA, avoiding replying to non-urgent emails, and leaving the device at home or not answering calls unless urgent when on holiday. The most positive effect of improved technology has lead to the ability to transfer the office to the home and other

locations providing the flexibility to manage work-life issues. The ability to work from home at any time could provide a positive spill-over between work and home in terms of achieving a healthy balance. This is supported by a study considering work locations which found that 'working from the home office was linked to more positive perceptions of work-life balance and a greater perception of personal and family success' (Hill, Ferris and Martinson 2003: 235).

Research suggests the positive affects of blurring boundaries when e-working means that those with caring responsibilities can, in many cases, opt to work around work and home commitments (Maruyama, Hopkinson and James 2009: 77). In the current study interviewees with children indicated how they flexed their e-working to meet family needs and often worked split hours to fit around the children's activities. Females, in particular, reported working the early and late parts of the day, often working evenings after the children had gone to bed to catch up with work commitments. This temporal aspect to remote e-working is well reported and a study by Dimitrova (2003: 191) indicates the way in which e-workers start to personalise their working schedules and hours according to their own requirements. These experiences of working at different times could provide interventions for others seeking to work and balance other activities. However, care should be exercised as working late may affect health.

For interviewees in the current study, only slight gender differences were found in managing roles or boundaries. One difference was e-working providing an opportunity to complete domestic chores, but this was only mentioned by females as useful when working at home. Males tended to focus on the flexibility to work in many different locations, but also referred to being able to look after children and complete non-work tasks if working from home. These findings are also supported by previous research, for example, Sullivan and Lewis (2001). Overall, e-working appears to provide parents with the opportunity to continue working outside of traditional working hours to achieve their work goals. This was

supported by those without children in the current sample, who considered they could pursue a non work related goal, such as a hobby, and could catch up work hours later in the day or on a different day.

Boundaries between work and home were considered by interviewees in the current study. Those with and without caring responsibilities noted that more hours could be worked and that non-work interruptions would need to be managed. Over-working and the related effects on health, such as exhaustion and work related stress, can be mediated by e-working, as found by (Golden, Veiga and Simsek 2006: 183). However, Hartig, Kylin and Johansson (2007: 247) found that e-working from home could confound the restorative aspects of the home environment. The flexibility of technology to provide access to work outside of traditional office hours was generally used in a positive manner by the interviewees in this sample. The negatives, such as over working, or managing boundaries between work and home and lack of motivation when e-working, were reported in the comments from interviewees, but they also advised of ways in which these could be effectively managed. Examples of possible interventions included, preparing family and friends in advance of e-working to reduce interruptions, discussing the benefits of working at home to pick up children from school, better use of time for non work commitments, organising a local social life and being able to work more hours by avoiding commuting.

Interviewees in the current study reported how they organised themselves when e-working remotely. Many cited good planning, organisational skills, compartmentalising work and non-work life as important. Development of these skills could form part of a training intervention for e-workers. This is supported by other literature whereby specific e-working competencies and skills have been identified (Baruch 2000: 43). The interviewees in the current study referred to motivation and personality type as possible influencing factors. For example, those who may be highly motivated and over-worked leading to ill health, and

those who may lack motivation and under-work. Attitudes towards e-working were also considered important, with the interviewees with high levels of job satisfaction potentially being more highly motivated e-workers. The personalities of e-workers have not been specifically explored in this study but would be an area for future research. It has been captured in the current research by the e-worker typology as being an important aspect for the 'developed' e-worker. Baruch (2000: 43) also touches on this aspect when reviewing the desirable qualities of e-workers.

Managers, in this sample, indicated measuring the success of their employees e-working by outputs and by appraisal against objectives was important for those working remotely. Managers appeared careful in selecting individuals who they trusted and were already highly motivated to work. This was taken from evidence they were performing to a high level in the office environment. Some form of pre-assessment for e-working appeared to be carried out by line managers. For one organisation this was a formal requirement, whilst for another the line-manager would make their own assessment based on current performance and work related requirements.

Role type was also reported as being important in considering whether or not they were appropriate to be a remote e-worker. Roles which required face to face activity, for example, a receptionist was not considered suitable. There was also a suggestion that e-workers needed a period of adjustment in order to manage their work-life commitments and become a fully effective e-worker. This is supported in the literature, for example, Tremblay (2002) cited in (Maruyama, Hopkinson and James 2009: 79) supports studies which indicate that a period of months may be required for e-workers to adjust their working and home lives to remote e-working. After this time work to family interference may be reduced.

Communication was an area considered important for the e-worker. For example, a lack of communication with the team was cited as problematic and would lead to issues with team members not e-working, and/or isolation for the e-worker. Ongoing support and continued contact and 'checking in' with the line manager meant that e-workers could gain an understanding of their ongoing work requirements, expectations and the boundaries for e-working in their organisation. These findings are supported by the literature. For example, critical success factors for being a successful e-worker have been discussed by Kowalski and Swanson (2005), which include the necessity for trust, communication and support. Kowalski and Swanson (2005: 242) indicates that 'new communications skills are required to prevent teleworkers from feeling isolated.' The types of communication required could constitute a formal policy at an organisational level, where agreements between supervisors and their staff on how work is conducted, formalising expectations around what happens when the teleworker is sick, and how they will be managed from a distance agreed (Kowalski and Swanson 2005). The e-worker should also consider how to develop effective relationships with co-workers, customers and their line manager. In the current study, the emotional aspects related to e-working were considered in terms of social activity and contact with the office. Guilt was experienced by e-workers for those office bound employees who picked up extra duties to cover the absent e-worker. This is supported by research that has found that negative emotions can be experienced by e-workers, such as guilt and social isolation, leading to emotional issues more than by office based workers (Mann and Holdsworth 2003: 208).

When considering what the organisation could provide for e-workers, the current sample of e-workers reported that organisations have an important role to play in effective e-working. This involved being clear about expectations, ensuring individuals had the right technology and tools, addressing issues such as health and safety and communicating effectively with all staff both remotely and on site.

Providing appropriate policies for e-working and work-life balance were also seen as important. One aspect which was expressed as important was autonomy and trust given by the organisation. This involved individuals being able to flex their time and manage their own work loads effectively without a high degree of management intervention. Many of the e-workers in the current study worked as Professionals or at a Line Manager level. Roles included: Communications Director, Senior Purchasing Manager, Policy Advisor, Project Manager, which indicated a seniority that would have an expectation of high levels of trust and autonomy. Those at lower levels in the organisation indicated slightly less autonomy, however, they did report perceiving high levels of trust from their managers, which also gave them access to greater degrees of autonomy. Brey (1999: 15) indicates that autonomy is associated with 'the control that workers have over their own work situation.' Some job roles may have had less autonomy to e-work. Clear and Dickson (2005: 226) report that 'only managers and mobile workers, those that have some level of autonomy attached to their roles, are likely to adopt, or be allowed to adopt telework in such firms'. It should also be considered that many females request home working opportunities in order to manage their work and family lives (Clear and Dickson 2005: 227). This aspect has been covered earlier in that some females desire to complete household tasks and manage child-care arrangements.

The culture of an organisation can affect the way in which e-working is implemented. For example, the move away from presenteeism to work based outputs may be a new way of working for many organisations. This was rated as the top priority intervention, at an organisational level, by the group of exemplar e-workers in the card sorting exercise. This is consistent with findings by Clear and Dickson (2005: 227) who found that attitudes of managers towards e-workers can affect the efficacy of e-working. They found a divergence of views, from highly supportive managers who see productivity gains to those who consider it as an opportunity to shirk work. The current research sample reported

some instances of where they had to either remove the opportunity to e-work due to lack of performance when working remotely or would not consider some members of staff given their already poor performance in the office. This study has highlighted a need to support e-working with measurement of performance which is goal driven and output focussed. Madsen (2011: 155) suggests that interventions that could assist e-workers would include, providing clear policies and guidelines for e-workers to follow including training workers to the new remote environment. She also suggests that suitability for e-working should be assessed and non-teleworkers should also be brought into the process.

10.8.1 Typology and E-Work life assessment tools

As part of the research in phases one and two a clear polarity emerged leading to a typology for the 'developed' and 'undeveloped' e-worker. This classification focussed on competencies, behaviours and outcomes and has provided the two poles of those e-workers that require further development and those which are exemplars, and would be able to support newer e-workers. Phase three has further tested the typology on a set of exemplar e-workers and added extra items to each category. Further, it has become clear from phase three of the research that a self-assessment tool for new remote e-workers could provide organisations with a means to assess their suitability and highlight specific areas for training. A similar tool could also be used to assess current e-workers efficiency. A number of factors were raised during this phase and included the appropriate work role, personality, utility of technology and an output based culture. The revised typology was contained in section 10.6.

10.9 Conclusions

Phase three of the study has produced suggested interventions to support the 'actionable' nature of the E-Work life measures. It has developed and validated

the e-worker typology and begun to specify the requirements for an e-worker self-assessment tool. This tool could be used as an assessment for ensuring current e-workers needs for training and other interventions are met, and as an early assessment for those embarking on e-working. The full E-Work life tool may be used for organisations starting out on e-working or to improve the productivity, health and efficiency of those already e-working. The main limitation of the current study was the limited sample of e-workers that participated. However, the findings are supported by the previous literature on remote e-working. The next steps, for future research, would be to develop and test this tool in an applied setting to gain confirmation of the scale, start collecting norms and test the interventions and assessment tool.

Chapter Eleven: Discussion of the E-Work life Scale, Implications for Practice and Future Directions

11.0 Overview

This final chapter discusses and reaches conclusions based on the current research into the development of the E-Work life scale, including self reports of job effectiveness and well-being. The strengths and limitations of the research are reviewed. The current research is situated in the literature on work-life balance and e-working, adding a unique contribution to knowledge in both of these areas. The implications for practice including recommendations for the future commercial use of the E-Work life scale and associated consultancy tool are also discussed, as well as, suggestions for future development.

11.1 Discussion

The main aim of this research was to develop a unique work-life balance scale, in the context of e-working, with associated defined interventions for individuals' supervisors and organisations. To complete this original contribution it was necessary to split the research into three overarching objectives:

- Devise an E-Work life balance scale that is 'actionable', that is actions derived from the scale will provide suggested interventions for individuals, supervisors and organisations.
- Test the validity and reliability of the scale by conducting a survey on a sample from a diverse base of remote e-workers, ensuring that any suggested interventions identified were fully explored with exemplar remote e-workers.

- Explore self reported associations, identified through the literature between e-working, work-life balance, well-being and job effectiveness.

To achieve these objectives the research was conducted over three phases. University ethical approval was gained (see appendix forty-two). Chapters two to four provided a background review of the work-life balance and e-working literature. Chapter five described the scale development methodology and chapters six to seven completed the first phase of item generation for the scale. Chapters eight and nine concluded the scale development process by testing the scale on a diverse sample, validating and exploring the postulated dimensionality of the scale. The third phase was completed in chapter ten and provided a set of potential 'actionable' interventions that were related to the scale. E-working and work-life balance issues were further explored through associations of self reported job effectiveness (questions contained in the E-Work life survey) and well-being.

The items for the scale were devised from revising measures in pre-existing scales and developing new items specifically for the current study. Interviews were completed with over 20 e-workers at different stages of the research to enhance face and content validity and a wide scale survey involving 250 e-workers, was conducted to test the newly devised scale. The survey included questions on job effectiveness. An existing well-being survey (SF36v2) was carried out simultaneously, to check levels of well-being amongst e-workers. The current research provided both quantitative data, through the scale development and survey results, and also in-depth qualitative analyses.

The E-Work life scale was checked for content adequacy, construct validity and refined using the Q-Sort method, exploratory factor analysis and correlation analyses. The internal consistency of the scales was checked and found to meet

the requirements for Cronbach's alpha. This resulted in a uni-dimensional scale consisting of 28 items. Initially eight postulated dimensions were used to explore the potential sub-scales of the E-Work life scale. The PCA results did not confirm the presence of the sub scales, therefore, the name was changed to descriptors to allow the items to be categorised. The descriptors used were the previously postulated dimensions: e-working effectiveness, e-job effectiveness, work-life integration, role management/conflict, managing boundaries, e-well being, management style and trust. Both the scale and the presence of potential sub scales require further analysis through Confirmatory Factor Analysis to confirm the underlying dimensions (DeVellis 2003: 131 and Netemeyer, Bearden and Sharma 2003: 147). To provide the 'actionability' of the scale data was used from phases one and two, to provide an initial set of suggested interventions that were established by a final set of interviews with e-workers in phase three. Both the scale and the suggested interventions were designed to work on three levels: individual, supervisory and organisational.

The next three sections return to the research objectives of the current research as set out at the beginning of this section. A critical reflection will be provided on how the current research contributes to research in this field.

11.1.1 Devise an E-Work life balance scale that is 'actionable', that is actions derived from the scale will provide suggested interventions that could help individuals, supervisors and organisations

This objective was met by reviewing the current literature on work-life balance and e-working and in particular, their measurement. Developing interventions for the new scale evolved from both findings from the E-Work life survey and the interviews conducted with exemplar e-workers. A review of previous scales into work-life balance revealed few, if any, clear associations with e-working. Conversely e-working measures were limited, consisting of interviews or surveys

with e-workers seeking their views about e-working efficacy (e.g., Baruch 2000 and Sullivan and Lewis 2001). Maruyama, Hopkinson and James (2009) completed a wide-scale survey that began to address the impact of e-working on work-life balance; however, this research did not produce an in-depth set of validated scales. Hence, another important facet of the new E-Work life scale was to ensure their validity, reliability and 'actionability', thus enabling clear applied interventions to be developed. Gaps had been identified by Parasuraman and Greenhaus (2002) in the work-life balance research. This included a lack of focus on single parents, families that were not typically structured and those without dependants. The current research was keen to include all types of social structures including those without dependants. The E-Work life scale was, therefore, structured in a way which could be interpreted by different types of social groups.

The E-Work life scale used previous work-life balance scales as a basis for developing new items, as measures of e-working were not generally validated and only consisted of survey or interview style questions. The 'actionable' requirement of the new E-Work life scale meant that any existing items were re-worded to include both the context of e-working and also the potential to lead to applied interventions and actions. When reviewed, most of the available work-life balance scales related to the negative aspects of conflicting roles and measurements related to self-managing (Gutek, Searle and Klepa 1991 and Carlson, Kacmar and Williams 2000). Greenhaus and Beutell (1985) were early advocates of measuring these aspects of role conflict. In particular, they looked at time, strain and behaviour related antecedents that could create conflict between the opposing roles of work and family domains. The current research widened this remit by including different types of social groups and individuals, whilst at the same time acknowledging predecessor's work in this area. The scope was further widened to cover the effects on job effectiveness and well-being.

The scale development process for the current research sought to check definitions in both topics as part of the initial scoping. Defining work-life balance was easily identified due to the amount of research on this topic and was further developed through the interviews with e-workers. However, e-working proved more problematic with definitions mainly focussing on home-based teleworking. Madsen (2011) confirmed that following a meta analysis of the e-working literature there was variance in the way terms such as 'teleworking' were utilised and very little agreement on their use in research. The current research related to all types of e-workers including those travelling and working remotely away from home. The definition chosen, through a review of definitions from the research on e-working included a focus on the technical, communication and spatial aspects of e-working. The definition by Nilles (2007) met this criteria. Both definitions of, e-working and work-life balance were confirmed as part of the interviews with exemplar e-workers in phase one. Definitions were important as they provided a basis for constructing the E-Work life scale and confirming construct validity. However, it should be noted that the current research found that whilst one definition was used to cover all types of e-workers, in fact, distinguishing between home and remote working may be a useful improvement for the future development of the scale. It became clear from the qualitative analysis that there were different types of e-working roles. For example, those who had roles that required e-working 24/7 and from remote locations, whilst others were working from home and switched off from work at the end of the day. These differences require further investigation and potentially refinement of the E-Work life scale and the related suggested interventions.

The suggested applied interventions supporting the E-Work life scale were not devised in phase one of the study but developed through the E-Work life survey and interviews completed in phase three. These findings are discussed in section 11.1.2. When coupled with e-working the E-Work life scale provide both a unique scale and a set of suggested supporting interventions that can potentially

help individuals, supervisors and organisations manage these issues effectively. The findings from the E-Work life survey, along with the testing of the scale for validity, reliability and the newly devised interventions are discussed next.

11.1.2 Test the reliability and validity of the scale by conducting a survey on a sample from a diverse base of remote e-workers, ensuring that any suggested interventions identified were fully explored with exemplar remote e-workers

To complete the objective for this part of the research, an E-Work life survey, including: questions related to job effectiveness, the newly devised E-Work life scale, and an existing well-being scale (SF36V2) was conducted. The E-Work survey was completed using eleven organisations from three different sectors. Care was taken to try and engage e-workers from different levels within the organisation, although the voluntary nature of recruitment meant that it was mostly self-selective to participate.

Analyses of the demographic data from the E-Work life survey presented few new findings. The sample were mainly female professionals aged (25-54 years) without children and given this survey was voluntary, the findings suggested that this social group do have a high interest in work-life issues. Furthermore, male respondents in the mid-life age group (45-54 years) also showed interest in the survey and were keen to take part in the e-worker interviews. This interest by older males could relate to a greater emphasis for them on quality of life, or perhaps reaching a stage in their careers where they have greater autonomy. This would require further investigation to confirm. These demographic findings were not supported by recent research which found that teleworkers were mainly older, married and with children (Brotherton 2011: 1).

When gender differences were analysed they were not found to be significant in this sample of e-workers. This result is surprising given previous research

findings. For example, previous studies have found gender to be a significant difference when measuring work-life balance (e.g., Gutek, Searle and Klepa, 1991) in this study women experienced more family to work interference than males. The findings from the current research could mean the gap is closing between gender differences in work-life balance, perhaps with technology increasing accessibility to work remotely for both genders. E-working studies (e.g., Sullivan and Smithson 2007: 458) have found gender differences in reasons for adopting flexible working, females choosing flexible working to balance home and work responsibilities, whilst males associated flexibility with control over working hours. The current study found similar reasons given but both genders in this study referred to the need to balance work and home commitments as a priority.

No other demographic findings were significant for this study including number of dependants; however, it should be noted that only a third of those completing the E-Work life survey had children under the age of 18. The current study had two thirds of the sample without dependants, and whilst the majority of the sample were married, only a third of these had dependants. Interest in work-life issues as already discussed, appeared to be important to those that were not married nor had dependants. This finding is supported by Casper, Weltman and Kwesiga (2007) who examined expectations regarding work-life issues from a sample of single employees without dependants. They found that single people were very keen to retain equity of benefits related to work-life benefits similar to those employees with families. Given the voluntary nature of this survey, it could be concluded that this present sample also found work-life issues of interest despite having no dependants. A study by Waumsley, Houston and Marks (2010) completed research to see if existing scales can be adapted to examine those people who do not have children. Findings from this study suggest that current work-life balance scales do not adequately measure those who are experiencing work-life issues but are not within a typical family structure. The current research

addressed these issues by including items which did not discriminate between those who lived in particular family structure or without family commitments. The E-Work life scale would, however, benefit from being tested on differing groups, both those with more family responsibilities and groups who had no family responsibilities, to confirm these demographic findings.

The analysis of the E-Work life scale provided further insights into the relationship between work-life balance and e-working. A self-assessment questionnaire was developed, whereby participants provided their own perception of where they placed themselves in terms of e-working effectiveness and work-life balance. Alongside this the e-worker typology was a key output of the exemplar interviews, completed in phase one, and was further developed through the E-Work-life survey. The typology provides a unique contribution to research in e-working, as there is very little research into what makes an effective e-worker related to specific skills, behaviours and outcomes. The E-Work life survey used research by Baruch (2000) to select competencies that could be for effective e-working, e.g., self motivation, organisational skills and ability to work alone. As part of the E-Work life survey these competencies were confirmed and additional ones emerged, for example, prioritisation of work tasks and trust based on work outputs. These findings indicated that e-working may require specific skills and behaviours for the positive outcomes usually associated with e-working to be achieved. The typology was updated to define the 'developed' and 'undeveloped' e-worker indicating areas where e-workers could improve their skills, behaviours and outcomes when e-working.

To investigate the items within the scale, these were focussed on eight postulated dimensions (see appendix thirty-nine for details) these related to specific aspects of e-working effectiveness and work-life integration, including autonomy and job control. The postulated dimensions were explored and not completely found to be present through factor analysis. The dimensionality of the

scales requires further validating through Confirmatory Factor Analysis with a new sample to further investigate the presence of sub scales. The suggested applied interventions were related to these postulated dimensions and are discussed next.

Suggested interventions to support the 'actionable' nature of the E-Work-life scale were developed initially from findings from the E-Work life survey and then tested on a sample of expert e-workers. The suggested interventions were developed on three levels, the individual, supervisory and organisational and consisted of 58 interventions in total. Analysis revealed that the top three preferred interventions for each level shared some commonality. For the individual e-worker one of the top interventions was related to engendering trust by delivering against objectives. At a supervisory level ensuring that e-workers understood that they needed to deliver both on time and to the quality expected where considered key. Further, at an organisational level encouraging a culture based on trust and delivering against outputs as opposed to being present was indicated as vital to e-working success. These suggested interventions had two themes in common, trust and the measurement of e-working effectiveness. Trust and measurement have emerged throughout this research and are discussed next.

Trust was highlighted in the early exemplar e-worker interviews in phase one, again in the open comments through the E-Work life survey and in the final interviews with e-workers to establish the potential interventions. Trust was related to measurement by many of the e-workers in the current study, with the importance of supervisors measuring outputs as opposed to time spent working in the office (presenteeism). Research into e-working is supportive of these views of how to effectively measure e-workers (e.g., Kowalski and Swanson 2005). Trust is also related in the literature to role and job autonomy (Morgan 2004). The current research found a high degree of both job autonomy and flexibility

over where and when work was completed in the sample of e-workers surveyed. This is supported by previous research, for example, Kossek, Lautsch and Eaton (2006) found that when e-working, control over job role, flexibility of hours and the ability to self-manage were all important to achieving balance between work and home demands. Further, high degrees of satisfaction both with e-working and work-life balance were reported in the current research. This may relate to the high proportion of professional people in the current sample and would need further verification to see if people employed at lower levels in the organisation shared similar levels of autonomy and satisfaction.

The next section reviews the associations with well-being, and other facets identified through the e-working and work-life balance literature.

11.1.3 Explore self reported associations, identified through the literature between e-working, work life balance, well-being and job effectiveness

An important objective of the current research was to consider the self reported associations by the e-workers of their work-life balance, e-working job effectiveness and well-being. Well-being when related to e-working has been highlighted in studies of e-workers both positively and negatively. Mann and Holdsworth (2003) found that stress levels could be reduced when e-workers were compared to office workers. Conversely, Hartig, Kylin and Johansson (2007) found that e-workers may not gain the restorative effects of being at home by taking work into the home and therefore blurring boundaries. In the current sample of e-workers over two thirds of respondents reported good or very good levels of general well-being. However, when respondents were asked in the well-being survey about emotional and psychological issues, over half were tired and a third felt worn out. These findings need further substantiating but show an indication that respite was not being achieved through e-working and could be supportive of the findings by Hartig, Kylin and Johansson (2007). The well-being

survey (SF36V2) used for the current research contained general measures of mental health; further research could investigate specific aspects of mental health that would relate to e-workers, such as, social isolation, burn out, tiredness and depression. Another aspect of well-being that can adversely affect stress levels and well-being is control both over work and non-work responsibilities.

Job effectiveness has been studied when related to work-life balance and e-working exploring control over work and family demands. For example, Thomas and Ganster (1995) found that a lack of control over work duties led to higher rates of family conflict and depression. Carlson and Frone (2003) completed research to examine both internal (e.g., psychological recuperation) and external influences (e.g., demanding work schedules) to work-family conflict, findings suggested that both were important when viewing work-life balance issues. The E-work life scales incorporated aspects relating to job effectiveness including job autonomy and control. Findings indicated that the current sample had high levels of autonomy over when and where they e-worked, which may have led to more positive reportings of work-life balance. The current sample was constituted of many highly professional roles, ranging from high levels within the organisation to lower levels. The current sample also included a high proportion of managers. Further research may find differences between both levels of autonomy with e-workers role type and also between managers and non-managers. The current study did not have sufficiently different numbers between these roles and levels to analyse in detail but both these aspects should be considered for further clarification and study.

The current research identified clear advantages to e-working, including, flexibility to work differing hours, ability to manage non-working commitments, increased productivity and job satisfaction. These findings are supported by previous research that has highlighted the benefits to organisations including, the

financial aspects of e-working, including productivity, increased employee commitment and retention rates (Baker, Avery and Crawford 2006 and Morgan 2004). Disadvantages to e-working were also identified in the current research, including working longer hours, the blurring of boundaries between work and home and an inability to switch off from work. Research of the literature supports these findings, for example, Baruch (2000) and Morgan (2004), have related negative aspects to working from home including the blurring of boundaries between work and non-work time and the need to carefully organise time so that work and non-working lives do not impact each other. Baruch (2000) and Morgan (2004) included other disadvantages to e-working that need to be managed, including social isolation, lack of professional support and visibility. These findings were not so clearly supported in the current research, although interviewees highlighted the need to retain social contact, e-working was not considered by many e-workers in the current sample as the total solution to effectively managing work-life balance. Several indicated that face to face contact was still necessary to build both work and social relationships. Visibility and contact with colleagues and line managers was covered in the current research with e-workers indicating that this was crucial to effective e-working.

Morgan (2004) considered both opportunities and challenges for e-working, highlighting the need for organisations to accurately assess the culture and any barriers to change before e-working programmes are implemented. The interviewees in the current research indicated that whilst work-life policies were mostly available, policies covering e-working requirements did not exist or have visibility. If organisations do not consider how to effectively implement their policies, there may be adverse health consequences. Kossek, Lautsch and Eaton (2009) report that teleworking can have positive outcomes for employee well-being, however, these need to be related to psychological job characteristics such as working conditions and job design. These aspects should be considered when introducing e-working policies.

This research has significant strengths but also some limitations these are now discussed in the next two sections.

11.2 Strengths of the research

The research completed to construct and validate the E-Work life scale has several strengths. Firstly, the research was conducted in three discrete phases which consisted of four separate studies, which when taken together provided a thorough approach to scale development. The scale met the initial requirements for the production of a validated measure with a reliable scale. A further strength is that four samples have been used and there has been some consistency in that some individuals elected to take part in all four studies. Whilst this provided consistency in that they were able to understand the whole studies objectives, it is noted that this could also be considered a confounding variable in that using a new sample each time would add further to validity. The scale aimed to cover not just those with dependants but also those without these responsibilities, it was very successful in attracting these differing social groups, with a high number of single people, without dependants taking part.

In the current study e-workers were at times hard to gain access to and occasionally the same person volunteered throughout the study. This was not considered problematic given the exploratory nature of the research. A wide range of organisations took part, from three different sectors, private, voluntary and public giving diversity in employment practices. Individuals self selected to take part in the E-Work life survey and this produced a range of e-workers with differing work roles including self-employed to executive level. The data provided through the interviews and the E-Work life survey produced a mixed approach using both quantitative and qualitative data. This was a strength of the research

in that quantitative results and findings could be used to alongside the qualitative analyses to support the findings.

The new E-Work life scale sought to have a European focus as many of the previous work-life balance measures had been developed in North America. The E-Work life scale was developed with UK based e-working employees leading to greater relevance to this audience. However, the scale could be used for e-workers country-wide; however, further considering different cultures would add to the richness of the scale. The scale could be further refined and adapted to increase relevance internationally.

The provision of the suggested applied interventions to support the E-Work life scale is a significant strength of this research. Scales produced by previous research have not addressed the three levels of individual, supervisor and organisation, nor do they provide applied recommendations or actions that directly related to improving work-life issues. Finally, the overall strength is that this innovative scale can now be further tested to provide e-workers and organisations with recommendations on how to achieve the full benefits of e-working.

The unique contribution of the E-Work life scale is that whilst it continues to build on existing scales in work-life balance, it also provides a different and emerging context by combining with e-working. Furthermore, the scale has been developed with UK based organisations, which provides direct relevance to a European business culture.

There are some limitations to this study and these are discussed in the next section, followed by future direction for the research.

11.3 Limitations of the research and future research

The E-Work life scale has been developed and explored in detail; however, it has not been re-confirmed on a separate sample of e-workers. The sample utilised for the current research had some limitations in that it consisted mainly of female professionals, without children. The sample sizes for the interviews conducted in phases one and three, were also quite low. Whilst the participants for both of these studies were highly relevant and provided long and in-depth interviews, it would be recommended that further interviews could be conducted to re-check some of these findings. Relying on a small sample can produce false positive and false negative responses, which may lead to incorrect inferences being made from the data. Furthermore, the majority in the sample considered that they had autonomy over when and where they completed e-working, many working at a professional and/or a managerial level, slightly skewing the results towards management working practices. Ideally a further sample would be mixed more equally for gender to include more participants with families. Different levels of autonomy would be important to explore further with those at different levels within the organisation. The scale could be used to contrast those with and without family responsibilities and also managerial and non-managerial roles. This would allow further exploration of e-working practices.

Confirmatory Factor Analysis on a new sample is required to complete the development of the E-Work life scale. A number of potential dimensions to the scale were explored through factor analysis. Factor analysis requires a large sample to effectively complete the analysis. Whilst the E-Work life scale had a good response rate overall, individual scale items had variable responses leading to missing data. The missing data made factor analysis and reliability checks more difficult to conduct and although these were completed using an acceptable pair-wise method, these analyses would need to be repeated on a more stable

set of responses to investigate more thoroughly and confirm the dimensionality and reliability of the scale.

The reliability of the E-Work life scale was not fully completed; test, re-test is a further test of reliability, which would need to be conducted for the new measures on a different sample of e-workers. Further reliability and validity checks should be undertaken on different samples to ensure the scale items are confirmed and to develop norms. Norms provide a series of different samples against which future use of the scales can be interpreted. This is important for the commercial use of scales and would need to be developed over a long period of time.

Through these limitations opportunities for future research can be considered. Firstly, the E-Work life survey provided a useful tool to test the E-Work life scale, however, it attracted a specific set of participants (i.e., females without children) in the current study. The scale should be further tested on a diverse range of e-workers. This would check to see if the results are replicated and the factor analysis and reliability checks supported. Whilst it is not recommended that the full survey is repeated, as this set the context for the development of the scale, a number of questions, including role type should be included, alongside a repeat of the well-being survey. It would be interesting to note if the different levels of e-workers would report differing issues and whether or not these related to good or poor well-being.

The current research found some respondents had low levels of self reported well-being, including tiredness and low feelings. Future research could focus in more depth on finding out the causes of psychological issues for e-workers, including burn out and low feelings. New e-workers could be measured pre and post e-working to investigate any differences in their skills and attributes including well-being and job satisfaction. Another approach would be to compare e-workers with non-e-working colleagues to look for these differences. Further

research examining the occupational health issues related to remote working, including sedentary behaviours (sitting for long periods) and Multiple Skeletal Disorders could also be the focus of further study in this area.

The current research went some way to explore the competencies of both the developed and un-developed e-worker. The e-worker typology was based on findings from the interviews and validation of behavioural competencies through the E-work life survey. The E-Work life scale in conjunction with the e-worker typology could provide organisations with a benchmark to consider where an organisation sits in relation to its e-worker's current skills and behaviours. This benchmark could then lead to training and implementation of relevant interventions. Personality type was a factor that was mentioned during the current research through the e-working interviews, although there was no agreement to the type or a particular pattern. For example, motivation to complete work independently was identified by many in the current study as important to being an effective e-worker. Other examples from the e-worker interviews included those who had a tendency to over-work, so whilst highly motivated may experience burn-out at a later date. Personality types, such as type A and B were not researched as part of the current studies but would form a useful supplementary study, perhaps using Costa and McCrae's (1985) big five personality dimensions (conscientiousness, openness, introversion, extroversion and agreeableness) to look at the well-being of e-workers and their behaviours. The big five dimensions, such as, conscientiousness could be related to e-working effectiveness and the well-being of the e-worker. These studies if completed could be used to further develop the granularity of the e-worker typology and confirming the competencies required for the developed and undeveloped e-worker. Findings from recent research (McCullough 2011: 3) support the notion that personality type can affect levels of work-life conflict. This research indicated that certain personality related styles can benefit more from e-

working, e.g., those who can segment between work and family commitments can experience less work-life conflict.

Finally, the suggested interventions related to the E-Work life scale could be refined further, by testing in differing e-working contexts and on different job roles, in particular, contrasting managers and non-managerial roles. This would test the predictive validity of both the E-Work life scale and the suggested interventions. Further, there have been technological advances, such as wider use of smart technology, since this study commenced and an increased numbers of e-workers. It would be valuable to re-test and confirm the current studies findings and refine the E-Work life scale further.

The next section recommends how the E-Work life scale could be used to provide organisations with the opportunity to develop their e-working capabilities.

11.4 Implications for practice

The E-Work life scale and typology, when taken together, provide a means to examine work-life balance in the context of e-working. Once they have been validated through further research to develop norms, their practical application could lead to a commercially viable product. A consultancy process could be developed to use the scale in organisations with e-workers as well as in those considering moving to e-working in the future. The scale would be used on both new and existing e-workers to elicit behaviours, skills and working practices that can be improved. This may be particularly useful for those organisations looking to change over to e-working, or those who wish to improve the effectiveness of their existing e-workers. It is further suggested that assessments, both before and after commencing e-working, are conducted on e-workers to provide evidence of improvements. In the current study some interviewees reported the interviews helped them to realise issues surrounding their self management. It is

recommended that these exploratory interviews could be incorporated into the process. An outline of the components of the consultancy model which could be utilised by organisations is given below:

- Assessment of existing e-worker or new e-workers' capabilities
- Completion of E-Work life scale on line
- Provision of suggested interventions (this could be conducted via interview or on line)
- Re-assessment to show the differences before and after the interventions had been completed.

This process could also be used to develop supervisory skills and behaviours at an organisational level with Senior Executives. The suggested applied interventions currently work on three levels, the individual e-worker, supervisory and organisational. For example, an Executive may be interested in improving their own e-working effectiveness but also engendering an e-working culture for the whole organisation.

A future direction for the E-Work life tool would be to test the scale in a number of different work contexts, for example, those with new e-workers, organisations who provide differing levels of autonomy. This would ascertain the types of analysis and tools that assist Executives and Human Resource managers when moving their organisation across to e-working or in improving e-working capabilities. A further next step for the tool would be develop an on line tool, which would contain both the E-Work life scale and the suggested interventions, e-workers could use this to identify issues and develop themselves through a series of modules.

11.5 Test standardisation

When developing new tests it is important to ensure test fairness and standardisation. Test fairness cannot always be achieved as tests can often be affected by many variations both in the test user and by the test administrator. To overcome some of these problems The European Test User Standards for Test Use in Work and Organisational Settings (2005) provides guidance on the procedures for test use. These standards ensure competence in test use and provide guidance on how tests can be used ethically and fairly. A necessary part of ensuring standardisation is to provide good practice guidelines on the administration of the new test and a supporting manual setting out how the test should be interpreted. These could effectively form part of the next steps for the newly devised E-Work life scale. In addition, the manual should provide norms for test interpretation, which would require new samples to be tested as described above.

The E-Work life scale did not draw on any cultural differences that were known to exist when reviewing work-life balance and e-working issues. Ethnicity was not highlighted as a key issue and this present research used a voluntary sample for testing the scales. In future ethnicity data could be collected as part of the demographic information to assess for any variance. The E-Work life scale could be tested on different ethnicities to ascertain if there are any key differences and to check wording is appropriate to differing cultures. This would also improve the international application of the E-Work life scale.

Verbal protocol analysis (Ericsson 2002) could be utilised to check the measures wording and to improve the scale overall, taking account of any cultural variations. This method involves 'talking out loud' i.e., with participants verbalising their thoughts. A way of improving test fairness is to ensure the standardisation of the test administration process. The current research has used

specific protocols for administration and standard methods for the scoring of the scales. More norms still need to be developed for the scale. Norms will provide greater interpretation of test scores and provide wider samples against which to compare results.

The final section of this chapter provides the overall conclusions for this research.

11.6 Conclusions

This research has led to an innovative product, providing the first research work-life balance scale based in the context of e-working. The findings indicate there are benefits for both individuals and organisations of e-working. However, for individuals, supervisors and organisations to gain these benefits, applied interventions may need to be completed, including training, management of e-working practices and the development of E-Work life policies. These interventions are supported by recent findings that consider that organisations need to assist e-workers to be effective in fulfilling their duties whilst e-working (Madsen 2011). The E-Work life typology provides a classification of the 'developed' and 'un-developed' e-worker that could be used alongside the E-Work life scales to aid organisations to improve their e-working skills and competencies. Previous research has not considered the behaviours and competencies of e-workers in detail and this research provides, through the typology, a means to work with organisations to understand their impact. Another key contribution to the research on e-working and work-life balance is that e-workers have not been previously measured in detail about their views about how these two topics work together. Further the health of e-workers has been measured through the use of a well-being survey which adds more information to previous research. E-worker's job effectiveness has been researched through the interviews and the E-Work life survey and scale. These

findings add data on e-working practices, use of technology and autonomy and control of e-workers.

The current research set out to achieve three key research objectives. Firstly, to devise an actionable E-Work life scale with clearly suggested interventions. Secondly, to test this scale for validity and reliability, and finally, to seek potential associations with e-working, work-life balance, job effectiveness and well-being. These goals have been successfully achieved through this research. There are some key strengths including the provision of a set of measures which can now be used to help organisations consider and realise the full benefits of e-working.

11.7 Publishing of thesis results and findings

This research has been published externally at the following conferences:

Grant, C. A., Wallace, L. M., and Spurgeon P. (2008). Poster presentation: 'The development of 'actionable' E-Work life balance scales and their relationship to well-being and job effectiveness'. E-working and Sustainable Work-life Conference, Coventry University, 12th June 2008

Grant C. A., Wallace, L. M., and Spurgeon P. (2011). Poster presentation: 'The development of 'actionable' E-Work life balance scales and their relationship to well-being and job effectiveness'. British Psychological Society, Division of Occupational Psychology Conference, Stratford, 12th -14th January, 2011

Grant C. A., Wallace, L. M., and Spurgeon P. (2011). Poster presentation: The development of 'actionable' E-Work life balance scales and their relationship to well-being and job effectiveness. British Psychological Society, Work-life Balance Group Conference, London, 10th June, 2011

The research has also been published through the following external magazine articles:

Liddle, C., and Grant, C. A. (2010) 'Balancing Act'. Coventry University Health Magazine. 6, p11

Kennett, M. and Grant, C. A. (March 2011) 'Remote Control'. Management Today. p46-50

In addition to external publications an internal prize at Coventry University was awarded for the research:

PhD Poster for the Faculty of Health and Life Sciences, Coventry University Research Symposium, awarded 3rd Prize (2008). Finalist in the Coventry University Post Graduate Research Symposium (2008).

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**The development of an 'actionable'
E-Work life scale with reference to
self reported well-being and job
effectiveness**

Volume II

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Doctor of Philosophy

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2011

Appendix One: Review of validated scales in work-life balance

Author/Source	Date	Country published	Measures	Comment
Work-Family Conflict/interference (1)				
Carlson, D. S. and Frone, M. R. Journal of Business Psychology	2003	USA	12 items split into internal/external dimensions. Four factor measure of work-family interference, external and internally generated interference.	Finds a gap and adds dimensions to previous scales developed by Gutek, Searle and Klepa on work-family interference.
Carlson, D.S., Kacmar, K.M. & Williams, L. J. Construction and initial validation of a multidimensional measure of work-family conflict. Journal of Vocational Behaviour	2000	USA	18 Items, provides a multi-dimensional measure of work-family conflict. Six dimensions are covered including, time, strain and behaviour. Including interference with work-family and vice versa.	This is an excellent paper which builds on the work of Gutek, Searle & Klepa, and in particular Greenhaus and Beutell's 1985 paper.
Gutek, B. A., Searle, S. and Klepa, L. Journal of Applied Psychology Carlson, D., and Perrew, P.L. Journal of Business Management	1991 1999	USA	12 items, Work-Family, Family –Work inference scales. Two additional items added by Carlson & Perrew (1999) to cover the role of social support.	These scales were used for the researcher's MSc and provided good results. The two extra items add depth to the scales.
J Kopelman, R. E., Greenhaus, J. H., and Connolly, T. F. Journal of Applied Psychology	1983	USA	8 items which assess the amount of conflict between work and family roles (work-family conflict). Reversing the words may make it possible to look at family-work conflict.	Work-family conflict correlated positively with job involvement, work role conflict, work role ambiguity, work time demands, family role conflict and family time demands. Negative correlations with, social support, family satisfaction, job satisfaction

Author/Source	Date	Country published	Measures	Comment
				and life satisfaction as found by Adams et. al.1996 and Carlson and Perrewe, 1999.
Netmeyer, R.G., Boles, J.S.and McMurrin, R. Journal of Applied Psychology	1996	USA	10 items, Work-family and family –work conflict scales, measuring potential outcomes.	Correlations where found to be similar to the studies above. Additionally family-work conflict correlated positively with number of children living at home.
Thomas, L.T., and Ganster, D.C. Journal of Applied Psychology	1995	USA	14 Items, measuring an employee's perceptions of control over aspects of work and family responsibilities and demands.	Choice correlated positively with job satisfaction and perceived support. Control negatively correlated with work-family conflict and depression.
Bohen, H. Viveros-Long, A. Book: Balancing Jobs and Family Life	1981	USA	19 items, Job-Family Role Strain Scale. Measures respondents stress and strain when combining work and parenting.	Some evidence to show that work-family strain is distinct from work and family conflict.
Small, S., and Riley, D. Journal of Marriage and Family	1990	USA	5 items, covering four dimensions looking at job and non-work conflict. The extent of spill-over of work demands into four non-work roles.	Job-parent conflict correlated positively with number of children under six years of age and job-spouse conflict for both husbands and wives.
Bacharach, S.B. Bamberger, P., and Conley, S. Journal of Organisational Behaviour	1991	USA	4 Items, measuring Work-Home Conflict. A form of interrole conflict in which role pressures from work and home domains are incompatible.	Similar to work-family interference scales but not as detailed.
Stephens, G.K., and Sommer, S.M. Sage Publications.	1996	USA	14 Items, measuring work-family conflict. Time and strain based measures.	Similar to other work-conflict scales but focus on time and behaviour.
Work-Family Culture (2)				
Thompson, C.A. Beauvais, L.L., and Lyness, K.S.	1999	USA	21 items	Look at when work-family benefits are not enough: The influence of work-

Author/Source	Date	Country published	Measures	Comment
Journal of Vocational Behaviour				family culture on benefit utilization, organisational attachment and work-family conflict.
Clark, S.C. Work Culture Scale Journal of Vocational Behaviour	2001	USA	13 items, an examination of three aspects of work culture(flexibility of working hours, flexibility of work itself and supportive supervision).	
Allen, T.D. Family Supportive Organisations Journal of Vocational Behaviour	2001	USA	14 items, examines family supportive organisations and family friendly benefits.	
Work and Family Role Values (3)				
Amatea, E. S., Cross, E.G., and Clark, J.E. Journal of Marriage and Family	1986	USA	5 items, assessing the work and family role expectations of career-oriented men and women; The life role salience scales.	

Appendix Two: Review of surveys in work-life balance (wlb)

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
Maruyama, T., Hopkinson, P. G., and James, P. W.	2009	UK	British Telecom	Survey	This study used six predictors to explain positive work-life balance.	1566 teleworkers	New measures were developed from existing studies	Time, flexibility variables were found to be the most dominant. Gender or having children was not significant. Controlling working hours was the most important to this sample to achieve work-life balance.
Bloom, N., Kretschmer, T. and Van Renen, J. Work-Life Balance, Management Practice and Productivity	2006 and 2010	UK	Centre for Economic Performance London School of Economics	Study and report sponsored by the ESRC. Developed three models which were tested using correlations between wlb and, competition, management and productivity. A telephone interview was used	This study seeks to look at two separate models of wlb and productivity. The UK under Blair has instigated a 'win, win' situation whereby wlb policies and practices are seen to support industry and increased productivity. The opposing view to this is that wlb is not possible due to globalisation and the need for increased productivity – this serves to increase working hours and	Manufacturing sector, across UK France, Germany, & USA. Medium sized firms employment ranged between 50-10,000 workers, average 2000. 732 firms sampled. 54% response rate.	Used WERS questions and a management practice tool. HR measures, absence, holidays sickness and other relevant measures. Perception of wlb against other companies was the key wlb measure.	The study did not find support for the theory that good management and work life balance are substitutes for each other nor strictly complimentary. For firms who do introduce better work life balance, this neither penalises them in terms of productivity nor does it significantly reward them. On average they are neutral. However, improving wlb may be socially desirable and productivity does not suffer but the authors issue care in terms of introducing regulation for wlb in that it could affect the bottom line profits due to the expense of introducing.

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
				for managers, HR statistics used to measure absence et and employees asked for their perceptions of wlb.	reduce wlb opportunities. A third model was developed to show that competition stimulates better management and productivity. Good managers may also be more likely to introduce better wlb. But the model suggested that greater competition had no direct effect on wlb.			
Hurst J., Baker S. French S., Daniels G. The 24/7 Work Life Balance survey Executive Summary	2006 and 2008 published annually	UK	Work Life Balance Centre, Keele Centre for Industrial Relations.	Annual internet-based survey	Work-life balance policies are defined as family friendly and flexible working initiatives. This definition is seen as a pitfall and restrictive of further debate, the survey therefore takes a broader view of 'balance'. It defines work-life balance as 'an issue for all – regardless of family circumstance'.	N=1217 63% female, covered mainly Managerial and professional occupations (83%). Predominately from 31-50 age group. It does not claim to be representative across different	Health, work , legislation & policy, flexible working options, workload management/control.	47% felt stressed or pressured at least sometimes. Overall 8 in 10 people feel pressured at some time. The age group feeling most pressured is 31-40 yr olds. More than half felt they had suffered ill-health as a result of stress at work eg sleeplessness, depression, irritability etc.. Men were more likely to report depression, women more likely to report anxiety. Despite the pressure and illness levels the vast majority of people reported that they had not made a

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
						groups. The sample is skewed towards, white collar, full-time permanent staff, mainly in the Midlands/ South East.		serious error at work. However, more than 1 in 10 reported they had made a serious error.
National Study of Employers Families and Work Institute	2005	US	National Study of Employers funded by the AP Sloan Foundation Families and Work Institute	Interviews	A study was conducted in 1998 (Work-life Study) which provides a baseline for this survey. This survey assesses the way in which organisations are responding to the changing needs of the nations' workforce and workplace.	A representative national sample of 1092 companies with 50 or more employees using telephone interviews with HR directors.	Ongoing measurements of employer work life benefits, policies and practices. Q's around flexibility – over 17 very detailed.	38% response rate (lower than 1998 survey 45%). They found that employees in more effective and flexible workplaces are more likely than other workers to have: greater engagement in jobs; higher levels of job satisfaction; stronger intentions to remain with their companies; less negative spillover from job to home; less negative spillover from home to job and better mental health.
Mauno, S., Kinnunen, U., and Pyykko, M. Does work-	2005	Finland	University of Jyvaskyla, Finland & Family Research	This study looked at the relationship between a	The examination of whether perceived work-family conflict would function as a mediator in the link	N=1297 employees from five Finnish organisation	Work-family culture was measured via three scales, adapted from	New concept of work-family culture – this refers to an organisation's supportiveness ore responsiveness towards

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
family conflict mediate the relationship between work-family culture and self reported distress? Evidence from five Finnish organisations			Centre, Finland	supportive work-family culture, perceived work-family conflict and self reported distress. Using various scales each one was measured and correlated.	between work-family culture perceptions and self reported distress.	s both public (local social & health care, school & labour departments) and private sectors (paper mill & IT company's).	Thompson et al (1999). These scales assess family supportiveness of management, career development and working hours.	employees' family-related needs. It has been recognised that a supportive work-family culture is associated with several positive well-being outcomes. For example, effects of wlb on health, statistically significant effects etc. A model is presented which shows the effects of culture i.e., a supportive work-family culture on w-f conflict and self reported distress i.e., physical symptoms, exhaustion and negative job related-mood. It was found that a family friendly organisational culture is associated with employee well-being and lower levels of self-reported distress.
Inside the Workplace First findings from the 2004 workplace Employment Relations	2004 & 1998	UK	Jointly sponsored by Dti, ACAS ESCR and Policy Studies Institute	Design remained the same as previous surveys, however, a think tank	Ongoing survey which has been in place over several decades. Previous surveys in 1980,84 and 90 did	N= 3200 face to face interviews with Managers. Over 20,000 employees	Same questions as in previous surveys but with new questions on work-life	Results showed that 11% of employees worked more than 48 hours per week. There was an increase in employers offering flexible working arrangements between 1998-2004. 65%

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
Survey (WERS 2004) & (WERS (1998) Kersely, B., Alpin, C., Forth, J., Bryson, A., Bewley, H., Dix, G., and Oxenbridge, S.				was used to refine and add further changes following new legislation.	not include questions related to work-life balance.	completed a self completion survey. Split was 82% private sector and 18% public sector of those surveyed.	balance, computer use and job satisfaction were included.	of managers believed it was up to employees to balance their work and family responsibilities.
Flexexecutive. A consultancy that specialises in flexible work consultancy and recruitment Flexible working in the IT Industry: Long hours cultures and work life balance at the margins ?	2004	UK	Commissioned by Department of Trade & Industry.	Web-based questionnaire.	When executed successfully flexible working is seen as delivering multiple benefits – improved productivity, performance, new ways of working, enhanced employee commitment & retention. This study sought to examine the views of IT professionals about flexible work and wlb in IT professions.	1001 respondents: 65% female 35% male. The majority were aged under 40. All were IT workers.	Attitudes to flexible working, Senior managers can work successfully on a part-time basis ?	84% agreed should be available to all workers. Senior managers seen as poor role models for wlb (69%). Findings were in line with other flexible working surveys, ie a lack of Senior management role models, a willingness to change and the impact of long hours
Herst, D., and Brannick, M.T. Cross-Cultural	2004	USA		Multi-sample confirmatory factor	Based on work by Carlson, Kacmar & Williams measures of work/family	Validation sample N=225 average age		The results provided an important step in standardising scales for work-family conflict

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
Measurement Invariance of Work/Family Conflict Scales Across English-Speaking Samples				analysis used to determine cross-cultural measurement invariance of the Carlson, Kacmar, & Williams (2000) work/family conflict scale.	conflict (first to measure conflict, using psychometric procedures). The paper furthers the construct validity of these scales and investigated cross-cultural invariance.	37. Comparison sample N=392, 63% female average age 31.		measurement. The results showed that it was important to take account of different cultures and sub-cultures when devising scales.
Butler A. B., & Skattebo A Journal of Occupational Psychology	2004	USA	University Northern Iowa, USA & Pennsylvania State University, USA	Experimental design	The aim of the study was to examine the effect of a family conflict with work on performance appraisal ratings given to men and women.	Equal no.s male/female (n=96) employed in industrial settings in two small cities in Mid-Western US. Average age 43 and slightly more than 82% had children. All non-professional occupations.	Participants evaluated the worker by rating his/her performance on a global dimension of overall performance and a specific dimension of planning, and by making a recommendation for a reward (Qrtly bonus). Attitudinal measures of	Overall the experience of a family conflict was associated with lower performance ratings, and rate sex moderated this relationship. Men who experienced a family conflict received lower overall performance ratings and lower reward recommendations than men who did not, whereas women were unaffected by the experience of a family conflict.

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
							divisions of work and family roles, and egalitarian sex role survey.	
Stevens, J., Brown, and Lee, C. The Second Work-Life Balance Study: Results from the Employees' Survey	2004	UK	DTi Employment Relations Research Series No. 27.	Questionnaire developed by MORI/Dti Longitudinal study. Study one provided a baseline.	Follow-up survey to the baseline survey on employers conducted in 2000. This survey, like the first one served to review the employer provision of work-life balance practices and policies, to measure employee take-up and demand for these initiatives and to look at the impact on costs and benefits to the employer. The second purpose of the survey was to establish a baseline for future evaluation on the provisions under the employment Act 2002: ie the right for	2003 interviews completed – response rate 29%. Sample generated using random digit dialling, but quotas were set for gender and industrial classifications. The self-employed or those organisations with less than 5 employees were not included.	Awareness of wlb policies; working time, hours of work and time off; flexible working arrangements, employee attitudes to wlb.	Requests for working wlb working practices still popular, differences noted between different groups and differing requirements, ie mothers/father, parents/non-parents. Requests for flexible working mainly from mothers. Overall majority of employees agreed that everyone should be able to manage their wlb the way they want to. 95% said that people work best when they can balance their home and other aspects of their lives.

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
					parents/carers to apply to work flexibly.			
Carlson D. & Frone M. R.	2003	USA	Various	Journal Paper	This study builds on previous scales work-family interference scales. It separates out the scales into external and internal generated conflict measures of interference. This is important as it addresses behavioural and psychological factors in wlb.	534 employed adults with families. Average age 42.2, average time in work 10 years, 78% had at least one child living at home.	The original interference scales were developed further for this study, to specifically examine four dimensions.	This study expanded the research into work-family interference, It conceptualised that four measures of work family interference using external and internal dimensions. The results provided strong support for the new dimensions. The findings indicated that both behavioral and psychological involvement factors influenced work interference with family.
About Time for Change Jones, A.	2003	UK	The Work Foundation, in association with the Employers for Work-Life Balance	Survey	Investigating how people spent their time and how they wanted to change the way they spent time.	500 mixed gender from different sectors at different job levels.	Time based measures e.g., I would like to spend more time with my family	Findings showed that people wanted to spend more time with family & friends regardless of hours worked and whether or not they have young children. Nearly two thirds of those without children wanted to spend more time with their family. The survey found that partners are coming increasingly demanding – i.e., men are under increasing pressure from working partners to

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
								<p>participate more in housework & childcare.</p> <p>Note problem with the definition that separates out work and life, some individuals enjoy work and consider it part of their life. Those that worked the longest hours loved their work the most.</p>
Living to work?	October 2003	UK	CIPD	Telephone interviews, most lasted approx 10 mins – those who worked longer than 48 hours were asked more questions.	Re-visiting the original Living to work survey, this follow-up survey was to see if the people working long hours five years ago were still doing so. (48 hours plus per work is defined as long hours).	Representative sample of 1666 who worked either full or part time.	Reasons for working long hours; attitude to LHs; prioritisation work vs life outside work; job performance; work life balance; health.	<p>The results showed that only one in six had cut back their hours. However, parenthood was seen as the biggest factor in wanting to reduce hours and adopt flexible working. Most respondents report that working long hours has some sort of negative effect on their job performance, including mistakes or performing less well generally.</p> <p>Some suffered some sort of physical ailment as a result of working long hours. Furthermore 26% state that working LHs has had a detrimental effect on their mental health in terms of stress or depression.</p>

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
Gray, H. Family Friendly working: What Performance!	2002	UK	CEP, LSE Sponsored by ESRC	The study sought to look for relationships between specific family-friendly policies and performance. It controlled for a wide range of workplace characteristics, eg recent pay rises etc.	The paper outlines the different types of family-friendly policies into two categories, those that are visible (ie child care provision) that keep the individual in the office more and those that are considered invisible, ie home working.	As for WERS98. Private Sector only.	Using WERS98 data and questions but focusing on the Management and Survey Employees Questionnaires. Dependent variables performance, rated by financial and labour productivity and quality of product or service. Independent variables are family friendly policies.	It was concluded that there is strong evidence to suggest that family-friendly policies are associated with superior, rather than inferior, performance when controlling a wide range of workplace characteristics. Benchmarking of workplaces with and without the full range of policies was used. The greater visibility policies were linked with stronger performance outcomes than those with less visible types of policies. ie those policies that keep employers in the workplace. If less visible policies are to be used then employee isolation needs to be managed.
Work, parenting and careers	October 2002	UK	Chartered Institute of Personnel and Development (CIPD) CIPD & Taylor Nelson Sofres	www.cipd.co.uk	Survey conducted on parents to research attitudes towards current childcare provision in the UK.	504 interviews of working parents.	Support for working parents, affects of parenting on career, changing working hours.	Paternity leave is one of the most popular policies adopted by parents.
Fields, D. L Taking the Measure of	2002	US	N/A	N/A	Book containing nine validated scales on wlb and	N/A		Work-family conflict is the main definition used and defined as a construct.

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
Work					other topics			Work-family conflict is defined as: a form of interrole conflict in which the role pressures from work and family domains are mutually incompatible and the demands of participation in one role make participation in the other role more difficult (Ayree, Luk, & Stone, 1998 etc...)
T. Hogarth, C. Hasluck, G. Pierre with M. Winterbotham and D. Vivian (2001) <i>Work-Life Balance 2000: Results from the Baseline Study,</i>	2000	UK	Institute for Employment Research.	Survey/Questionnaire of employees by telephone. Employers by interview,	In Spring 200 the government launched its work-life campaign. To raise employers' awareness to the business benefits of introducing policies and practices to help employees achieve a better wlb. The baseline was to assess the extent to which employers operated wlb policies and practise and whether employees felt these met their needs.	2500 workplaces with five or more employees. Interviews with head offices of 250 workplaces, Survey of 7500 persons in employment with five or more staff.	Centred on working practices and utilisation of wlb policies and practices.	The Work-life balance 2000: Baseline study found that 91% of employers agreed that people work best when they can balance their work and other aspects of their lives. And the majority of employers (59%) also accepted that the employer has a "responsibility to help people balance work and other aspects of their lives". More than half (58%) of employers thought that work-life balance practices improved staff motivation and commitment, and 52% thought that staff turnover and absenteeism were lower as a result.
Married to the	June	UK	CIPD	Interviews/	Revisiting the	486 or the	Measures	The main occupational

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
job?	2001			self reports	sample used for the 'Living to work survey' – but looking at those individuals who are still working long hours and measuring the effects on their relationships.	original 823 were re-interviewed. The partners of 139 respondents were also interviewed. The report also includes a nationally representative telephone survey of 589 adults in paid work	centre around working long hours.	groups are still working more than 48 hours per week. More than a third surveyed who work long hours admit to being workaholics – tend to be male, middle aged, managers.
Lee, C. and Hui, C. Antecedents and Outcomes of Work-family Interface	1999	US	Curtin University of Technology	Random selection of employees, paper based survey.	Model to examine the relationships between antecedents, conflicts and outcomes. Finding: work-life conflict negatively correlated to life satisfaction.	8,000 employees of product company, wide variety of roles. 47% response rate.	Measures used: eg. life satisfaction, perceived usefulness of work-based family support program, absenteeism, job security, work-family conflict, family-work conflict, job complexity, number of dependents	It was found that family-work mediates a relationship between career dev and job security and work based support programmes. It also found that the gender gap is narrowing. Work-family conflict shows a negative association to life satisfaction.
Living to work ?	Augu	Institute	CIPD	1)Telephon	Results of two	1)N= 823		It was found that working

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
	st 1999	of Personnel & Development		e survey 2)Face-to face household interviews.	research projects: 1) to elicit reasons for employees working long hours and the effect on work, health and home life. 2) To assess potential link between working long hours and health problems.	2) N=2053 surveyed who work beyond the working time regulations..		long hours has some sort of detrimental effect on the job performance of three- quarters of those surveys. 73% admitted they made mistakes at work due to tiredness. These surveys did not find a link with health problems, but other research of a longitudinal nature eg ESRC' Household panel study of 5000 households suggested that persistent long hours working over long periods may have a permanent negative effect on a person's health.
Carlson, D. S., and Perrewe, P. L. The role of Social Support in the Stressor- strain Relationship: An Examination of Work-Family conflict Journal of Management	1999	USA	State Government	Two phase study which looked to test previously developed models of social support.	A study, which examines the role of social support in relation to work-life conflict.	403 respondents From a department of a state government. Response rate 40%.	Work role conflict, Family role Conflict, work role ambiguity, family role ambiguity, work-time demands, work social support, job satisfaction and family satisfaction, work and	Coinciding with the work- family research, stress models have identified social support as an important resource or coping mechanism that can reduce the negative effects of stressors. Work-related social support may come from peers, supportive supervisors etc.

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
							social support.	
Frone, M., Russell, M., & Cooper, L. Relation of work-family conflict to health outcomes: A four year longitudinal study of employed parents.	1997	USA	Community based sample	Cross sectional research study looking at work-family conflict and it's association with adverse health-outcomes.	This study is important in that it is longitudinal, it looks at both constructs of work-family and family to work conflict and associates these with depressive symptoms, physical health and heavy alcohol use.	1933 adults residing in New York. Average age 38.6 years, worked 46 hours per week on average and had two children living at home. 52% women, 67% married or living as married.	w-f and f-w scales were used. Respondents self-reported on depression, physical health and alcohol use. Their hypertension was measured for them.	Family to work conflict was longitudinally related to elevated levels of depression and poor physical health and to the incidence of hypertension. In contrast work-family conflict was longitudinally related to elevated levels of heavy alcohol consumption.
Gutek, B. A., Searle, S., & Klepa, L. Rational Versus Gender Role Explanations for Work-Family Conflict	1991	USA		To find two separate indicators of work-family conflict. By using two different scales on two separate samples (families).	Two conflicting frameworks for work-family conflict are proposed, ie time versus gender roles. A rational explanation of work-life conflict, ie 'the amount of conflict one perceives rises in proportion to the number of hours one expends in both work and family domains'.	N= 1200. Random-sample survey of male & female psychologists. N=209 for the second study - a group of managers from the University Executive programme.	Kopleman , Greenhaus and Connolly Scales. ie Work-Family and Family to Work interference.	W-F interference found to be higher in both studies than F-W interference. That the two domains operate separately. The women in both samples found more W-F than men.

Empirical Studies of Work-Life Balance								
Author	Date	Country	Organisation	Design	Content	Sample	Measures	Outcomes
					<p>Exploration of the impact of gender roles provides a different way for defining the issue of work-life conflict.</p> <p>The authors consider that work-family conflict has two components: family interference with work (FIW) and work interference with family (WIF).</p>			
<p>Kopelman, R. E., Greenhaus, J. H., and Connolly, T. F.</p> <p>A Model of work, family and inter-role conflict: A Construct Validation Study</p>	1983	USA		<p>An examination of the construct validity of three scales that purport to measure work conflict, family conflict and inter-role conflict.</p>	<p>Early study into work-life conflict and the various roles a model is established in the paper.</p>	<p>Study 1: 494 male alumni of an eastern technological college, missed age distribution.</p> <p>Study 2: 230 questionnaires distributed to undergraduates. 40% response rate.</p>	<p>Work Conflict, Family Conflict and Interrole Conflict and job satisfaction. Some new measures developed.</p>	<p>Three role conflict variables: Work conflict: the extent to which a person experiences incompatible role pressures with the work domain. Family conflict: the extent to which a person experiences incompatible role pressures with the family domain. Inter-role conflict the extent to which a person experiences pressures within one role that are incompatible with the pressures that arise within another role.</p>

Appendix Three: Review of e-working measures

Author	Date	Country	Organisation	Design/survey	Content	Sample	Measures	Outcomes
Hill, E.J., Ferris, M., and Martinson, V.	2003	USA	IBM	Journal paper. Quantitative study that compare three work venues against the influence on aspects of work and personal/family life.	The IBM study compares how three work venues, home, traditional and virtual may influence aspects of work (job performance, job motivation, job retention, workload success and career opportunity) and personal/family life (work life balance and personal/family success).	Tradition office N= 4316, virtual office n= 767, home office n= 441. All IBM employees, IT professional. The sample was stratified by gender, ensuring that enough females responded.	Data used from the 2001 IBM Global work and life issues survey which was responded to by 48 countries n=25,822. A sample from USA was used randomly selected.	The relationship between telework and job performance was supported. The perception was of both home workers and virtual office workers that teleworking improved productivity. However, appraisal did not find a difference between traditional office workers and virtual and home workers but virtual office workers did report slightly higher appraisal than home office workers. The home and virtual offices were found to have a positive affect on job motivation as did job retention. Virtual workers reported significantly less work/life balance and less

Author	Date	Country	Organisation	Design/survey	Content	Sample	Measures	Outcomes
								personal/family success than traditional office workers of home office workers. Home based teleworkers found the greater work/life balance (avoiding the daily commute may have accounted for this).
Sullivan C & Lewis S	2001	UK	Mixed	Qualitative, in-depth study using semi-structured interviews.	This study examines the relationship between work-family roles and their boundaries, gender, among home based teleworkers.	28 , 14 home based workers and 14 co-residents. Across various types of employment, computer contracting, laboratory work, secretarial etc. Mean age co-residents 41, mean age women 39 and for men 43.	Interviews – no detail on questions.	Consistent with previous research the reasons the teleworkers give for working at home are highly gendered ie domestic (including childcare) and work-related, ie to avoid office politics and self employment and commuting. Both genders reported advantages for working at home. Reports included some; jumbling' of work and home responsibilities. Tendency for males to see more work-family conflict and women more family to work conflict.

Author	Date	Country	Organisation	Design/survey	Content	Sample	Measures	Outcomes
								Strategies for combining work and family responsibilities are discussed.
Baruch, Y. Teleworking: benefits and pitfalls as perceived by professionals and managers	2000	UK	Five UK organisations.	Interview Survey.	A study examining the impact of teleworking on effectiveness, quality of working life, and family life.	62 teleworkers (professionals) from five different organisations.	Semi-structured interview. Performance appraisal measured according to Baruch (1996), by self appraisal and by manager. Other measures not specified.	The most prominent advantages of teleworking according to the sample were found to be greater satisfaction, perceived performance and reduced stress. The study indicates that it is important to characterise people who may be the best fit to teleworking, the most important attribute self discipline. Space at home and the age of children were also found to be factors that affected the success of teleworking. The study concludes that the positive outcome of teleworking is manifested in a better quality of life for the employees involved.

Author	Date	Country	Organisation	Design/survey	Content	Sample	Measures	Outcomes
Duxbury, L.E., Higgins, C.A., and Mills, S.	1992	Canada	Institute of Management Sciences	Survey Journal paper	The effects of spill-over were being measured. In particular the effect of after-hours work done at home on a computer,	19 organisations, 504 questionnaires completed.	14 page survey. Nine questions relating to work-family conflict.	The outcome of this study showed that men and women who performed after-hours telecommuting worked significantly more hours per week and a greater number of hours overtime at home than did individuals without computers.

Appendix Four: Gatekeeper letter

Organisation

date

Dear xx

My name is Christine Grant, I am a Chartered Occupational Psychologist currently carrying out research for my PhD at the Health and life Sciences Faculty at Coventry University. The topic of my research is e-working and its relationship with work life balance. I am writing to you concerning a request to conduct part of my research within your organisation.

Aim of the Research

The aim of this research is to develop work life balance (wlb) scales that can be specifically used in the context of e-working. These should also be versatile enough to use across most types of organisations and the focus will be on the practical aspects and working practices involved in e-working.

The research will be undertaken in three phases:

Phase one, will gather the information required to produce a draft set of E-Work life scales. This will involve interviewing e-workers in order to gain a thorough understanding of e-working and its associated practices and a search of existing scale in work life balance. Questions for the measures will be devised from the information gathered from the e-working questionnaire and from relevant literature and existing measures of work life balance. As part of this phase a panel of subject matter experts will be asked to view the bank of questions develop and help refine these to a smaller set of scales ready for testing.

Phase two will use the newly defined scales on a large selection of individuals with diverse e-working practices.

Phase three will use the new measures with groups of e-workers with diverse e-working practices to look at the potential relationships with health and job performance.

What I am asking for?

I am asking your permission for me to approach some of your e-working employees to take part in phase one stage one, of this study. Employees will be approached directly by myself (by phone/email or in person) and briefed about the study, then asked if they would like to take part in the study. At this point I will ensure they fully understand the study and what is required of them if they do take part. The study requires a small selection of e-workers to be interviewed either face to face or via a questionnaire to elicit their views on e-working practices and how these could affect both positively and negatively their work life balance. The interview or completion of the questionnaire will take approximately 30-40 minutes of their time. This part of the research will serve to confirm a current definition of e-working and its properties.

What will you get from the research?

On completion of the analysis, I will make available to all participants (if requested), and yourself a written summary of the anonymised findings from your organisation.

I hope that you will consider this request and help in furthering knowledge in the area of work life balance and its relationship to e-working.

Thank you for taking the time to consider this request and look forward to hearing from you in due course. If you have any further questions I can be contacted on work: 0116 252 9918 or mobile: 07973 379536 or via email on christine.grant@dsl.pipex.com

The research is supervised by: Professor Louise Wallace, Director, Health Behaviour & Health Service Management Interventions programmes Health & Lifestyles Interventions Research Centre, Coventry University. She can be contacted on Tel: 02476 888718 or email: L.wallace@cad.coventry.ac.uk. It should be noted that Coventry University has public liability and professional indemnity insurance to cover negligent harm.

This research has been approved by Coventry University's Research Ethics Committee.

Yours sincerely

Christine Grant C.Psychol
Chartered Occupational Psychologist

Appendix Five: Consent form

Title of Project:

The development of ‘actionable’ work-life balance (or integration) scales and their relationship to job performance and well-being in the context of e-working.

Name of Researcher and contact details

Christine Grant C.Psychol
Address supplied

email: christine.grant@dsl.pipex.com

Please initial box to affirm consent

- 1. I confirm that I have read and understand the information sheet dated for the above study and have had the opportunity to ask questions.
- 2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason
- 3. I agree to take part in the above study.
- 4. I would like a copy of the summary report of the findings from my organisation

Name of Participant Date Signature

Name of Person taking consent (if different from researcher) Date Signature

Appendix Six: Participant Information Sheet

Research title:

The development of 'actionable' work-life balance (or integration) scales and their relationship to job performance and well-being in the context of e working.

Date _____

Dear

My name is Christine Grant I am a Chartered Occupational Psychologist currently undertaking research for my PhD at the University of Coventry in the Faculty of Health and Life Sciences. My supervisor is Professor Louise Wallace. She can be contacted on 02476 888718.

I am conducting a research study which will devise new measures of work life balance in the context of e-working. As part of this study I need to find out about e-working practices and how these might affect work life balance. You have been chosen for this study as you have experience of or expertise in the area of e-working practices. This research will use this information so that it can accurately define the topic of e-working and ensure that all e-working practices have been identified. If you are agreeable to take part in this study then I will either interview you face to face, or via the telephone, or if you prefer you may answer a specially devised questionnaire via email. You do not have to take part in this study and may chose to be removed from the research upon request. The benefits of taking part in this research include personal consideration of how your own time is spent on e-working and how this may be affecting your own work life balance but also knowledge of how others are being affected. Ultimately this research intends to influence government policy on work life balance and the effects of e-working. There are no direct risks associated with taking part in this study and no known disadvantages to yourself or your organisation.

The interview/questionnaire will take about 30-40 minutes to complete. You will be asked to put your name on the sheet as it may be useful as part of the study for me to return to yourself or your organisation to ask further questions. However, the information collected will be anonymous and confidential. That is, it will not be directly attributable to yourself or to your organisation in any reports, publications or research material that is produced, without prior written consent. Once you have returned the questionnaire or completed the interview you may still withdraw from the research if you so wish.

Note this section is adjusted for the appropriate phase of the study

If you are happy to take part in an interview or complete the questionnaire via email please sign both copies of the consent form and return one with the questionnaire to:

Christine Grant
Address supplied

If you have agreed to a face to face interview or interview by telephone you will be asked to confirm your consent either by phone AND we ask you to send us a copy of the signed consent form to the address given above.

A summary of the results will be available to yourself via a short report following completion of the interviews (please tick the appropriate box on the consent form to receive a copy). If have any questions about the research at any time in the study, then please contact me at the following email address christine.grant@dsl.pipex.com or telephone mobile: xxxxx

It should be noted that if you have a complaint about the research and or the way it has been conducted you are asked first of all to contact the researcher involved and/or their supervisor who will try to resolve the matter with you directly. Failing this you may wish to contact the Coventry University Ethics Committee chair, Dr Ray Carlson, in writing at JS347, Coventry University, Priory Street, Coventry CV1 5FB, or by telephone on 024 7688 7688. It should be noted that Coventry University has public liability and professional indemnity insurance to cover negligent harm.

Thank you very much for your time.

Christine Grant C.Psychol
Chartered Occupational Psychologist

Appendix Seven: E-worker semi-structured interview (phase one)

E-working interview (Phase one)

Dear e-worker,

Thank you for agreeing to take part in this study. I am currently undertaking research at Coventry University for my PhD and would appreciate your help with my studies.

The overall aim of my PhD research is to develop work life balance (e-wlb) measures that can be used specifically in the context of e-working. Work life balance is usually defined as the interaction between work and non-work activities, whilst e-working and its associated work practices usually relates to the use of technology to work at an off site location. This study seeks to ensure that e-working practices are fully understood as a key part of this research. The scales once completed will measure an individual's wlb specifically looking at the impact of e-working. Recommendations to help improve wlb in relation to e-working and e-working practices can then be identified and developed. The measures should be versatile enough to use across most types of organisations and job roles.

Your participation in this part of the study will help to define the nature of e-working practices, which in turn will help to define e-working for the purposes of this study. This is a very important part of this research as it is necessary to understand what e-working is and how this interacts with our work life balance.

This interview should take around 30-40 minutes to complete. The information through this interview will be kept securely, anonymised for the study and all details will remain confidential to the research. No individuals or organisations will be named without their written consent. The data will be used purely for this PhD research.

About You:

This section will be used to collect demographic information.

Unless otherwise stated please place an x in the box as provided giving your response to each question shown below.

What is your name?

.....

What is your gender ?

Male Female

What is your marital status ?

Single Married Other please specify

How old are you ?

18-21 22-35 36-45 46-55 56-65 Over 66

How many dependant children do you have ? Please place the number in the box:

None 1 2 3 4 or more

How many elderly dependants do you take care of on a daily basis ?

None 1 2 3 4 or more

Which sector do you work in ?

Public
please specify

Private

Not Applicable

Other,

What is your job title ?

Professional Managerial Student Not applicable

Other, please specify

On what basis are you employed ?

Part time less than 21 hours student Full time Full time

Part time more than 21 hours student Unemployed Part time

Other, please specify

1. Your Role

- 1.1 What is your role within the organisation? Can you describe ?
- 1.2 Are you part of a team ? if so how large is your team? Do you manage the team?
- 1.3 How would you describe the main purpose/s of your job?

2. Access to Technology

- 2.1 Do you work remotely (i.e., off site from your head office) on a frequent basis ? If so, how frequently and for how long ?
- 2.2 How do you work remotely, i.e., what type of technology and working practices do you use ?

3. E-working practices

3.1 Have you heard of the term e-working before? If so, what is your understanding of the term?

3.2 E-working is often defined as: working independently ie off site, using technology to communicate with others remotely. For example, it could be defined as 'any form of substitution of information technologies (such as telecommunications and computers) for work-related travel: moving work to the workers instead of moving workers to the work' (Nilles, 1998).

To what extent would you agree with these definitions ? Are there any other aspects you could add to this definition ?

3.3 Are there any aspects to your own job which could be defined as e-working?

3.4 If you use e-working, how do you access the facilities ?

Source	Please tick as many of these that are appropriate to your working practices
Virtual environment eg virtual team, virtual sharing of documents	
Telecommunications networks: eg mobile phone	
Wireless network	
Internet access direct to your organisation eg to check emails, work on-line etc	
Work off line	
Other – please insert any others that are relevant to you	

3.5 What activities do you complete through e-working on a daily/weekly/monthly or longer basis?

Please also indicate from the list which e-working practices you complete and in what frequency. It would be useful if you could split these into time spent in approximate percentages.

This list is not definitive and if you have any further e-working practices to add to the list then please do so and they will be added to the study.

e-working practice	Daily % split	Weekly % split	Monthly % Split	Longer – please state and use % to split
Email				
Written reports or documents				
Teleconferencing				
Input to shared web-documents				
Video conferencing				
Access to databases				
Access to shared calendars				
Mobile phone calls				
Web conferencing (interacting on the web)				
Office Administration (eg booking rooms etc)				
Surf internet				
Use spreadsheets (eg manage budgets)				
Please add any others that are relevant to your work.				

3.6 How successful are these e-working practices in improving your ability to work and your life outside of work?

Could you give me an example of where e-working has improved your work or life generally ?

- 3.7 Alternatively how do these e-working practices hinder the work you undertake and your life in general? Could you give me an example of where e-working has negatively affected your work and/or life ?
- 3.8 When you think about important decisions at work, would e-working affect those decisions?
- 3.9 In confidence, may I ask whether, if at all e-working has any effect on you life outside work?

4. Measuring e-working practices

- 4.1 Does your organisation measure the success or otherwise of e-working?
- 4.2 Do you feel that your productivity increases/decreases when e-working? If so how would you measure your productivity?
- 4.3 Would you prefer to continue e-working or prefer to work solely in one location, or change the current balance between the two ?

5. Work life balance and e-working

- 5.1 Have you heard of the term work life balance? If so what does this mean to you ?
- 5.2 Do e-working practices affect your work life balance negatively ?
- 5.3 How do you feel that e-working affects your work life balance positively ?
- 5.4 In the future do how do you see e-working practices affecting work/family interaction ?
- 5.5 How do you set your priorities for work and home when e-working?

- 5.6 What aspects do you feel could be covered in a measure of work life balance, in the context of e-working?
- 5.7 Does your organisation have policy on work life balance, flexible working and/or e-working ? If so, can you describe this briefly?

6. Other Comments

Do you have any other comments you would like to add on the topic of e-working and work life balance?

Appendix Eight: Analysis of the e-working interviews (phase one)

1) Demographics

11 interviews completed between 18th April, 2006 and 29th June, 2006.

Overall Split

Gender	
Male	4
Female	7
Total	11
Age range	
18-21	0
22-35	4
36-45	2
46-55	4
56-65	1
Total	11
Marital Status	
Single	3
Married	3
Co-habiting	3
Other not specified	2
Total	11
No Dependant Children	
None	6
One	2
Two	2
Three	1
Four or more	0
Total	11

No of Elderly Dependants	
None	9
One	1
Two	1
Three	0
Four or more	0
Total	11
Sector	
Public	5
Private	5
Other (voluntary)	1
Total	11
Job Title	
Managerial	3
Professional	4
Student	0
Other	4
Total	11
Terms of Employment	
Part-time less than 21 hours per week	3
Part-time more than 21 hours per week	2
Full time	6
Full time Student	0
Part time student	0
Unemployed	0
Other	0
Total	11

Split by Gender

Gender	No.	Age range	No.	Marital status	No.	Number of Dependant Children	No.	Number of Elderly Dependants	
Male	4	18-21 22-35 36-45 46-55 56-65	0 3 0 1 0	Single Married Co-habiting Other (not specified)	2 0 2 0	No dependant children	4	No elderly dependants	4
Female	7	18-21 22-35 36-45 46-55 56-65	0 1 2 3 1	Single Married Co-habiting Other (not specified)	1 3 1 2	No dependant children 1 child 2 children 3 children	2 2 2 1	No elderly dependants 1 elderly dependant 2 elderly dependants	5 1 1
Total	11		11		11		11		11

1. Your Role

I/V Ref	1.1 <i>What is your role within the organisation? Can you describe ?</i>	1.2 <i>Are you part of a team ? If so how large is your team? Do you manage the team?</i>	1.3 <i>How would you describe the main purpose/s of your job?</i>
A1	Support and development role within IT systems Department.	Yes, IT systems. 5 in the team. No do not manage the team	Development of systems, end to end process
A2	My role is the facilities of corporate services throughout the Society, for example I am responsible for IT, design, print, mailing services, premises management in London and in Leicester.	I have a team of 26 people of varying different skills and experiences so that makes it very interesting from a management perspective, it makes it quite a diversity of different views and objectives, of course. Also responsible for	You can say it in a number of management words, planning and implementation with a various and disparate bunch of people. The whole thing for me is getting the people team working together but not losing sight of the organisations strategic objectives. Nothing

I/V Ref	1.1 What is your role within the organisation? Can you describe ?	1.2 Are you part of a team ? If so how large is your team? Do you manage the team?	1.3 How would you describe the main purpose/s of your job?
		the strategic future of services within the organisation not least IT and developing IT on to meet future needs in an ever changing environment. And also budgetary control.	really happens in the organisation without it being touched by one of my people somewhere along the line, from sending a letter, to printing, or opening a door almost. The enjoyment part is keeping all that going.
A3	Responsible for development of systems throughout the Society – those that usually involve technology, either internet based or network based technology. Systems analysis and project management. We would like to achieve x using technology how would you do that and I would help them identify a process flow and specification and then take that as a project manager to the end.	Direct team 2 and I am the manager of that person. But I also work within the IT systems team which is further 6 people. Then I also work with a network of programmers and sub contractors who I manage remotely.	To deliver to specification on time and on budget I would say is my main purpose. My main purpose is to deliver against requirements and turn it into work – although that always has to fall within certain constraints, financial and time constraints. Manage the constraints.
A4	Financial role complete financials for conference centres and other departments.	Part of different teams, conferences, technology park etc and soon to be forming a new finance team which I will be part of. 3 assistants	Looking after finances for a variety of departments.
A5	Senior Project Manager working in three areas of the business: 1. Personnel and Human resources 2. Location Independent Working (LIW) 3. New Ways of Working	I am now part of a team I have worked on my own for a number of years but have now picked up two members of staff who are PAs to Directors, hence the Human Resource role really.	Deliver and develop the LIW offering to all the staff in CUE Ltd and potential commercial clients. I also run the HR function for CUE Ltd which is simplifying the processes fed down from the University. New Ways of Working, I sit on the panel of the quality and operations groups which instigate new ways of doing things, which might well be policy driven or rooms that we work out of – the look and the

I/V Ref	1.1 What is your role within the organisation? Can you describe ?	1.2 Are you part of a team ? If so how large is your team? Do you manage the team?	1.3 How would you describe the main purpose/s of your job?
			feel that kind of thing.
A6	Help to define strategy for BT Regions – how we work with the public sector to drive broad band adoption whether it's to help in digital inclusion projects or to encourage SMEs to take it up and use to become more productive.	I don't have a team but I am part of a team of 15. I dont manage anyone myself.	Marketing strategy and marketing governance.
A7	VDU Operator – to input data with speed and accuracy.	Yes I am part of a team of Home workers but not sure how many there are at the moment, poss. between 12 and 15. No I do not manage the team myself, but we do have Managers and Supervisors for whom we are responsible to.	I have to capture information from a VDU screen and type in the information that is presented to me from data cards that have been scanned in to the system.
A8	Managing Consultant – working as a business psychologist with a specialism in OD. I advise clients on all aspects of the employee lifecycle – from attraction to retention to exit.	Yes, a team of about 20 people involved in employee surveys. No, I don't manage the team.	To provide consulting input at each stage of the survey process – strategy, survey design, administration, analysis, report back, executive presentations and action planning interventions.
A10	Claims assessor - Monitor/Police claims invoices for payment	Part of assess team of 19 Claims team 40 plus in total	To ensure correct claims procedure carried out and to administer both Manual and electronic claim invoices received from customers, manufactures And repair agent either for payment or rejection.
A11	Project Manager for implementing employee surveys.	Yes, 15 in the team	Co-ordinating and project managing the implementation of employee surveys.
A12	Data capture, keying in	Yes, Team of home workers = 14	Data input.

I/V Ref	1.1 What is your role within the organisation? Can you describe ?	1.2 Are you part of a team ? If so how large is your team? Do you manage the team?	1.3 How would you describe the main purpose/s of your job?
		Whole team approx. 35 plus	

2. Access to Technology

	2.1 Do you work remotely (ie off site from your head office) on a frequent basis ?	If so, how frequently and for how long ?	2.2 How do you work remotely, i.e., what type of technology and working practices do you use ?
A1	Yes wouldn't say regular but whenever I need to check reports	Probably for an hour or so.	Connect via home pc to organisation via citrix network and use various functions that we have on site. Including email and the productivity, word etc.
A2	I work remotely at least once a fortnight when I visit London our other office, but often it could be as many times as 2-3 days per week either from home or from a remote office. Depends on work load and the type of work.	So you basically flex it to meet the requirements of the role ? Yes	Lap top – but when I work from home I use my desk top and broad band connectivity through citrix. Mobile phones and land line phones, and when I'm in London it is the same network that I would use from home only its hard wired. I use wireless technology at home (although there is wireless in London).
A3	Yes, probably twice a month in terms of a full day but I do use e-working to dip into systems at home	Would you work during the day in the office and then do more work from home in the	A system called citrix which delivers what I have in the

	2.1 Do you work remotely (ie off site from your head office) on a frequent basis ?	If so, how frequently and for how long ?	2.2 How do you work remotely, i.e., what type of technology and working practices do you use ?
	every now and again.	<p>evening ? The way it works is that I allocate time at home for a specific piece of work as my job is quite telephone based which can make written work tricky. So if I have some written work or a test to do then I very often use a teleworking day and use e working to access all my systems. So you might use it in that way which is a specific piece of work?</p> <p>Yes I call it peace and quiet time. Another time is when I have a specific home circumstance say the boiler breaks down and I need an engineer to come on site means that rather than take a days leave and be sat there twiddling my thumbs, I can actually work for day from home and let the engineer in. So are you tempted to do work outside of your normal hours through e working ? Yes occasionally, I tend to run on project cycles so I try, but my girlfriend insists that I leave the office in the office – because I work in project roles it is evitable towards the end of a project that there will be more hours - and rather than sit in the office I would rather go home have a drink and some food, but I do try to put a barrier there really when I can.</p>	office to my desk top at my home over the internet. So it means I do not have to have the various bits of software I use in the office at home and on my PC. I also use internet based systems applications such as fault loggers, on- line collaboration sheets etc.
A4	Yes.	Two days per week or variable.	<p>Desktop computer, printer, broadband.</p> <p>All the same as at home.</p>
A5	Yes, 3 days per week/flexibly.	I diarise to work three whole days at home but given my schedule I might arrive late or leave early in the day which is not generally an 8 hour day. I work flexibly around that – this is what the LIW	Mobile smart phone , PDA tablet, laptop, desktop, PPN (personal private network) or webmail. All available at home

	2.1 Do you work remotely (ie off site from your head office) on a frequent basis ?	If so, how frequently and for how long ?	2.2 How do you work remotely, i.e., what type of technology and working practices do you use ?
		allows us to do.	as well as in the office.
A6	Almost all the time, I dont have a work desk. Do you have a hot desk ? No what happens is when I go into a BT office I sit at a hot desk not my hot desk. So you can go into any BT office and start working ? Yes that is the idea. But I work mainly from home. I am an official home worker.		A lap top, flat screen, keyboard, 6 line phone with broadband connection, fax printer, company mobile, I also have virtual number, which means that the 0208 number can be diverted to follow me, I can route anywhere eg. To a mobile, to a BT building etc., so that no-one knows any difference when they are contacting me. LAN access, secure ID card which allows me access to the LAN.
A7	I work from my home for the full duration of my contractual hours. The only time I visit the office is to take part in our monthly Team Meetings and regular Employee Appraisal Meetings. If there is a major problem with my pc equipment at home which cannot be rectified within a reasonable timescale, then I would be expected to work at the office until the problem was solved. Since the implementation of Home workers within our organisation, this has not happened to me personally.		I purchased my own pc for the purpose of Homeworking but use it for home use as well as for business use. My company installed the required software and arranged the installation of Broadband and pay for this quarterly. I am also required to provide the necessary insurance to cover the use of my PC for homeworking.

	2.1 Do you work remotely (ie off site from your head office) on a frequent basis ?	If so, how frequently and for how long ?	2.2 How do you work remotely, i.e., what type of technology and working practices do you use ?
A8	Yes, frequently. I work from home several evenings a week and when I am on client sites or travelling. 2-3 out of 4 weeks are typically spent travelling from 2-4 days per week.		I use email (MS Outlook) and strict diary scheduling to book weekly client calls and calls with colleagues in the US where our operational team are based (who are 6 hours behind us). I would often use WebEx or Liv Meetings during meetings.
A10	2 days a week from home.		Computer and Telephone
A11	Yes, one a week or more than that 5-6 days working days per month. 3 years experience of e-working.		Laptop, connected to wireless network and mobile phone.
A12	All 16 hours at home		Home pc. They pay for broadband. Mostly by email, they do not contribute to home costs, electricity, heating etc.

Appendix Nine: Draft E-worker typology

Classification	Roles/level in organisation	Frequency of e-working	Hardware	Software	Working Practices
Level 1 Autonomous e-worker	Executive Managerial Managing Consultant Senior Project Manager	As and when complete flexibility in when and where work is completed	Usually provided by organisation: Laptop/personal computer Printer Mobile Phone Personal Device Application (PDA) Fax Smart phones	Broadband Internet gateway to work files and email Virtual numbers to divert calls. Virtual private networks Messaging services Email	Includes all kinds of remote working, including, home, off site, client locations etc. Conference calls Web casts Webinars Email Written documents and reports Input to shared web documents Office administration Spreadsheets Access to shared databases Mobile phone calls Access to shared calendars
Level 2 Semi-autonomous e-worker	Project Manager Team Leader Business IT Analyst	Specific day/hours agreed with manager, though can be flexible according to work requirements. Individual tends to manage own work load along	Sometimes provided by organisation: Laptop/personal computer Printer Mobile Phone	Internet based applications e.g., fault loggers etc.	Mostly home working but can be off site when hardware/software is provided. Email Written documents and reports Input to shared web documents Office administration Spreadsheets Access to shared databases Mobile phone calls Access to shared calendars Managing the team Contractor/supplier management

Classification	Roles/level in organisation	Frequency of e-working	Hardware	Software	Working Practices
		with team requirements.			
Level 3 Managed e-worker	Clerical IT Analyst IT business	Specific times and days agreed with by the manager in response to specific work needs.	Very limited hardware provided by organisation, many use their own personal computers etc.	Intranet Broadband Internet based access to work gateway	Usually home based working with limited provision of hardware and software by organisation. Email Input to shared web documents Office administration Access to spreadsheets Mobile phone calls Form filling Inputting data

Appendix Ten: Initial list of E-Work life scale items (104)

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>Boundaries/over spill/work/family interference:</p> <p>B1 When e-working from home/off site, my work affects the quality of my home life negatively (or positively)</p> <p>B2 I know when to switch off from e-working at home</p> <p>B3 I know how to switch off from e-working at home</p> <p>B4 My home life interrupts my work when I am e-working from home (negatively/positively)</p> <p>B5 My family constantly interrupt me when I am e-working from home</p> <p>B6 I am able to concentrate better when e-working from home/remotely</p> <p>B7 E-Working constantly interrupts my thoughts outside of normal working hours</p> <p>B8 I do not have set working hours when e-working</p> <p>B9 Not having set hours when e-working works well for my work life balance</p> <p>B10 Having set e-working hours would be better for my work-life balance</p> <p>B11 My children/family understand that when I am e-</p>	<p>Work/home Boundary theory</p>	<p>Blurred boundary home/work</p> <p>High/Low work/family interference (bi-directional)</p> <p>Internal conflict – preoccupation with one dimension when I the other.</p> <p>Time based conflict</p>	<p>Individual/Self help:</p> <p>Keeping strict boundaries between work and home responsibilities (eg. Switching phone/computer off at set times)</p> <p>Interference of one role to another, need to advise family of working hours and stick to them.</p> <p>As the work goes more into the home, individuals will need to recognise that self boundaries need to be drawn – this will require strong self discipline for those who are highly motivated to work.</p> <p>Supervisor:</p> <p>Ensures employees have the opportunity to discuss problems/work load/work life balance issues.</p> <p>Ensures that employees have suitable skills and competency to e-work, if not provide training.</p> <p>Organisation:</p> <p>Policy on long hours, hidden work load.</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>working from home I should not usually be interrupted</p> <p>B12 I feel in control of my work and home life when I am e-working remotely</p> <p>B13 I feel in control of my work when e-working</p> <p>B14 The demands on my work when e-working are higher than when working in the office</p> <p>B15 E-working from home/remotely interferes with my family life (negatively/positively)</p> <p>B16 My family interferes with my ability to e-work from home</p> <p>Internal conflict:</p> <p>B17 When <i>e-working remotely</i> at home, I often think about work-related problems outside of my normal working hours. (Work interference with family – internal conflict, Carlson & Frone, 2003)</p> <p>B18 When <i>e-working remotely</i> I often worry about things I need to complete at work. (Work interference with family – internal conflict, Carlson & Frone, 2003)</p> <p>B19 When I am <i>e-working remotely</i>, I often try to arrange, schedule, or complete job-related activities outside of my normal work hours. (Work interference with family – internal conflict, Carlson & Frone, 2003)</p>			<p>Use software to remind employees to take a break at appropriate times.</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>B20 When I am e-working remotely, I often think about family related problems. (Family interference with work- internal conflict, Carlson & Frone, 2003)</p> <p>B21 When e-working remotely I often think about things I need to complete at home. (Family interference with work- internal conflict, Carlson & Frone, 2003)</p> <p>B22 When <i>e-working remotely</i> I frequently try to arrange, schedule, or perform family related activities. (Family interference with work- internal conflict, Carlson & Frone, 2003)</p> <p>Time based conflict:</p> <p>B23 E-working remotely takes me away from my family and /or leisure activities more than I would prefer. (Time based conflict Stephens and Sommer, 1996 and Time based work interference with family Carlson, Kacmar, Williams, 2000) – reversal to this may indicate e-working helped</p> <p>B24 The time I must spend e-working remotely keeps me from participating equally with my partner in household responsibilities and activities (Time based work interference with family, Carlson, Kacmar and Williams, 2000) – reversal may indicate more time because of e-working</p> <p>B25 I have to miss family activities and/or other leisure activities due to the amount of time I must spend on my e-</p>			

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>working responsibilities. (Time based work interference with family, Carlson, Kacmar and Willams, 2000)</p> <p>B26 The time I spend on my family responsibilities often interferes with my e-working responsibilities (Time based family interference with work, Carlson, Kacmar and Williams, 2000)</p> <p>B27 I am able to work the hours that are best for my life style and schedule (Temporal flexibility, Campbell-Clark, 2001)</p> <p>B28 My work is so flexible I could easily take time off e-working remotely, if and when I want to (Temporal flexibility, Campbell-Clark, 2001)</p>			
<p>Role Conflict</p> <p>B29 When I am e-working from home I complete some household tasks</p> <p>B30 When I e-work it gives me the opportunity to do other non-work tasks</p> <p>B31 If my partner is e-working from home I expect them to complete some of the household tasks</p> <p>B32 I have too many different roles to perform in a day, which affects my ability to e-work at home.</p> <p>B33 I am overloaded when I e-work remotely and try to manage non-work responsibilities at the same time</p> <p>B34 My supervisor expects me to work set hours when e-</p>	<p>Role conflict theory/ Role conflict between home/work</p> <p>Role conflict/Role overload</p> <p>Gender, double shift</p> <p>Time base conflict</p>	<p>Non-work tasks (eg. Household, child care, hobbies etc.) Versus interference with work tasks</p>	<p>Individual:</p> <p>Whilst e-working may reduce some of the strain in terms of being able to do household chores, child care etc, there is a need to balance this with work load – i.e. it could lead to working later at night etc. So there is a need to understand the knock on effect of taking time out during the day. It will also be interesting to note any gender differences here.</p> <p>Supervisor:</p> <p>Organisation: Implement core hours when employee is expected to be ‘at work’ and/or</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>working remotely.</p> <p>B35 My supervisor allows me to flex my hours when e-working remotely, provided the work is done.</p> <p>B36 My supervisor is sympathetic to my family/needs outside of work and allows me to e-work as required.</p> <p>B37 My organisation has an active flexible working policy.</p> <p>B38 My family dislikes how often I am preoccupied with my e-working whilst I am at home. (Work-family conflict, Kopelman & Connolly, 1983)</p> <p>B39 When I e-work from home my work is so demanding at times I am irritable towards others whilst at home (Work-family conflict, Kopelman & Connolly, 1983)</p> <p>B40 The constant demands of e-working remotely make it difficult to be relaxed all the time at home with my family and friends (Work-family conflict, Kopelman & Connolly, 1983)</p> <p>B41 My e-working takes up time that I would like to spend with my family and friends or on other activities. (Work-family conflict, Kopelman & Connolly, 1983) – need to consider reversal</p> <p>B42 My e-working remotely uses up time I feel I should spend with the family and friends or on other non-work activities. (Time based conflict, Stephens and Sommer, 1996)</p> <p>B43 If both my partner and I are both employed, I expect</p>			<p>available by mobile etc.</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>housework to be a jointly shared responsibility, even if one partner e-works remotely from home. (Balance, Sanders, Lengnick-Hall, Lengnick-Hall and Steele-Clapp, 1998)</p> <p>Relationships:</p> <p>B44 E-working remotely improves my relationship with my partner and/or children and friends</p> <p>B45 My relationships suffer because of my e-working (Job family-role strain, Bohlen and Viveros-Long, 1981)</p>			
<p>Social Support:</p> <p>B46 My family and/or close friends are supportive of me e-working from home and/or off site.</p> <p>B47 My family and/or close friends would prefer me to stop e-working as much as I do</p> <p>B48 I have family/close friends that I can rely on to look after my/our children when I need to continue e-working after hours</p>	Social support and work life balance	Good/bad social support	<p>Individual: gain support from family and friends</p> <p>Supervisor:</p> <p>Organisational: offer support, flexible working policies</p>
<p>General Work life balance:</p> <p>B49 I am able to successfully integrate my work and non work activities whilst e-working remotely.</p> <p>B50 I am unable to integrate my work and life outside of work when e-working remotely.</p>	Work-life balance	Good/bad work life balance	<p>Individual: Consider personal changes to improve work life balance, diagnose problem, seek counseling, speak to supervisor etc.</p> <p>Supervisor: flexible working hours</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>B51 When my work life balance is out of control my e-working suffers (and positive)</p> <p>52 My work life balance suffers when e-working from home/remotely</p> <p>B53 I am happy with my work life balance when e-working remotely</p>			<p>Organisational: wlb policy, e-working policy?</p>
<p>Trust:</p> <p>B54 My supervisor/manager trusts me when I am e-working from home/remotely (and negative)</p> <p>B55 I need to gain permission from my supervisor/manager before I can e-work from home</p> <p>B56 My work is monitored by my organisation whilst I am e-working from home</p> <p>B57 My supervisor/manager trusts that I will complete all of my work when I e-work from home</p> <p>B58 If I am interrupted by family/other responsibilities whilst e-working from home, I still complete all of my work to the quality and standards as expected by my manager/supervisor</p>		<p>High trust Low Trust</p>	<p>Individual: ensure that work is completed on time and to the quality expected eve if interrupted by non-work activities</p> <p>Supervisor:</p> <p>Organisation: slowly increase trust for e-workers but monitor those that may need higher motivation to complete work satisfactorily due to non-work interruptions</p>
<p>Supervision:</p> <p>B59 As an e-worker I feel that I am being managed well by my supervisor</p> <p>B60 My supervisor understands my family and/or non</p>			

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>work demands when I am e-working. (Supportive supervision, Campbell-Clark, 2001)</p> <p>B61 My supervisor listens when I talk about any problems I may have when e-working remotely. (Supportive supervision, Campbell-Clark, 2001)</p> <p>B62 My supervisor accepts that I have obligations as a family member and that these may affect my ability to e-work remotely. (Supportive supervision, Campbell-Clark, 2001)</p> <p>B63 The ideal employee is the one who is available 24 hours to answer emails and other communications from work by e-working remotely. (Organisational family supportive measures, Allen, 2001)</p> <p>B64 My supervisor is sympathetic to any issues related to my work life balance when e-working</p> <p>B65 My organisation has an active work life balance policy.</p> <p>B66 My supervisor controls my work load when e-working remotely</p> <p>B67 My supervisor is happy to let me control my own work load when e-working remotely, providing I complete the work on time and to the quality required</p> <p>B68 My supervisor has higher demands of me when e-working remotely than when I am in the office working normally</p>			

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>B69 The organisation recognises the need to ensure that employees have some control over their e-work load</p> <p>B70 The organisation has a policy on e-working remotely</p>			
<p>Demand/Control</p> <p>B71 When e-working from home/off site I know when to switch the computer off so that I can rest</p> <p>B72 Rest is not something I need when e-working remotely.</p> <p>B73 I enjoy e-working so much that time flies.</p> <p>B74 Work demands are much higher when I am e-working remotely.</p> <p>B75 I have total control over when and how I get my work completed when e-working.</p> <p>B76 I feel I have more to do than I can handle comfortably when e-working. (Job family-role strain, Bohlen and Viveros-Long, 1981)</p> <p>B77 I can choose to do my work in whatever location suits my personal needs. (control, Thomas and Ganster, 1995)</p> <p>B78 I have a choice over the amount and timing of work that I do at home in order to meet my employers demands. (Control, Thomas and Ganster, 1995)</p> <p>B79 In general, I have a great deal of control over the way</p>	<p>demand/control models</p> <p>Job family role strain</p>	<p>Amount of demand versus control</p> <p>High/low stress levels</p> <p>High low anxiety levels</p> <p>High low depression levels</p>	<p>Individual/Self Help</p> <p>Recognising and using the restorative qualities of home. The need to switch off to strengthen ability to work.</p> <p>Supervisor: Monitor absenteeism rates</p> <p>Recognising and using the restorative qualities of home. The need to switch off to strengthen ability to work.</p> <p>Organisational:</p> <p>E-working policy that covers working hours/expectations from role and the implementation of specific amount of rest.</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>I balance work and parenting. (Control, Thomas and Ganster, 1995)</p> <p>B80 I can take hours off as and when I need to when e-working remotely. (Control, Thomas and Ganster, 1995)</p> <p>B81 I have a good balance between my job and my family time when e-working remotely. (Job family-role strain, Bohlen and Viveros-Long, 1981)</p> <p>B82 I feel I have to rush to get everything done each day when I am e-working remotely. (Job family-role strain, Bohlen and Viveros-Long, 1981)</p> <p>B83 I feel I don't have enough time for myself when e-working remotely. (Job family-role strain, Bohlen and Viveros-Long, 1981)</p> <p>B84 I worry that people who do not e-work think my family interferes with my job too much. (Job family-role strain, Bohlen and Viveros-Long, 1981)</p> <p>B85 Making arrangements for my children is easier when I am e-working remotely (Job family-role strain, Bohlen and Viveros-Long, 1981)</p>			
<p>Job Effectiveness</p> <p>B86 E-working makes me more effective to deliver against my key objectives and deliverables</p> <p>B87 E-working is effective at proving good quality working relationships</p>	Job effectiveness	<p>High motivation/high productivity</p> <p>High motivation/low productivity</p> <p>Low motivation/high productivity</p>	<p>Individual:</p> <p>Highly motivated individuals need to consider the effects of e-working 24/7. So opportunity does equal the need to work 24/7.</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>B88 I am highly motivated when I e-work from home to continue working past normal hours</p> <p>B89 I find that because I have access to e-working technology 24/7 this increases the amount of work I complete in a day</p> <p>B90 I am more motivated to work in an office environment with set deadlines and hours of work than e-working from home</p> <p>B91 Constant access to work through e-working is very tiring and I often make work related mistakes I would prefer to avoid.</p> <p>B92 Self expectations are much higher when e-working remotely</p> <p>B93 I am motivated to carry on e-working at home/off site past usual office working hours</p> <p>B94 I do more work from home/off site than I do in the office</p> <p>B95 My overall job performance has increased (or decreased) by my ability to e-work from home/remotely</p> <p>B96 I do not know what to do to increase my performance as a remote e-worker</p> <p>B97 I can competently balance my e-work with the rest of my life</p>		Low motivation/low productivity	<p>Lower motivated individuals may need to consider e-working strategies/skills that ensure they complete work on time.</p> <p>a non performer may be responding to higher expectations and skill levels than they currently possess</p> <p>a high performer may be motivated to continue working on after hours – leading to burnout, blurred boundaries and lack of restorative time to recover from work</p> <p>Supervisor: appraisal process, ensure all feedback is incorporated into performance review process.</p> <p>Organisation: should consider monitoring work hours to ensure that some e-workers are not over or under working.</p>

Sample e-wlb (e-working life?) measures by category Source indicated in (). No brackets equals new measure	Related psychological theory/s	Dimensions	Possible Interventions
<p>E-working competencies/work characteristics:</p> <p>B98 I consider myself to be a competent e-worker (and negative)</p> <p>B99 The reason I am a competent remote e-worker is that I have self discipline</p> <p>B100 I am good at time management when e-working remotely and know when to stop working</p> <p>B101 I know what it takes to be an effective e-worker</p> <p>B102 I have adapted to e-working by developing suitable skills and behaviours</p> <p>B103 My organisation understands what it takes to be a competent remote e-worker</p> <p>B104 My organisation provides training in e-working skills and competences.</p>	<p>E-working competencies/job characteristics</p>	<p>Competent e-worker Incompetent e-worker</p>	<p>Individual: need to consider what competencies make a good e-worker, alongside those that make a competent work life balancer</p> <p>Supervisor:</p> <p>Organisational: Identify and develop e-competencies to ensure all those who need to work remotely have the necessary skills and behaviours</p>

Appendix Eleven: E-Work life scales (74) items

Sample e-work life balance measures by category
Source indicated in (). No brackets equals new measure

Boundaries/over spill/work/family interference:

- B1 When e-working from home/off site, my work improves the quality of my non-working life
- B2 I know when to switch off from e-working remotely
- B4 My non-work activities interrupt my work when I am e-working from home
- B5 My family and/or friends constantly interrupt me when I am e-working from home
- B9 Having flexible hours when e-working works well for my work and non-work life
- B10 Having set e-working hours would be better for my work-life balance
- B11 My children/family/friends understand that when I am e-working from home I should not usually be interrupted
- B15 E-working from home/remotely improves the quality of my family life
- B16 My family and/or other interruptions interferes with my ability to successfully e-work from home

Internal conflict:

- B17 When e-working remotely at home, I often think about work-related problems outside of my normal working hours.
(Work interference with family – internal conflict, Carlson & Frone, 2003)
- B18 When e-working remotely I often worry about things I need to complete at work.
(Work interference with family – internal conflict, Carlson & Frone, 2003)
- B19 When I am e-working remotely, I often try to arrange, schedule, or complete job-related activities outside of my normal work hours.
(Work interference with family – internal conflict, Carlson & Frone, 2003)
- B20 When I am e-working remotely, I often think about family related problems.
(Family interference with work- internal conflict, Carlson & Frone, 2003)
- B21 When e-working remotely I often think about things I need to complete at home.
(Family interference with work- internal conflict, Carlson & Frone, 2003)
- B22 When e-working remotely I frequently try to arrange, schedule, or perform family related activities at the same time.
(Family interference with work- internal conflict, Carlson & Frone, 2003)

Time based conflict:

- B23 E-working remotely takes me away from my family and /or leisure activities more than I would prefer.
(Time based conflict Stephens and Sommer, 1996 and Time based work interference with family Carlson, Kacmar, Williams, 2000) – reversal to this may indicate e-working helped
- B24 The time I must spend e-working remotely keeps me from participating equally with my partner in household responsibilities and non-work activities
(Time based work interference with family, Carlson, Kacmar and Williams, 2000) – reversal may indicate more time because of e-working
- B25 I have to miss family activities and/or other leisure activities due to the amount of time I must spend on my e-working responsibilities.
(Time based work interference with family, Carlson, Kacmar and Williams, 2000)
- B26 The time I spend on my family responsibilities often negatively interferes with my e-working responsibilities
(Time based family interference with work, Carlson, Kacmar and Williams, 2000)
- B28 My work is so flexible I could easily take time off e-working remotely, if and when I want to
(Temporal flexibility, Campbell-Clark, 2001)

Sample e-work life balance measures by category
Source indicated in (). No brackets equals new measure

Role Conflict

- B30 When I e-work remotely it gives me the opportunity to do other non-work tasks, such as house work.
B31 If my partner is e-working from home I expect them to complete some of the household tasks.
B32 I have too many different roles to perform in a day, which affects my ability to e-work at home.
B33 I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time.
B38 My family/friends dislike how often I am preoccupied with my e-working whilst I am at home.
(Work-family conflict, Kopelman & Connolly, 1983)
B39 When I e-work from home my work is so demanding at times I am irritable towards others whilst at home
(Work-family conflict, Kopelman & Connolly, 1983)
B40 The constant demands of e-working remotely make it difficult to be relaxed all the time at home with my family/friends
(Work-family conflict, Kopelman & Connolly, 1983)
B41 My e-working takes up time that I would like to spend with my family and friends or on other activities.
(Work-family conflict, Kopelman & Connolly, 1983) – need to consider reversal
B42 My e-working remotely uses up time I feel I should spend with the family and friends or on other non-work activities.
(Time based conflict, Stephens and Sommer, 1996)
B43 If both my partner and I are both employed, I expect housework to be a jointly shared responsibility, even if one partner e-works remotely from home.
(Balance, Sanders, Lengnick-Hall, Lengnick-Hall and Steele-Clapp, 1998)

Relationships:

- B44 E-working remotely improves my personal relationships with my partner, children and friends.

Social Support:

- B46 My family and/or close friends are supportive of me e-working from home and/or off site.
B47 My family and/or close friends would prefer me to stop e-working as much as I do
B48 I have family/close friends that I can rely on to look after my/our children when I need to continue e-working after hours

General Work life balance:

- B49 I am able to successfully integrate my work and non work activities whilst e-working remotely.
B52 My work life balance suffers when e-working from home/remotely
B53 I am happy with my work life balance when e-working remotely

Trust:

- B54 My supervisor/manager completely trusts me to manage my work when I am e-working from home/remotely
B55 I need to gain permission from my supervisor/manager before I can e-work from home
B56 My work is monitored by my supervisor/organisation whilst I am e-working from home
B57 My supervisor trusts that I will complete all of my work when I e-work from home
B58 If I am interrupted by family/other responsibilities whilst e-working from home, I still complete all of my work to the quality and standards as expected by my manager/supervisor

Sample e-work life balance measures by category
Source indicated in (). No brackets equals new measure

Supervision:

- B60 My supervisor understands my family and/or non work demands when I am e-working.
(Supportive supervision, Campbell-Clark, 2001)
- B63 The ideal employee according to my work culture is one who is available 24 hours a day, every day to answer emails and other communications from work by e-working remotely.
(Organisational family supportive measures, Allen, 2001)
- B64 My supervisor is sympathetic to any issues related to my non-work when e-working and allows me to flex my hours to meet my needs, providing all of the work is completed.
- B68 My supervisor has higher demands of me when e-working remotely than when I am in the office working normal hours.
- B69 The organisation recognises the need to ensure that employees have some control over their e-work load

Demand/Control

- B71 When e-working from home/off site I know when to switch the computer off so that I can rest
- B72 Rest is not something I need when e-working remotely.
- B74 I feel that work demands are much higher when I am e-working remotely.
- B75 I have total control over when and how I get my work completed when e-working.
- B79 In general, I have a great deal of control over the way I balance work and non-work.
(Control, Thomas and Ganster, 1995)
- B80 I can take hours off as and when I need to when e-working remotely.
(Control, Thomas and Ganster, 1995)
- B81 I have a good balance between my job and my family time when e-working remotely.
(Job family-role strain, Bohlen and Viveros-Long, 1981)
- B82 I feel I have to rush to get everything done (work and non-work activities) each day when I am e-working remotely.
(Job family-role strain, Bohlen and Viveros-Long, 1981)
- B83 I feel I don't have enough time for myself when e-working remotely.
(Job family-role strain, Bohlen and Viveros-Long, 1981)
- B84 I worry that people who do not e-work think my family commitments interfere with my job too much.
(Job family-role strain, Bohlen and Viveros-Long, 1981)
- B85 Making arrangements for my children is easier when I am e-working remotely
(Job family-role strain, Bohlen and Viveros-Long, 1981)

Job Effectiveness

- B86 E-working makes me more effective to deliver against my key objectives and deliverables
- B87 E-working is effective at proving good quality working relationships
- B88 I am highly motivated when I e-work from home to continue working past normal hours
- B89 I find that because I have access to e-working technology 24/7 this increases the amount of work I complete in a day
- B91 Constant access to work through e-working is very tiring and I often make work related mistakes I would prefer to avoid.
- B92 Self expectations are much higher when e-working remotely
- B95 My overall job productivity has increased by my ability to e-work from home/remotely
- B96 I do not know what to do to increase my performance as a remote e-worker
- B97 I can competently balance my e-working with the rest of my life commitments

Sample e-work life balance measures by category
Source indicated in (). No brackets equals new measure

E-working competencies/work characteristics:

B98 I consider myself to be a competent e-worker (and negative)

B99 The reason I am a competent remote e-worker is that I have self discipline

B100 I am good at time management when e-working remotely and know when to stop working

B101 I know what it takes to be an effective e-worker

B102 I have adapted to e-working by developing suitable skills and behaviours

B103 My organisation understands what it takes to be a competent remote e-worker

B104 My organisation provides training in e-working skills and competences.

Appendix Twelve: E-Work life scale items (final 76) used for Q-Sort

B1 When e-working from home/off site it improves the quality of my non-working life
B2 I know when to switch off from e-working at home/off site
B4 My non-work activities interrupt my work when I am e-working from home/off site
B5 I experience interruptions from my family and/or friends frequently when I am e-working from home
B9 Having flexible hours when e-working allows me to integrate my work and non-work life
B10 Having set e-working hours would be better for my work-life balance
B11 My children/family/friends understand that when I am e-working from home I should not usually be interrupted
B16 My family and/or other non-work related interruptions interfere with my ability to successfully e-work from home
B17 When e-working remotely (off site/at home) I often think about work-related problems outside of my normal working hours
B19 When I am e-working remotely (off site/at home), I often try to arrange, schedule, or complete job-related activities outside of my normal work hours.
B20 When I am e-working remotely (off site/at home), I often think about family related and/or non work related problems.
B21 When e-working remotely (not at home) I often think about things I need to complete at home.
B22 When e-working remotely (off site/at home) I frequently try to arrange, schedule, or perform family/personal related activities at the same time.
B23 E-working remotely (off site/at home) takes me away from my family and /or leisure activities more than I would prefer.
B24 The time I spend e-working remotely (off site/at home) keeps me from participating equally with my partner in household responsibilities
B25 I have to miss family activities and/or other leisure activities due to the amount of time I must spend on my e-working responsibilities.
B26 The time I spend on my family responsibilities often negatively interferes with my e-working responsibilities
B28 My work is so flexible I can easily take time off e-working remotely (off site/at home), when I want to
B30 When I e-work remotely (off site/at home) it gives me the opportunity complete my own activities.
B31 If my partner is e-working from home I expect them to complete some of the household tasks.
B32 I have too many different roles to perform in a day, which affects my ability to effectively e-work at home/off site.

B33 I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time.
B38 My family/friends dislike how often I am preoccupied with my e-working whilst I am at home.
B39 When I e-work from home my work is so demanding at times I am irritable towards others whilst at home
B40 The constant demands of e-working remotely make it difficult to be relaxed all the time at home with my family/friends
B41 My e-working takes up time that I would like to spend with my family and friends or on other activities.
B42 My e-working remotely uses up time I feel I should spend with the family and friends or on other non-work activities.
B43 If both my partner and I are both employed, I expect household responsibilities to be a jointly shared, even if one partner e-works from home.
B44 E-working remotely improves my personal relationships with my partner, children and friends.
B46 My family and/or close friends are supportive of me e-working from home and/or off site.
B47 My family and/or close friends would prefer me to stop e-working at home/off site as much as I do
B48 I have family/close friends that I can rely on to look after my/our children/elderly relatives when I need to continue e-working after hours
B49 I am able to successfully integrate my work and non work activities whilst e-working remotely.
B52 My work life balance suffers when e-working from home/remotely
B53 I am happy with my work life balance when e-working remotely
B54 My supervisor/manager completely trusts me to manage my work when I am e-working from home/remotely
B55 I need to gain permission from my supervisor/manager before I can e-work from home
B56 My work performance is monitored by my supervisor/organisation whilst I am e-working from home
B57 My supervisor trusts that I will complete all of my work when I e-work from home/off site
B58 If I am interrupted by family/other responsibilities whilst e-working from home, I still complete all of my work to the quality and standards as expected by my manager/supervisor
B60 My supervisor understands my family and/or non work demands when I am e-working off site/at home.
B63 The ideal employee according to my work place culture is one who is available 24 hours a day, every day to answer emails and other communications from work by e-working remotely.
B64 My supervisor is sympathetic to any issues related to my non-work when e-working and allows me to flex my hours to meet my needs, providing all of the work is completed.

B68 My supervisor has higher demands of me when e-working remotely than when I am in the office working normal hours.
B69 The organisation recognises the need to ensure that employees have some control over their e-work load
B71 When e-working from home/off site I know when to switch off/put work down so that I can rest
B72 Rest is not something I need when e-working remotely off site/at home.
B74 I feel that work demands are much higher when I am e-working remotely off site/at home.
B75 I have total control over when and how I get my work completed when e-working.
B79 In general, I have a great deal of control over the way I balance work and non-work.
B80 I can take hours off work as and when I need to, when e-working remotely.
B81 I have a good balance between my job and my family/personal time when e-working remotely.
B82 I feel I have to rush to get everything done (work and non-work activities) each day when I am e-working remotely.
B83 I feel I don't have enough time for myself when e-working remotely.
B84 I worry that people who do not e-work think my family commitments interfere with my job too much.
B85 Making arrangements for my children/others that I am responsible for is easier when I am e-working remotely
B86 E-working makes me more effective to deliver against my key objectives and deliverables
B87 E-working is effective at proving good quality working relationships
B88 I am highly motivated when I e-work from home to continue working past normal hours
B89 I find that because I have access to e-working technology 24/7 this increases the amount of work I complete in a day
B91 Constant access to work through e-working is very tiring and I often make work related mistakes I would prefer to avoid.
B92 Self expectations are much higher when e-working remotely
B95 My overall job productivity has increased my ability to e-work from home/remotely
B96 I do not know what to do to increase my performance as a remote e-worker
B97 I can competently balance my e-working with the rest of my life commitments
B98 I consider myself to be a competent e-worker
B99 The reason I am a competent remote e-worker is that I have self discipline
B100 I am good at time management when e-working remotely and know when to stop working
B101 I know what it takes to be an effective e-worker
B102 I have adapted to e-working by developing suitable skills and behaviours

B103 My organisation understands what it takes to be a competent remote e-worker
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B104 My organisation provides training in e-working skills and competences.

Appendix Thirteen: Q-Sort, demographic and e-working general survey questions

About You:

This section will be used to collect demographic information for the Q-Sort.

Unless otherwise stated please place an x in the box as provided giving your response to each question shown below.

Your name

Your gender:

Male Female

Your marital status:

Single Married Other please specify

Your age:

18-21 22-35 36-45 46-55 56-65
Over 66

How many dependant children do you have ? Please place the number in the box:

None 1 2 3 4 or more

How many elderly dependants do you take care of on a daily basis ?

None 1 2 3 4 or more

Which sector do you work in ?

Public Private Not Applicable Other,
please specify

What is your job title ?

Evaluation and research manager

Professional Managerial Student Not
applicable

Other, please specify

On what basis are you employed ?

Part time less than 21 hours Full time Full time
student

Part time more than 21 hours Unemployed Part time student

Other, please specify

1. Your Role

- 1.1 What is your role within the organisation? Can you describe ?
- 1.2 Are you part of a team ? if so how large is your team? Do you manage the team?
- 1.3 How would you describe the main purpose/s of your job?

2. About your e-working

Please indicate from the list below which out of the following bandings you would consider is the most closely matched to you as an e-worker:

Band	Type	Definition	Technology Used	Tick the definition nearest to your own working practices – but please write in the boxes if you wish to add further detail.
One	Autonomous e-worker	Complete flexibility to e-work remotely, when needed without reference to line manager, using all currently available types of technology.	Laptop, PC, PDA, mobile phone, smart phones, fax etc. Mostly provided by the organisation.	
Two	Semi-autonomous e-worker	Able to e-work on specific day/hours agreed with manager, though can be flexible according to work requirements. Individual tends to manage own work load (along with team requirements if team managed).	Laptop/Personal Computer Mobile Phone Mostly provided by the organisation.	
Three	Managed e-worker	Specific times and days agreed with by the manager to e-work, in response to specific work related needs. Sometimes these can agreed also for personal needs.	Generally use own personal facilities eg. Home computer or laptop	
Other				
If none of these definitions fit your				

Band	Type	Definition	Technology Used	Tick the definition nearest to your own working practices – but please write in the boxes if you wish to add further detail.
current e-working practices/facilities, please describe in your own words under the headings provided.				

Appendix Fourteen: *Most and least preferred statements from Q-Sort by sub-group*

Sub Group one

Top ten *most* preferred statements

Reference No.	Statement	Z Score
B101	I know what it takes to be an effective e-worker	2.220
B98	I consider myself to be a competent e-worker	2.182
B1	When e-working from home it improves the quality of my non-working life	1.880
B54	My supervisor/mgr completely trusts me to manage my work when I am e-working from home/remotely	1.868
B57	My supervisor trusts that I will complete all of my work when I e-work from home/off site	1.750
B69	The leaders of my organisation recognise the need to ensure that employees have some control over their e-work load	1.597
B97	I can completely balance my e-working with the rest of my life commitments	1.376
B9	<i>Having flexible hours when e-working allows me to integrate my work and non-work life</i>	1.321
B89	I find that because I have access to e-working technology 24/7 this increases the amount of work I complete in a day	1.217
B46	My family and/or close friends are supportive of me e-working from home and/or off site	1.108

Bottom ten *least* preferred statements

*Reference No.	Statement	Z Score
B5	I experience interruptions from my family and/or friends frequently when I am e-working from home	-1.154
B16	My family and/or non-work related interruptions interfere with my ability to successfully e-work from home	-1.170
B41	<i>My e-working takes up time that I would like to spend with my family and friends or on other non-work activities</i>	-1.255
B47	My family and/or close friends would prefer me to stop e-working at home/off site as much as I do	-1.351
B68	My supervisor has higher demands of me when e-working remotely than when I am in the office working normal hours	-1.398
B17	<i>When e-working remotely I often think about work related problems outside of my normal working hours</i>	-1.492
B63	The ideal employee according to my work place culture is one who is available 24 hours a day, every day to answer emails and other communications from work by e-working remotely	-1.587
B4	My unpaid activities interrupt my work when I am e-working from home/off site	-1.703

*Reference No.	Statement	Z Score
B91	<i>Constant access to work through e-working is very tiring and I often make work related mistakes I would prefer to avoid</i>	-1.866
B52	My work life balance suffers when e-working from home/remotely	-1.996

Sub Group Two

Top ten most preferred statements

*Reference No.	Statement	Z Score
B75	My supervisor gives me total control over when and how I get my work completed when e-working	2.279
B9	<i>Having flexible hours when e-working allows me to integrate my work and non-work life</i>	2.161
B86	E-working makes me more effective to deliver against my key objectives and deliverables	1.828
B41	<i>My e-working takes up time that I would like to spend with my family and friends or on other activities</i>	1.791
B64	My supervisor is sympathetic to any issues related to my non-work when e-working and allows me to flex my hours to meet my needs, providing all of the work is completed	1.517
B17	<i>When e-working remotely I often think about work related problems outside of my normal working hours</i>	1.379
B30	When I work remotely it gives me the opportunity to complete my own activities	1.379
B107	My organisation expects my e-working commitment also to help me achieve a better work-life balance	1.366
B58	If I am interrupted by family/other responsibilities whilst e-working from home, I still complete all of my work to the quality and standards as expected by my manager/supervisor	1.125
B91	<i>Constant access to work through e-wg is very tiring and I often make work related mistakes I would prefer to avoid</i>	1.109

Bottom ten least preferred statements

*Reference No.	Statement	Z Score
B105	My supervisor has discussed my wlb issues with me in the past six months	-1.030
B38	My family/friends dislike how often I am preoccupied with my e-working whilst I am at home	-1.168
B71	When e-working from home/off site I know when to switch off/put work down so that I can rest	-1.262
B33	I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	-1.518
B72	Rest is not something I need when e-working remotely off site/at home	-1.582
B19	When I am e-working remotely I often try to arrange, schedule, or	-1.615

*Reference No.	Statement	Z Score
	complete job-related activities outside of my normal work hours	
B32	I have too many different roles to perform in a day, which affects my ability to effectively e-work at home/off site	-1.931
B55	I need to gain permission from my supervisor/manager before I can e-work from home	-1.931
B25	I have to miss family activities and other leisure activities due to the amount of time I must spend on my e-working responsibilities	-2.181
B24	The time I spend e-working remotely keeps me from participating equally with my partner in unpaid activities such as house work	-2.247

Appendix Fifteen: Q-Sort consensus statements by sub-group

Reference No.	Statement	Group One	Group Two
		Rank Score	Rank Score
*B11	My children /family/friends understand that when I am e-working from home I should not usually be interrupted	0	0
*B20	When I am e-working remotely, I often think about family related and/or non work related problems	0	0
*B21	<i>When e-working remotely I often think about things I need to complete at home</i>	-1	-1
*B23	<i>E-working remotely takes me away from my family and/or leisure activities more than I would prefer</i>	-2	-1
*B26	The time I spend on my family responsibilities often negatively interferes with my e-working responsibilities	0	0
*B28	My work is so flexible I can easily take time off e-working remotely, when I want to	0	-1
*B38	<i>My family/friends dislike how often I am preoccupied with my e-working whilst I am at home</i>	-1	-2
*B42	My e-working remotely uses up time I feel I should spend with the family and friends or on other non-work activities	0	0
*B43	If both my partner and I are both employed I expect household responsibilities to be jointly shared, even if one partner e-works from home	0	-1
*B44	E-working remotely improves my personal relationships with my partner, children and friends	0	0
*B46	<i>My family and/or close friends are supportive of me e-working from home and/or off site</i>	2	2
*B58	<i>If I am interrupted by family/other responsibilities whilst e-working from home, I still complete all of my work to the quality and standards as expected by my manager/supervisor</i>	1	2
*B60	<i>My supervisor understands my personal demands when I am e-working off site/at home</i>	1	2
*B84	I worry that people who do not e-work think my family commitments interfere with my job too much	-1	0
*B85	Making arrangements for my children/others that I am responsible for is easier when I am e-working remotely	0	0
*B87	E-working is effective at providing good quality working relationships	0	0
*B88	I am highly motivated when I e-work from home to continue working past normal hours	0	0
*B95	My overall job productivity has been increased by my ability to e-work from home/remotely	1	0
*B96	<i>I am not sure what to do to increase my</i>	-2	-1

Reference No.	Statement	Group One	Group Two
	<i>performance as a remote e-worker</i>		
*B99	<i>The reason I am a competent remote e-worker is that I have self discipline</i>	1	1
*B102	<i>I have adapted to e-working by developing suitable skills and behaviours</i>	2	1
*B108	<i>I admire the way one of my colleagues balances their e-working with their other life commitments</i>	0	-1
B22	<i>When e-working remotely I frequently try to arrange, schedule, or perform family/personal related activities at the same time</i>	0	0
B53	<i>I am happy with my work life balance when e-working remotely</i>	2	0
B54	<i>My supervisor/manager completely trusts me to manage my work when I am e-working from home/remotely</i>	3	2
B63	<i>The ideal employee according to my work place culture is one who is available 24 hours a day, every day to answer emails and other communications from work by e-working remotely</i>	-3	-2
B72	<i>Rest is not something I need when e-working remotely off site/at home</i>	-1	-3
B81	<i>I have a good balance between my job and my family/personal time when e-working remotely</i>	1	0

Appendix Sixteen: E-Worker typology: The ‘developed’ and the ‘un-developed’ e-worker (revised)

	Un-Developed	Developed
E-working skills & Experience	<ul style="list-style-type: none"> • Does not fully utilise technology available • Poor e-working practices • Ineffective when working off site • None or very little feedback from supervisor on how to improve • Un-trusted e-worker 	<ul style="list-style-type: none"> • Fully utilises technology available • Good e-working practices • Effective when working off site • Feedback from supervisor on productivity • Trusted e-worker
Behavioural Competencies	<ul style="list-style-type: none"> • Unable to control own work load • Work flexibly but allows work to spill over into other life commitments • Does not manage time effectively • Does not have self discipline or motivation to work alone • Is a poor communicator when e-working • Has poor organisational skills 	<ul style="list-style-type: none"> • Controls own work load well • Works flexibly, work does not spill over into other life commitments • Manages time effectively • Self motivated and self disciplined to work alone • Communicates well when e-working • Is well organised
Outcomes	<ul style="list-style-type: none"> • Has poor work life integration • Is monitored to e-work by supervisor • Family/friends are not supportive when e-working • Has poor relationships outside of work • High stress levels and poor well being (high absenteeism) • Poor social life 	<ul style="list-style-type: none"> • Has good work life integration • Is completely trusted by supervisor • Family/Friends are supportive when e-working • Has good relationships outside of work • Low stress levels and good well being (low absenteeism) • Good social life

Appendix Seventeen: Numbers of participants approached by organisation

Organisation Ref	Numbers of people approached	Description of Participating Organisation	Sector
O1	100	Mixed group of professionals and clerical workers who have flexibility to work remotely.	Public/Voluntary
O2	15	Professionals in IT who work independently of location	Private
O3	150	Location independent workers and academics	Public
O4	25	Clerical home workers	Private
O5	20	E-working staff at the college	Public
O6	10	Professionals in IT who work independently of location	Private
O7	25	Research nurses who work out of cars and hot desk.	Public
O8	100	Mixed group professional and clerical e-workers	Public
O9	15	MSc students and Academic staff	Public
O10	15	Professionals with flexibility to work independent of location	Private
O11	90	Occupational Psychology Consultants	Private
	565		

Appendix Eighteen: E-Work Life Survey

E-Work Life Survey - 2009

1. Introduction



Dear Participant,

I would like to invite you to take part in this e-work life survey. If you consider yourself to be an e-worker, ie. for the purposes of this study this is defined as 'the ability to manage your work independent of location and/or of time', then I would be very grateful if you could take 10-15 minutes to complete this survey. This survey is part of my PhD research into work life balance in the context of e-working which is being conducted at Coventry University.

The overall aim of this PhD research is to develop e-work life measures (scales). The scales once completed will measure an individual's work life balance when related to e-working. Recommendations to help improve e working life will be identified and developed as a result of this survey.

The PhD also looks at the interaction between work life balance, e-working, well being and job effectiveness. As such this survey contains questions on all of these aspects. A set of questions contained in the final section of this survey relates to your general well being. From these we would like to know how well you complete your usual activities and how you rate your own health.

The survey is simple to complete and but please be sure to read the instructions before you start. Please remember this is NOT a test and there are no right or wrong answers. Choose the responses that best represent the way you feel. You should answer the questions by yourself.

Your participation in this part of the study will help to define the measures and validate these for further use. As an incentive to take part in this survey Coventry University has kindly donated a Personal Digital Assistant (PDA) - if you would like to be entered into this prize draw then please give your details at the end of the survey. This will be drawn as soon as the survey closes.

If you have any queries about completing the survey then please contact me by email at Christine.grant@dsl.pipex.com

Thank you

Christine Grant CPsychol

2. Collection of Data

The information captured through this survey will be kept securely, anonymised for the study and all details will remain confidential to the research. No individuals or organisations will be named without their written consent. Your organisation may receive a report but this will be anonymised and no individual will be identifiable from the results. The data will be used purely for the purposes of this research.

A report containing the overall results and those for your organisation will be available upon request once the research has been completed. Unfortunately individual results cannot be provided.

It should be noted that if you have a complaint about the research and or the way it has been conducted you are asked first of all to contact myself christine.grant@dsl.pipex.com and/or my supervisor Professor Louise Wallace (lwallace@coventry.ac.uk) who will try to resolve the matter with you directly. Failing this you may wish to contact the Coventry University Ethics Committee Chair, Dr Ian Marshall, Pro Vice Chancellor (Research) Coventry University, Priory Street, Coventry CV1 5FB, or by telephone on + 44 (0)24 7688 5294 or email: i.marshall@coventry.ac.uk. It should be noted that Coventry University has public liability and professional indemnity insurance to cover negligent harm.

E-Work Life Survey - 2009

3. Instructions

This survey should take around 15 minutes to complete. Please be as honest as you can when adding your responses, all information collected is important. Please answer all of the questions.

If you need to change your answer then simply re-allocate the tick and it will move, if the changed answer is on a previous page then press the 'previous' key and this will then allow you to go back and alter your answer. If you feel that you are unable to answer a question, then these may be missed out, with the exception of questions annotated with an * as these are mandatory and require an answer before you may move on.

If you want to withdraw from the survey you may press 'exit the survey' at any time, whilst your data will be saved (so you may return and complete the survey later) your data will only be finally submitted when the full survey is completed.

4. Your Consent

You are asked to give your consent for your information and response to this survey to be used for the purposes of this PhD research. If you have any concerns before completing this survey then please contact: Christine Grant by email on christine.grant@dsl.pipex.com for further advice.

As mentioned already your responses to this survey will be anonymised for the study and all personal details kept confidentially to the research.

* 1. Please give your consent now

- YES (if YES, continue to next page)
- NO (if NO, you will be directed to the end of the survey and no data will be collected)

5. About You

This section will be used to collect demographical information.

* 1. Please indicate your gender

- Female
- Male

* 2. Please select your marital status from the list below

- Single/living alone or with friends
- Single/living with parents or family
- Co-habiting/Married
- Other (please specify)

E-Work Life Survey - 2009

*** 3. Please select your age from the ranges below:**

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 plus

*** 4. Can you indicate the number of children (up to the age of 18) living in your household.**

- None
- One
- Two
- Three
- Four
- More than Four
- Other (please specify)

*** 5. Please indicate if you take care of elderly dependants on a regular basis (at least once per week)**

- YES
- NO
- Other (please specify)

6. About You (continued)

E-Work Life Survey - 2009

1. If YES, please advise how many elderly dependants you look after

- One
- Two
- Three
- Four
- More than Four
- Not Applicable

7. Your Journey to Work

This section looks at if you do travel to your work place, then how you commute.

1. Do you commute to work?

- Yes
- No
- Sometimes

8. Your journey continued

1. Please advise how you would normally commute to your work place (you may select more than one answer)

- By Car
- Public Transport
- Cycle
- Walk
- Other (please specify)

E-Work Life Survey - 2009

2. Please indicate how long your normal commute takes

- Less than 15 minutes
- Less than 30 minutes
- Less than 40 minutes
- Less than 1 hour
- Less than 2 hours
- More than 2 hours
- Other (please specify)

9. Your Role

This section requests information about the role you undertake within your organisation

*** 1. Please select the name of your employer from the list below (you may remain anonymous by ticking the other box below). If your employer does not appear then tick the 'other' box.**

- British Telecom
- British Psychological Society
- Coventry University
- Domestic and General
- IBM
- MSc Student University of Leicester
- Severn Trent
- TUI
- University of Leicester
- Zircon Associate
- Full time Student
- Retired
- Self Employed
- Other (please specify - or tick and leave the space blank if you wish this to remain anonymous)

2. Please can you specify your job title

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3. Could you please briefly describe your role within the organisation

4. Could you advise if you have complete autonomy (control) over your work load? (e.g. setting your own work goals, work pattern and location)

- Yes
- No
- Sometimes
- Not applicable

5. Do you have flexibility over when and how you complete your work?

- Yes
- No
- Sometimes

Other (please specify)

6. Please select from the list below the basis on which you are employed (tick all those that apply to you)

- Full time
- Part time less than 21 hours per week
- Part time more than 21 hours per week
- Full time student
- Part time student
- Self employed
- Retired
- Unemployed
- Other (please specify)

E-Work Life Survey - 2009

*** 7. If you are part of at least one work group (ie. a team that has shared goals and activities) please indicate below**

- YES
- NO
- Other (please specify)

10. Your Role continued

1. Please indicate how many people there are in your main work group

- 1-6
- 7-15
- 16-29
- 30 or more
- Not Applicable

11. Your Role continued

*** 1. Do you have direct responsibility for managing people in your organisation? Please indicate below**

- YES
- NO
- Other (please specify)

12. Your Role Continued

1. Can you please indicate how many people you are responsible for

- 1-6
- 7-15
- 16-29
- 30 or more
- Not Applicable

E-Work Life Survey - 2009

2. Can you please indicate below how many of those employees reporting to you are e-working remotely (ie. using technology to work independent of time and location)

- 1-6
- 7-15
- 16-29
- 30 or more
- Not Applicable

13. Your Access to Technology

This section looks at your access to technology whilst e-working

1. Please select from the list below the types of technology you use when e-working (ie. to work independent of time and location). Please tick all those that are relevant. This list is not definitive so please add any others that you use in the 'other please specify' box provided.

- Laptop
- Personal Computer
- Mobile Phone
- Hand held device (eg. Blackberry)
- Internet via Broadband
- Internet via dial in
- Smart Phone
- Fax
- Thin Client
- Skype
- Video conferencing Facilities
- Teleconferencing Facilities
- Other (please specify)

E-Work Life Survey - 2009

2. Please indicate if you own the devices privately or if work provide these for you

- Work provide all devices
- Work provide some devices
- All the devices are owned by myself
- Some of the devices are owned by myself
- I am unsure
- Other (please specify)

14. Your E-working Practices

This section explores the working practices you use whilst e-working

1. Please can you indicate how long you have been e-working (ie. working independently of time and location)

- 0-1 years
- 2-5 years
- 6-10 years
- over 10 years

2. Please use the list below to indicate how often you work remotely (ie. use technology to work independent of time and location).

- Less than once a week
- Once a Week
- Twice a Week
- More than twice a Week
- Once a Month
- Twice a Month
- More than twice a Month
- Other (please specify)

E-Work Life Survey - 2009

3. If your organisation is committed to other forms of flexible working (as well as e-working) please select those which apply from the list below

- Annualised Hours
- Term Time working
- Flexible Working
- Job Sharing
- Part Time Working
- Career break
- Secondment policies
- Family Friendly Policies
- Self Rostering
- Other (please specify)

4. Using the list of working practices below, please tick those that you use whilst e-working remotely. This list is not definitive and if you have any further e-working practices please add them to the list using the 'other please specify' comment box.

- Written report or documents
- Email
- Teleconferencing
- Video conferencing
- Input into shared web documents
- Blogs
- Electronic forums
- Access to databases
- Access to shared calendars
- Mobile phone calls
- Web conferencing
- Office administration
- Surfing internet for work related research
- Spreadsheets
- Other (please specify)

E-Work Life Survey - 2009

5. Can you advise if you have full access to the internal systems and technology that you need to complete your work when e-working remotely

YES

NO (if NO please give further detail in the comments box provided in Q6 below)

6. If you answered NO to Q5 above please describe below what further access or technology you need to complete your e-working effectively

*** 7. Please indicate to what degree you demonstrate the following skills/behaviours when you are e-working. Select from the choices how much you agree or disagree with each.**

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Not Applicable
Self discipline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good time management Skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to work alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organisational skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer and technology skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to manage social relationships of work remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

E-Work Life Survey - 2009

*** 8. Look at the following list and prioritise the skill/behaviour according to how important you consider each one is to being an effective e-worker.
Where: 1= very important, 5=not important**

	1	2	3	4	5	Not Applicable
Self discipline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good time management Skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to work alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organisational skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer and technology skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to manage social relationships of work remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Please add any further skills, behaviours and competencies that you consider important to being an effective e-worker.

15. Measuring your e-working

This section looks at how e-working is measured in your organisation

*** 1. Please indicate below if your organisation currently measures e-working**

- YES
 NO
 Dont Know
 Other (please specify)

16. Measuring your e-working continued

E-Work Life Survey - 2009

1. Can you describe in the box below how your organisation measures your e-working

17. Measuring your e-working continued

*** 1. Do you measure your direct reports e-working productivity?**

YES

NO

Other (please specify)

18. Measuring your e-working continued

1. If you measure your employees e-working please describe below how you do this in the text box below

19. Your E-Work Life

This section asks you to consider the relationship between e-working and the integration of your work and non work activities.

E-Work Life Survey - 2009

1. Please indicate your agreement or otherwise to the statements below. Not Applicable may be used for those statements which do not apply to you or your circumstances. If you are unsure about your agreement to the statement then select 'uncertain', however, this should be used as last resort.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Not Applicable
I know what it takes to be an effective e-worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation provides training in e-working skills and behaviours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having flexible hours when e-working allows me to integrate my work and non-work life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My e-working takes up time that I would like to spend with my family/friends or on other non-work activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When e-working remotely I often think about work related problems outside of my normal working hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am happy with my work life balance when e-working remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constant access to work through e-working is very tiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When e-working I can concentrate better on my work tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can completely balance my e-working with the rest of my life commitments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can manage my time well when e-working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor gives me total control over when and how I get my work completed when e-working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My line manager completely trusts me to manage my work effectively when I am e-working remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust my line manager to advise me if I am not effectively performing whilst e-working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Your E-work life continued

1. Please indicate your agreement or otherwise to the statements below. Not Applicable may be used for those statements which do not apply to you or your circumstances. If you are unsure about your agreement to the statement then select 'uncertain', however, this should be used as last resort.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Not Applicable
My organisation trusts me to be effective in my role when I e-work remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust my organisation to provide good e-working facilities to allow me to e-work effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-working makes me more effective to deliver against my key objectives and deliverables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When e-working from home I do not know when to switch off/put work down so that I can rest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My work is so flexible I could easily take time off e-working remotely, if and when I want to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-working has a positive affect on other roles in my non-working life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family dislike how often I am preoccupied with my e-working whilst I am at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

E-Work Life Survey - 2009

21. Your E-work life continued

1. Please indicate your agreement or otherwise to the statements below. Not Applicable may be used for those statements which do not apply to you or your circumstances. If you are unsure about your agreement to the statement then select 'uncertain', however, this should be used as last resort.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Not Applicable
I can arrange for childcare/support to look after my dependants when I am e-working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When e-working remotely I often think about family related and/or non work related problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not need to gain permission from my line manager before I can e-work from home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My line manager discusses sympathetically any issues related to my non work when e-working.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My line manager allows me to flex my hours to meet my needs, providing all the work is completed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My line manager is a good role model for me in terms of e-working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have total control over when and how I get my work completed when e-working.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My line manager is a good role model for me in terms of work life balance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that work demands are much higher when I am e-working remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am highly motivated to work past normal work hours when e-working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My overall job productivity has increased by my ability to e-work remotely/from home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have adapted to e-working by developing suitable skills and behaviours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My social life is poor when e-working remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I miss socialising in the office when e-working remotely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to socialise using technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commuting to work increases my stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Your General Well Being

This part of the survey asks about your general health. This is a standard well being questionnaire and is relevant to capture information about your general well being, it is also relevant to a population who may have disabilities.

As mentioned in the introduction all responses will be kept confidentially to this research and anonymised for the purposes of any reporting.

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23. Your General Well Being - Instructions

E-Work Life Survey - 2009

Please take your time to read the following questions and indicate from the choices the answer/s that best describes your general health.

As before there are no right or wrong answers, this is not a test. Please be as honest as you can when selecting the answers.

1. In general, would you say your health is:

- Excellent
 Very good
 Good
 Fair
 Poor

2. Compared to one year ago, how would you rate your health in general now?

- Much better now than one year ago
 Somewhat better now than one year ago
 About the same as one year ago
 Somewhat worse now than one year ago
 Much worse now than one year ago

3. The following questions are about activities you might do during a typical day.

Does your health limit you in these activities? If so, how much?

	Yes limited a lot	Yes limited a little	No, not limited at all
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifting or carrying groceries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climbing several flights of stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climbing one flight of stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bending, kneeling, or stooping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking more than one mile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking several hundred yards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking one hundred yards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bathing or dressing yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Your General Well Being continued

E-Work Life Survey - 2009

1. During the past 4 weeks how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Cut down on the amount of time you spent on work or other activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accomplished less than you would like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Were limited in the kind of work or other activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had difficulty performing the work or other activities (for example, it took extra effort)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of emotional problems (such as feeling depressed or anxious) ?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Cut down on the amount of time you spent on work or other activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accomplished less than you would like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did work or other activities less carefully than usual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

Not at all
 Slightly
 Moderately
 Quite a bit
 Extremely

4. How much bodily pain have you had during the past 4 weeks?

None
 Very mild
 Mild
 Moderate
 Severe
 Very severe

5. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all
 A little bit
 Moderately
 Quite a bit
 Extremely

E-Work Life Survey - 2009

6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Did you feel full of life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been very nervous?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt so down in the dumps that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt calm and peaceful?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you have a lot of energy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt downhearted and low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you feel worn out?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been happy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you feel tired?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives etc.)?

- All of the time
 Most of the time
 Some of the time
 A little of the time
 None of the time

8. How TRUE or FALSE is each of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
I seem to get ill more easily than other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am as healthy as anybody I know	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect my health to get worse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My health is excellent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. Your Comments

This is the final section of the survey and asks for your comments and a selection of overall general questions.

1. Please can you advise if your organisation has an e-working policy?

- YES
 NO
 Don't Know
 Other (please specify)

E-Work Life Survey - 2009

2. Please can you advise if your organisation has a work life balance policy?

- YES
 NO
 Don't Know
 Other (please specify)

*** 3. Overall, please indicate how satisfied you are with your current e-working**

- Very satisfied Satisfied Don't know Dissatisfied Very Dissatisfied

*** 4. Overall how satisfied are you with the balance between your work and non work life?**

- Very satisfied Satisfied Don't know Dissatisfied Very Dissatisfied

5. Please can you advise if there are any changes in your work place (eg. the introduction of new technology) that may be affecting your ability to e-work effectively at this time

- YES
 NO
 Don't Know
 Other (please specify)

6. If you answered YES to Question 5. Can you briefly indicate the change that is taking place which is affecting your e-working.

7. If you have any hints or tips that you would like to share with other e-workers (eg. e-working practices, balancing e-working and non-work life etc.) then please describe below

E-Work Life Survey - 2009

8. If you have any further comments you would like to add on e-working and/or work life balance then please complete the box below

26. Thank You

Thank you for completing this survey. The information you have provided forms a very important part of this research and the development of e-work life measures for organisations. Finally, if you would like to enter the prize draw to win the PDA donated by Coventry University then please answer the question below.

Individual results cannot be provided from this study but an overall report will be available upon request from:

christine.grant@dsl.pipex.com

Many thanks
Christine Grant CPsychol

1. If you would like to enter the prize draw to win the PDA then please give below your full name and contact details. Once the survey closes a name will be drawn from those submitted by an independent person and the winner contacted. Your details will remain anonymous in the survey and the information given below only used for the purposes of the prize draw.

Name
Contact Details (email address and/or phone No.)

Your Health and Well-Being

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. *Thank you for completing this survey!*

For each of the following questions, please tick the one box that best describes your answer.

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
▼	▼	▼	▼	▼
<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

2. Compared to one year ago, how would you rate your health in general now?

Much better now than one year ago	Somewhat better now than one year ago	About the same as one year ago	Somewhat worse now than one year ago	Much worse now than one year ago
▼	▼	▼	▼	▼
<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

3. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Yes, limited a lot	Yes, limited a little	No, not limited at all
--------------------------	-----------------------------	------------------------------

- a Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports 1 2 3
- b Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf 1 2 3
- c Lifting or carrying groceries..... 1 2 3
- d Climbing several flights of stairs 1 2 3
- e Climbing one flight of stairs 1 2 3
- f Bending, kneeling, or stooping..... 1 2 3
- g Walking more than a mile 1 2 3
- h Walking several hundred yards..... 1 2 3
- i Walking one hundred yards 1 2 3
- j Bathing or dressing yourself..... 1 2 3

4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- a Cut down on the amount of time you spent on work or other activities 1 2 3 4 5
- b Accomplished less than you would like..... 1 2 3 4 5
- c Were limited in the kind of work or other activities..... 1 2 3 4 5

- a Had difficulty performing the work or other activities (for example, it took extra effort)..... 1..... 2..... 3..... 4..... 5

5. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼

- a Cut down on the amount of time you spent on work or other activities 1..... 2..... 3..... 4..... 5
- b Accomplished less than you would like..... 1..... 2..... 3..... 4..... 5
- c Did work or other activities less carefully than usual 1..... 2..... 3..... 4..... 5

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

Not at all	Slightly	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

7. How much bodily pain have you had during the past 4 weeks?

None	Very mild	Mild	Moderate	Severe	Very severe
▼	▼	▼	▼	▼	▼
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	▼	▼	▼	▼	▼

a	Did you feel full of life?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
b	Have you been very nervous?.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
c	Have you felt so down in the dumps that nothing could cheer you up?.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
d	Have you felt calm and peaceful?.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
e	Did you have a lot of energy?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
f	Have you felt downhearted and low?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
g	Did you feel worn out?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
h	Have you been happy?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
i	Did you feel tired?.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

11. How TRUE or FALSE is each of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
	▼	▼	▼	▼	▼

a I seem to get ill more easily than other people 1 2 3 4 5

b I am as healthy as anybody I know 1 2 3 4 5

c I expect my health to get worse..... 1 2 3 4 5

d My health is excellent..... 1 2 3 4 5

Thank you for completing these questions!

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Appendix Twenty: Participant invite – E-work-life Survey (phase two)

Dear Participant,

May I invite you to take part in an e-work life survey. This survey forms part of my PhD research into work life balance in the context of e-working, which is sponsored by Coventry University. If you are an e-worker (ie. can use technology to work independently of location and time, so home or off site) I would be really grateful if you would take part and complete the attached survey. It only takes around 15 minutes to complete and the results will be very important in developing interventions for e-workers in the future.

As an incentive for those who complete the survey Coventry University have kindly donated a Personal Digital Assistant, so you will be invited to give your name to be entered into a prize draw to receive this gift. Your details will be kept anonymously and a copy of the final report will be available to you upon request. Unfortunately due to the size of the survey individual results will not be available on this occasion.

If you have any colleagues, friends or family who are also e-workers and would like to take part in the survey then please do pass this email on to them directly, more respondents would be really useful for the outcomes of this research.

Please select the link below to start the survey now:

http://www.surveymonkey.com/s.aspx?sm=k2vd5Zd8kKheEM4Amut_2fcg_3d_3d

If you do have any questions about the survey then please do contact me directly. I would be grateful if you could complete this **by 10th March, 2009.**

Many thanks for your help,
Chris

Christine Grant C.Psychol
Chartered Occupational Psychologist

Appendix Twenty-one: E-Work Life survey response numbers (phase two)

Organisation Ref (where applicable)	Sector	Numbers approached*	Actual Number of responses	Response Rate
O2	Private	15	5	33%
O4	Private	25	5	20%
O6	Private	10	-	-
O10	Private	15	3	20%
O11	Private	90	6	6%
Self employed	Private	Unknown	21	-
Sub total Private sector		155	40	25%
O3	Public	150	46	31%
O5	Public	20	8	40%
O7	Public	25	Unknown	-
O8	Public	100	54	54%
O9	Public	15	7	47%
O12	Public	Unknown	6	-
Students	Public	Unknown	1	-
Sub total public sector		310	124	35%
O1	Voluntary	100	32	32%
Unknown affiliation	Unknown	Unknown	38	-
Sub total - others		100	70	-
Sub total all respondents		565	234	41%
This question left blank by respondents			16	
Sub total		565	250	44%
Respondents removed blank answers across the survey			5	
All responses		565	255	45%

* some of these figures are approximations or not known due to the snowball effect.

Appendix Twenty-two: Demographic statistics for the key variables (phase two)

Demographic variable	% Response and N	Overall N
Female	63% (N=158)	250
Male	37% (N=92)	
Single/living alone or with friends	12% (N=31)	250
Single/living with parents or family	6% (N= 14)	
Co-habiting/married	79% (N=198)	
Single with children	1% (N=3)	
Widow with children	.5% (N=1)	
Divorced	1% (N=2)	
Separated with children	.5% (N=1)	
Age group:		
18-24	5% (N=12)	
25-34	27% (N=67)	
35-44	30% (N=75)	
45-54	27% (N=68)	
55-64	8% (N=21)	
65-74	3% (N=7)	
Number of children living in household (up to the age of 18 year):		250
None	60% (N=150)	
One	19% (N=48)	
Two	17% (N=42)	
Three	2% (N=4)	
Four	.8% (N=2)	
More than four	.8% (N=2)	
Not all the time	.4% (N=1)	
Pregnant	.4% (N=1)	
Taking care of elderly dependants on regular basis		250
Yes	(N=19)	
No	(N=229)	
If answered 'yes' to caring for elderly dependants:		21
One	4% (N=11)	
Two	3% (N=7)	
Three	0% (N=0)	
Four	0% (N=0)	
More than four	.8% (N=2)	
Not applicable	.4% (N=1)	

Appendix Twenty-three: Additional Behaviours and Skills identified by E-work life survey respondents

1) The Self - Social relationships/networking, communication and people skills

I think a face to face relationship would need to have been built-up between colleagues for a person to feel comfortable undertaking this role.

Awareness of the importance of socialising - making sure you get out and see/talk to people rather than becoming a hermit.

No need for a lot of social interaction with work colleagues.

An understanding of the difference in using Computer Mediated Communication rather than face-to-face, i.e. lack of visual cues.

Little need for social interaction

Manage lack of face-to-face company

You need to be a good networker in order to keep your name in the minds of people. This will help to bring new business in.

Networking skills and enthusiasm

Happy in your own company (2)

Some time with colleagues also.

Self awareness; awareness of how others read remote input especially email, and how it affects interpretation

Self awareness of own strengths and weaknesses (2)

Having experience of working in and with multi-cultural/diverse environments and people

Emotional management

Humour (2)

Positive outlook.

An effective e worker must really have excellent communication skills otherwise it simply will not work for the individual and organisation as a whole.

2) Practicalities of e-working

Common sense (2)

It has to work!

Willingness to work outside of normal hours

To be accessible within the working timeframe

Speed in being able to source information.

Patience (for when the IT systems that are essential to my work fail to operate efficiently - which is often!)

3) Trust

Trustworthiness

Trust between managers and other team members is important and availability to anyone who is working in the office.

4) E-Working Practices

Prioritising tasks is of vital importance

Taking regular breaks and getting out of the house for walks or other exercise (4).

Ability to avoid distractions of surrounding environment

Ability to assist/remind others to work to timescales

Discipline to structure working day and not work longer than standard required hours and take lunch breaks

I believe the key to being able to be an effective e-worker is the ability to adapt to a home or 'away from office' environment. In detail the ability to maintain healthy relationships with people that you do not see every day as well as having a higher than typical level of resourcefulness.

An ability to regularly share what work has been done and to have 'shared' organisation to avoid, for example, duplication of work.

Representation of information / data in format, easily understandable by person accessing it remotely

Flexibility: I have found that you may have a light workload for a while and then a huge peak where you are quite often required to work weekends etc. I have worked with colleagues where they are highly inflexible with their schedules and consequently don't last long in the job.

5) Application of skills/responsibility

Concentration

You need to be responsible, committed and enjoy working alone since you will be spending quite some time working in isolation at times.

It may also be important to demonstrate higher than typical levels of integrity in the earlier stages of transitioning to e-working and telecommuting.

Able to work without close supervision and able to focus.

A clear idea of what you are going to accomplish - I see this as bringing together self-discipline, time management etc.

Flexibility

Willingness to learn and develop. There is no organisational driver to maintain CPD if you are self-employed but it is still important.

Ability to cope with distractions

6) Work Life issues

An ability to compartmentalise your life, so that 'real life' duties do not impinge too much on work.

Need to know when to switch off. It's very easy to keep working when you are at home. Must be able to separate work from home life.

Managing relationships with others in the house (non work related), ie teenage children, partner, visitors, friends, and striking a balance between their needs and your own. Setting boundaries on self and others for which time and geographical spaces are work zones and when. Ability to concentrate in environment where people in household are engaged on very different activities eg non work related (eg in an office everyone is engaged on aims of organisation, in a house that is often not the case, which makes it much more challenging to work productively and comfortably).

Ideally a supportive family or getting your family to appreciate that you are working at home and not just available to do all household chores.

Ability to keep work space and home space separate and be able to switch off from work mode.

If your office is in your home (as mine is) it's vital to put your work first and not the ironing or the washing up. Discipline away from the daily chores is hard when you work long hours. So prioritising what is important when the house is upside down is of massive importance.

7) Others

Influencing skills - to try and get what you need to work in terms of time and space in a home environment, when you cant use position power in the same way that you might at work, and the people you are trying to influence do not belong to or respect the rules/culture of your office organisation. Frustration/anger management skills when not demonstrating competence with all of the above!!!!

Resilience in the face of uncertainty e.g. when nature of future work is very uncertain.

Appendix Twenty-four: Measuring e-working, further comments by E-work life survey respondents

1) Regular Communications

Not sure except for occasional contact by phone or email

I am trusted to achieve the goals that I am set and to reach out for assistance if I have any difficulties. I have regular conference calls with my manager and team.

Discussion with manager to make sure it is working in your situation

Work from home I usually can work any time over 24 hours but I always let my supervisor know what time I am working.

2) HR systems and time sheets/IT recording mechanisms

Through time sheets

Via their electronic human resources system all working from home is recorded (4)

Not really able to, however, I imagine logging on and off times could be easily measured (2)
Through updating of databases and systems within the organisation. Working hours are recorded and signed off by a manager e.g. working from 6pm to 10pm

Everything that I key is stored and reports are generated based on data query's using that information such as Accuracy, Productivity etc.

Monthly statistics are issued showing workers workload and the level of completions / refusals / ineligibles

Unsure although expect that IT monitor access

I'm not sure they do. They must have access log to see the amount of users logging on each day.

Monitors blackberry activity and phone calls

Pull stats from Blackboard, monitoring updates, out e-learning sites ect. Reaching targets

Weekly timesheets

3) Objective setting/Appraisal

I do not know exactly. My company uses MBOs and therefore, each year we are assessed based on the objectives listed in our MBOs. Once targets are established it is up to me how to reach them. I am fully autonomous in the way I manage my work as long as I perform and obtain results.

In accordance with timescales being specified in the service level agreement to our client groups

Not sure if it does, only when it comes to appraisals.

There are a series of work life balance objectives for the organisation and certain individuals

Employee performance is measure via Balanced Scorecard mechanism in our organization, it is also applied to e-workers.

Annual review procedure and probation period (end of probation questionnaire and interview if required)

As noted in the previous question I do not know how or if they measure E-working. I do however have a yearly appraisal in which the amount and quality of the work I have produced in that year against the agreed targets that have been set.

We conduct a formal annual DPR system where we monitor personal target achievement, periodically we complete online reviews and there is a method of raising/reporting LIW working problems or comments.

Through DPR (development and performance reviews), by overseeing goal output, by contact with line manager

4) Surveys

There is a survey periodically (6)

5) Productivity/output based

It is general work based than time based. So the job goals have definite measurement yardsticks for success or failure depending on project outcome rather than the time that has been put into the project.

The vast majority of projects I manage are target driven so I would assume if I am meeting my targets then this is used as a measurement.

Project Managers assessment/project reports

Discussion with line manager what work is going to be undertaken

By asking beforehand what work is to be completed when working away from the office/at home. Rarely is the work checked my line managers upon return to work.

Effectiveness and completion of projects on time and on target, surveys , line manager reviews etc

Academic Output

Unsure how they manage it but they can see how many claims you have assessed, volumes and extract information for quality control and claims per hour, if you have settled the claim or rejected the claim

5) Other

Specific person job for monitoring e working

Not sure it does, flexible working in terms of child care means I have to catch up at home.
Follow- on questions asked if respondents measured their direct reports e-working productivity, 73% answered negatively, 9% positively. Those that did measure their direct reports e-working completed this mainly through discussion and setting/reviewing of work objectives.

Appendix Twenty-five: Hints and tips for E-workers by respondents of E-Work life survey

1) Working Practices/behaviour:

To start work at an early time and take time to review in the afternoon. To take regular short breaks. To ensure there are timely outcomes to the work undertaken.

You may not be able to complete all tasks despite working at home as you only have 7hrs. Organisation is important and self-discipline to concentrate on the tasks at hand. Structure day as if you were in the office to ensure you take required breaks and do not work beyond the required hours as this eats into your out of work life.

stick to the clock and switch the PC off in the evening because if it's still on it will draw you in....

Give yourself a set timeframe, ie a stop time and try to stick to it. Don't be tempted to check for emails every half hour.

Work in a room separate (e.g. study), if this is not possible, do not leave work out at the end of the day e.g. visible papers out as this can be distracting.

Set out a plan for the day and stick to it.

Be conscious of what it is that distracts you (e.g. TV) and try to avoid looking at it.

Take regular breaks and dont feel guilty, e.g. if you are allowed a 15 min break at work, take it at home also

E-working has its advantages and disadvantages for sure. The most important thing is that e-workers need to be disciplined, responsible and like autonomy. Also I found it useful to fix a working time unless I have family constraints but generally I try to start working from 09:00 till 17:00 (taking few short breaks every now and then).

having a separate room to work in helps. Currently i do my e-working in the same room as the TV and personal computer and my partner is also there. I am trying to get together a separate study as i find that being on my own increases my concentration so my work is complete quicker.

Schedule time in for specific tasks to remain motivated and focused and if a sociable individual spending a lot of time eworking, it can be useful to balance eworking with face to face contact with work colleagues.

Make a habit of getting out of the house at least once a day.

Develop the habit of going into your office at a set time. I'm in my loft (office) by 8.00 am - to work.

Avoid distractions.

Get good quality chairs, desk, ergonomic set up

Be disciplined in switching off and coming out of the office

If you need social interaction, schedule an office day regularly.

Avoid possible tendency to work longer hours because you can.
Ensure you take a lunch break if you are e-working remotely, you generally would do in the office so this should be no different if you are working at home.

Get up at a similar time as you would if you were going into the office and work approx the same hours. Have a well-structured diary which works backwards from deadlines. Make sure you have access to all the technology you need to carry out your job. Try and arrange meetings that require you to be in the office on the same day to minimise the time you spend travelling. Always be available to co-workers via email/mobile phone so they feel that you are 'there' even if you are not physically present.

To set out your working day as if you were working in an office. For example I set out my routine as:

8.00am Start, 10.30 Break, 12.30 to 1.30 Lunch, 3.30 Break, 5.00 finish.

Make sure your workspace is pleasant. Try and see some people face-to-face even if it takes a effort.

I close the door of my 'office' at home (second bedroom) at 5.30 every day I work so it forces me to stop working.

My partner will remind me if I lose track of time and work past the time I should be finishing.

I turn off my computer, blackberry and mobile when I stop working for the day.

I don't answer my phone to customers while I am eating lunch.

Set list of daily objectives.

Give yourself breaks to get a drink/get away from the computer screen.

Try to keep an area just for work so that when you have finished work you can walk away and shut the door on it, both physically and mentally.

Keep in touch with colleagues in the office so they you feel keyed into the team you work with.

Have a separate office if you are a home worker.

Close the door when cannot be disturbed or on the phone

Keep the dogs out when going on an important conference call !

Have a priority task - work on that until it is complete

2) Attitude:

If you get the opportunity take it - I have managed to complete my work from different locations throughout the UK and even from Antarctica on holiday.

Work to live, don't live to work! Bad health or accidents (either your own or others) can appear suddenly and have devastating effects - it is important to realise that you should, as far as possible, live for today as tomorrow is promised to no-one. Don't work so hard that you look back at the end of your life with regret.

try not to feel guilty about taking advantage of the situation. If you want to take 3 hours for lunch and your schedule permits then do it. Unless you reap some additional reward from a flexible policy the extra effort required to be self motivated etc. wont be worth it. Remembering that it is work and that there should be a start and finish time. Try not to work weekends and evenings but it is hard not to.

Have at least one day where you don't log into work or do anything work related bar reading an article about it in the newspaper.

Only do it, if you absolutely love what you're doing - there are no distractions, so you've got to feel 100% involved by choice.

Have fun and enjoy it all!

Don't think working remotely gives you an excuse to skive, you should act as though you are working in the office. You only trip yourself up anyway as the work still needs to be completed, whether that is today or tomorrow. Better to stick to a full working day, in the office or remotely.

Try to keep to a work routine.

3) Work-life balance:

Keep work-life balance in mind

Be fully aware of what it required. Commit to new work or private life requirements sensibly. Prioritise and be aware of other's priorities. Be honest with yourself, family and colleagues about any unexpected pressures the may arise.

Manage your family so that they appreciate that being at home is 'work'.

"train" family early that if the door is shut, you're working and to pretend you're not there

Try to switch blackberry off at weekends/evenings - otherwise friends/family get annoyed.

Be strict about when you're working and when you're free for your non-work life and make sure that both get fair shares.

Make it clear to people that although you are at home you are working and casual visiting is not encouraged - be clear when you are available and when you are not.

E-working is the best form of working life balance. You can manage your time better and improve performance.

Make sure you have a separate room for working in at home, so home and work is separate and you don't carry on thinking about work into the evening because you are still looking at it.

Ensure that when e-working that children are aware of what you are doing and that you should not be disturbed if possible.

Ensure your employer is sympathetic to personal needs. not everyone is the same!

E working enables the individual to meet the demands and deadlines of the organisation along with balancing home life positively. The only negative part of e working is that you have to be very focused and organised to do this effectively.

Ensure family know you are working & need to focus on that

4) Well being/Health/fitness:

Remember to exercise and to socialise!

I have chronic depression that requires treatment (unrelated to work), force yourself to socialise in person or life can become lonely. Leave work at work, and home life at home.

Be fit.

I feel that everyone should have the opportunity that I have to experience working from home as it so beneficial to your working life. My working life is less stressful and my health is better for e-working. I have been able to continue working past my retirement age due to e-working and therefore my skills are not lost to the company.

Don't let your social life slip away like I have, you can feel very isolated and then find it hard to get yourself back into that social life again.

Get a dog - it forces you to take all important breaks to help clear your head and be more productive. It also gives you very essential exercise.

Record the hours you spend sat at your desk and make sure this is less than the other hours in the day.

Make sure you have a good chair if you sit at a computer all day.

5) Skills/Competencies:

Improving organisation, self-discipline and time management skills!

I've actually e-work less; sometimes more productive to meet in the office and discuss ideas. E-working is best used when trying to do something that can be done best when avoiding distractions e.g. report writing etc.

It isn't just good time management skills that help - it's good job organisation skills. You need a plan for any job rather than just taking everything home to work on or leaving it at work. I think you need to organise your priorities and plan the e-working jobs.

Plan work so have resources to hand/available.

Be self-disciplined & motivated - 'short-changing work' leads to guilt & anxiety

6) IT issues:

The only thing I would say is that technology needs to be improved in terms of IT problems. It seems like everyday there is a problem, which has been going on for a long time and nothing is resolved.

Ensure you have the right technology.

7) Trust:

Flexibility and shared trust with your employer regarding working hours really helps.

Appendix Twenty-six: Overall Comments from E-Work life survey respondents

In a practical sense e working surely has to be the future in an enlightened Society. It is madness for everyone to commute to work at the same time, causing stress to individuals, congestion and impact on the environment.

You need to spend some time creating the right home environment as it has a big impact on your feelings - you are going to spend hours in your home office so make it as pleasant a place to be as possible.

For me the introduction of flexi time has been the major factor in my work-life balance, by increasing it a lot. the ability to e-work has also increased my job satisfaction.

None.

e-working is far more easy when your line manager is available. Currently my line manager isn't available a lot of the time and when it she is un-approachable. This means that i tend to do far more work when I am e-working and i feel more pressured.

I love working from home. I feel in complete control of my work and it allows me to control my work life, rather than being controlled by work!

I wouldn't want to work any other way.

Sometimes it feels like out of sight is out of mind, and other people in the organisation seem to think that because I and my team are out of the office so much, we are doing less work. This is infuriating, and if we had a proper e-working policy that made it clear that people could be trusted to manage their own time and workload, our lives would be an awful lot easier.

It works very well indeed for me. It's very normal in my company to work from home a day or even two a week if you want. We also have to work when travelling and have sufficient equipment for this. I don't miss the social side of work as some people do so I could happily work more from home.

I could not go back to working in an office full time - I find it hard to concentrate with the noise of other people, phones etc

There should be a policy enabling staff to work from home when it is not necessary for them to work in the University and there should certainly be equity between staff because in my institution it varies according to who the line manager is - my manager clearly does not support it and would prefer everyone to be in the office every day, and still take work home. I know of someone in another University who is classed as a "home worker" and I would like the option of doing this.

In organisations where a large number of people work remotely, it must be remembered that this means the people in the office are also subjected to many of the same features of remote working, since they:

a) have to interact by email, fax & phone etc with people who are remote-working

b) have to deal with the problems of remote interaction (e.g. grumpy messages) and delay in getting information

Meanwhile, being on the premises they also have to weave into this the specific requirements of face to face interactions, meetings etc., and they don't get the plus-side of remote working, such as flexibility in dealing with non-work demands, not having to commute, etc.

So there is an extra dimension to be tapped here, that may not come out in the survey: when people say 'no' to all the remote-working questions, they may mean they work on the

premises...but they are still remote workers when they interact with those who are not on the premises

E-working model grant your high level of flexibility in terms of balancing work and non-work life, however, it also quite difficult as an e-worker to manage the expectations of your bosses and peers.

I think that e-working allows flexibility to improve work-life balance. It is important to me to see my family and friends as often as possible. If I spend a long, full day at one point in the week (say doing a 7-5 day), I then used to work from home later in the week, allowing me to spend time with my husband, who also works from home a couple of days a week. It means we get to spend time together, which makes me happy and increases the positive attitude I hold towards my work - I don't resent work because it doesn't "get in the way" of my life. I am therefore more motivated, I believe.

Also - with a chronic pain problem, flexible home working is so important. Some days pain is very bad in the middle of the day, so if I'm e-working, I can take a long break and perhaps do some leisure activities. My pain decreases, so I then pick up my work again later in the day. I still accomplish a full day's work, but without being in pain, miserable, tense - sitting in the office not concentrating and rushing my work.

While I feel I am trusted to work at home, and no-one checks up on me, we are only permitted to work at home if we are contactable during normal working hours. Therefore, this isn't completely flexible working. In a previous job in a different organisation I was a permanent home worker for nearly 3 years, and was able to complete my work in whichever hours I chose. This was more beneficial to me and the company, as I could work when I felt most productive. I know my manager would be understanding and happy if I needed to take a longer lunchbreak and make up the time later in the day, but there is pressure to stick to normal hours. I am usually allowed to work from home 1 day a week, but have to request this beforehand and state what work I will be doing. I would like to work from home more often as I live some distance away, and as someone who has worked from home for years, I would like to be trusted to do so more often.

I like it - but then my work hours are very variable and also I am able to mix it up with a fair amount of time out of the home office. I wouldn't like to do e-work as a full-time occupation.

In my role I am allowed to work from home one day per week but in reality this can be difficult to organise around other activities that get scheduled in across the week.

just need to improve IT problems, slowness and disconnectivity. This is a constant problem and lost all hope with IT people at Coventry University.

I prefer to work at work - e-working is convenient if I have deadlines to meet as I can't spend long hours in the office but can catch up at home in the evenings. However, this is not good for my home/work balance

The biggest problem to work generally is the level of emails.

Anything that can contribute to the reduction of the number of emails will significantly improve work/life balance

The NHS could invest more heavily in e working but this requires investment in technology and most PCTs have a deficit in funding, so this is not likely to happen in the near future

I don't do it enough to give the survey justice, but I would think for a lot of people it makes work life balance better, as it cuts down on stress associated with travelling to work in rush times, child care etc.

I think that if you can continue to deliver your work more people should be encourage to do it if they can.

As 5. Minimal e-work at present. What is more usual, is out of hours working therefore the work life balance is heavily weighted towards work.

This survey took me 21 minutes.

In the section where you asked about "feelings" in the last 4 weeks - this has purely been caused by work-related stress and under-resourcing.

Have only just started working on this basis and is very infrequent and so some parts of this questionnaire were difficult to respond to.

I am working in projects, which generally implies a non-routine-job, influenced by timelines and project requirements. Thus sometimes my work-life-balance is better or sometimes worse.

When filling out the questionnaire it is now half-time of a very time-intensive project phase. I chose to give my answers related to my current state, not the average.

E-working means that I am more productive than I would be if I worked all the time in an office environment (with interruptions and noise in an open plan office for example), but it does mean that it is really hard to get away from work. I do realise that most of this does come down to the personal choices that we make and that I can be in more control of my work-life balance - I think I could benefit from some time/task management training. I do not work completely flexibly and am expected to be in the office as a general rule - it is at evenings and weekends that I find it easy to fill my time with e-work.

I find working from home fantastic for my home life as I have a 5 year old daughter I can fit my work around her without having to rely on others to look after her.

If I need to take a break it has to be away from my home as I cannot stay out of my office when there's always so much to do. Take care to plan in regular breaks away over the year or the work gets in the way of any time off and you work yourself to a standstill.

My unusual responses to the health questionnaire is due to the fact that I am pregnant

no

I have been an eworker since the early nineties and have found that it is a fantastic way to work. I feel that I have been more productive than working in an office and your quality of life working from home is far greater.

The younger generation seem to use it as an excuse to doss, so I think in the future you will find tighter controls on e-working.

I think that e-working would benefit more people and more companies should try to adapt to allow people to do this. If you trust people to e-work then they will be successful at it.

Useful to meet up or phone or teleconference occasionally. Training for everyone in BPS, especially in remote locations throughout Scotland, in improving e-use could be beneficial to me and others.

I usually do not have to rely on or work with a team of people to get my work done - I am in a very independent role and normally it is only me that is working on my projects.

However, when other people are involved things get more complicated because my team are all in the USA and so are on a different time frames (multiple) to me and this usually involves late nights. However, I always try to take the additional time back by spending longer walking my dog or doing some gardening or shopping (activities outside the house to ensure I cannot hear the emails pinging!).

I find it much easier to work remotely as it is quieter than the busy and noisy office I work in. I am also able to get away from emails if I wish. The main negative is that I don't get to develop a social relationship with a lot of my colleagues as I don't see them very often. Also I feel less valued as people move my things from my desk or use my desk in the office as I don't work there very often.

Appendix Twenty-seven: E-Work life items by dimension

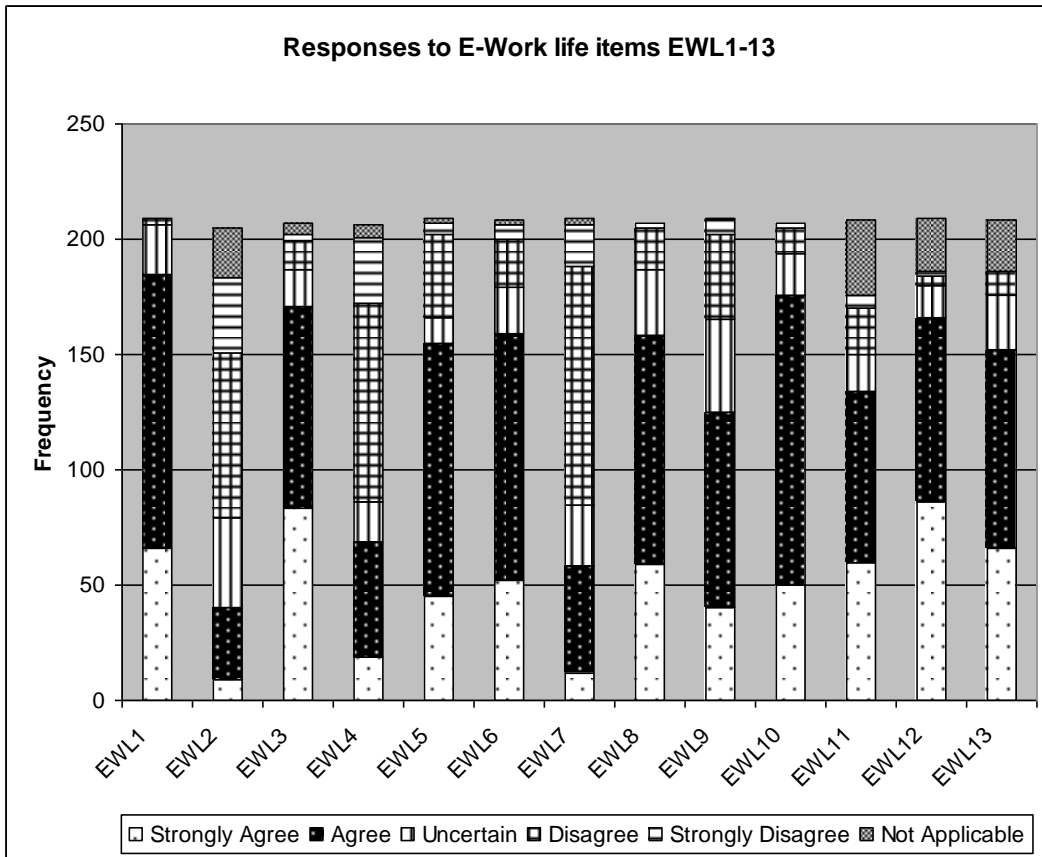
Dimensions	Items	Scoring (Strongly agree to strongly disagree) 5-1
E-working effectiveness	<p>I know what it takes to be an effective e-worker (EWL1)</p> <p>My organisation provides training in e-working skills and behaviours (EWL2)</p> <p>I can manage my time well when e-working (EWL10)</p> <p>I have adapted to e-working by developing suitable skills and behaviours (EWL34)</p>	<p>High score: Effective/developed e-worker</p> <p>Low score: Less effective/undeveloped e-worker</p>
Work Life integration	<p>Having flexible hours when e-working allows me to integrate my work and non-work life (EWL3)</p> <p>I am happy with my work life balance when e-working remotely (EWL6)</p> <p>I can completely balance my e-working with the rest of my life commitments (EWL9)</p> <p>My work is so flexible I could easily take time off e-working remotely, if and when I want to (EWL20)</p>	<p>High Score: Good integration</p> <p>Low Score: Poor integration</p>
Role management/ conflict	<p>My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted (EWL19)</p> <p>E-working has a positive affect on other roles in my non-working life (EWL21)</p> <p>I can arrange for childcare/support to look after my dependants when I am e-working (EWL23)</p>	<p>High score= Good management of multiple roles</p> <p>Low Score= Poor management of multiple roles</p>
Managing Boundaries	<p>I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time (EWL35)</p> <p>My e-working takes up time that I would like to spend with my family/friends or on other non-work activities (EWL4)</p> <p>My family dislike how often I am preoccupied with my e-working whilst I am at home</p>	<p>High Score: Poor boundary management</p> <p>Low Score: Good boundary management</p>

Dimensions	Items	Scoring (Strongly agree to strongly disagree) 5-1
	<p>(EWL22)</p> <p>When e-working remotely I often think about family related and/or non work related problems (EWL24)</p> <p>When e-working remotely I often think about work related problems outside of my normal working hours (EWL5)</p>	
E-Well Being	<p>When e-working from home I do not know when to switch off/put work down so that I can rest (EWL18)</p> <p>I feel that work demands are much higher when I am e-working remotely (EWL31)</p> <p>I have total control over when and how I get my work completed when e-working. (EWL29)</p> <p>I am highly motivated to work past normal work hours when e-working. (EWL32)</p> <p>Commuting to work increases my stress (EWL39)</p> <p>My social life is poor when e-working remotely (EWL36)</p> <p>I miss socialising in the office when e-working remotely (EWL37)</p> <p>I know how to socialise using technology (EWL38)</p> <p>Constant access to work through e-working is very tiring (EWL7)</p>	<p>High scores=lower e-well being Low Scores= high e-well being</p>
E-Job effectiveness	<p>When e-working I can concentrate better on my work tasks (EWL8)</p> <p>E-working makes me more effective to deliver against my key objectives and deliverables (EWL16)</p>	<p>High Scores=Good E-job effectiveness Low Scores= Poor E-job effectiveness</p>

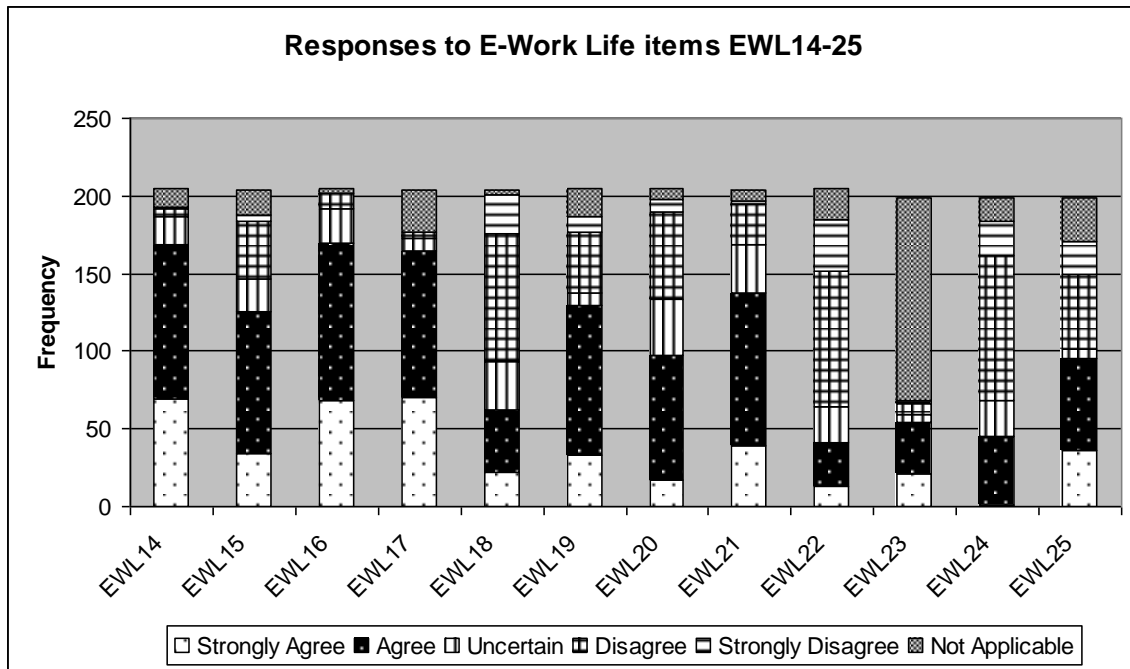
Dimensions	Items	Scoring (Strongly agree to strongly disagree) 5-1
	<p>If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations (EWL17)</p> <p>My overall job productivity has increased by my ability to e-work remotely/from home (EWL33)</p>	
Management Style	<p>My supervisor gives me total control over when and how I get work completed when e-working (EWL11)</p> <p>My line manager discusses sympathetically any issues related to my non work when e-working. (EWL26)</p> <p>My line manager allows me to flex my hours to meet my needs, providing all the work is completed. (EWL27)</p> <p>My line manager is a good role model for me in terms of e-working (EWL28)</p> <p>My line manager is a good role model for me in terms of work life balance (EWL30)</p>	<p>High Scores: Effective management style</p> <p>Low Scores: Less effective management style</p>
Trust	<p>My line manager completely trusts me to manage my work when I am e-working remotely (EWL12)</p> <p>I do not need to gain permission from my line manager before I can e-work from home (EWL25)</p> <p>I trust my line manager to advise me if I am not effectively performing whilst e-working (EWL13)</p> <p>My organisation trusts me to be effective in my role when I e-work remotely (EWL14)</p> <p>I trust my organisation to provide good e-working facilities to allow me to e-work effectively (EWL15)</p>	<p>High Score: High degree of trust</p> <p>Low Score: Less trust</p>

Appendix twenty-eight: Frequency Graphs for E-Work life Scales

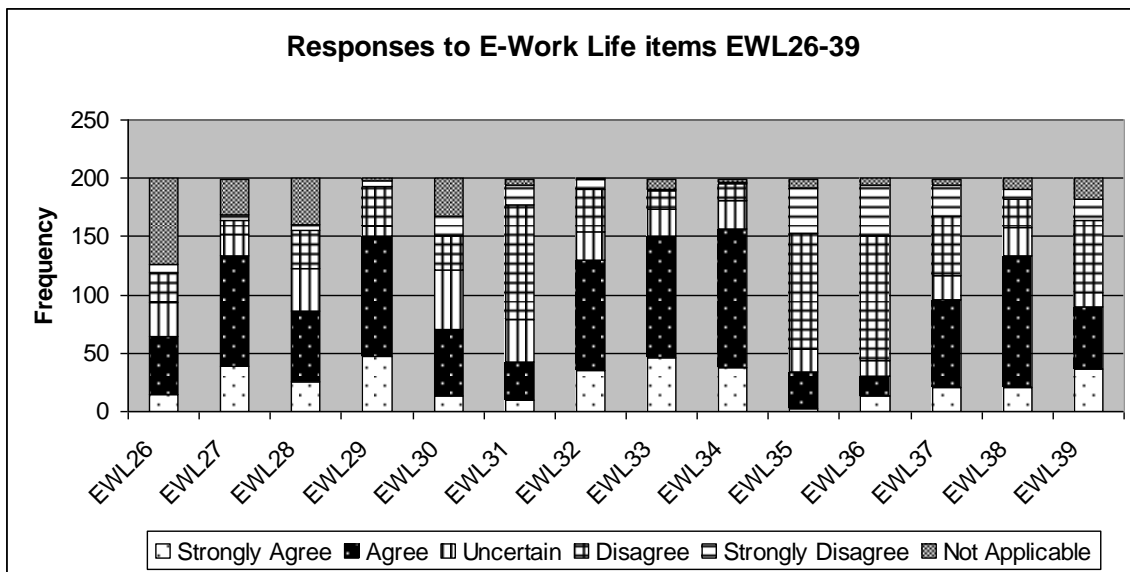
Graph one: Frequency of scores from e-work life measures Questions 1-13



Graph two: Frequency of scores from E-Work life measures Questions 14-25

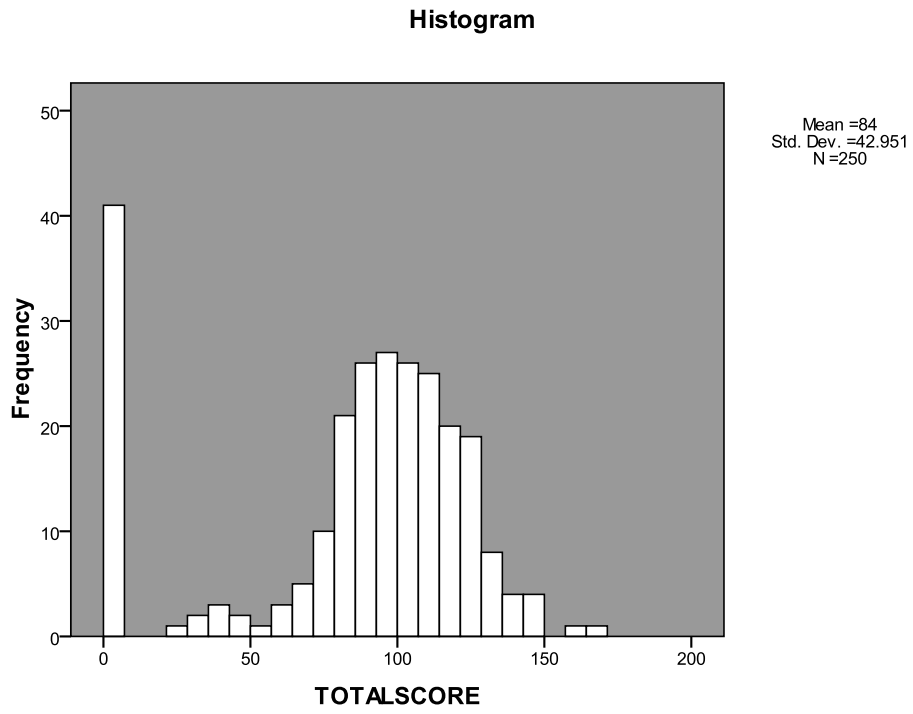


Graph three: Frequency of scores from E-Work life measures Questions 26-39

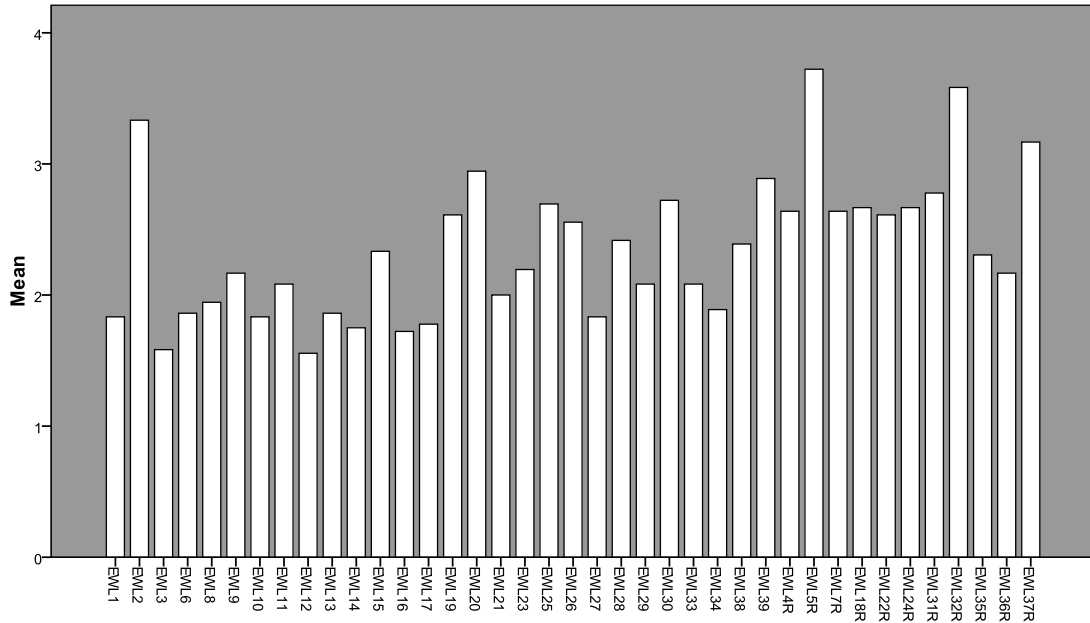


Please note: all Questions coded with 'R' in the graphs are negatively worded questions whereby the scores have been reversed. Reversing the scores shows better the distribution of scores when all questions are considered in the same direction.

Appendix Twenty-nine: Histogram of total scores for E-Work life scales (phase two)



Appendix Thirty: Graph to show mean scores per item of the E-work life scales (phase two)



Appendix Thirty-one: Descriptive statistics for all responses to the 39 items contained in the E-Work life scales

Scale Item	N	Mean	SD	Median	Mode
EWL1	209	1.81	.664	2	2
EWL2	183	3.48	1.11	4	4
EWL3	202	1.83	.915	2	2
EWL4 (R)	201	2.72	1.25	2	2
EWL5 (R)	207	3.74	1.06	4	4
EWL6	206	2.14	1.00	2	2
EWL7 (R)	206	2.67	1.09	2	2
EWL8	207	2.06	.928	2	2
EWL9	208	2.44	1.08	2	2
EWL10	207	1.98	.794	2	2
EWL11	176	2.08	1.09	2	2
EWL12	186	1.69	.792	2	1
EWL13	193	1.88	.830	2	2
EWL14	193	1.80	.752	2	2
EWL15	188	2.39	1.06	2	2
EWL16	202	1.87	.794	2	2
EWL17	177	1.69	.664	2	2
EWL18 (R)	201	2.76	1.22	2	2
EWL19	187	2.44	1.16	2	2
EWL20	198	2.79	1.07	3	2
EWL21	197	2.25	.956	2	2
EWL22 (R)	185	2.46	1.15	2	2
EWL23	68	2.06	1.03	2	2
EWL24 (R)	184	2.50	1.00	2	2
EWL25	171	2.77	1.38	2	2
EWL26	126	2.68	1.09	2	2
EWL27	169	2.11	.939	2	2
EWL28	160	2.57	1.08	2	2
EWL29	198	2.23	1.07	2	2
EWL30	167	2.88	1.10	3	2
EWL31 (R)	194	2.59	1.03	2	2
EWL32 (R)	199	3.56	1.11	4	4
EWL33	190	2.06	.862	2	2
EWL34	196	2.09	.802	2	2
EWL35 (R)	192	2.26	1.00	2	2
EWL36 (R)	194	2.22	1.10	2	2

Scale Item	N	Mean	SD	Median	Mode
EWL37 (R)	194	3.06	1.28	3	4
EWL38	190	2.40	.986	2	2
EWL39	182	2.84	1.35	3	4

Note (1): Those statements marked with (R) refers to the reversed items.

Note (2): Those statements highlighted in blue refer to statements which do not follow the positive direction.

Appendix Thirty-two: Correlations by E-Work life item and E-Work life dimension including analysis

E-working effectiveness (dimension one)

When the responses were taken together for this dimension the majority of participants clearly perceived themselves to be effective and well adapted to e-working. It is clear from the responses that specific training in e-working is generally not provided by organisations. Whilst, overall, the results are positive for this section it should be considered that just under one third of respondents did not answer positively to any of these items. There is, therefore, evidence of both the 'developed' and 'undeveloped' e-worker (see typology in appendix seventeen). However, as two thirds responded highly it can be concluded that this sample was mainly well 'developed'. This finding aligns with the results from chapter eight which indicates an experienced sample of e-workers who report high levels of autonomy.

When the survey question on job role is compared to EWL1 (*I know what it takes too be an effective e-worker*) the result indicated $p < 0.05$ $r = -0.149$. This showed a negative relationship, indicating that high job effectiveness may not be related to job type. This result is slightly contradictory and role autonomy needs further detailed investigation to find if e-working effectiveness is linked to being autonomous and role status. Length of experience when correlated with e-working effectiveness (EWL1) did not find a significant result.

Table to show frequencies for E-Work life items - e-working effectiveness

Dimension	Item	Frequency	Scoring
E-working effectiveness	I know what it takes to be an effective e-worker (EWL1)	74% strongly agree/agree (N=185)	High Score: Effective/developed e-worker Low Score: Less effective/undeveloped e-worker
	My organisation provides training in e-working skills and behaviours (EWL2)	41% disagree/strongly disagree (N=104)	
	I can manage my time well when e-working (EWL10)	70% strongly agree/agree (N=176)	

Dimension	Item	Frequency	Scoring
	I have adapted to e-working by developing suitable skills and behaviours (EWL34)	63% strongly agree/agree (N=158)	

Table to show correlation matrices for e-working effectiveness

	EWL1	EWL2	EWL10	EWL34
EWL1	1			
EWL2	.164*	1		
EWL10	.324**	.145	1	
EWL34	.343**	.199**	.367**	1

* Correlation is significant at the 0.05 level (2 tailed)

** Correlation is significant at the 0.01 level (2 tailed)

E-job Effectiveness (dimension two)

Overall the results for this dimension indicated positive results for concentrating and performing better when e-working. The majority of respondents agreed that e-working improved concentration and that it made them more effective to deliver against objectives and deliverables, with nearly two thirds agreeing that job productivity had increased by their ability to e-work remotely. Furthermore, two thirds agreed that if they were interrupted when e-working they would still meet their manager's expectations for quality. The survey responses to questions regarding the measurement of e-workers productivity (in chapter eight) indicated that there was little activity in this area, with line managers instead preferring to measure by appraisal specific work items. However, the overall self reported perception is that participants productivity improved with e-working. This is an area that would benefit from external validation from other measures, such as appraisal to confer the predictive validity of these E-Work life items.

There are some fairly strong correlations in this section, EWL16 appears to be associated with EWL8, EWL17 and EWL33 (see appendix thirty-five for details). These statements could have high levels of social desirability, or a need to answer positively as they reflect on work productivity. External validation would be important.

Table to show frequencies for E-Work life items - e-job effectiveness

Dimension	Item	Frequency	Score
E-Job effectiveness	When e-working I can concentrate better on my work tasks (EWL8)	63% strongly agree/agree (N=158)	High Scores=Good E-job effectiveness Low Scores= Poor E-job effectiveness
	E-working makes me more effective to deliver against my key objectives and deliverables (EWL16)	68% strongly agree/agree (N=170)	
	If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations (EWL17)	66% strongly agree/agree (N=165)	
	My overall job productivity has increased by my ability to e-work remotely/from home (EWL33)	60% strongly agree/agree	

Table to show correlation matrices for category six – e-job effectiveness

	EWL8	EWL16	EWL17	EWL33
EWL8	1			
EWL16	.518**	1		
EWL17	.335**	.484**	1	
EWL33	.387**	.527**	.393**	1

* Correlation is significant at the P< 0.05 level (2 tailed)

** Correlation is significant at the P< 0.01 level (2 tailed)

Work-life Integration (dimension three)

These findings indicated that working flexible hours, through e-working, can provide the means to integrating work and non work life. Furthermore, many of the respondents were happy with the way in which e-working facilitates good work-life balance. This was supported by a one tailed correlation between EWL1 and EWL9 which gave a significant result $p < 0.01$, $r = 0.250$. When it came to taking time off from e-working the responses indicated that this may not always be possible.

When correlations were considered EWL3 (*Having flexible hours when e-working allows me to integrate my work and non work life*) was found to be significant at $p < 0.05$ with EWL6, EWL9 and EWL20, these items relate to degree of happiness with work-life balance, findings indicated a relationship between all of the items. The flexible hours could be associated with balancing time and leading

to happiness with work-life balance. This provides some evidence that e-working can assist work-life balance. It is worth noting that EWL6 and EWL9 are highly positively associated. The items are quite similar and it is likely they are measuring the same facet, thus one of the questions could be removed from the final scales. This will be covered under reliability tests in section 9.8.

Table to show frequencies for E-Work life items - work life integration

Dimension	Item	Frequency	Score
Work Life integration	Having flexible hours when e-working allows me to integrate my work and non-work life (EWL3)	68% strongly agree/agree (N=171)	High Score: Good integration
	I am happy with my work life balance when e-working remotely (EWL6)	63% strongly agree/agree (N=159)	
	I can completely balance my e-working with the rest of my life commitments (EWL9)	50% strongly agree/agree (N=125) 50% <i>uncertain/strongly disagree/disagree</i> (N=83)	Low Score: Poor integration
	My work is so flexible I could easily take time off e-working remotely, if and when I want to (EWL20)	39% strongly agree/agree (97) 25% <i>strongly disagree/disagree</i> (N=64)	

Table to show correlation matrices - Work life integration

	EWL3	EWL6	EWL9	EWL20
EWL3	1			
EWL6	.399**	1		
EWL9	.271**	.656**	1	
EWL20	.248**	.135	.204**	1

* Correlation is significant at the $P < 0.05$ level (2 tailed)

** Correlation is significant at the $P < 0.01$ level (2 tailed)

Role Conflict (dimension four)

It has been considered in the literature, that males and females respond differently when role conflict is considered. Role conflict is a key research feature in the current study, and many of the previously developed scales relate to differences between males and females in managing their roles. When gender is considered in the current study, half of respondents answered positively to EWL19 relating to the management of roles, and there is also strong agreement

when males and females are considered separately. As reported earlier EWL23 was not widely answered and this could be due to the fact that 60% (N=150) of respondents in this sample did not have children. Overall no significant findings between genders were found.

When the scale items are correlated together for this dimension, they show a significance of $p < 0.01$, indicating that these items are all associated with each other. As the items are so closely correlated it may mean that one item could be selected from the three for the final scales.

Table to show frequencies for E-Work life items - role conflict

Dimension	Item	Frequency	Score
Role management/ conflict	My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted (EWL19)	52% strongly agree/agree (N=130)	High score= Good management of multiple roles Low Score= Poor management of multiple roles
	E-working has a positive affect on other roles in my non-working life (EWL21)	55% strongly agree/agree (N=138)	
	I can arrange for childcare/support to look after my dependants when I am e-working (EWL23)	52% Not applicable (N=131) 21% strongly agree/agree (N=54) 3% disagree (N=9)	

Table to show correlation matrices – role management/conflict

	EWL19	EWL21	EWL23
EWL19	1		
EWL21	.234**	1	
EWL23	.382**	.366**	1

* Correlation is significant at the $P < 0.05$ level (2 tailed)

** Correlation is significant at the $P < 0.01$ level (2 tailed)

Managing Boundaries (dimension five)

Work-life balance literature (e.g., Campbell Clark 2000) often considers that managing the boundaries between work and non-life can be difficult and sometimes these boundaries can merge. This may be particularly relevant for

those e-working at home. As such these E-Wok life items view the impact of e-working where work begins to merge with non-working lives.

Most respondents disagreed with EWL35R which indicated that these respondents were not overloaded by other conflicting non-working roles when e-working. However, EWL4R and EWL5R provided an interesting example of two questions that worked together to show where boundaries may be overlapping. Respondents mainly disagreed with item EWL4R, indicating that they did not feel e-working overlaps into their non-work time, EWL5R showed greater agreement. This finding indicated that whilst individuals perceived that e-working does not take up more of their time, they are still thinking about work outside of the normal working hours, thus using up time psychologically. This suggests that psychologically closing down from work is not occurring. This could be due to the fact that if work is in the home, it is not easy to remove thoughts from work still needing to be completed and, which could be rectified easily by logging back on to the office. Another reason could be that this sample is predominantly professionals and these types of roles may not be so easy to switch off from work.

Respondents generally disagreed with item EWL22R, which meant they did not perceive that their family disliked how often they were pre-occupied by e-working. These results may have been different if the friends and family were asked this question. However, there was a gender split to this item as 20% (N=22) of females strongly agreed or agreed with the item whilst 26% (N=19) of males strongly agreed or agreed. This item has possibilities for a 360 degree appraisal method of e-workers (that is asking other parties to assess skills and competencies, this is frequently used in work-place appraisal). It also looks like it may affect males more than females. Item EWL24R related to e-workers thinking about family and non work related problems when e-working. Generally there

was disagreement to this item. When gender was considered again a quarter of males agreed with this statement compared to a fifth of females.

When correlations are considered, as already discussed in section 9.6.1, EWL5R is a negatively worded question but shows a good strength of correlation with EWL4R which is also a negatively worded item. This result supports the descriptive findings, as already discussed, and indicates that these two items have an interesting interaction. As such they should be retained in the final scales. EWL22R, EWL24R and EWL35R are also negatively worded questions. The findings show moderate positive relationships between these items and each other, concluding that they are similar. These items could be combined into one overall item.

Table to show frequencies for E-Work life items, managing boundaries

Dimension	Item	Frequency	Score
Managing Boundaries	My e-working takes up time that I would like to spend with my family/friends or on other non-work activities (EWL4R)	46% strongly disagree/disagree (N=115)	High Score: Poor boundary management
	When e-working remotely I often think about work related problems outside of my normal working hours (EWL5R)	62% strongly agree/agree (N=155)	
	My family dislike how often I am preoccupied with my e-working whilst I am at home (EWL22R)	48% strongly disagree/disagree (N=121)	Low Score: Good boundary management
	When e-working remotely I often think about family related and/or non work related problems (EWL24R)	46% strongly disagree/disagree (N=116)	
	I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time (EWL35R)	46% strongly disagree/disagree (N=139)	

Table to show correlation matrices – managing boundaries

	EWL4R	EWL5R	EWL22R	EWL24R	EWL35R
EWL4R	1				
EWL5R	.410**	1			
EWL22R	.436**	.320**	1		
EWL24R	.066	.148*	.135	1	
EWL35R	.387**	.224**	.376**	.400**	1

* Correlation is significant at the $P < 0.05$ level (2 tailed)

** Correlation is significant at the $P < 0.01$ level (2 tailed)

E-well being (dimension six)

The items in this section relate to stress and well being. In particular they are measuring the ability to control work demands, and to know when to take rest and respite to support well-being. There is evidence from these items that respondents in this sample do have more control over their work, which is also supported by the responses to the questions in the survey regarding autonomy. Another facet of well-being is social activity and this was also measured. One further item measured responses to commuting as this had been found to be stressful in previous studies, the item used in the E-Work life scale measured if they did commute to work would it add to their stress levels.

The statements EWL7R and EWL18R relate to gaining rest and respite, so ensuring that rest is taken to aid well being. The results indicated that the majority of respondents felt that e-working was *not* too tiring, however, it should be noted that a quarter of the respondents did agree with this item, indicating this area may need further investigation. EWL18R asked respondents if they knew when to put work down to rest. A quarter of respondents agreed that they did *not* know when to switch off from work, however, the majority indicated they knew when to put work away. When this question is split by gender 43% (n=49) of females felt they did not know when to switch off working to rest whilst 16% (n=13) of males indicated they did know when to switch off and rest. EWL32R relates to high levels of motivation again affecting the ability to switch off and rest. A high proportion of respondents agreed that they were highly motivated to

work past normal hours, whilst a smaller number disagreed with this item. When gender was considered there was little difference in the responses.

Items EWL29 covered control over when they were e-working and EWL31 asked respondents if they felt work demands increased for e-workers. Almost two thirds 60% (N=150) of respondents agreed that they had control over when and how they carried out their work when e-working, only a small percentage disagreed with this item 16% (N=39). Respondents to EWL31 indicated that demands were not higher when e-working at 46% (N=115) with a smaller percentage agreeing to this item 17% (N=43).

Items EWL36, EWL37 and EWL38 relate to social activity. The majority of respondents indicated that their social life was not poor when e-working and that they knew how to socialise using technology. However, over one third of respondents indicated that they missed socialising in the office when e-working.

Respondents were asked if commuting to work increased their stress (EWL39), 37% (N=90) agreed with this item, with 32% (N=80) disagreeing. It could be deduced that many e-workers answering this survey do still commute to work and find this stressful. There was no significant gender difference.

There were some strong correlations between EWL7R and EWL18R and EWL32R, which is not surprising as EWL7R measures tiredness. The results support the descriptive analysis for these items in that these questions were closely related. One of these items could be removed for the final scales. There is a very weak negative correlation between EWL37R and EWL32R, indicating that whilst working past hours is not a major motivation, socialising in the office is still missed. This could be explored in future studies. Many of the correlations are weak in this section, in particular EWL38 and EWL39. EWL36R and EWL37R are very closely related thus these items could be combined.

Table to show frequencies for E-Work life items- e-well being

Dimension	Item	Frequency	Score
E-Well Being	Constant access to work through e-working is very tiring (EWL7R)	48% strongly disagree/disagree (N=121)	High scores=lower e-well being Low Scores=high e-well being
	When e-working from home I do not know when to switch off/put work down so that I can rest (EWL18R)	43% strongly disagree/disagree (N=114) 25% strongly agree/agree (N=62)	
	I have total control over when and how I get my work completed when e-working. (EWL29)	60% strongly agree/agree (N=150)	
	I feel that work demands are much higher when I am e-working remotely (EWL31R)	46% strongly disagree/disagree (N=115)	
	I am highly motivated to work past normal work hours when e-working. (EWL32R)	52% strongly agree/agree (N=130)	
	My social life is poor when e-working remotely (EWL36R)	60% strongly disagree/disagree (N=150)	
	I miss socialising in the office when e-working remotely (EWL37R)	38% strongly agree/agree (N=96) 31% strongly disagree/disagree (N=78)	
	I know how to socialise using technology (EWL38)	53% strongly agree/agree (N=133)	
	Commuting to work increases my stress (EWL39)	36% strongly agree/agree (N=90) 32% strongly disagree/disagree (N=80)	

Table to show correlation matrices – e-well being

	EWL7 R	EWL18 R	EWL2 9	EWL31 R	EWL32 R	EWL36 R	EWL37 R	EWL38	EW L39
EWL7R	1								
EWL18 R	.465**	1							
EWL29	.184*	.098	1						
EWL31 R	.460**	.422**	.048	1					
EWL32 R	.178*	.383**	.122	.272**	1				
EWL36 R	.359**	.409**	.202**	.385**	.041	1			
EWL37 R	.106	.100	.007	.214**	-.020	.270**	1		
EWL38	.043	.032	.067	.023	.019	.117	.099	1	
EWL39	.035	.077	.045	.104	.098	.089	.126	.076	1

* Correlation is significant at the P< 0.05 level (2 tailed)

** Correlation is significant at the P< 0.01 level (2 tailed)

Management Style (dimension seven)

The majority of respondents agreed that their supervisor gave them total control of when and how to get work completed when e-working and only a small percentage disagreed with this item. It was indicated by only a quarter of respondents that line managers discussed non work issues sympathetically. Further, nearly one third of respondents considered this item as 'not applicable'. Just over half of respondents indicated that their line manager allowed flexibility in hours worked, with only a small percent disagreeing. Just over one third of respondents felt their line manager was a good role model for e-working and just under one third felt their line manager a good role model for work-life balance. Some respondents were uncertain with 20% (N=51) unsure if their line manager was a good role model for work-life balance.

EWL28 and EWL30 provided the strongest correlation in this section, considering that they relate to a line manager's being a role model and these items could be merged.

Table to show frequencies for E-Work life items, management style

Dimension	Item	Frequency	Score
Management Style	My supervisor gives me total control over when and how I get work completed when e-working (EWL11)	54% strongly agree/agree (N=134)	High Scores: Effective management style Low Scores: Less effective management style
	My line manager discusses sympathetically any issues related to my non work when e-working. (EWL26)	30% Not applicable (N=74) 25% strongly agree/agree (N=64) 13% strongly disagree/disagree (N=32)	
	My line manager allows me to flex my hours to meet my needs, providing all the work is completed. (EWL27)	54% strongly agree/agree (N=134)	
	My line manager is a good role model for me in terms of e-working (EWL28)	34% strongly agree/agree (N=86) 30% uncertain/strongly disagree/disagree (N=74)	
	My line manager is a good role model for me in terms of work life balance (EWL30)	28% strongly agree/agree (N=70)	

Table to show correlation matrices - management style

	EWL11	EWL26	EWL27	EWL28	EWL30
EWL11	1				
EWL26	.289**	1			
EWL27	.441**	.483**	1		
EWL28	.150	.565**	.438**	1	
EWL30	.106	.410**	.296**	.625**	1

* Correlation is significant at the P< 0.05 level (2 tailed)

** Correlation is significant at the P< 0.01 level (2 tailed)

Trust (dimension eight)

The majority of respondents agreed their line manager trusted them to manage their work. Furthermore, over one third of respondents agreed that they did not need to seek permission to e-work from home with just over a quarter of respondents disagreeing with this item indicating there was a degree of

management control in this area. Nearly two thirds of respondents agreed their line manager trusted them to be effective when e-working and over two thirds of respondents indicated their organisation trusted them to e-work effectively. Finally, half of respondents agreed they trusted their organisation to provide good e-working facilities with just under a quarter of respondents disagreeing with this item.

There are some weak to moderate associations in this section, for example, EWL12 and EWL13. These items show relationships between all of the trust related measures. As they measure different dimensions of trust and at different levels of possible intervention these should remain in the final measures.

Table to show frequencies for E-Work life items - trust

Dimension	Items	Frequency	Score
Trust	My line manager completely trusts me to manage my work when I am e-working remotely (EWL12)	64% strongly agree/agree (N=166)	High Score: High degree of trust Low Score: Less trust
	I trust my line manager to advise me if I am not effectively performing whilst e-working (EWL13)	61% strongly agree/agree (N=152)	
	My organisation trusts me to be effective in my role when I e-work remotely (EWL14)	68% strongly agree/agree (N=169)	
	I trust my organisation to provide good e-working facilities to allow me to e-work effectively (EWL15)	50% strongly agree/agree (N=126)	
	I do not need to gain permission from my line manager before I can e-work from home (EWL25)	38% strongly agree/agree (N=95) 28% strongly disagree/disagree (N=70)	

Table to show correlation matrices for category eight – trust

	EWL12	EWL13	EWL14	EWL15	EWL25
EWL12	1				
EWL13	.482**	1			
EWL14	.348**	.354**	1		
EWL15	.354**	.349**	.387**	1	
EWL25	.253**	.076	.140	.070	1

* Correlation is significant at the P< 0.05 level (2 tailed)

** Correlation is significant at the P< 0.01 level (2 tailed)

Appendix Thirty-three: E-work life scale item analysis related to e-worker typology

Table to show case analysis of the 'developed', 'undeveloped' e-worker

Item	Case 1 <i>Developed e-worker</i> (Male, two children)	Case 2 <i>Undeveloped</i> (Female, with one child)
I know what it takes to be an effective e-worker	Strongly agree	Disagree
My organisation provides training in e-working	Strongly agree	Strongly disagree
My e-working takes up time that I would like to spend with my family/friends or on other non-work activities	Strongly disagree	disagree
I can completely balance my e-working with the rest of my life commitments	Strongly agree	Disagree
I can manage my time well when e-working	Strongly agree	Disagree
My supervisor gives me total control over when and how I get my work completed when e-working	Strongly agree	Disagree
My line manager completely trusts me to manage my work effectively when I am e-working remotely	Strongly agree	Disagree
I trust my line manager to advise me if I am not effectively performing whilst e-working	Strongly agree	Disagree
I trust my organisation to provide good e-working facilities to allow me to e-work effectively	Uncertain	Disagree
I can arrange for child-care/support to look after my dependants when I am e-working	Agree	Disagree
I am highly motivated to work past normal hours when e-working	Agree	Disagree

Appendix Thirty-four: Results from Principal Component Analysis of the E-Work life scales

Run 2 Results

Running the data analysis again pairwise produced a variable N, the highest N= 207 and the lowest N=68. This

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .		.627
Bartlett's Test of Sphericity	Approx. Chi-Square	633.077
	df	741
	Sig.	.998

The table below shows the 9 rotated factors and their associated variances. The analysis was suppressed for items under .4.

	Component								
	1	2	3	4	5	6	7	8	9
EWL22R	.661								
EWL5R	.656								
EWL32R	.655								
EWL4R	.640								
EWL18R	.618								
EWL7R	.530								
EWL35R		.727							
EWL36R		.695							
EWL37R		.604							
EWL10		.587							
EWL31R	.435	.515							
EWL9		.477							
EWL6	.405	.472							
EWL11			.775						
EWL29			.733						

Rotated Component Matrix^a

	Component								
	1	2	3	4	5	6	7	8	9
EWL12			.707						
EWL27			.631						
EWL20			.423				.418		
EWL13			.406						
EWL8				.745					
EWL33				.733					
EWL16				.731					
EWL17				.525					
EWL34				.496					
EWL30					.799				
EWL28					.789				
EWL26					.622				
EWL2						.765			
EWL14						.620			
EWL15						.418			
EWL3							.647		
EWL39							.485		
EWL24R							-.437		
EWL21							.408		
EWL23								.823	
EWL19								.570	
EWL38									.706
EWL25									-.599
EWL1									

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 30 iterations.

Run 3 Results

The results were slightly different for the correlations but the majority remained low so provided no further correlation issues. The KMO and Bartlett's test were now improved giving good results for the sampling adequacy.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.822
Bartlett's Test of Sphericity	Approx. Chi-Square	1570.169
	df	406
	Sig.	.000

The table below shows that the factors were reduced to 7 after this run of the analysis. The items were suppressed to show only those .4 and above. The cumulative % variance was 60.67.

Rotated Component Matrix^a

	Component						
	1	2	3	4	5	6	7
EWL18R	.738						
EWL22R	.712						
EWL7R	.694						
EWL6	.635						
EWL31R	.615						
EWL9	.569						
EWL5R	.564						
EWL32R	.524	-.469					
EWL16		.733					
EWL33		.729					
EWL8		.729					
EWL17		.547					
EWL27			.687				
EWL11			.652				
EWL20			.624				
EWL3			.521				.407

Rotated Component Matrix^a

	Component						
	1	2	3	4	5	6	7
EWL21		.422	.461				
EWL14				.747			
EWL2				.654			
EWL15				.545			
EWL36R	.512				.582		
EWL35R	.519				.578		
EWL10					.547		
EWL13				.437	.528		
EWL19						.643	
EWL24R						.627	
EWL38						.621	
EWL1							.682
EWL34		.476					.570

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Appendix Thirty-five: Results of E-Work life scales by Principal Component Analysis runs (all items) by factors

a) Items sorted by Factors

E-Work Life Statements		RUN2 Varimax Factors All Correlations	RUN 3 Varimax Factors reduced Correlations
When e-working remotely I often think about work related problems outside of my normal working hours	EWL5 R	1	1
Constant access to work through e-working is very tiring	EWL7 R	1	1
When e-working from home I do not know when to switch off/put work down so that I can rest	EWL18R	1	1
My family dislike how often I am preoccupied with my e-working whilst I am at home	EWL22R	1	1
I am highly motivated to work past normal work hours when e-working	EWL32R	1	1&2
My e-working takes up time that I would like to spend with my family/friends or on other non-work activities	EWL4 R	1	
I can completely balance my e-working with the rest of my life commitments	EWL9	2	1
I can manage my time well when e-working	EWL10	2	5
I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	EWL35R	2	1&5
My social life is poor when e-working remotely	EWL36R	2	1&5
I miss socialising in the office when e-working remotely	EWL37R	2	
My supervisor gives me total control over when and how I get my work completed when e-working	EWL11	3	3
My line manager allows me to flex my hours to meet my needs, providing all the work is completed.	EWL27	3	3
I trust my line manager to advise me if I am not effectively performing whilst e-working	EWL13	3	4&5
My line manager completely trusts me to manage my work effectively when I am e-working remotely	EWL12	3	
I have total control over when and how I get my work completed when e-working.	EWL29	3	
When e-working I can concentrate better on my work tasks	EWL8	4	2
E-working makes me more effective to deliver against my key objectives and deliverables	EWL16	4	2

		RUN2 Varimax Factors All Correlations	RUN 3 Varimax Factors reduced Correlations
E-Work Life Statements			
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations	EWL17	4	2
My overall job productivity has increased by my ability to e-work remotely/from home	EWL33	4	2
I have adapted to e-working by developing suitable skills and behaviours	EWL34	4	7
My line manager discusses sympathetically any issues related to my non work when e-working.	EWL26	5	
My line manager is a good role model for me in terms of e-working	EWL28	5	
My line manager is a good role model for me in terms of work life balance	EWL30	5	
My organisation provides training in e-working skills and behaviours	EWL2	6	4
My organisation trusts me to be effective in my role when I e-work remotely	EWL14	6	4
I trust my organisation to provide good e-working facilities to allow me to e-work effectively	EWL15	6	4
Having flexible hours when e-working allows me to integrate my work and non-work life	EWL3	7	3
When e-working remotely I often think about family related and/or non work related problems	EWL24R	7	6
E-working has a positive affect on other roles in my non-working life	EWL21	7	2&3
Commuting to work increases my stress	EWL39	7	
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted	EWL19	8	6
I can arrange for childcare/support to look after my dependants when I am e-working	EWL23	8	
I know how to socialise using technology	EWL38	9	6
I do not need to gain permission from my line manager before I can e-work from home	EWL25	9	
I am happy with my work life balance when e-working remotely	EWL6	1&2	1
I feel that work demands are much higher when I am e-working remotely	EWL31R	1&2	1
My work is so flexible I could easily take time off e-working remotely, if and when I want to	EWL20	3&7	3

E-Work Life Statements		RUN2 Varimax Factors All Correlations	RUN 3 Varimax Factors reduced Correlations
I know what it takes to be an effective e worker	EWL1		7

b) Factors sorted by dimensionality compared to predictions (all items)

E-Work Life Statements		RUN2 Varimax Factors All measures	RUN 3 Varimax Factors with reduced measures	Predicted prior to analysis by dimension s number	Dimension
I can manage my time well when e-working	EWL10	2	5	1	E-Working effectiveness
I have adapted to e-working by developing suitable skills and behaviours	EWL34	4	7	1	
My organisation provides training in e-working skills and behaviours	EWL2	6	4	1	
I know what it takes to be an effective e worker	EWL1		7	1	
I can completely balance my e-working with the rest of my life commitments	EWL9	2	1	2	Work life integration
Having flexible hours when e-working allows me to integrate my work and non-work life	EWL3	7	3	2	
I am happy with my work life balance when e-working remotely	EWL6	1&2	1	2	
My work is so flexible I could easily take time off e-working remotely, if and when I want to	EWL20	3&7	3	2	
E-working has a positive affect on other roles in my non-working life	EWL21	7	2&3	3	Role management/conflict
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted	EWL19	8	6	3	

E-Work Life Statements		RUN2 Varimax Factors All measures	RUN 3 Varimax Factors with reduced measures	Predicted prior to analysis by dimension s number	Dimension
I can arrange for childcare/support to look after my dependants when I am e-working	EWL23	8		3	
When e-working remotely I often think about work related problems outside of my normal working hours	EWL5R	1	1	4	Managing Boundaries
My family dislike how often I am preoccupied with my e-working whilst I am at home	EWL22R	1	1	4	
My e-working takes up time that I would like to spend with my family/friends or on other non-work activities	EWL4R	1		4	
I am overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time	EWL35R	2	1&5	4	
When e-working remotely I often think about family related and/or non work related problems	EWL24R	7	6	4	
Constant access to work through e-working is very tiring	EWL7R	1	1	5	E-well being
When e-working from home I do not know when to switch off/put work down so that I can rest	EWL18R	1	1	5	
I am highly motivated to work past normal work hours when e-working	EWL32R	1	1&2	5	
My social life is poor when e-working remotely	EWL36R	2	1&5	5	
I miss socialising in the office when e-working remotely	EWL37R	2		5	
I have total control over when and how I get my work completed when e-working.	EWL29	3		5	
Commuting to work increases my stress	EWL39	7		5	
I know how to socialise using technology	EWL38	9	6	5	

E-Work Life Statements		RUN2 Varimax Factors All measures	RUN 3 Varimax Factors with reduced measures	Predicted prior to analysis by dimension s number	Dimension
I feel that work demands are much higher when I am e-working remotely	EWL31R	1&2	1	5	
When e-working I can concentrate better on my work tasks	EWL8	4	2	6	
E-working makes me more effective to deliver against my key objectives and deliverables	EWL16	4	2	6	E-job effectiveness
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations	EWL17	4	2	6	
My overall job productivity has increased by my ability to e-work remotely/from home	EWL33	4	2	6	
My supervisor gives me total control over when and how I get my work completed when e-working	EWL11	3	3	7	Management Style
My line manager allows me to flex my hours to meet my needs, providing all the work is completed.	EWL27	3	3	7	
My line manager discusses sympathetically any issues related to my non work when e-working.	EWL26	5		7	
My line manager is a good role model for me in terms of e-working	EWL28	5		7	
My line manager is a good role model for me in terms of work life balance	EWL30	5		7	
I trust my line manager to advise me if I am not effectively performing whilst e-working	EWL13	3	4&5	8	Trust
My line manager completely trusts me to manage my work effectively when I am e-working remotely	EWL12	3		8	
My organisation trusts me to be effective in my role when I e-work remotely	EWL14	6	4	8	
I trust my organisation to provide good e-working facilities to allow me	EWL15	6	4	8	

E-Work Life Statements		RUN2 Varimax Factors All measure s	RUN 3 Varimax Factors with reduced measur es	Predicted prior to analysis by dimension s number	Dimension
to e-work effectively					
I do not need to gain permission from my line manager before I can e-work from home	EWL25	9		8	

Appendix Thirty-six: Cronbach's alpha, reliability results for E-Work life scale items

Run 2 – PCA removals

The results found number of cases 99 and the N=29 (minus the 10 EWL statements) with Cronbach's Alphas higher than 0.8 for all statements.

Case Processing Summary

		N	%
Cases	Valid	99	39.6
	Excluded ^a	151	60.4
	Total	250	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.875	29

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EWL1	67.36	172.846	.405	.872
EWL2	65.73	169.915	.298	.875
EWL3	67.47	171.905	.338	.873
EWL6	67.01	161.541	.684	.865
EWL8	67.12	172.801	.277	.875
EWL9	66.76	159.043	.723	.863
EWL10	67.18	163.824	.735	.865
EWL11	67.13	166.707	.414	.872
EWL13	67.27	169.751	.409	.872
EWL14	67.43	173.003	.310	.874
EWL15	66.77	165.629	.501	.869

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EWL16	67.36	174.479	.261	.875
EWL17	67.46	172.149	.414	.872
EWL19	66.66	168.411	.350	.874
EWL20	66.33	172.959	.223	.877
EWL21	67.03	162.866	.699	.865
EWL27	67.20	169.755	.436	.871
EWL33	67.13	174.401	.230	.875
EWL34	67.11	170.467	.448	.871
EWL38	66.82	171.722	.298	.874
EWL5R	65.39	172.772	.254	.875
EWL7R	66.44	163.576	.577	.867
EWL18R	66.44	164.372	.470	.870
EWL22R	66.73	164.629	.512	.869
EWL24R	66.59	173.653	.216	.876
EWL31R	66.54	170.741	.302	.874
EWL32R	65.64	178.295	.031	.881
EWL35R	66.88	162.046	.671	.865
EWL36R	66.94	162.058	.630	.866

Results run 3 – All removals

The eleven identified items have been removed and all of the results show high enough levels at Cronbach's alpha at above .8, which means no further items are identified for further reduction from the scales at this time.

Case Processing Summary

		N	%
Cases	Valid	102	40.8
	Excluded ^a	148	59.2
	Total	250	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.851	28

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EWL1	65.87	145.657	.388	.847
EWL2	64.26	142.315	.309	.849
EWL3	65.98	144.990	.315	.848
EWL6	65.52	134.628	.692	.836
EWL8	65.59	144.799	.286	.849
EWL10	65.70	137.323	.721	.838
EWL11	65.64	139.481	.425	.845
EWL13	65.77	142.256	.422	.845
EWL14	65.94	145.402	.316	.848
EWL15	65.28	138.542	.502	.842
EWL16	65.87	146.073	.300	.849

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EWL17	65.96	144.474	.407	.846
EWL19	65.15	141.414	.331	.849
EWL20	64.89	145.919	.197	.853
EWL21	65.54	135.894	.693	.837
EWL27	65.72	142.047	.457	.845
EWL30	64.80	144.199	.260	.851
EWL33	65.62	145.625	.269	.850
EWL34	65.60	142.045	.487	.844
EWL38	65.35	144.349	.294	.849
EWL4R	64.95	139.255	.412	.846
EWL5R	63.92	144.113	.300	.849
EWL7R	64.97	136.781	.566	.840
EWL18R	64.94	137.224	.473	.843
EWL24R	65.10	146.565	.192	.852
EWL31R	65.05	143.809	.290	.849
EWL32R	64.14	151.743	-.027	.860
EWL36R	65.46	137.063	.569	.840

Appendix Thirty-seven: E-work Life Scales – with items removed highlighted after analysis

E-Work life items	Ref
I know what it takes to be an effective e worker	EWL1
My organisation provides training in e-working skills and behaviours	EWL2
Having flexible hours when e-working allows me to integrate my work and non-work life	EWL3
My e-working does not take up time that I would like to spend with my family/friends or on other non-work activities	EWL4R
When e-working remotely I do not often think about work related problems outside of my normal working hours	EWL5R
I am happy with my work life balance when e-working remotely	EWL6
Constant access to work through e-working is not very tiring	EWL7R
When e-working I can concentrate better on my work tasks	EWL8
<i>I can completely balance my e-working with the rest of my life commitments</i>	EWL9
I can manage my time well when e-working	EWL10
My supervisor gives me total control over when and how I get my work completed when e-working	EWL11
<i>My line manager completely trusts me to manage my work effectively when I am e-working remotely</i>	EWL12
I trust my line manager to advise me if I am not effectively performing whilst e-working	EWL13
My organisation trusts me to be effective in my role when I e-work remotely	EWL14
I trust my organisation to provide good e-working facilities to allow me to e-work effectively	EWL15
E-working makes me more effective to deliver against my key objectives and deliverables	EWL16
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations	EWL17
When e-working from home I do not know when to switch off/put work down so that I can rest	EWL18R
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted	EWL19
My work is so flexible I could easily take time off e-working remotely, if and when I want to	EWL20
E-working has a positive affect on other roles in my non-working life	EWL21
<i>My family do not dislike how often I am preoccupied with my e-working whilst I am at home</i>	EWL22R
<i>I can arrange for childcare/support to look after my dependants when I am e-working</i>	EWL23
When e-working remotely I often do not think about family related and/or non work related problems	EWL24R
<i>I do not need to gain permission from my line manager before I can e-work from home</i>	EWL25
<i>My line manager discusses sympathetically any issues related to my</i>	EWL26

E-Work life items	Ref
<i>non work when e-working</i>	
My line manager allows me to flex my hours to meet my needs, providing all the work is completed	EWL27
<i>My line manager is a good role model for me in terms of e-working</i>	<i>EWL28</i>
<i>I have total control over when and how I get my work completed when e-working</i>	<i>EWL29</i>
My line manager is a good role model for me in terms of e-work life balance	EWL30
I do not feel that work demands are much higher when I am e-working remotely	EWL31R
I am not highly motivated to work past normal work hours when e-working	EWL32R
My overall job productivity has increased by my ability to e-work remotely/from home	EWL33
I have adapted to e-working by developing suitable skills and behaviours	EWL34
<i>I am not overloaded when I e-work remotely as I try to manage non-work responsibilities at the same time</i>	<i>EWL35R</i>
My social life is not poor when e-working remotely	EWL36R
<i>I do not miss socialising in the office when e-working remotely</i>	<i>EWL37R</i>
I know how to socialise using technology	EWL38
<i>Commuting to work increases my stress</i>	<i>EWL39</i>

Note: The measures that have been removed via the analysis processes are highlighted in italics/bold

Appendix Thirty-eight: Final version of E-Work life scale

E-Work life measures	No.	Ref
I know what it takes to be an effective e worker	1	EWL1
My organisation provides training in e-working skills and behaviours	2	EWL2
Having flexible hours when e-working allows me to integrate my work and non-work life	3	EWL3
My e-working does not take up time that I would like to spend with my family/friends or on other non-work activities	4	EWL4R
When e-working remotely I do not often think about work related problems outside of my normal working hours	5	EWL5R
I am happy with my work life balance when e-working remotely	6	EWL6
Constant access to work through e-working is not very tiring	7	EWL7R
When e-working I can concentrate better on my work tasks	8	EWL8
I can manage my time well when e-working	9	EWL10
My supervisor gives me total control over when and how I get my work completed when e-working	10	EWL11
I trust my line manager to advise me if I am not effectively performing whilst e-working	11	EWL13
My organisation trusts me to be effective in my role when I e-work remotely	12	EWL14
I trust my organisation to provide good e-working facilities to allow me to e-work effectively	13	EWL15
E-working makes me more effective to deliver against my key objectives and deliverables	14	EWL16
If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality expectations	15	EWL17
When e-working from home I do not know when to switch off/put work down so that I can rest	16	EWL18R
My children/family/friends understand that when I am e-working remotely from home I should not usually be interrupted	17	EWL19
My work is so flexible I could easily take time off e-working remotely, if and when I want to	18	EWL20
E-working has a positive affect on other roles in my non-working life	19	EWL21
When e-working remotely I often do not think about family related and/or non work related problems	20	EWL24R
My line manager allows me to flex my hours to meet my needs, providing all the work is completed	21	EWL27
My line manager is a good role model for me in terms of e-work life-balance	22	EWL30
I do not feel that work demands are much higher when I am e-working remotely	23	EWL31R

E-Work life meaures	No.	Ref
I am not highly motivated to work past normal work hours when e-working	24	EWL32R
My overall job productivity has increased by my ability to e-work remotely/from home	25	EWL33
I have adapted to e-working by developing suitable skills and behaviours	26	EWL34
My social life is not poor when e-working remotely	27	EWL36R
I know how to socialise using technology	28	EWL38

Appendix Thirty-nine: Descriptions of the eight E-Work life Dimensions

1. *E-working Effectiveness (High scores indicate a highly effective and well developed e-worker, whilst low scores show a less effective, undeveloped e-worker). This is defined as using their skills and competencies, including self management to be an effective e-worker. See e-worker typology for more details of an effective e-worker.*
2. *Work Life Integration (High scores show that work and non work life is well integrated, low scores indicates poor integration of work and non-work life). This is defined as the ability to integrate work and non work demands effectively. Poor work life integration may lead to problems on other dimensions such as e-well being.*
3. *Role Management/Conflict (High scores indicate a good management of multiple work/life roles, low scores poor management of multiple work/life roles). This is defined as being able to switch effectively between the different roles required, eg. parent, worker, carer etc.*
4. *Managing Boundaries (High scores relate to poor management of boundaries between work and non-work activities (overspill), low scores indicate good boundary management between work and non-work activities (less overspill). This relates to being able to switch effectively between work and non work activities in doing this setting clear boundaries eg. for family members when e-working, or for work when completing non work tasks.*
5. *E-Well Being (High scores indicate greater e-well being (using positive aspects of e-working), whilst lower scores indicate poorer e-well being (affected by negative aspects of e-working). This is defined as being able to positively manage health and wellness issues whilst e-working, eg. taking effective breaks, exercising, social activities, time out for respite from e-working etc.*
6. *E-Job Effectiveness (High scores indicates high e-job effectiveness, whilst low scores indicate lower e-job effectiveness). This relates to performing well as an e-worker, having appropriate technology and setting clear goals and targets to achieve a high work performance.*
7. *Management Style (High scores indicate a highly effective management style showing a good role model, whilst low scores less effective and probably not a role model). This is defined by the e-worker in relation to how they perceive effective management skills. For example, the way in which a line manager or supervisor manages an e-worker by using management practices and communicates with the team.*
8. *Trust (High scores show a high degree of trust from supervisors and/or the organisation, whilst low scores indicate low trust from supervisors and/or the organisation). This is defined as the level of autonomy and responsibility afforded to the individuals whilst e-working.*

Appendix Forty: Copy of intervention interview proforma (Phase three)

Intervention Interview (Phase Three)

Dear E-worker,

Thank you for agreeing to take part in this study. I am currently undertaking research at Coventry University for my PhD and would appreciate your help with my studies.

The overall aim of my PhD research is to develop work life balance measures that can be used specifically in the context of e-working. Work life balance is usually defined as the interaction between work and non-work activities, whilst e-working and it's associated work practices usually relates to the use of technology to work at an off site location. The E-Work life scales have now been developed and this final part of the study reviews potential interventions. Recommendations to help improve E-work life in relation to e-working and e-working practices can then be identified and developed. The measures are versatile and can be used across most types of organisations and differing job roles.

Your participation in this final part of the study will help to evolve and clarify the measures and their respective interventions. This is a very important part of this research as it is necessary to understand what e-working is and how this interacts with our work life balance.

Christine Grant C.Psychol
Occupational Psychologist

This interview should take around 30-40 minutes to complete and involves generating new ideas for interventions and prioritising recommendations for new e-workers. The interview will be recorded. The information through this interview will be kept securely, anonymised for the study and all details will remain confidential to the research. Selected quotes may be used for the research. No individuals or organisations will be named without their written consent. The data will be used purely for this PhD research.

1. About You:

This section will be used to collect demographic information.

Your name?

(may be anonymous)

Gender ?

Male Female

What is your marital status ?

Single Married Co-habiting

Other please specify

Would you mind telling me how old you are ?

How many dependant children do you have ?

None 1 2 3 4 or more

How many elderly dependants do you take care of on a daily basis ?

None 1 2 3 4 or more

Which sector do you work in ?

Public Private Voluntary Self Employed

Not Applicable Other, please specify.....

Your job type ?

Professional Executive/Senior Manager Supervisor/Line Managerial

Administrative

Other, please specify.....

On what basis are you employed ?

Part time less than 21 hours Full time Full time student
 Part time more than 21 hours Unemployed Part time student

Other, please specify.....

2. Your Role

- 1.1 What is your role or position within the organisation?
- 1.2 Do you manage anyone ? if so, how large is your team?
- 1.3 Are you managed directly by anyone ?

3. E-Work- life experience

3.1 How long have you been an e-worker (actual years)?

3.2 To gain a pre-assessment of an e-workers E-Work life – the first step would be to quickly assess their current perception. This would then be followed by a full assessment using the E-Work life measures.

Can you now use the following scales and mark where you would you judge yourself to be?

3.2.1 E-Working skills and behaviours

0 _____ 1 _____ 2 _____ 3 _____ 4 _____ 5

Un-developed

Satisfactory

Well Developed

(need to develop skills/behaviours) (some skills/behaviors but would like to develop more) (all skills and behaviors no development areas)

3.2.2 Your Work life balance

0 _____ 1 _____ 2 _____ 3 _____ 4 _____ 5

Poor

Satisfactory

Good

(unmanageable would like to improve) (managed but with some areas to improve) (well managed with few areas to improve)

3.2.3 Access to appropriate technology and support to work remotely

0 _____ 1 _____ 2 _____ 3 _____ 4 _____ 5

Poor

Satisfactory

Good

(old technology, poor support, little to new) (Some support and new technology) and good support)

(New technology)

Together these scores give a simple estimation of your E-Work life.

3.3 In your experience what assistance would you provide a new e-worker in order to be effective in managing work remotely and their non-work lives?

- a) as an individual e-worker
- b) from line management
- c) support from the organisation?

3.4 How much do you consider access to new and developing technologies as important to being an effective e-worker?

3.5 Could you read the classification below?

Are there any points you would add?

If so, what would these be and why?

E-worker – classification

Undeveloped or novice e-worker	
E-working skills & Experience	<ul style="list-style-type: none"> • Does not have appropriate technology available • Does not fully utilise technology that is available • Poor e-working practices • Ineffective when working off site • None or very little feedback from supervisor on how to improve • Un-trusted e-worker
Behavioural Competencies	<ul style="list-style-type: none"> • Unable to control own work load • Work flexibly but allows work to spill over into other life commitments • Does not manage time effectively • Does not have self discipline or motivation to work alone • Is a poor communicator when e-working • Has poor organisational skills
Outcomes	<ul style="list-style-type: none"> • Has poor work life integration • Is monitored to e-work by supervisor • Family/friends are not supportive when e-working • Has poor relationships outside of work • High stress levels and poor well being (high absenteeism) • Poor social life

Developed or expert e-worker	
E-working skills & Experience	<ul style="list-style-type: none"> • Fully utilises technology • Has appropriate technology available • Good e-working practices • Effective when working off site • Feedback from supervisor on productivity • Trusted e-worker
Behavioural Competencies	<ul style="list-style-type: none"> • Controls own work load well • Works flexibly, work does not spill over into other life commitments • Manages time effectively • Self motivated and self disciplined to work alone • Communicates well when e-working • Is well organised
Outcomes	<ul style="list-style-type: none"> • Has good work life integration • Is completely trusted by supervisor • Family/Friends are supportive when e-working • Has good relationships outside of work • Low stress levels and good well being (low absenteeism) • Good social life

3.6 Do you have any further comments to add before we move on?

4. Proposed E-Work life interventions

We are interested in your views\ of how to enable people to E work effectively. I am now going to ask you a series of open questions.

4.1 How has your organisation enabled you to be an effective e-worker?

Is there anything they could do better to support e-workers?

4.2 Can you describe the way you have organised yourself to be an effective e-worker?

(PROMPTS only – What coping strategies do you use (eg. compartmentalising work and home life)? How do you ensure that your work life balance is maintained? Do you consider the health and social aspects of e-working?)

4.3 Do you manage e-workers, if so, what processes do you put in place to:

- a) ensure they are effective e-workers?
- b) provide appropriate facilities?
- c) continue to monitor/measure their e-working effectiveness?

4.4 Do you have responsibility for policies in your organisation ?

If so, can you advise how you have developed policies for work life balance/e-working?

If not, are you satisfied that the polices cover you e-working ?

4.5 Now I would like you to take part in the sorting of the actions/recommendation for new e-workers. Pass to them the instructions. At this stage you can also add in any new ideas they have given through the interview. Undertake card sort.

5. Other comments

- 5.1 Do you have any other comments you would like to add/discuss regarding this study?

Thank you very much for taking part a short report will be available upon request after this stage of the study.

Appendix Forty-one: E-Work life intervention cards, research protocol and participant instructions (phase three)

Script:

I am going to ask you to sort three piles of cards.

The first pile is about actions that you could do to improve e-working as individual the second as a supervisor and the third at an organisational level.

There is no time limit to this task and if you want to add in other actions then we can write these down on the spare cards and you can sort these.

The idea is to sort these from high to low order in terms of priority.

You can stop at any time, ask me questions and clarify statements on the cards as you go along.

Once you have completed the task please let me know. I will then use a grid to record the question no. against your chosen priority.

The ‘Individual’: Considering your own experience I am going to ask you to consider strategies that might help you and others like you to e-work effectively

Supervisory: what do you think a line manager or supervisor could do to assist in e-working effectively?

The organisation – what do you think your organisation can do to support your e-working effectively?

List of interventions by Dimensions and by level

Dimension (this will not be on the card – for researcher only)	Individual
<i>E-working Effectiveness</i>	Undertake training to acquire e-working skills and competencies (IEWE1) Seek reflective practice through feedback from line manager (IEWE2) Practice good self discipline in working hours (IEWE3)
<i>Work Life Integration</i>	Request flexible working patterns (IWL1) Manage boundaries between work/non work commitments to reduce impact

Dimension (this will not be on the card – for researcher only)	Individual
	(IWL12) Provide yourself with a suitable working environment (designated space, chair etc.) (IWL13)
<i>Role Management/Conflict</i>	Ensure your non-work roles do not conflict with effective e-working (IRM1) Review work/non work commitments as life circumstances change (IRM2) Ensure your line manager is informed of any problems/stresses that may affect your e-working (IRM3)
<i>Managing Boundaries</i>	Seek to ensure boundaries between your work and home life are not conflicting (IMB1) Make family and friends aware that when working interruptions should be minimal (IMB2)
<i>E-Well Being</i>	Report early signs of stress and strain to line-manager when e-working (IEWB1) Know your limits and when to switch off from e-working (IEWB2) Ensure that you take regular breaks when e-working as you would in the office (IEWB3)
<i>E-Job Effectiveness</i>	Keep track of outputs against work requirements (IEJE1) Ensure work load is achievable (IEJE2)
<i>Management Style</i>	Manage working hours (IMS1) Ensure management are aware of any extra hours required and they agree these are required (IMS2)
<i>Trust</i>	Engender trust by delivering against objectives and requirements (IT1) Keep well organised when e-working (IT2) Be available for work communications when required/expected (IT3)

Dimension	Supervisory
<i>E-working Effectiveness</i>	Ensure new e-workers undertake specific training to acquire e-working competencies and skills (SEWE1) Set check points with e-workers to assess productivity and deliverables (SEWE2)

Dimension	Supervisory
	Address e-worker's under performance and reward good performance (SEWE3)
<i>Work Life Integration</i>	<p>Provide flexible arrangements for individuals but ensure team is balanced according to work requirements (SWLI1)</p> <p>Use e-worker exemplars to mentor new e-workers (SWLI2)</p> <p>Discuss non-work issues that may affect productivity as they arise with e-workers (SWLI3)</p>
<i>Role Management/Conflict</i>	<p>Discuss with e-worker balance of non-work to work roles (SRM1)</p> <p>When appropriate consult with e-workers about the stress and strain of working to a number of differing and sometimes conflicting roles (SRM2)</p> <p>Measure e-workers absenteeism, this may be related to hidden ill health due to e-working (SRM3)</p>
<i>Managing Boundaries</i>	<p>Consult with employee to ensure they have ergonomic and safe facilities at the remote working location (SMB1)</p> <p>Advise e-workers that they need to be contactable during specific core work hours (SMB2)</p>
<i>E-Well Being</i>	<p>Monitor stress levels and consider psychological effects that may not be obvious (SEWB1)</p> <p>Review work patterns of staff regularly to ensure over/under work is detected (SEWB2)</p>
<i>E-Job Effectiveness</i>	<p>Regularly measure productivity of e-workers (SEJE1)</p> <p>Ensure office based employees are not over or under worked due to those e-working (SEJE2)</p> <p>Provide review periods so that e-working can be assessed in context of whole team (SEJE3)</p>
<i>Management Style</i>	<p>Be a good role model for e-working (SMS1)</p> <p>Be a role model for work life balance (SMS2)</p> <p>If extra hours or work is required ensure e-worker has required support (SMS3)</p>
<i>Trust</i>	<p>Ensure that e-workers understand what, when, how they need to deliver and to appropriate quality expected (ST1)</p> <p>Ensure staff are able to discuss any issues related to e-working with you (ST2)</p>

Dimension	Supervisory

Dimension	Organisation
<i>E-working Effectiveness</i>	<p>Provide training for all new e-workers and refreshers for existing ones (OEWE1)</p> <p>Provide training for line managers to manage e-workers (OEWE2)</p> <p>Ensure there is parity and fairness for those not e-working (OEWE3)</p>
<i>Work Life Integration</i>	Provide E-Work life polices and resources for flexible/e-working options (OWL1)
<i>Role Management/Conflict</i>	<p>Review absenteeism of e-workers vs. non-workers. Consider that e-workers may not be reporting sickness and that this may impact their health and productivity (ORM1)</p> <p>Ensure line managers are trained to spot situations and changes in non-work circumstances that may affect e-working as they arise (ORM2)</p>
<i>Managing Boundaries</i>	<p>Provide policy on e-working requirements eg. core hours, expectations etc. (OMB1)</p> <p>Ensure all employees understand the need to communicate and be available as would be expected from working in an office environment (OMB2)</p>
<i>E-Well Being</i>	<p>Ensure line managers consider e-workers work loads and these are not over or under loaded (OEWB1)</p> <p>Provide health/fitness related facilities and counselling services (OEWB2)</p>
<i>E-Job Effectiveness</i>	<p>Measure E-Work life to ensure employees are productive, healthy and address any issues arising (OEJE1)</p> <p>Ensure adequate e-working technology and support is provided and maintained (OEJE2)</p> <p>Identify new technologies which may support better e-working (OEJE3)</p>
<i>Management Style</i>	Ensure training for line managers in managing 'virtual' workers (OMS1)
<i>Trust</i>	<p>Encourage a culture of trust that is based on outputs and productivity as opposed to presenteeism (OT1)</p> <p>Trust managers to develop e-workers (OT2)</p>

Protocol for Researcher

- Sort cards into the three piles (individual, supervisory and organisation) and ensure they are randomly sorted within the pile. Advise the participant there are three piles of cards and that each pile will be taken and sorted separately. Each

- pile will be named: individual, supervisory and organisational and the definition of each explained fully before the sorting commences.
2. The researcher should explain why a sorting method is being used (ie. to find the most important interventions) and what this process will add to the research.
 3. Pass interviewee the cards one batch at a time and the instructions.
 4. Ask interviewee to sort in terms of priority order according to their own views. Ask the participant to sort from high to low priority.
 5. At this point new items maybe generated (written on spare cards) and added to the prioritised pile in order (if there are many new ideas it may be better to add in prior to sorting).
 6. Once all three piles are sorted, ensure these are kept in order.
 7. Write up results and prioritisation order for participant.
 8. Complete recording and transcribe.

Instructions to participants – to be read before the sorting commences

1. **Please take the first pile of cards (passed to you by the researcher) and read the cards. There will be three piles of cards to sort: the individual, supervisory and organisational.**
2. **Check for any areas of understanding, either on the cards or with the process.**
3. **Sort the cards from high to low priority. Keep the cards in this order and pass to the researcher.**
4. **This will be repeated until all three piles have been sorted in priority order.**
5. **At this stage if you wish to add in any new ideas then advise the researcher and you can also sort these into the pile.**
6. **The sorting exercise is then completed. The researcher will record the order of your cards.**

E-Work life Sort card Priority list to completed by researcher (a separate list was used for each level)

Individual/supervisory/Organisational	
Priority	Card Number
1	
2	

3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	

Appendix Forty-two – Ethics Approval Forms

a) Phase one

COVENTRY UNIVERSITY ETHICS COMMITTEE (Form 1)

POSTGRADUATE STUDENT & STAFF APPLICATION FOR ETHICAL APPROVAL

Name: Christine Grant
christine.grant@dsl.pipex.com

E-mail:

Designation / Subject & Faculty

Psychology/ Faculty of Health and Life Sciences

Title of Study

The development of 'actionable' work-life balance scales and their relationship to job performance and well-being in the context of e-working

1. Summary of proposal

The aim of this research is to develop work life balance (wlb) scales that can be specifically used in the context of e-working.

The objectives for this project are to:

1. Devise e-wlb scales that are 'actionable', ie. actions that can be interpreted as clear interventions to aid individuals and organisations (MPhil).
2. Test the scales for internal structure, validity and reliability. (MPhil)
3. Ensure the scales meet the criterion validity for the study. (MPhil)
4. Utilise the scales to investigate potential associations between e-working, wlb, well-being and job performance (PhD).

This research is split into three distinct phases. Phases one and two of the research will use the classical method of scale development to devise the e-wlb measures. The third and final phase of the study will use survey methods to look for associations between the newly developed e-wlb scales, health and job performance. Existing scales will be used to measure job performance and well-being, these will be identified as part of phase three.



2. Sample of participants

Phase	Participants	Materials
Phase one	N=6-10 interviews with e-workers Panel of subject matter experts N=5-10 Sample of e-workers with diverse e-working practices and appropriate wlb criteria (N=300).	Semi-structured interview. Workshop/s or by interview. e-survey techniques.
Phase Two	Sample as above. (N=300)	e-survey techniques.
Phase Three	Sample as above. (N=300)	e-survey techniques.

3. Site/s location

The collection of data will be conducted at a range of non healthcare organisations some of which will include the use of e-working practices.

<i>Tick / Cross. *Where answered 'NO', please give reasons on separate page.</i>	Yes	No*
4. Scientific background, design, method and conduct of the study. a) Have you given a justification for the research? b) Have you commented on the appropriateness of the design, the perceived benefits, risks and inconveniences to participants?	✓	
5. Recruitment of participants. Have you provided a comprehensive account of the characteristics of the population including the process for obtaining access as well as the inclusion and exclusion criteria?	✓	
6. Care and protection of research participants and researcher. Have you given an account of any interventions, situations and risks which have the potential to cause harm to the participants and researchers?	✓	
7. Access, storage, security and protection of participants' confidentiality. Have you identified who will have access to the data and what measures have been taken to ensure confidentiality and compliance with the Data Protection Act?	✓	
8. Informed Consent. Have you given a full description of the process for requesting and obtaining informed consent?	✓	
9. Community considerations. Have you considered how this study will benefit the participants or the community from which they have been drawn?	✓	
10. Participant information Sheet and consent form. Are these attached?	✓	

11. Source of External Funding if any N/A		
Signature of student / staff 	Address 30 Alvington Way Market Harborough Leicestershire LE16 7NF	Date 7/2/07
Signature of Supervisor 	Professor Louise M Wallace, FBPsS Director, Health Behaviour & Health Service Management Interventions programmes Health & Lifestyles Interventions Research Centre Whitefriars Building, Coventry University Priority Street Coventry CV1 5FB Tel: 02476 888718	Date 7/2/07
Signature of Chair	<input type="radio"/> Approved. <input type="radio"/> Approved with the conditions below:	Date
Conditions / Comments:		

Please complete in full and return to: **Research Manager, CU Ethics Committee, Richard Crossman RCG17, Coventry University.**

This form should be accompanied by the full research study proposal, or the COREC form if applicable. Further help & information can be found on W / HLS / Student / Ethics or call Rhoda Morgan on 024 7679 5945, or e-mail r.morgan@coventry.ac.uk.

b) Ethics Approval for Phases Two and three

COVENTRY UNIVERSITY ETHICS COMMITTEE (Form 1)

POSTGRADUATE STUDENT & STAFF APPLICATION FOR ETHICAL APPROVAL

Name: Christine Grant christine.grant@dsl.pipex.com	E-mail:
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Designation / Subject & Faculty

Psychology/ Faculty of Health and Life Sciences

Title of Study

The development of 'actionable' work-life balance scales and their relationship to job effectiveness and well-being in the context of e-working.

Note: phase one has already been completed and granted ethical approval. Ethical approval is now sought for the final stage of phase one and phases two and three.

1. Summary of proposal

The aim of this research is to develop work life balance (wlb) scales that can be specifically used in the context of e-working.

The objectives for this project are to:

5. Devise e-wlb scales that are 'actionable', ie. actions that can be interpreted as clear interventions to aid individuals and organisations (MPhil).
6. Test the scales for internal structure, validity and reliability. (MPhil)
7. Ensure the scales meet the criterion validity for the study. (MPhil)
8. Utilise the scales to investigate potential associations between e-working, wlb, well-being and job effectiveness including suggested interventions (PhD).

This research is split into three distinct phases. Phases one and two of the research will use the classical method of scale development to devise the e-wlb measures. The third and final phase of the study will use survey methods to look for associations between the newly developed e-wlb scales, well being and job effectiveness. Existing scales will be used to measure well-being, these have been identified to collect data in phase two for use in phase three.



2. Sample of participants

Phase	Participants	Materials
Phase one	N=6-10 interviews with e-workers Panel of subject matter experts N=5-10 Sample of e-workers with diverse e-working practices and appropriate wlb criteria (N=20-30).	Semi-structured interviews completed. Completed. QSort.
Phase Two	Sample as above. (N=300)	Web-based e-survey techniques.
Phase Three	N= 10-20 exemplars in e-working	Semi-structured interviews.

3. Site/s location

The collection of data will be from a range of e-workers conversant with e-working practices from non healthcare organisations/individuals.

<i>Tick / Cross. *Where answered 'NO', please give reasons on separate page.</i>	Yes	No*
4. Scientific background, design, method and conduct of the study. a) Have you given a justification for the research? b) Have you commented on the appropriateness of the design, the perceived benefits, risks and inconveniences to participants?	✓ ✓	
5. Recruitment of participants. Have you provided a comprehensive account of the characteristics of the population including the process for obtaining access as well as the inclusion and exclusion criteria?	✓	
6. Care and protection of research participants and researcher. Have you given an account of any interventions, situations and risks which have the potential to cause harm to the participants and researchers?	✓	
7. Access, storage, security and protection of participants' confidentiality. Have you identified who will have access to the data and what measures have been taken to ensure confidentiality and compliance with the Data Protection Act?	✓	
8. Informed Consent. Have you given a full description of the process for requesting and obtaining informed consent?	✓	
9. Community considerations. Have you considered how this study will benefit the participants or the community from which they have been drawn?	✓	
10. Participant information Sheet and consent form. Are these attached?	✓	
11. Source of External Funding if any N/A		

Signature of student / staff 	Address 30 Alvington Way Market Harborough Leicestershire LE16 7NF	Date 19/5/08
Signature of Supervisor 	Professor Louise M Wallace, FBPsS Director, Health Behaviour & Health Service Management Interventions programmes Health & Lifestyles Interventions Research Centre Whitefriars Building, Coventry University Priory Street Coventry CV1 5FB Tel: 02476 888718	Date 19/5/08
Signature of Chair	<input type="radio"/> Approved. <input type="radio"/> Approved with the conditions below:	Date
Conditions / Comments:		

Please complete in full and return to: **Research Manager, CU Ethics Committee, Richard Crossman RCG17, Coventry University.**

This form should be accompanied by the full research study proposal, or the COREC form if applicable. Further help & information can be found on W / HLS / Student / Ethics or call Satwant Sandhu on 024 7679 5813, or e-mail s.sandhu@coventry.ac.uk.