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The Use of Internships as a Work Placement Option on Quantity Surveying Courses in Light of the Current Economic Downturn in the Irish Construction Industry

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 General Overview

The importance of work based learning as an integral component in the education of Quantity Surveyors in Ireland has been a much debated topic among educators in this field over the last forty years. Prior to the 1970's, education in this sector was governed by the Royal Institute of Chartered Surveyors (RICS), in conjunction with employers in the Quantity Surveying profession (RICS, 2013). Prospective candidates served an apprenticeship with a Quantity Surveying firm, and ultimately sat examinations set by the RICS. Having passed RICS examinations, they worked for a further period of twenty four months prior to undertaking the RICS test of professional competence (TPC), an in-office practical exam. Upon successful completion of the TPC, the candidate was conferred with the title: Chartered Quantity Surveyor. This system was radically changed in the 1970's with the commencement of third level diploma and degree courses in Quantity Surveying, replacing the work based apprenticeship mode (RICS, 2012). The Irish branch of the RICS, separated from the main body in 1992, under the new title, Society of Chartered Surveyors (SCS), in partnership with the RICS. The SCS was renamed the SCSI after an amalgamation with the IAVI in 2012 (SCSI, 2012).

Currently, the education of quantity surveyors is principally provided by the various institutes of technology throughout Ireland, in collaboration with the Society of Chartered Surveyors Ireland (SCSI), the professional institution which represents and regulates the quantity surveying profession (SCSI, 2012). The standard procedure for obtaining the title Chartered Quantity Surveyor involves students obtaining an SCSI accredited honours degree, level eight under the NQAI framework (NQAI, 2012). Following qualification, the candidate starts a specified period of at least twenty four months structured, supervised training, supplemented by relevant work experience, prior to undertaking an Assessment of Professional Competence (APC). Students must register with the SCSI, before commencing the APC process. Students may register for the APC during the final year of a part time course, or during a placement year on a full time course. Students on a work placement programme, therefore may obtain up to 12 months of their APC

requirement while attending college (SCSI, 2011). Consequently, this option is less expensive, and also provides probationers with the possibility of achieving chartered designation one year earlier than a full time educated counterpart (Cunningham, 2010)

1.2 Context and Rationale.

There was an unprecedented demand for quantity surveying services from the mid 1990's to 2006, mainly due to a rapidly expanding construction sector. The third level education sector responded to this demand by increasing the number, capacity and variety of quantity surveying courses throughout the state (Cunningham, 2010). Course choice for students was directed by a number of factors: most importantly accreditation by the SCSI, however other factors such as modes of delivery, location and work placement also play a major part. Many commentators acknowledge that employers have a preference for students with previous work experience over those devoid of that experience (Bennett, Eagle, Mousley, & Ali-Choudhury, 2008). Cunningham (2010) also points out that students on SCSI approved courses which include work placement modules may obtain up to twelve months of their structured training while undertaking these placements. This can result in probationers to the society achieving chartered designation one year earlier than graduates from courses devoid of these modules. The radical change in the economic fortunes of the construction industry from 2006 onwards sets the backdrop for challenging times facing third level institutions dealing with work placement in this sector.

This study places an emphasis on innovative solutions regarding work placement. When ministers of education met in Leuven in April 2009 to review progress on the Bologna process, they defined a series of high level objectives for the decade ahead from 2010 to 2020. One of these objectives centred on employability through work placements embedded in study programmes (McMahon, 2010). Employability of graduates is addressed by Auburn (2007) who advises that this must be a priority when designing a third level course. The current economic climate in Ireland makes this objective a challenging prospect with record levels of unemployment showing little sign of abatement. Traditional work placement modules may not prove flexible enough for employers in this climate where many of their other employees are being made redundant. Indeed resentment may present itself where students are employed to fulfil roles recently vacated due to redundancy. There is nothing new about having work

placement modules within undergraduate courses, however the current state of our economy is in unknown territory, and our modules and policies must adapt to deal with work placement within this context.

My professional background is in the Construction Industry, and no other sector has experienced such a monumental collapse (DKM, 2012). My particular interest in work placement centres around my lecturing commitments in Construction Economics and Management, on Quantity Surveying courses in DIT. We are currently attempting to address the absence of a work placement module on our flagship quantity surveying course. It is coincidental that this debate is being conducted while industrial output in this sector is in a state of meltdown. With this environment in mind, the challenge posed is to formulate a model which will reflect the current state of industry. This study applies new research in this area to design a work placement module for our quantity surveying students, incorporating the flexibilities necessary to accommodate the turbulent economic realities of today's construction industry. Traditional work placement may not be feasible over the next number of years due to financial constraints (Cunningham, 2010). There may also be ethical implications for students employed in roles, where redundancies have been imposed within those companies. This study investigates alternatives that may provide the same learning outcomes as traditional work placement modules.

This study discusses the background of work placement within the Quantity Surveying profession, investigating internships as a modus operandi for introducing work placement modules on Quantity Surveying courses, drawing on past experience from similar modules within the DIT. A literary review has been conducted on current literature surrounding internships and work placement in general to develop my understanding of the principles of that method, and how it can be used in the Quantity Surveying context. Literature by experts in this field such as Toohey (1999), Hager (1999) and Boud and Soloman (2001) on the learning theories behind work place learning are explored.

The course chosen as the focus of this research has an excellent reputation within the construction industry for producing high calibre students, who are well versed in all aspects of the Quantity Surveying profession. The absence of a work placement module, however is becoming more questionable due to feedback from graduates in their quest to source employment. Hunt (2011) advises that students should be exposed to work place experience to

enhance employability. This is reinforced by Daore-Pool and Sewell (2007) who find that employers want graduates with relevant experience.

However there has been an on-going debate within our school on whether a work placement requirement should be introduced into the course. This topic has been an area of hot debate among lecturers, with views polarized on the merits of such a change.

The main opposition to the introduction of a work placement module, forwarded by colleagues in the school are supported by the following documentation:

- The course has been highly successful over the years, so why now? (DIT internal records detail student numbers at levels between 35 and 50 over the last twenty years.)
- The collapse of the construction industry will make it extremely difficult to find willing participant companies. (Hannock, 2011)
- Students on work placements are in many cases left with menial tasks which don't add to their learning experience. (Auburn, 2007)

Those colleagues in favour of work placement use the following points, also supported by documentation on the subject:

- External Examiners have suggested that this would be a positive addition. (External Examiners report, June 2012.)
- Industry has indicated that they would support the introduction of this type of module. (Russell, 2004)
- Students are generally in favour of work placement (Hager, 2000).
- RICS/ SCSI have expressed concerns over the absence of a work placement module. (SCSI, 2011)

Although there is some opposition to introducing a work placement module, the points in its favour are convincing, however they must be reinforced with relevant up to date research. If we are truly committed to fully implementing Bologna directives, the introduction of this type of module is inevitable (McMahon, 2010). The challenge lies in the composition of that module.

1.3 Aim of the Research and Research Objectives.

The overall aim of this thesis is to research the use of internships as a work placement option, with particular emphasis on quantity surveying courses. Although this is the core aim guiding this research, it is necessary to identify a number of objectives which must be achieved in the process of achieving the overall aim.

My objectives are as follows:

- Discuss the main issues, benefits, and problems relating to work placement as a mode of learning.
- Examine current models of work placement on quantity surveying courses as they exist in Ireland at present, highlighting difficulties being experienced due to the current economic climate.
- Research the use of internships as a work placement option. Investigate how internships may function from both the employers and students point of view.
- Determine the issues, benefits, and problems relating to the use of work placement modules, with a particular emphasis on internships.
- Based on research findings, design a work placement module for a specific quantity surveying degree course.

This research delivers an end product in the form of a work placement module descriptor, which has been presented to the course programme committee for their review. The implementation of the module descriptor will be at the programme committee's discretion; however constructive debate can be initiated based on research findings in this thesis.

My overall research question which is addressed in this thesis is as follows:

Can internships be considered as a viable work placement option on quantity surveying courses in light of the current economic state of the construction industry?

This research question is supplemented by a number of related sub questions:

What difficulties are currently being experienced by third level institutions offering work placement modules on construction related courses?

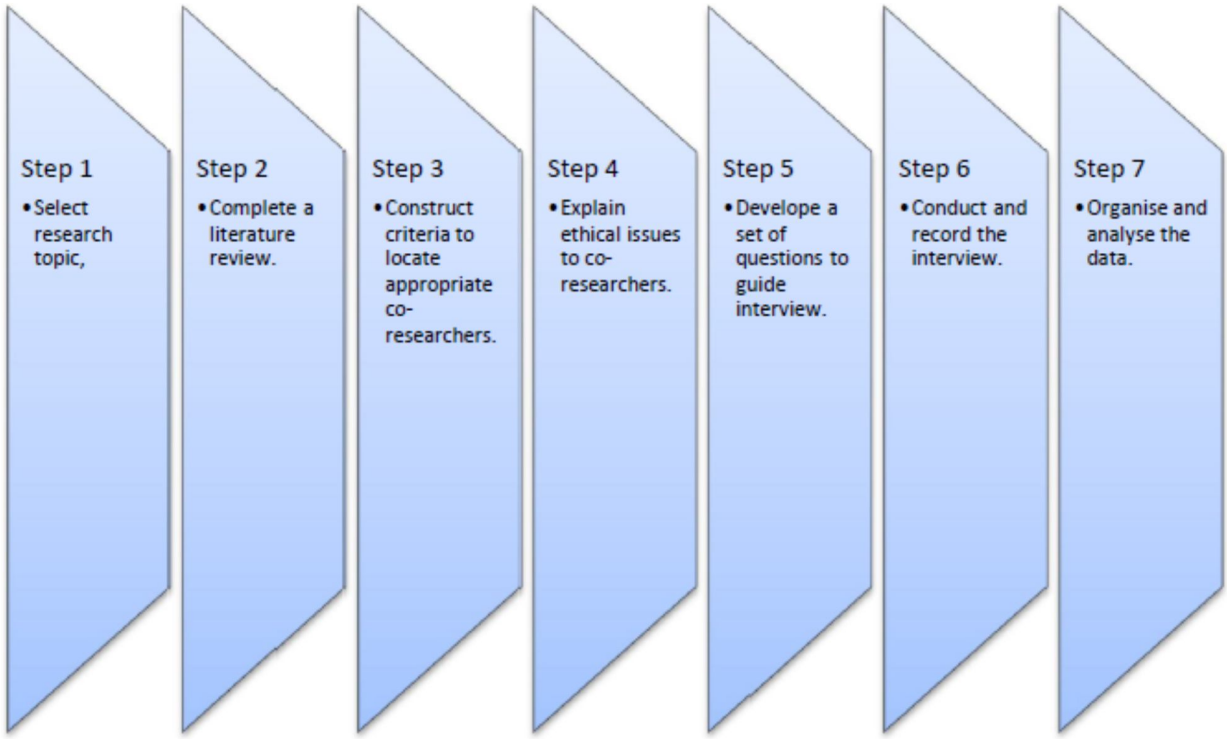
Do employers in the construction industry embrace this type of work placement model?

What are the main benefits for students, employers, and industry itself from the introduction of internship style work placement modules?

1.4 Basis for Research Design.

The research design utilised in this thesis is structured in a step by step approach. This is illustrated in Figure 1.1, and forms the blueprint for chapters to follow.

Figure 1.1. Methodology Steps



Step 1: The research topic was selected during the thesis proposal stage and is outlined above, along with associated aims and objectives.

Step 2: Chapter 2 includes a detailed literature review based on current literature surrounding this topic, and exposes gaps in this literature necessitating the pursuit of this research endeavour.

Step 3: The selection of key participants, who are adequately experienced in the phenomenon in question is paramount to a successful outcome (Moustakos, 1994). He holds that there are no set rules in the selection process, or the numbers involved. However the sample size must be adequate to provide credible findings and substantive evidence essential to resolving the research question.

In this study the author has identified the key participants whose experience and views will form the basis of this research. This study addresses the research question by interviewing different participants, who have different perspectives on the topic, and who inform the process based on their own experiences. As this study wants to gather experiences from different perspectives, the number of participants is quite large for a study of this nature. However the author feels that the number in question is necessary to rationalise findings on this issue and as such get to the essence of the collected experiences. The number of participants from each perspective is illustrated in table 1.1.

Table 1.1. Participant Numbers

Participants	Numbers selected for interview.
Employer	4
Undergraduate student	4
Graduate (1 year)	4
Lecturer's	4
S.C.S.I.	1

Step 4 .Van Manen (1997) advises that all research should be based in "a sense of the pedagogic good" (Van Manen, 1997, p. 6). The main ethical concerns on this study concern: consent, confidentiality, voluntary participation, access to data, validation of data, and reciprocity. This was addressed by briefing all participants prior to any interviews taking place, with all of the ethical issues explored. They were all given the opportunity to remain anonymous if required,

which all participants declined. The information in question was not of a sensitive nature, and there was no confidentiality concerns among participants.

Step 5. The interviews were designed with a semi structured approach adopted. Gillham (2000) advises that interviews are more than a conversation; they must be formal, have a research agenda, and are subject to some form of control. He argues that they are appropriate where a relatively select number of individuals are involved, and are accessible to be interviewed. Gillham (2000) discusses the advantages of interviews in that they are effective in collecting expert opinion, and that information produced can be rich in quality and vividness. However they are time consuming to administer, as there are a relatively large number of participants to interview, the interviews are designed to be short and to the point. The questions were designed with this in mind and are included in Appendix C.

Step 6: The interviews were organised with an agreed schedule detailing times and dates for each interview. They were conducted between February 2012 and May 2012, with the main points from each interview transcribed by hand as a record of proceedings. Phenomenology requires rigorous data collection, and is usually carried out through interview. Moustakas (1994) describes the interviewing process as rigorous, and Creswell (2007) advises that the nature of these interviews must be in-depth.

Step 7: Moustakas (1994) describes the aim of phenomenological research is to develop composite textural and structural description which reveal essences. Creswell (2007) advises on the importance of identifying significant statements that explain the experience of the phenomenon and draw out key themes to produce rich descriptions. “The understanding of meaningful concrete relations implicit in the original description of experience in the context of a particular situation is the primary target of phenomological knowledge” (Moustakos, 1994, p. 14). The foundation for analysis carried out in this research is based on Giorgi’s five point approach to data analysis cited in Moustakas (1994):

1. Read the entire description of the learning situation straight through to get a sense of the whole.
2. Develop a series of meaning units or constituents.
3. Eliminate redundancies – elaborate the meaning of constituents.

4. Reflection – researcher comes up with the essence of the situation.
5. Synthesises and integrates the insights achieved into a consistent description of the structure of learning.

This approach lays out a "road map" for analysing the large quantity of data gathered during the interview process. Using this process, the data arising from interviews is transcribed, which allows the interviewer an opportunity to become familiar with the material. The individual interviews are then condensed by concentrating on the significant statements and removing irrelevant content. Experiences are then compared and contrasted to allow common themes to emerge. The combination and linking of the various experiences of participants highlight the more significant elements in relation to the research topic. Synthesis of meanings and essences as described by Moustakas (1994) essentially refers to a process which interprets collected data, and involves the composition of an encompassing description of the essence of the phenomenon from the individual descriptions. These essences have been organised in the form of overriding themes, which are referred to throughout this study and are as follows:

- Theme 1 - Internships as a work placement model.
- Theme 2 - Timing and duration of work placements.
- Theme 3 - Work placements as a mode of learning.
- Theme 4 - The Employers role in the current economic climate.
- Theme 5 - Module descriptor design based on findings.

1.5 Summary

This thesis is composed of six chapters, strategically positioned to provide the reader with a logical sequence, initially conducting a literature review and exploring theoretical perspectives underpinning the research, before conducting the research itself and analysis of same.

Chapter Two provides an extensive review of existing literature relating to work placement and internships. It explores learning theories surrounding work placement, examining both advantages and disadvantages of this mode of learning. It also examines literature dealing with the current economic state of the construction industry which provides the backdrop to this study.

Chapter Three establishes the theoretical perspective from which the research is conducted, and provides a clear and precise picture of the foundations which underpin this research. It clarifies the chosen methodology and defends its selection. It provides a road map with regard to participants and stakeholders involved in this study and explains data collection techniques adopted, and how this data is utilised.

Chapter Four documents the findings gathered during the interview process under major themes. It provides a platform for interrogation and analysis of the data collected which is conducted in chapter five.

Chapter Five presents an in depth analysis and interpretation of the findings. It discusses the data gathered under key themes, and explores the implications of these findings in relation to the overall aims and objectives of this study.

Chapter Six, the concluding chapter revisits the aims and objectives outlined in chapter one, and reflects on the degree to which these objectives have been achieved. It also advises on areas where further research may be conducted in this area.

The above chapters have been organised in a structure designed to logically address the research question presented in this thesis.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews existing literature surrounding work placement and internships, and also reviews commentary on the current economic state of the Irish construction industry which acts as a backdrop to this study. This literature review carries out an evaluation, in depth analysis, and synthesis of literature related to work placements and internships. Initially, literature surrounding the economic backdrop is explored, before a definition of work placement is provided, with descriptions of typical models of work placement currently in use in third level education in Ireland and abroad. This chapter investigates the key learning theories reinforcing work placement, and also examines the advantages and disadvantages surrounding this method of learning. The literature in question is addressed while focussing on the key themes referred to in chapter one.

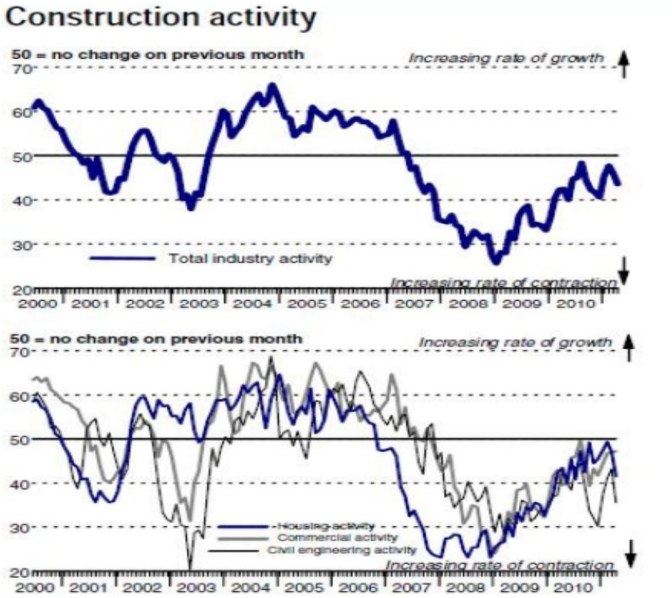
2.2 Economic Climate & Work Placement

The current challenging economic environment poses substantial problems for institutions sourcing perspective employers. The economic state of the Irish construction industry has been highly publicised in the media over the last three years. Students who are currently taking construction related courses are not immune to the existing economic climate prevalent in the Irish Construction industry. Johnston (2010) strongly advocates that construction courses must be economically viable, paying close attention to relevant employment skills.

2.2.1 Construction Industry – Statistical Trends

Employment in this sector has decreased at an alarming pace with recent commentators seeing little sign of abatement. Hancock (2011) advises that new orders in the construction industry sector have declined again, with companies cutting purchasing and jobs; he includes Figure 2.1 below to illustrate this point:

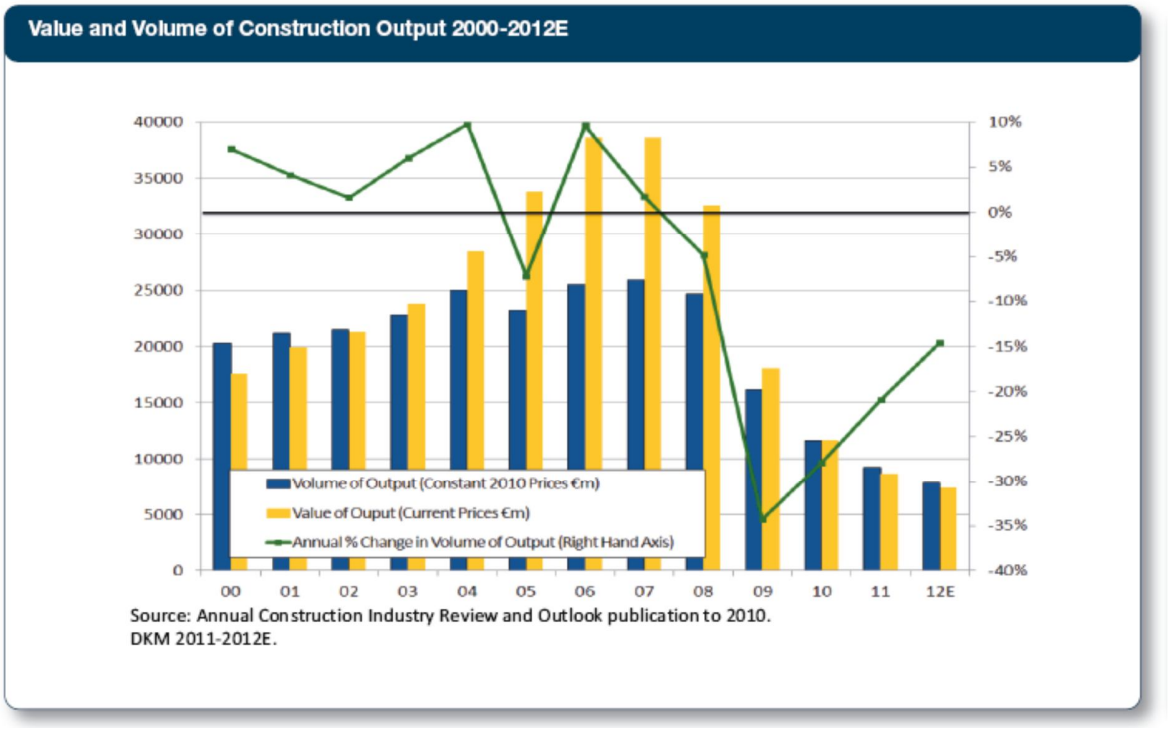
Figure 2.1. Construction Activity



This graphic depiction of construction activity gives credence to economists who have advocated meltdown in the Irish construction industry. This also reinforces the problems surrounding procurement of suitable employment for students sourcing work placement on construction related courses.

Scully, Caeleton and Quinn (2011) advise that there are even more challenging times ahead. They advise that the construction industry is now faced with the completion of most major construction projects in 2012, with no significant replacements in sight, coupled with further cutbacks in government capital expenditure, delays in NAMA funded projects, and very little private sector activity. They also highlight that against this background, the industry will inevitably decline even further with their predictions of output to fall to a mere €7.5m for 2012 which represents a 75% fall from its peak. Figure 2.2 illustrates their predictions going forward.

Figure 2.2 Construction Output

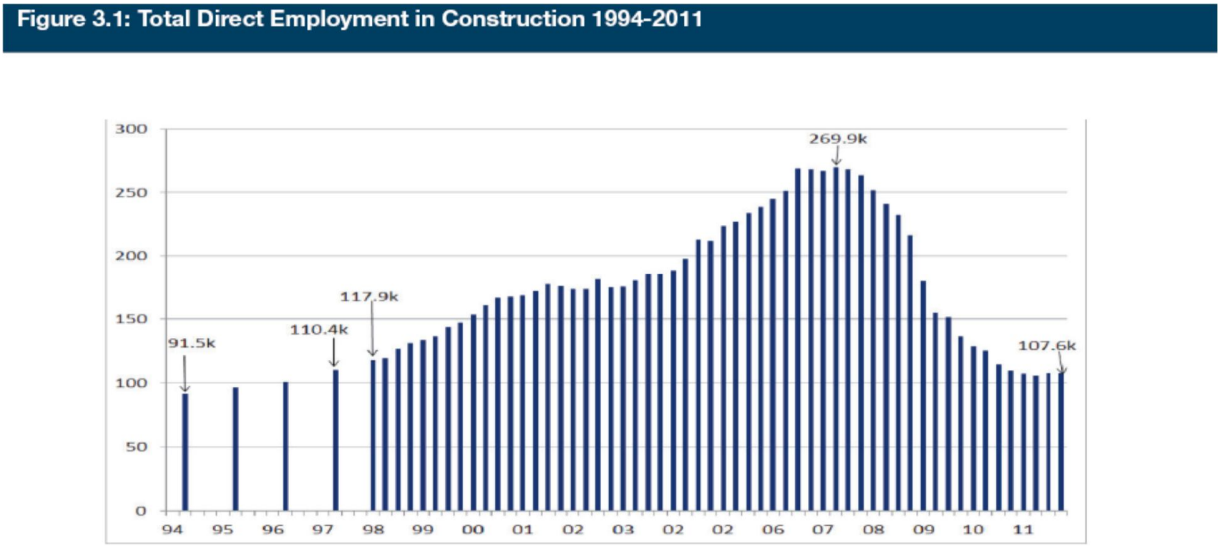


Despite negativity surrounding the construction industry relating to output and employment, students are still choosing construction related courses. With few opportunities for students to obtain experience through temporary positions held during vacation periods, which would have been the norm during boom years (Cunningham, 2010), there is an impetus on third level institutions delivering construction related courses to mirror industry where possible.

The Irish Construction Industry 2012 report compiled by DKM economic consultants for the Society of Chartered Surveyors Ireland is not optimistic about the years ahead in the industry. It states that the Irish construction sector remains in an exceptionally weak phase. Having peaked at close to €39 billion or almost 25% of GNP in 2006, the ensuing adjustment has led to the value of output falling to €8.7 billion in 2011, or 7% of GNP. The crisis in construction will see the value of output decline again this year to an estimated €7.5 billion, or by 14.5% in volume terms. Thus construction will record its fifth year in a row of a contraction in output, reaching just 6% of GNP. The sustained growth in construction employment during the boom period led

to construction experiencing the most rapid growth across all sectors in the economy (Hannock, 2011). Total employment in the economy peaked at 2.15 million in 2007. In the previous nine years total employment had increased at an annual rate of 3.6%, while employment in construction had increased by almost two and a half times the national rate at 8.7%. The strongest single year of growth saw construction employment increase by 18.3% in 2005 with construction accounting for almost 39% of the increase in jobs across the entire economy (DKM, 2012). After almost a decade of ever strengthening growth, a turning point was reached and a sustained period of contraction in employment commenced. The severe drop in construction output from 2007 was mirrored in the construction employment numbers, which began to tumble as the volume of work declined at a rapid pace (DKM, 2012). The situation now is that many skilled construction workers, professionals and trade persons have to emigrate to secure employment. This sector is unlikely to see employment return to the levels recorded in the run up to the peak (SCSI, 2011). With construction accounting for 47% of the total job losses in the past four years, and notwithstanding the numbers who have already emigrated, the level of unemployment in construction is likely to be above the national average. While there is no published figure for the numbers unemployed by sector, it is likely that the unemployment rate in construction ranges from 25% to 30% (DKM, 2012). Figure 2.3 illustrates the stark reality regarding employment numbers in an industry that is struggling to reverse current trends.

Figure 2.3. Employment in Construction



The graph clearly shows that employment numbers in the construction industry are currently at levels experienced in the early nineties.

There are obvious implications for third level institutions sourcing work placement positions for students on their construction related courses. Traditional work placement modules may not prove flexible enough for employers in this climate where many of their other employees are being made redundant. Indeed resentment may present itself where students are employed to fulfil roles recently vacated due to redundancy. There is nothing new about having work placement modules within undergraduate courses, however the current state of our economy is in unknown territory, and our modules and policies must adapt to deal with work placement within this context (Johnston, 2010). With this environment in mind, the challenge posed is to formulate a model which will reflect the current economic state of industry. This thesis will attempt to apply new research in this area to design a work placement module for our quantity surveying students, incorporating the flexibilities necessary to accommodate the turbulent economic realities of today's construction industry (DKM, 2012). My colleagues in industry have informed me that traditional work placement may not be feasible over the next number of years due to financial constraints. There may also be ethical implications for students employed in roles, where redundancies have been imposed within those companies.

2.2.2 Employability.

Employability has emerged as one of the leading concerns among Quantity Surveying graduates since the transformation in the economic fortunes of the construction industry (Auburn, 2007). "Employability is having a set of skills, knowledge, understanding, and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful" (Daore-Pool & Sewell, 2007, p. 280). Hunt (2011) is strong in his views on employability, advising that students should be encouraged to spend time in a work situation, and acknowledgement of this experience should be included in the students diploma supplement. "Undergraduate and postgraduate education should explicably address the generic skills required for effective engagement in society and in their workplace" (Hunt, 2011, p. 15). This view is held by many academics on the international stage, "for a graduate to stand the best chance of securing occupations in which they can be satisfied and successful, it is essential that they receive some education in career development education….so much research points to work

experience as being something that perspective employers value greatly in graduates" (Daore-Pool & Sewell, 2007, p. 284) . Watts (2006) advises that if third level institutions spend more time enhancing employability on their courses, there are benefits for many different stakeholders. He contends that the enhancement of student employability serves a number of important purposes:

1. It responds to student's motivation to entering third level education.
2. Responds to government policy – development of the country's human capital, increases access for disadvantaged groups.
3. It reinforces academic values by emphasizing generic competencies which are valued by employers. (Daore-Pool & Sewell, 2007)

Knight and Yorke (2004) maintain that the link between employability and course material will ensure that curriculums are under constant review, in order to meet the requirements of employers, which in turn will result in a freshness in relation to course material.

Eraut (2008) emphasises the learning achievable through work place experience, and different ways of evaluating that learning, "placements provide contexts for learning of a very different kind from those provided within universities….the real assessment will be whether your performance meets the expectations of significant others in your workplace " (Eraut, 2008, p. 1).

Figure 2.4 Employability

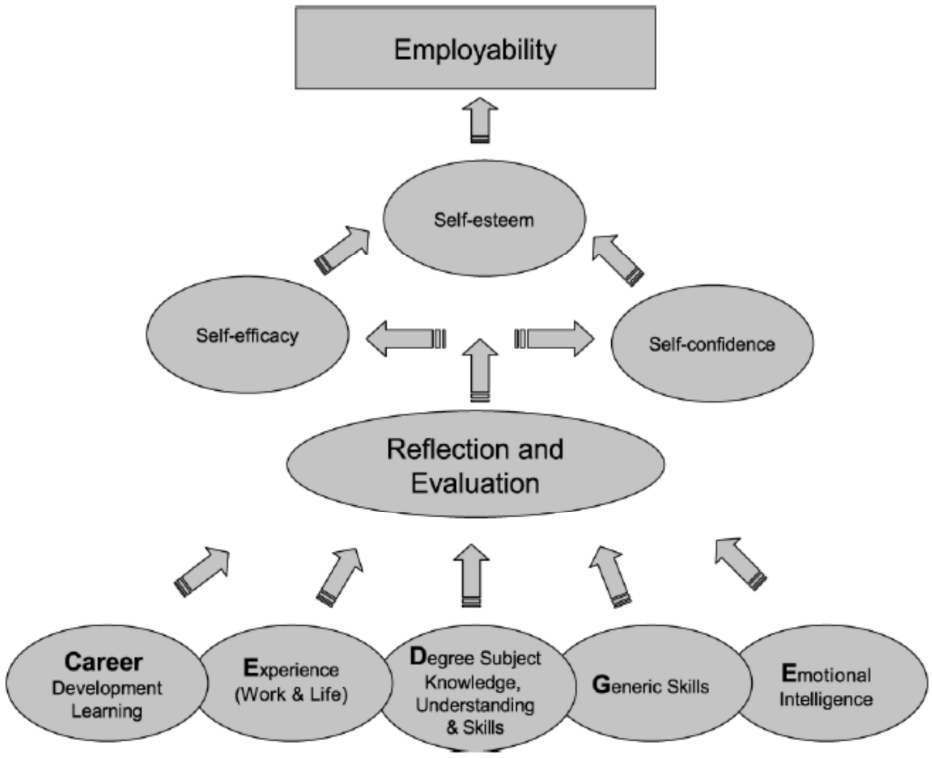


Figure 2.4 (Daore-Pool & Sewell, 2007, p. 280) , illustrates the relationships between the various attributes which interact to enhance the employability of a perspective graduate. Only a limited selection of the attributes illustrated above can be fully acquired in the classroom, reinforcing the requirement for work placement in some form. While Gomez, Lush and Clements (2004) advise that "students opting for sandwich degrees are better placed for employment when they graduate compared with students who lack this experience" (Gomez, Lush, & Clements, 2004, p. 14). If one reflects on the conclusion that placements are seen by employers and graduate employees as the single most significant missing element of the majority of degree programmes' (Harvey, Moon, Geall, & Bower, 1997), then it's absence must be considered by programme committees. Gomez (2004) concludes that bioscience students undertaking a one-year placement, show a demonstrable improvement in terms of their final-year marks which are independent of gender and earlier measures of performance. He also advises that there is potential for improvement within a placement programme designed to provide tighter integration between academia and industry. Mandilaras (2004) advises that the stated aim of professional training is "to enhance

students' knowledge of Economics and their transferable skills and equip them for professional life"**.**

2.2.3 Collaboration in Construction.

According to Vygotsky (1978), students are capable of performing at higher intellectual levels when asked to work in collaborative situations. The highest form of collaborative working and learning can only be really experienced in the workplace. "Complications arising from poor collaboration are the source of a variety of the construction industry's biggest problems" (Bouchlaghem, 2012, p. 1). It is now widely recognised that an effective collaboration strategy based on the implementation of information systems and careful consideration of the wider organisational issues are the key to delivering construction projects successfully. Bouchlaghem (2012) defines collaboration in construction as "an activity in which a shared task is achievable only when the collective resources of a team are assembled. Contributions to the work are coordinated through communications and the sharing of information and knowledge" (Bouchlaghem, 2012, p. 6) . Our construction practices and procedures are subject to a rapidly evolving information technology sector, enhanced by worldwide advances in communications technology, which are unfortunately not always captured in the classroom. These technologies are providing construction professionals with the tools to implement new collaborative strategies. Any given construction project involves the collaboration, at some level between Architects, Engineers, Quantity Surveyors, Project Managers, and many other construction professionals, depending on the magnitude and complexity of that project. Much of this process is based on a traditional sequential approach in which many of the participants often work independently, make decisions that inevitably affect others and then come together in face to face meetings. As educators, we must equip students with the skills and knowledge to prepare them for an industry so dependent on collaboration (Bouchlaghem, 2012).

2.3 Work Based Learning.

Cunningham (2010) advises that the concept of what it means to be a third level student continues to evolve. The traditional view of higher education as occurring exclusively in formal, accredited academic institutions is coming under increasing critical scrutiny. The merits of work placement as an educational approach are becoming more acknowledged throughout the third

level educational sector (Boud & Soloman, 2001). Contemporary commentators have voiced concerns with the predominance of formal book based traditional education approaches. Hager (2000) has challenged the effectiveness of the traditional emphasis on internal learning which he has described as the "standard paradigm of learning". He suggests that these approaches have been accepted uncritically as the most valuable kind of learning and that traditional educational approaches view non propositional learning such as real world learning experience as being somewhat inferior. He argues that learning is evidenced by the exercise of judgement and occurs in contexts linked with successful actions, and that theory cannot be separated from practice in the real world. This view is supported by Rainbird, Fuller and Munro (2004) who state "There is a widely held belief that formal or qualification focused learning is ritualistic, rote and virtually meaningless, while work based learning is real, relevant and meaningful" (Rainbird, Fuller, & Munro, 2004, p. 7). Cunningaham, Davies and Bennett (2004) feel that "learning is part of being human and people learn all the time at work" (Cunningham, Dawes, & Bennett, 2004, p. 16) , which establishes the important link between work and learning. This is reinforced by Boud and Garrick (1999) who inform that "learning at work has become one of the most exciting areas of development in the dual fields of management and education" (Boud & Garrick, 1999, p. 1). Boud and Garrick (1999) also examine the importance of workplace learning and find that the strands of knowledge obtained in initial education are no longer sufficient for the new work order. They advise that what is sought by future employers surround abilities to apply that knowledge and expertise to use in unfamiliar circumstances, and point to demands for flexibility, communication skills, teamwork and qualities of that nature. The concept of the workplace being an effective site of learning is strongly supported by Hager (1999) who also contends that students are supportive of this method. Illeris (2002) suggests that any learning theory that has received a certain amount of recognition and dissemination must have something to contribute to the whole.

Although this research generally focuses on the Quantity Surveying profession, there are many commonalities with other fields of expertise. Hager (2000) advises that a period of training is necessary to acquire judgement and become a practitioner, no matter what discipline is being discussed. He supports an emerging paradigm of learning which underpins the trend towards work placement as an effective learning strategy, and which recognises that learning occurs outside academia in various informal settings. This paradigm accepts that individuals learn, not

only from teachers, but also from family, friends, colleagues, and media (Cunningham, 2010). Boud and Solomon (2001) argue that the increasing use of work based learning approaches represent a radical shift in pedagogy: empowering the learner rather than the academic to determine what is to be learned. They contend that the recognition of the work place as a site of learning and the validation of working knowledge acquired in the workplace raises fundamental questions relating to academic standards, practices and identity. These represent an unprecedented challenge to the position of academia as the principle custodian of legitimate knowledge (Cunningham, 2010). This is supported by Harrison, Reeve, Hanson, and Clarke (2002) who add that this emerging paradigm presents "a serious challenge to many established ideas of how, why, where and with whom learning might occur" (Harrison, Reeve, Hanson, & Clarke, 2002, p. 1)

External pressures are also influencing change within the higher education sector. This is evident when one looks at the Bologna process. When the ministers of education met in Leuven and Louvain-la-Neuve in April, 2009, they reviewed progress to date on the development of the European Higher Education Area, but they also looked ahead to the decade from 2010 to 2020. Whilst noting that some objectives had not yet been completed, they defined a series of high level objectives for the decade ahead. These included a Social Dimension: equitable access, lifelong learning, employability, student centred learning and the teaching mission of universities, education, research and innovation, international openness, mobility, data collection, multidimensional transparency tools (McMahon, 2010). The new Bologna objectives are non-specific but this was the pattern of objectives set in 1999 and 2001; as the years went by, ministers made the objectives more specific, and two of these objectives are of particular relevance to this study

(1) Employability through work placements embedded in study programmes
(2) Higher education institutions with government agencies to improve career advice and employability guidance for students and alumni.

McMahon (2010) contends that even though Ireland has been to the forefront in the first decade of the Bologna Process in implementing the objectives set by ministers, that this was partly due to the fact that many of the reforms were already underway when the Bologna Process commenced in 1999. The next decade will involve greater challenges for Ireland and they come

at a time of economic difficulty. If this country is committed to Bologna, work placement must play a pivotal role (McMahon, 2010).

Coughlan (2004) argues for an educational system focussed primarily on individual needs, but also catering for the needs of the workplace and the wider society. He acknowledges the increasing influence of vocationalism and the rising emphasis of education for capability and enterprise. Auburn (2007) notes that the enhancement of employability has become the pre-eminent aim of many undergraduate programmes in the aftermath of influential government reports , such as the Dearing Report 1997, which recommended that " all institutions should identify opportunities to increase the extent to which programmes help students to become familiar with work, and help them to reflect on their experiences for exposure to and experience of work place" (Auburn, 2007, p. 12).

2.3.1 Theoretical philosophy behind work based learning.

Many experts in the educational field have researched the underpinning philosophy behind work based learning. McGinn (1999) advises that by placing students in employment relevant to their educational needs , this forms a component part of a third level curriculum." It integrates classroom theory and laboratory practice with real working conditions. It provides the means to develop a healthy working relationship with industry, commerce, the public services and the professions and ensures that the educational programmes produce graduate expertise relevant to economic development" (McGinn, 1999, p. 3).

Hager (2000) is strongly supportive of the work placement concept and feels that students require a period of formal education or training that needs to be completed by entrants to an occupation before they can be regarded as qualified workers. This period of formal education and/or training usually takes place in classrooms remote from the workplace. Boud & Solomon (2001) give their theoretical insight into the work placement concept, advising that although educators view the terms 'learner' and 'learning' as unproblematic and relatively neutral, in the community at large, being a learner can be seriously problematic. For example in workplaces " 'Learner' can have deficit connotations, for example learners may be viewed as inexperienced or incompetent, Learners will often have less power, position, recognition, or legitimation .Novices are often keen to discard their 'L plates'. This suggests that they also discard the role of 'learner'

as soon as possible" (Boud & Soloman, 2001, p. 42). Hager (2000) informs that there are considerable advantages in viewing work placement primarily as a process that has important social, cultural, and political dimensions. Sims, Murray, Murakami and Chedzey (2006) observes that students who have experienced placements and those who arrange them believe that placements may have a very positive effect on the learning of students." For example:

- students see practical examples of situations that they have heard described in the lecture room and their learning becomes more concrete
- students come back from placement with a number of questions for which they then actively seek answers and their learning becomes more active
- students are enabled to sample particular types of work and particular work organisations to see whether they wish to make their careers there and their learning becomes more focused
- students come back with a fund of anecdotes which make them more interesting to each other and to their lecturers and their learning becomes more narrative based." (Sims, Murray, Murakami, & Chedzey, 2006, p. 3)

2.3.2 Models of Work Placement

Auburn (2007) suggests that one of the main difficulties surrounding the evaluation of the benefits arising from work placement is down to the lack of an acceptable model. He is however very supportive in terms of associating work placement with better employability prospects for graduates. Blackwell et al (2001) reinforces this contention, by advising that graduates with work placement experience have higher employment success rates than those without. Auburn (2007) however does correlate the benefits of work placement to the quality of the placement itself. For example, if a student is subjected to photocopying documentation for six months, without exposure to relevant roles, the learning achieved is fruitless.

When discussing models of work placement, it is advantageous to explore experiences from different yet similar courses. For example Dr Terry Russell is a reader in architecture at the University Of Edinburgh. In his paper on work placement relating to architectural students, he

has formalised a list of good practice points which should be applied to a work placement module of this nature:

"Good Practice Points:

- Practical training is fully integrated within the degree structure
- Each student has a placement tutor who maintains e-mail contact with the student whilst on placement
- Placements are monitored in practice by a placement supervisor
- Placements are coordinated in the university by a placement coordinator
- Students attend courses by the Careers Guidance Service to help them to prepare their CV and perform well at job interviews
- Each student maintains a log book of work experience to count towards professional accreditation as an architect
- Each student writes a comprehensive report at the conclusion of the placement that counts directly towards the final degree assessment
- The students' understanding of professional studies is enhanced by an intensive series of advanced lectures on all major aspect of work connected with the built environment
- Students are prepared for the final 'Part III' professional examination in architecture held under the auspices of the Association of Scottish Schools of Architecture" (Russell, 2004, p. 2)

The above guidelines presented by Russell (2004) mirror numerous versions of work placement modules in usage, however there are differences in the finer detail, such as duration, assessment, remuneration, stage of course, etc. The terms: internment, work placement module, sandwich course and industrial placement are all used to describe this mode of learning, without any specific model attached to any of the terms.

2.3.3 Work Placement and Curriculum Design

The teaching delivery relating to the QS course linked to this study includes traditional lectures supplemented by tutorials. Blight (2000) finds that lecturing is still the most common method of delivery despite advances in new technologies. This thesis does not advocate radical changes to

our current modus operandi of delivery on this course, however it supports enhancement of the traditional approach via work placed learning. Macfarlene (2004) advises that our courses must endeavour to introduce real life situations or problems into our content, to prepare students for the challenges that await them in industry.

The above commentators establish the importance of work based learning, the whole logistics of introducing a work place module to an existing course must be examined. Toohey (1999) contends that if a work placement component is introduced to a course, it will be necessary to talk through the logistical difficulties that may arise. Such difficulties may surround sourcing of work placements, what will happen if sufficient placements cannot be organised? , who will be responsible for liaison between the employer and the educational institution?, what form that liaison will take and how frequent that contact is expected to be? (Toohey, 1999). Through in-depth research, solutions to these potential problems will be teased out. In this way problems can be foreseen and avoided.

Designing a curriculum to meet these needs is a complex task requiring careful consideration of what students should learn, and how this learning can best take place. Biggs (2002) advises that effective course design requires identification of appropriate, clear objectives and learning outcomes supported by effective learning strategies. These must be structured, organised and aligned in a consistent manner to ensure the learning outcomes are achieved and are verified by appropriate assessment techniques. Toohey (1999) advises that curriculum design identifies their designer's philosophical stance, and as a consequence "the way in which concepts, facts and skills are organised in a course is usually closely related to the beliefs about knowledge and learning." (Toohey, 1999, p. 92). Toohey (1999) examines a number of common philosophical approaches to curriculum design which include: traditional or discipline based approaches, cognitive approaches, social approaches, performance based approaches, and personal relevance/experiential approaches. She accepts that while a certain structure may predominate, it is unusual for a course to be based on any one approach. Those who favour work based learning approaches when designing courses are said to typically adopt a performance and/or personal relevance stance in relation to programme delivery. Toohey (1999) characterises the competence or system based approach as stressing competence attainment and that knowledge should be purposefully applied to produce skilled performers. Toohey (1999) describes the personal

relevance / experiential approach as being centred on individual student's needs and interests in which learning is organised around life experiences to deliver improved behaviour. This approach favours project, inquiry or problem based structure which integrates theoretical knowledge with practical application.

2.3.4 Criticisms of work placement.

It would be naïve to suggest that work placement does not attract any negative commentary. Employers must consider whether work placement students are cost effective within their organisational structure. Little and Harvey (2006) questions whether employers are being exposed to unwanted expenditure due to associated planning and management resources necessary to facilitate the placement. Cunningham et al. (2004) is concerned that the student may represent "a drain on the resources of an organisation" (Cunningham, Dawes, & Bennett, 2004, p. 63). There is also the concern that supervisors working on behalf of the third level institution may not show sufficient attention to planning the placement. Walker and Boud (1994) observe that where supervisors are not interested or adequately prepared, they may undermine the entire process.

Students, who are the integral participants in the work placement process, must also prepare adequately and display a certain enthusiasm for the process. Walker and Boud (1994) also link ineffective work placement experiences to lack of preparation on behalf of the student. Little and Harvey (2006) add that many students have not researched the workings of a work placement scenario, and its associated responsibilities. Some students may see the process as a box ticking exercise. Hager (2000) advises that participation in itself does not guarantee learning.

Auburn (2007) also suspects that problems occurring on work placement modules may be "brushed over", giving an impression that everything associated with work placement is positive, " In general, any negative experiences associated with supervised work experience tend to be downplayed and, where they are acknowledged, they are formulated as aspects of the design to be put right, and so the general assumption that supervised work experience produces beneficial outcomes is not challenged" (Auburn, 2007, p. 119). For example, Blackwell et al. (2001) report that almost"20% of engineering students in their sample were hostile or indifferent to work experience' after undertaking the period of supervised work experience".

Auburn (2007) concludes that when student's "own understanding of work experience is used, it is often voiced in terms of the 'good news' story of supervised work experience, whereby extracts from interviews or log books are incorporated into reports as evidence of its unalloyed benefits. It is rare that such understandings are systematically explored and analysed, and the range of meanings associated with supervised work experience for the student made explicit" (Auburn, 2007, p. 122).

These criticisms must be taken into account when evaluating work placement as a mode of learning. However the overwhelming evidence gathered during this literature review has steered towards positive outcomes.

2.4 Summary

The volume of literature relating to work experience is vast and varied, however the weight of evidence would suggest that this mode of learning is very effective if managed in the correct manner. Many of the criticisms relating to this mode of learning are symptoms of poor management structures, supervision or planning, problems which are not insurmountable if addressed in the appropriate manner. As an educational approach, workplace learning is underpinned by rich learning theories defended by experts in this area. The literature available is within a global context relating to many fields of expertise. The focus of this research is within the context of a specific industry within a specific economic climate.

One of the main objectives of this thesis is to research the viability of this approach in the context of the current economic crisis. The literature explored relating to the economic crisis within the construction industry is poignant, and sets the backdrop for the rest of the research. Having established the benefits of work placement from an international perspective in this chapter, and the concerns surrounding the specific industry in question, the goal of this thesis is to link these components together and establish whether this learning approach can be successfully adopted on a quantity surveying course in this climate.

CHAPTER THREE

THE RESEARCH DESIGN

3.1 Introduction

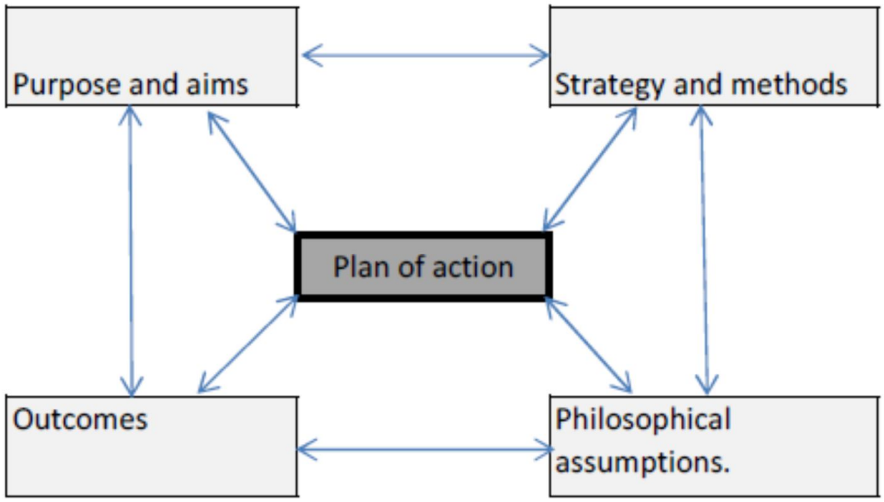
Crotty (1998) advises that theoretical perspective is a method of observing the world and making sense of it. It is important to establish the theoretical perspective from which research was conducted on this thesis. Robson (2002) makes the simple observation that if you don't pay serious attention to research design; your research project is likely to end up in disarray. Denscombe (2010) advises how important it is to achieve a clear and precise picture of what the foundations to your research are. And advises that "philosophical assumptions constitute the foundations for research in the way that';

- They underpin the perspective that is adopted on the research topic.
- They shape the nature of the investigation, its methods and the questions that are asked.
- They specify what type of things qualifies as worthwhile evidence.
- They point to the kind of conclusions that can, and cannot, be drawn on the basis of the investigation." (Denscombe, 2010, p. 117)

This chapter highlights the data collection techniques used for dealing with the research question being addressed. It clarifies why the chosen methodology is appropriate in order to address the aims and objectives of this study, and explains why other methodologies are not suitable in this quest.

"A good research design provides a blueprint for research activity; it provides details of what is to be done and shows how the various parts fit together (Denscombe, 2010, p. 105). Crotty (1998) views research design as a form of scaffolding or framework to support the research. The methodology chosen to address the research question is intrinsically linked to the theoretical perspective of the researcher. Denscombe (2010) explores these intrinsical relationships in Figure 3.1

Figure 3.1. Research Design



Research design: linking the parts together.(Denscombe 2010, p100)

Denscombe's illustration of the links that exist between different facets of the methodology in Figure 3.1 underlines the requirement of careful planning prior to commencing research. Taking Denscombes plan of action as the central component, the purpose and aims of this research study have been outlined in chapter 1

3.2 Philosophical Assumptions.

The research design adapted on this study is based on the researcher's philosophical assumptions, which reflect a worldview and informs and shapes the conduct of the research (Creswell, 2007). The epistemology surrounding this research area must be asserted in order to establish a credible methodology for carrying out the research. Epistemology is defined as being "concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate" (Crotty, 1998, p. 8). Creswell (2007) advises that good research requires that these assumptions are made explicit in order to reveal the influence they have on the research design process. It is therefore logical that we need to identify, explain and justify the epistemological stance we have adapted (Crotty, 1998). The fact that there must be a solid basis for choices surrounding methodologies is reinforced in Cohen, Mannion and Morrison (2000) who advise that "ontological assumptions give rise to epistemological assumptions: these in turn give rise to methodological considerations

and these in turn give rise to issues of instrumentation and data collection." (Cohen, Mannion, & Morrison, 2000, p. 1)

This study explores how a defined group of people experience a particular educational approach. The people in question offer contributions on the research area from very different perspectives. Firstly I will give some insight into the people involved or stake holders involved in this study. These include final year undergraduate students on the construction economics course who have experienced teaching and learning on the course without the benefit of a work placement module, other than a two week foster scheme placement. The second group will include graduates from the same course who have completed at least one year of work experience. Thirdly, I will involve a number of employers from industry who have employed work placement students over the last number of years. These three groups will form the main basis for my research, however I will include two further groups with insight on this area, and they are: lecturers on the course, and representatives from the SCSI. These participants will be presented with a complex phenomenon, and their feelings and experiences will be collected and analysed These finding will then influence the content inherent in my proposed module for work placement on that course.

I have included table 3.1 below which mirrors the concepts illustrated by Crotty (1998), however tailored to reflect my own research philosophy for this thesis.

Table 3.1. Research Philosophy

Epistemology	***Theoretical perspective.***	***Methodology***	***Methods.***
Constructionism	Interpretivism / Phenomenology	Phenomenological Research.	Interview / Semi structured.

The four main stages outlined by Crotty (1998) as necessary when designing a research strategy are addressed in table 3.1. The table clearly outlines the epistemology which lays the foundation for this research, and the theoretical perspective which I have adapted. And in turn the methodology and associated research methods. These concepts area also illustrated by Denscombe (2010) in table 3.2.

Table 3.2 Research Concepts

	Realism	⟺	Positivism	
Ontology	Critical realism	⟺	Post- Positivism	Epistemology
	Constructionism	⟺	Interpretivism	
	Pragmatism	⟺	Mixed Methods	

It is important that "we describe the philosophical stance that lies behind our chosen methodology. We attempt to explain how it provides a context for the process and grounds its logic and criteria" (Crotty, 1998, p. 7). The theoretical stance adapted during this research is interpretivist in nature, by means of a phenomenological research study.

3.2.1 Constructionism

Constructionists regard "the social world as a creation of the human mind, a reality that is constructed through people's perceptions, and reinforced by their interactions with other people" (Denscombe, 2010, p. 119). Crotty (1998) advises that meaning is constructed rather than discovered, and the individual may obtain different meanings from the same phenomenon. He advises that in constructionist theory, meaning emerges "in and out of our engagement with the realities in our world, There is no meaning without a mind" (Crotty, 1998, p. 8). Constructionism "asserts that social phenomena and their meanings are continually being accomplished by social actors… not only produced through social interaction but that they are in a constant state of revision" (Bryman, 2012, p. 33). Researchers who adopt this stance tend to adopt relativistic or interpretivist approaches (Creswell, 2007).

3.2.2 Interpretivism

Interpretivism regards "our knowledge of the social world as something that relies on human capacities to literally make sense of a reality which of itself has no inherent properties, no order, no structure" (Denscombe, 2010, p. 119). Interpretivism is concerned with how the social world is interpreted, understood, and experienced (Creswell, 2003). Bryman (2012) advises that interpretivism is a term that generally describes an alternative to the positivist orthodoxy that has held sway for over ten years. It is based on the view that a strategy is necessary which respects

the differences between people and the objects of the natural sciences, and hence necessitates the social scientist to grasp the subjective meaning of social action. Bryman (2012) also notes that the intellectual heritage of interpretivism is linked to the phenomenological tradition, and symbolic interactionism. Creswell (2007) explains that this perspective suggests that theory originates from experience. This study surrounds the obtaining of knowledge from the experience of participating stakeholders and falls within this sphere

3.2.3 Phenomenology

Merriam (2002) advises that all qualitative research is phenomenological to a certain extent in the context that it focuses on peoples experience; however a phenomenological study "seeks to understand the essence or structure of a phenomenon" (Merriam, 2002, p. 93). Merriam (2002) focusses on the word "essence" in his discussion on phenomenology and feels that describing the essence of a phenomenon is the defining characteristic of phenomenological research. Creswell (2007) describes phenomenological research as research of the "lived experience of a concept or phenomenon" (Creswell, 2007, p. 57) , by a group of individuals. He further advises that views from these individuals must be explored for commonalities as they experience a phenomenon, and it is the duty of the researcher to reduce these individual experiences to "a description of the universal essence" (Creswell, 2007, p. 58). Moustakas (1994) provides an in-depth history of phenomenological concepts, and the origins of the philosophy. He describes phenomenology as a process "to bring light, to place in brightness, to show itself in itself, the totality of what lies before us in the light of day" (Moustakos, 1994, p. 26)

This study explores attitudes towards the phenomenon that is work placement. The experiences of employers, who have employed work placement students. The experience of students and graduates who have completed foster scheme placements, however no formalised work placement modules. The experience of lecturers who are associated with the quantity surveying undergraduate degree course in DIT. This research involves gathering information and constructing meanings related to the effectiveness of an educational mode of learning. This study presents a set of conclusions with regard to work placement and internships derived from the experiences of the participants. From a theoretical perspective, phenomenological research has been deemed the most suitable approach in order to meet the aims and objectives outlined in chapter 1. Phenomenology focusses on describing the experiences of participants in relation to a

phenomenon they have in common, and revealing the essence of those experiences (Creswell, 2007). The experiences being researched in this context relate to work experience in a depressed economy.

3.3 Research Paradigms

Creswell (2003) outlines three different research paradigms: quantitative, qualitative, and mixed methods approaches. Naoum (1998) provides us with simple explanations of these research paradigms. He describes quantitative research as "objective in nature" and can be seen as "an inquiry into a social or human problem, based on testing a hypothesis or a theory composed of variables, measured with numbers, and analysed with statistical procedures in order to determine whether the hypothesis or the theory hold true" (Naoum, 1998, p. 38). Naoum (1998) explores circumstances when quantitative research is appropriate such as finding out hard facts relating to a concept, particular question or attribute. He also discusses the collection of factual data which can be interrogated for relationships in order to test a particular theory. Naoum (1998) defines qualitative research as "subjective in nature, it emphasises meanings, experiences (often verbally described), description and so on" (Naoum, 1998, p. 40). Bryman (1998) illustrates a number of differences that exist between quantitative and qualitative in table 3.3:

Table 3.3. Research Paradigms

		Quantitative.	Qualitative.
1.	Role	Fact finding based on evidence or records	Attitude measurement based on opinions, views and perceptions measurement.
2.	Relationship between researcher and subject.	Distant.	Close.
3.	Scope of findings.	Nomothetic	Idiographic
4.	Relationship between theory/ concepts and research,	Testing / confirmation	Emergent / development
5.	Nature of data	Hard and reliable	Rich and deep.

(Bryman 1998, cited in Naoum 1998 p43).

The approach adopted by the researcher is influenced by the nature of the investigation which he intends to pursue, and the type of information which is required and available. The research design itself is influenced at the outset from the choices outlined in table 3

3.3.1 Key Decisions.

Denscombe (2010) advises that at the commencement of any project, the researcher has to make essential decisions relating to how they approach the research of the topic, and those key decisions will have a fundamental impact on the research design. Denscombe provides a decision making table to aid the researcher in recognising the nature of the decisions which must be addressed.

Table 3.4. Decision Making Table

Category	Alternative possibility 1	intermediate	Alternative possibility 2
Time frame	Cross-sectional (snap shot) e.g. survey		Longitudinal e.g. panel study cohort study.
Number	Depth (small number, specific) e.g. case study		Breadth (large number, general) e.g. survey
Environment	Controlled (in captivity) e.g. Experiment, comparative research		Natural (in the wild) e.g. ethnography, case study, historical research.
Data	Quantitative (numbers) measurement, statistics.	Mixed-methods.	Qualitative (words and images) texts, interpretation, understanding
Theory	Explanatory ,theory testing		Exploratory, theory building

(Denscombe, 2010, p. 101)

Timeframe: At the outset, a decision is required on whether the research will record matters at a specific point in time or designed to track a phenomenon over a longer period of time. Denscombe (2010) advises that this decision will be affected by practical considerations such as availability of resources, deadlines, etc. This particular research is cross-sectional, i.e. a particular snap-shot in time. The timeframe related to this thesis is of vital importance in that the

construction industry is experiencing economic meltdown at present, and this has a major impact on the research findings.

Number: The researcher decides on whether to capture a wide range of instances, or focus on a more select number of examples. Denscombe (2010) advises that a breadth of coverage has benefits in terms of representation and supports the ability to generalise from findings. However "opting for a depth of coverage allows researchers to obtain detailed data and to deal with the complex interrelationships that characterize many social phenomena" (Denscombe, 2010, p. 102). On this thesis it was felt that a more in-depth study of a smaller sample was more suited to this research study. Denscombe (2010) advises that depth studies are more conducive to utilise rich content and provides the opportunity to probe deeply into a relatively restricted area of study, interviews being an appropriate method in this instance.

Environment; should the research be conducted in a controlled environment such as a laboratory, or by studying the events in their natural habitat? The decision was obvious on this category as the entire research deals with work placement in a real world environment, to get away from the controlled environment of the classroom.

Data: Earlier in this chapter, a detailed explanation of the main research paradigms is given with examples of when it is practical to use one over the other, or in some cases both. The theoretical perspective outlined above advocates a qualitative perspective, with a phenomenological study the favoured approach. The author felt that quantitative data would not provide the rich detailed data required in this instance, or unlock the depth of experience required to meet the specified aims and objectives.

Theory: Denscombe (2010) informs that some researchers prefer to adapt an exploratory research design irrespective of the volume of existing research in existence relating to the topic. "Researchers can choose to take a fresh look at things and be keen to avoid having their vision of events clouded by the cumulative theories and wisdom of previous researchers" (Denscombe, 2010, p. 105). Phenomenological approaches are good examples of this where the researcher does not want previous research on a topic to impinge on his current research. In this case, the research conducted was in the context of a depressed construction industry, and hence research carried out during the more affluent years of the boom would probably attract completely

different results. This research explores the views, feelings and experiences of participants solely in the context of the current economic environment.

The key decisions relating to this research study are tabulated in table 3.5 based on the decision categories outlined in table 3.4. These decisions formed the basis for the methodology adopted in this thesis.

Table 3.5. Research Decisions

Time frame	Cross – sectional. A particular snap-shot in time during an economic depression in the construction industry.
Number	Depth – A specific number of participants, - 17 in total
Environment	Natural – Based on work placement in industry.
Data	Qualitative – Phenomenological study – Semi structured interviews.
Theory	Exploratory – Experiences of participants in context of economic collapse of the Irish construction industry.

Based on the information listed in table 3.5, the methodology relating to this thesis is further developed into the practicalities of how this methodology was implemented.

3.3.2 Methodology.

Methodology can be defined as “the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and the use of methods to the desired outcomes” (Crotty, 1998, p. 3). Opie (2004) views this as a process whereby the best approach is established to gather evidence in order to answer a particular research question. ”A method offers a systematic way of accomplishing something orderly or disciplined, with care or rigor” (Moustakos, 1994, p. 104). The adopted methodology has an intrinsic link to the theoretical perspective of the researcher, which is outlined above. This study has adopted an interpretivist perspective, aligned with a phenomenological qualitative research methodology.

3.3.3 Interpretive Research Methodologies.

Interpretivist studies can be characterised as small in scale and focus, and concerned with the credibility and reliability of the research findings rather than generalisations. (Bartlett, Butler, & Peim, 2001). Creswell (2007) advises that researchers are instrumental to the interpretivist process, collecting information generally from numerous sources, and then interrogating that information to construct detailed summations of the research question or topic.

According to Moustakas (1994), Merriam (2002) and Creswell (2007), there are many methodologies that fall within the interpretivist perspective, and include: phenomenological research, ethnography, grounded theory, case study, narrative research, and hermeneutics. As already outlined, phenomenological research is the favoured methodology on this thesis.

3.4 Research Design

The interviews were semi structured by design, and deliberately short in nature. This made it possible to interview seventeen participants, who each had a valuable contribution to make to this research. The participants and agendas for the semi structured interviews are listed in Appendix C. Due to the quantity of interviews conducted, the interview transcripts have not been included in the appendix, however are available on disc upon request.

3.4.1 Key Participants

The participants were quite open with their views and had no desire to remain anonymous. The participants are referred to by their participant designation throughout the following chapters. The participants in question were carefully chosen to obtain in depth opinion from the main stakeholders in this research paradigm. Table 3.6 illustrates the rationale behind choosing each of the key stakeholders, outlining the contributions expected, and the importance of this information to the overall research question.

Table 3.6 Stakeholders

Stakeholder	Rationale.
Employer	The employers interviewed have experience of employing quantity surveying students on work placement modules, from other courses. They can provide detailed analysis of the advantages and disadvantages of current models in operation. They can also provide advice on improvements which can be made in this area, especially in light of the current economic crisis facing the construction industry. Their views on the internship model will be a major component in this research, and will shape the content of the proposed module descriptor for work placement on the quantity surveying course in question.
Undergraduate Student	Students are the main stakeholders in this research. Their views are vital to the validity of this research, and they can give a valuable insight into student requirements on a course of this nature. The students in question have completed three years of the construction economics degree course, and are fully aware of the learning outcomes required. They have also participated in the current foster scheme which provides students in third year with two weeks unpaid work placement.
Graduate (1 yr.)	The graduates in question completed the degree one year ago. The content of the course is still fresh in their minds. Unlike the students above, they have been exposed to the realities of sourcing employment in a shrinking industry. Their experiences of interviews and employer expectations with regard to work experience will make an invaluable contribution to the research.
Lecturers	The lecturers in question have all over ten years' experience of lecturing on the construction economics degree course. They are versed in the learning outcomes which must be achieved by students on this course. They will have to supervise any potential workplace modules, and carry out all associated assessments.
President SCSI	The SCSI has overall responsibility for the quantity surveying profession throughout Ireland. They have a major interest in prospective members, especially among quantity surveying students on undergraduate courses. The degree course in question is SCSI accredited, and their views on any alterations to course content must be acknowledged

3.4.2 Background to interviews.

The participants were approached in January 2012, and the interviews were conducted between February 2012 and June 2012. The backdrop to these interviews was one of economic collapse within the construction industry, with construction output estimated at €7.5bn for 2012, a pale shadow of the €39bn figure for 2006 . The current economic climate within the construction

industry has been extensively documented in chapter three; however the interviews in question bring you to the cold face of the effect of these turbulent economic climatic conditions.

The timing of this research is of paramount importance due to the economic conditions outlined above, and to the velocity of the changes within the industry. It would be fair to speculate that if this same research was conducted only five years ago, that a radically different set of results would be presented. There was anecdotal evidence of companies pursuing undergraduates with offers of fulltime permanent employment in their third year; such was the demand and skills shortage in this area between 2002 and 2006. This is especially evident in interviews conducted with graduates, who selected the construction economics course in 2006/2007, whose expectations were fuelled by full employment, and attractive remuneration, and makes their views on work placement all the more poignant.

The key themes have been elicited from the material recorded during these interviews. The design of these qualitative interviews, which were semi structured in nature, steered the interviewee to providing concise and useful information, eliminating extraneous detail, and ultimately assisting the researcher in compiling key themes which was the overall goal of the interviewing strategy. The key themes are recorded in chapter 4.

3.4.3 Limitations of the research.

"Following the organisation, presentation, and analysis of data derived from a phenomenological investigation, the researcher summarises the study in its entirety and considers possible limitations" (Moustakos, 1994, p. 155).

Although this research was based on the findings of seventeen semi structured interviews, limitations with regard to the range of participants must be acknowledged. The author endeavoured to gather views from all the main stakeholders in the work placement process, to ensure that a balanced set of opinions informed any conclusions made. However due to the wide spectrum of participants, only four of each category could be interviewed within the timeframe available, i.e. four employers, four lecturers, and so on. The four employers in question had experience of work placement students, and hence their views and opinions may be coloured by those experiences. The participants from the employer category were all in senior management, and there is always the risk that they are divorced from realities on the ground.

The research in question has been conducted during a depressed economic climate within the construction industry, and this certainly has an effect on opinions from the various participants. For example: students and graduates interviewed were quite willing to complete work placement without payment. Would their views have been different during the construction boom five years ago? Hence the conclusions taken from this research must be framed within the context that the research is carried out.

There is evidence from CAO intake numbers that the amount of students signing up for construction related courses has decreased substantially over the last three years (Flynn, 2012). This will result in smaller class sizes on quantity surveying courses and decrease pressure on colleges trying to source work placement positions. This may result in the availability of more course related summer work and lessen the desire on behalf of students to complete work placements.

The level of economic activity within the construction industry is difficult to predict going forward. If stimulus packages such as the Grangegorman Campus or Luas extensions are realised, they could have a major influence an employment numbers within the industry over the coming years. However, without these initiatives, the spiralling downwards trend with regard to output may continue unabated. This research is therefore of its time and will require readdressing as the industry changes.

Despite the above reservations, the author feels that the research has broadly achieved the aims and objectives initially outlined in the introductory chapter of this thesis. The above limitations are included only to contextualise the research for the reader, and this should in no way detract from the validity and importance of the research conducted.

3.4.4 Research Design Summary.

This chapter has provided an in-depth analysis of the various research design models available when commencing a research study of this nature. It has defended the particular methodology

utilised by the author with regard to this thesis. The design in question is interpretivist and qualitative in nature. It adopts phenomenology as the appropriate methodology, with semi structured interviews the chosen modus operandi. The aim of this research is to provide credible findings in the context of today's construction industry. These findings are presented and discussed in chapters 4 and 5, with conclusions and recommendations based on those findings presented in chapter 6.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction.

This chapter documents the findings gathered during the interview process under major themes. It provides the platform for interpretation and analysis of the data collected. The interviews were semi structured in nature, with a prepared list of questions, see Appendix C. This list of questions set the agenda for the interviews, and helped to shape the predominant themes. The genesis of these themes were facilitated by the nature of the questions put to each of the participants. However participants were encouraged to expand on their answers where they felt it necessary to do so.

4.2 Benefit of work placement as a mode of learning.

The benefits of work placement as a mode of learning were recognised by the participants without exception. Their views and opinions are outlined below.

4.2.1 The importance of work placement.

There was consensus among all participants that work placement is a valuable mode of learning. Students 1, 2, 3 and 4 discussed their experiences on the two week foster scheme which provides for unpaid work experience in third year at the start of semester 2. They were all quite vocal in appraising the benefits of this scheme; however there was consensus among them that the two weeks allocated were too short. Graduates 1 and 2 felt that they were disadvantaged when competing with graduates from other courses due to the absence of adequate work placement on their resumes. Employers 1, 2, 3 and 4 advised that graduates with work placement experience had an advantage in an interview situation over graduates lacking this experience. However Employer 4 pointed out that this was only an advantage for graduate level posts, and once experience was achieved in some form, the initial advantage disappeared. Lecturer 1 was very supportive of the philosophy of work based learning and the attributes of this form of learning. When asked why a module of this nature had not been introduced to the course over the last forty years, he indicated that tradition and culture were the main impediments rather than any great animosity within the school to this mode of learning. Lecturers 2, 3 and 4 were convinced of the

benefits available through work placement, however were more concerned about the logistics of implementing this form of module. Therefore the importance of work placement received widespread support among all participants.

4.3 Employment opportunities / prospects.

Employment opportunities has become a major issue for graduates of most courses due to the lack of economic activity. However the Construction Industry has been the major casualty of the economic recession of recent years, hence employment in this sector has suffered disproportionally as a result.

4.3.1 Experience of work environment

Employers were unequivocal in their views on the advantage held by graduates from courses containing work placement over those without work placement experience. All of these participants interviewed maintained that when faced with a number of prospective employees in an interview situation, having covered much the same material in their undergraduate courses, the candidates with work experience were more likely to be employed. This fact cannot be ignored by our course committee while this view is held by employers in a shrinking employment market.

Lecturers 2 and 4 were concerned about the sourcing of suitable and credible work placements due to the economic state of the construction industry, the logistics of sourcing this employment, and the alternative if on occasion placements could not be sourced. Lecturer 2 observed that" he had anecdotal evidence of other third level institutions experiencing difficulties sourcing work placement positions on construction related courses, especially in the last four years". He also observed that the quality of work placement positions may decrease as the industry contracts, and some employers may be tempted to use students to complete basic menial administrative functions rather than tasks appropriate to the desired learning outcomes. Lecturer 1 stated that the "primary purpose of work placement is to satisfy learning outcomes", and even if the experience was favoured by students, it would prove a worthless exercise if these learning outcomes were not the central focus of attention. For example, he had of knowledge of students on other courses in the DIT who engaged with positions which had little relevance to the course

they were reading. Hence, in his view, “careful vetting of perspective employers was necessary, along with the intended work experience attached to the placement.”

All of the student participants were very enthusiastic about the experience to be gained on work placement. During the construction boom years of the early noughties summer work in the construction industry was readily available; in fact there was a temptation among students to engage in part time employment throughout the college year, which presented its own problems. In essence quantity surveying work was available at all levels for those interested in sourcing this work. Since 2008, the very opposite is true. Unless students have contacts working in the industry, or are willing to travel abroad, the probability of acquiring summer or part time employment is remote. In order to make resumes more attractive, students feel the need to have completed some form of work experience, no matter how remote. Aside from the potential employment opportunities already discussed above, students also want engagement with industry to enhance their learning. Student 4 stated that “there is always the concern at the back of your mind that when you finally get a job, that you won’t be able to do what is required of you”. This was echoed by student 1 who advised that “they (QS firms) may have computerised measurement systems that we were not taught in college”. These statements made it clear that a certain amount of anxiety existed among students relating to their future careers, and how they would function in the working environment. The overall perception among these participants was that the work placement would act as a “dummy run” for future ventures into employment within the quantity surveying profession. Indeed it would give them a flavour of what their future working life would entail. Student 3 observed that “within quantity surveying, there were two major divisions between professional practice and contracting, and work experience in one or other may help making more informed decisions after graduation”.

The graduate participants were very supportive of the experience to be gained through workplace learning, bemoaning the fact that a workplace module had not been a part of their undergraduate course. Their views relating to employability have already been explored above, along with their views on competition with graduates from other courses. Again the fact that practical experience enhances material delivered in the class room was evident in their responses and the difficulty surrounding digestion of material when the student can’t relate it to real life practice.

The SCSI allow experience to be recorded during work placement and attributed to the twenty four months of work experience outlined as a prerequisite to completing their assessment of professional competence requirements. The participant from SCSI was supportive of work placement as “a valuable method of learning”. However he had a concern relating to the “possibility of undergraduate students filling work placement roles reducing employment opportunities for graduates”.

4.4 Payment / Remuneration & the concept of internships

The payment question is a major aspect of this study, and views expressed by both employers and graduates provided unexpected findings on this topic.

4.4.1 Current economic climate and employment.

The overall aim of this thesis is to research the use of internships as a work placement option, with particular emphasis on quantity surveying courses. A distinguishing characteristic between traditional work placement modules and the concept of an internship revolves around remuneration. The term “internship” is more common with regards to work placement in USA, which covers students or recent graduates undergoing supervised practical training. The term has also been introduced by the current government in an initiative to source employment for graduates, and reduce unemployment. The focus of my study relates to work experience solely for undergraduate students in pursuit of achieving specific learning outcomes on a degree course in Quantity Surveying. Research of work placement as a learning technique has been thoroughly explored throughout this thesis, especially in the context of a worsening economic forecast. The main differential between internships and traditional work placement mechanics being the inclusion or exclusion of payment for services rendered, and possibly the term of employment as a result. Hence the question of payment during the work placement term was a vital question for all the stakeholders in this research, and participants expressed a range of views on the matter.

The genesis of the idea that internships may be an appropriate mechanism as a work placement option was born out of the current problems facing our industry or perceived problems! And their effect on implementing a viable work placement initiative.

Problem 1. Would employers be in a position to offer payment to students during work placement in light of the current economic crisis in the industry? and if not, would an internship style placement for a shorter duration without pay be more attractive to employers?

Problem 2. Would the employment of students with payment cause industrial relations friction with existing employees already employed with these firms in light of so many redundancies within the industry? Or would internships without payment be more palatable to co-workers?

Problem 3. Was there enough work in any case to employ students? Would they have anything to do?

The problems outlined were put to employers during the interviews, and really the employers were the main stakeholders who could address the issues contained. Their responses are outlined below.

4.4.2 No payment – not valued!

It would have been fair to assume that employers participating in this research would have been very enthusiastic about employing students without payment. After all the construction industry is not just facing a slowdown, but a meltdown which has been extensively documented in chapter 3. However this was not the case. Employer 3 was very strong on this issue, “whether it is traditional work placements or internships going forward, payment is necessary in order for the individual to respect the employer, and the employer to respect the individual.” Employer 3 also stated that” if companies cannot afford to pay students, they shouldn’t employ them.” His central argument surrounded value, “do you value their employment or not?” He felt that companies should see the employment of undergraduates on these courses as an investment for the company going forward. Employer 4 felt that “it is important to pay students on work placement, even if it’s just a nominal amount”. He advised that students who were not receiving payment “may threat the placement as a break from college and end up disrupting other employee’s in the office”. Employer2 stated that “we would always try to make them some sort of payment”, and again was not supportive of an unpaid role despite economic constraints on his company at present. Employer 1 commented that “I think it is better if they get some nominal amount, even if it’s only the minimum wage, otherwise its open to abuse”.

The employer participants in question all work at a senior level within their respective companies, and not one of them expressed an interest in employing students on an internship, non-payment basis. In all cases, they felt that the advantage of saving money by not offering payment was heavily outweighed by the disadvantages arising from this mode of work placement. None of the employers concerned felt that industrial relations would be an issue, whether students were paid or not. They all accepted that difficult choices were being made on an on-going basis with regard to redundancies, however employee's in that unfortunate position were sensible enough to recognise the needs of work placement.

With regards sourcing employment, Employer 1 recognised the huge contraction in construction output, and the negative effect that this has had on employment, however he acknowledged that for the company to remain in business, there would have to be a certain amount of construction work being completed. With that in mind, he advised that" there would always be a demand, albeit limited, for junior quantity surveyors to carry out certain tasks". Employer 4 contended that "with the number of redundancies within his company, remaining employees were in many cases over burdened with workload". He felt that student placement employees could alleviate the pressure on these workers in the short term. Employers 2 and 3 both expressed the fact that there were probably more opportunities for quantity surveyors at entry level than for more experienced professionals. Employer 4 added that with the proximity of the UK market, that it would not be unreasonable for students to consider that jurisdiction for work placement options if having difficulty sourcing a position in Ireland.

The student reaction to completing work placement without payment was surprising in that three out of the four interviewed were supportive of this idea. Student 1 stated "definitely, unpaid work placement works well on courses such as physiotherapy and medicine so I don't see why there should be a problem on this course". Student 2 was not enthusiastic about this proposal; however he added "it depends on the length of time". Student 3 advised "Yes, once it was within the timetable of the college year". Student 4 echoed this sentiment, advising that she had no problem in principle so long as it didn't impinge on summer holidays when students required summer employment to supplement grants. The graduate responses were generally in unison with their student counterparts with all of these participants willing to undertake unpaid internships.

Lecturers had mixed views relating to the payment issue. Lecturer 2 contends that" payment is a motivational factor and the work placement experience would be more realistic if payment, no matter how minimal was included". Lecturer3 advised that "the whole process may be open to exploitation if payment was not included". Lecturer 4 felt that" a minimum payment should be included, and even concluded that a set nominal figure could be agreed to avoid competition on this aspect among students over the location of their placement". Lecturer 1 focussed on the learning outcomes, advising that "achieving these outcomes was more important than payment, which should be a minor aspect of the placement process". "However there should be reimbursement for out of pocket expenses".

The interview process has presented the researcher with many, quite unexpected responses from some of the participants with regard to the payment issue. The overwhelming lack of enthusiasm on behalf of employers with regard to non-paid internship style placements was stark. On the other hand the willingness of students and graduates to participate on work placements devoid of remuneration in the interests of gaining experience was encouraging.

4.5 Logistics of work place learning.

When addressing the whole logistics of work placement, a number of topics were addressed. These included what was expected by employers, along with timing issues and supervision implications. It also covered learning outcomes which are a vital component of any module.

4.5.1 Expectations of employers.

The participating employers have experience of work placement students over the past decade and in all cases have built up informed expectations of what students should, and should not be capable of completing. Employer 1 who has acted as an external examiner on this undergraduate course in the past, has clear expectations of what placement students can achieve, "they should be able to carry out basic measurement and administration tasks" although it was very much dependant on the actual candidate. Employer 4 was critical of the lack of skills that he feels should be inherent in a student having completed two years on a full time course, "Computer skills are lacking with most students, particularly in the likes of Excel, Buildsoft, and Construction Programming. Third level colleges need to keep in touch with what is happening in the marketplace and equip their students for working life in today's industry". Employer 3

advised that work placement students would be treated as a “junior quantity surveyor”, and his approach was no different from training in graduate surveyors. Employer 2 is currently an external examiner on a QS postgraduate course in DIT, and again has first-hand experience of course modules, and the standard of student output. His company uses the placements as an “extended interviewing process” where future employees can be targeted. “We tailor our expectations to meet the abilities of each student, if they show initiative; we will raise the level of tasks allocated”. Again he places a strong emphasis on the attitude of the student rather than exceptional academic ability,

4.5.2 Supervision by employers.

The participant employers were all convinced of the importance of adequate supervision. All four employers operated a team system in the workplace, where employees within the organisations were divided into teams, containing a blend of experience from team leader down to junior QS. The work placement student would become a functioning unit within that team and learn from his peers throughout whatever project they were working on. Employer 4 observed that while his company aspired to giving students the best possible exposure to all facets of the QS role within the company, “sometimes it is hard to find the necessary time to explain internal processes etc. and to check their work”. Employer 3 was concerned about what he called the “job bridge”, where in the past there was a natural progression from junior QS up through the ranks to senior management, with the progressing employee “training in “ and supervising the lower ranks as he progressed. This formed a natural bridge from one level to the next. However in the face of widespread redundancies, there are now gaps in this chain, with many companies top heavy with senior management, who do not have the time or inclination to supervise junior ranks. He feels that this is a growing problem in many organisations, which does have an impact on the standard of supervision in relation to work placement students. Employer 2 admits that there “can be a temptation in some teams to delegate unwanted and menial tasks to the student, and if left unchecked can result in the student gaining little or nothing from the experience”. He advises his senior management to carefully police this aspect and ensure that the student is getting fair treatment Employer 1 observed that his company has a long tradition of dealing with placement students, and they have quality control procedures in place to ensure a successful outcome for both the employer and student respectively.

4.5.3 Supervision by college representatives

The work placement module is an important part of any course, attracting specified credits with an impact on the students overall degree classification. It is paramount that the third level institution treats this module with the same care and attention as any other module on the course. The college has a responsibility to vet all perspective employers, along with the standard of experience being offered to the student. Lecturer 1 stated that “the tasks expected from students should be clarified by employers in advance; there is a risk that students could find themselves photocopying for six months”. He also felt that Lecturers must be allocated adequate timetable hours in order to appropriately supervise work placement students. “Like any other module, there must be learning outcomes and appropriate assessment”. He further added in relation to field work on behalf of lecturers meeting students and employers in their place of work that “this may be a welcome release for some of the lecturers”. Lecturer 3 felt that the college must engage with employers, and assess students on the basis of a number of feedback reports from both parties. The structure of these reports would have been agreed in advance. Lecturer 2 advises that “supervision must be rigorous, and well policed”. Assessment must be carried out by the college with input from the employer; this must be a collaborative effort as realistically college supervision is going to be intermittent in nature. Again, Lecturer 4 reinforces the collaborative relationship between the college and the employer. He feels that the company must be flexible for the relationship to work. Lecturer 4 feels that a rigorous assessment procedure must be agreed with the student at the outset, and embodied in the form of a number of interim reports submitted by the student.

4.5.4 Learning outcomes.

The benefits of work place learning have been well documented throughout this thesis, with the opinions of experts in this area explored in detail in chapter three, along with the views expressed by participants throughout this research process. Lecturer 1 has focused a large proportion of his commentary on the importance of learning outcomes attached to the work placement process and their successful completion. One of the aims of this thesis is to design a work placement module based on the results of research completed. This research is expected to shape and inform best practice for course design going forward in the context of a depressed construction economy. Although the attraction of having work experience listed on resumes may

be the motivational factor behind students enthusiasm for work placement no matter what form it takes, courses designers must not lose sight of the importance of learning requirements within the course and the responsibility of the course committee to ensure that these learning requirements are achieved.

Responses from Lecturers detailed above, offer advice on how learning outcomes are defined and achieved. They observe that rigorous vetting of employers and the tasks they expect students to complete must be fulfilled. They observe that a detailed assessment regime must be in place, with the responsibilities of both student and employer clearly defined. They point to the compilation of structured interim reports to be submitted by students, and the evaluation of this material by lecturers in collaboration with employers. Their views encompass a belief that "structure" is a necessity within any proposed module, and the need for adequate resources being allocated by the college,

4.5.5 Timing and duration.

Once the importance of work placement was established, the whole issue of timing and duration were then addressed. There were varying views among participants on the timing question with third and fourth year attracting the most favour. Employers were not questioned on the timing issue as it was felt that they would not have in depth knowledge of the mechanics of the course, and at what stage students covered specific material. Lecturer 2 maintained that by year 3, students would have a good foundation in the skills required, specifically by semester 2. Lecturer 4 concurred with this view, while Lecturer 1 advised that students at the start of year 3 would have "sufficient knowledge at that stage to make a contribution to the workplace." Lecturer 3 varied slightly in his view, maintaining that year 4 would be his choice, for he felt" that maturity was an important component", and with the "finish line" line in sight, students became very focused on employment opportunities and career implications.

With regard to the views of the student and graduate participants, there was a stark divide between their views on this question. Students 1, 2, 3 and 4 all maintained that year 4 was the ideal year; they all felt that you were too busy in the first three years completing coursework and getting to grips with the course itself. Student 1 felt that "year 4 would be an ideal, with work placement being carried out concurrently with the dissertation". Students 3 and 4 advised that

year 3 included problem based learning modules which were both challenging and practical, and grounded students in what to expect in the workplace. They felt that it would be advantageous for the students to have completed these modules prior to undertaking a work placement. Student 2 felt that you were "more focussed on gaining work experience in year 4". Interestingly, graduates differed with these opinions. Graduate 1 favoured year 2, stating that "year 1 gives you grounding in the profession, and if you completed work placement in year 2, it would give you a better understanding of material in modules later in the course". Understanding of course material was a common theme to responses from Graduates 2 and 4, who both advised that you were dealing with material in later modules which you could not fully understand in a practical context. If a comprehensive work placement module was conducted at the start of year 3, you would be better prepared to contextualise this material in later modules. Graduate 3 added that "your chosen topic for research for the dissertation module would be better informed if you had already completed work placement, and had a clear insight into areas of the profession that stimulated your interest". It is clear that the graduate students have had time to reflect on their learning experiences on the course and in that reflection can deduce where learning could have been improved.

A number of third level institutions, who offer work placement as part of their quantity surveying degree courses, refer to the courses as "sandwich courses", which relates to "a course in which periods of study in an educational institution alternate with periods of practical experience in an appropriate work situation in industry, commerce or a profession" (HEA, 2004). The duration of this sandwich year has tended to be one year or more, a substantial portion of the course duration. My interview questions on duration, gathered views from all of the participants in order to establish whether duration mattered, what an appropriate duration would be? And what duration was required to achieve the desired learning outcomes. Although one year appears on the surface to be a sensible approach, giving the student ample time to "bed in" in their new environment and treat the placement as a "real job". There must be debate on the length of time the student is divorced from college life during that placement, and the downside of interrupting the fluidity of studies during that period. My own opinion informed from having worked in industry with work placement students, would advise that the placement duration must correlate with the time required for the student to achieve the stipulated learning outcomes. The expectation is that post-graduation, students will spend the following forty years in the

workplace, and valuable time spent in the college environment should not be under estimated. Indeed the question of duration in this context was also influenced by cultural restraints specific to this course which traditionally had contained four full years of college attendance. The prospect of reducing this attendance by 25% would be a sizeable and radical alteration to existing practice.

An interesting quotation from Graduate 4 on duration was that the placement should be “long enough to make it worthwhile”. The responses to this question from employers were consistently the same, duration of six months. It must be remembered that all of these employers have experience of employing work placement students, which as mentioned above is generally one year duration, however they felt that six months was adequate. The common theme running through their answers was that it took approximately two months for students to bed –in and accustom themselves to the working environment. Employer 3 stated that “we treat them as junior QS’s, and they are expected to come to grips with assigned tasks in the same manner, this normally takes around two months”. Emloyer1 noted that “different people progress at different rates and you can’t beat enthusiasm.” Employer 2 noted that “you may employ a strong and ambitious candidate who after two weeks has totally assimilated into the team; other may be the same after six months as the day they started”. Employer 4 felt” that six months was generally adequate for any new employee to make a name for themselves”, and during that time would achieve good exposure to how the company operated.

Lecturers 1, 2, 3 and 4 felt that the duration should not exceed one semester absence from college. Lecturer 4 observed that “if the placement was conducted during semester 2, it would give the student an opportunity to continue the placement during the summer holidays”. Lecturer 1 advised that ” it was crucial that the placement would include adequate supervision from the college, and any more time allocated over and above one semester would be over arduous on course resources”. He also warned that “the placement could pose the risk of tempting students to disengage with the formal educational process.” Lecturers 2 and 3 were also concerned about the college resources in relation to supervision. Lecturer 2 pointed out that a number of lecturers who had recently retired had not been replaced due to government restrictions to public sector recruitment, and this must be factored into the thought process when designing a new work placement module.

Students and Graduates had similar opinions on the duration of the placements, with one semester, three to four months, being the common response among these participants. Student 1 was the only participant to diverge from this view, advising that a one year placement would be appropriate. Generally the students interviewed, with the exception of student 1 did not favour the idea of leaving college life behind for a full year. Student 2 contemplated that sourcing worthwhile placements would pose problems in the current economic climate, and a shorter duration may be more attractive to employers.

4.6 Summary of findings.

The interviewing process has proved to be a beneficial and rewarding process in light of the information gathered from the various participants. Within the constraints of this document, it is not possible to discuss every aspect of every interview conducted. However, by isolating key themes, a detailed and informed view can be formulated based on the information gathered. This information forms the basis of an in-depth discussion which is covered in chapter six. The information gathered is utilised in the design of a work placement module, which was presented to the programme committee of the QS course in question. Work placement has been a reality on a number of quantity surveying courses throughout the country for the last two decades, however this research has been conducted in the context of an economic meltdown within our industry, a context which has unprecedented implications for construction courses over the next decade.

In advance of presenting a summary of the main findings arising from this research, the sample size of participants involved must be acknowledged, and the associated research limitations not understated. However this is common with regards to research of this nature, and does not detract from the quality of the research conducted or the validity of the results produced. The main findings must be analysed within the context of the overall research parameters.

In summary, this research has established the following main findings:

1. The idea of internship style work placement modules on Quantity Surveying courses, where payment is not included, are not favored by Employers in the industry or by Lecturers.
2. Students have no problem in principle to completing unpaid work placement, so long as the duration does not exceed one semester.

3. Employers feel that unpaid internships will not be valued by either students or employers.
4. Work placement provides a valuable mode of learning on quantity surveying courses.
5. Graduates from a Quantity Surveying course, which does not contain a work placement module feel disadvantaged when competing for employment with graduates who do have work placement experience.
6. Semester 2 of Year 3 is the favored positioning of a work placement module.
7. The favored duration is six months.
8. The primary purpose of work placement modules, from the college point of view, is to satisfy learning outcomes.
9. Vetting of employers and their intended tasks for students is paramount to making the work placement experience a success.
10. Employers do not envisage industrial relations difficulties employing work placement students despite the current economic state of the construction industry, and the number of redundancies being made.
11. Employers feel that there are still work placement positions available, despite the lack of construction activity in the country at present.
12. Employers expect students to have basic IT skills, and an ability to carry out simple measurement and administrative tasks.
13. Employer supervision is paramount to ensuring that students receive a quality placement.
14. College supervision is vital to ensuring that the placement includes appropriate tasks, and that students are exposed to work experience whereby they can achieve the stipulated learning outcomes.
15. From an academic point of view, learning outcomes are the most important aspect of work placement.

The above findings are discussed in detail in the following chapters.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

The findings presented in Chapter Four include a comprehensive breakdown of the interview process, the participants involved, and the main themes arising from their opinions. The content of chapter four has also included a detailed description of the process involved in conducting this research, along with an initial analysis of the principle issues involved in the work placement process. The purpose of this chapter is to provide a detailed discussion, presenting the generalisations arising from findings, and to utilise that information to build solid and well informed conclusions. In essence, this chapter reverts back to the original research question, along with the aims and objectives of this study, and endeavours to address each of these items based on the information gathered. This discussion identifies whether the findings support the argument presented in the literature review. Particular attention is paid to those areas which were considered surprising, or which unsettled original assumptions on which the research design was based; This discussion also identifies the implications of the research for practice.

5.2 Main themes arising from findings

The main findings arising from key themes are listed in Chapter Five. I have grouped these themes into five main blocks for discussion:

- Theme 1 - Internships as a work placement model.
- Theme 2 - Timing and duration of work placements.
- Theme 3 - Work placements as a mode of learning.
- Theme 4 - The Employers role in the current economic climate.
- Theme 5 - Module descriptor design based on findings.

In order to maintain the link between the main themes arsing, and the original research questions, I have mapped out which themes address each specific research question:

- *The overall aim of this thesis was to research the use of internships as a work placement option, with particular emphasis on quantity surveying courses, and to explore the*

viability of work placement modules due to the current economic state of the construction industry. (Themes 1,2,3,4)

- *Discuss the main issues, benefits, and problems relating to work placement as a mode of learning.*(Themes 1,3)
- *Examine current models of work placement on quantity surveying courses as they exist in Ireland at present, highlighting difficulties being experienced due to the current economic climate*. (Themes 1,2,4)
- *Research the use of internships as a work placement option. Investigate how internships may function from both the employers and students point of view.*(Themes 1,2,4)
- *Based on research findings, design a work placement module for a specific quantity surveying degree course*. (Theme 5)

5.3 Internships as a work placement model.

Hancock (2011) painted a pessimistic picture of employment in the construction industry going forward, while DKM (2012) outlined their views in relation to what they saw as the collapse of the construction industry, these views have been explored in chapter 3, and generally lead to the conclusion that sourcing employment in the construction industry over the coming years will become next to impossible. This produced the conundrum: where would employment be sourced for work placement students on construction courses going forward? The government, alarmed at rising rates of unemployment produced the National Internship Scheme also known as the "Job-bridge scheme", and advised that "the aim of the National Internship Scheme is to provide job seekers with experience in a particular role that would be presently unobtainable due to lack of actual work experience". The success of the scheme was applauded by Enda Kenny who declared "I am delighted that job bridge has provided 5000 internships in only eight months, since I launched it last June. Today five thousand additional young people have had invaluable experience in the workplace, with some already securing a full time job as a result". This initiative was aimed at graduates, and was linked to social welfare; hence a certain level of payment was involved. My interest in this area was to explore a similar system, only this time aimed at undergraduate work placement students. My hybrid version of the government initiative would not have social welfare support; hence payment would be the sole responsibility of the

employer. Adopting the rationale that many employers simply would not be in a position to pay students due to the harsh economic climate, the internship model in mind could be based on those used in the USA where internship posts do not include payment. Hence a large section of this research surrounded the investigation of whether payment was a major issue among the key stakeholders.

The surprising result arising from this research was the reaction to this question from employers. All four of the employer participants interviewed were strong in the opinion that work placement students must receive some form of payment. The overriding theme arising from their interviews was: for students to value the placement, they must receive payment, and likewise for employers to value the students as employee's, payment must be attached. Lecturers were also supportive of payment being attached to the placement, with one Lecturer stating that the experience would be more "real life" if remuneration was attached, and students would take it "more seriously". One employer advised that employer's should not consider employing work placement students if they were not in a position to provide payment.

The other surprising result surrounded the views of students and graduates, the vast majority of these participants were in favour of completing non paid work placements in the interests of achieving suitable work experience. However this opinion is influenced more by the desire to have work experience completed from an employability point of view rather than achieving specified learning outcomes. This reinforces Auburns theory, where he advises "one of the most effective ingredients for producing employable graduates is supervised work experience" (Auburn, 2007, p. 5). This is obviously being experienced by graduates as they attempt to source employment.

If we correlate the opinions on this issue from all of the participants involved, there must be some form of remuneration involved with the placement, however it should be pitched at a suitably low level to not make it onerous or unattractive to the employer in the current economic climate, yet appropriate for the student to value the placement as a "real life" work experience. It is obvious that many construction companies are struggling at present, and costs of any description are an issue, however if a common sense approach is adopted with regard to student expectations on payment, this should not be a problem going forward. Accepting the fact that

students are willing to complete the placement without payment augurs well for achieving this aspiration.

5.4 Timing and duration of work placements

The design of work placement modules relating to quantity surveying courses delivered by other third level institutions within Ireland have tended to adopt a "year out" approach, where the duration of the placement extended to a full year of the course**.** The results of this research would suggest that a maximum of six months was sufficient. The employers interviewed have all extensive experience of employing work placement students, and obviously feel that while the duration must be significant enough to make the placement worthwhile, a full year is too long. This would also address the concerns already raised relating to employers ability to facilitate payment in the current economic climate, with six months possibly being more achievable from a budgeting point of view than a full year.

Lecturers were concerned in relation to the amount of time the student would be divorced from college life, and if this duration was too extensive, the student may disengage from the formal educational process. The other major influence on the duration, from the academic point of view was that the duration of the work placement must be linked to the time required to achieve desired learning outcomes. Lecturers generally felt that at least one semester, not exceeding six months would be sufficient to achieve this.

Students and graduates presented different angles to the duration discussion, focussing on their own needs in relation to this area. One telling quotation from a student participant was that "the duration must be significant enough to make it worthwhile" and she said this was especially true having experienced the "foster scheme" currently in place on the undergraduate course which only extends to two weeks. A number of responses from students advised that the placement should not impinge on traditional holiday periods when students in many cases travel abroad to pursue summer work. The general consensus among student and graduate participants was that the placement should be conducted during standard college periods, not exceeding six months.

With regards to what specific time slot to choose for the placement during the four year undergraduate course, the general view across the various participants gravitated towards third year as the appropriate year. Bearing in mind that employer expectations of the students who

would be undertaking these placements entailed the ability to carry out basic measurement and administrative tasks. It is only fair to assume that students require at least two years of formal education in quantity surveying modules before obtaining the confidence to carry out such tasks. Lecturers supported this view with the comment “by year 3 they have a good foundation in the abilities required to make a meaningful contribution in the work place”. Another Lecturer pointed out that students reached a notable maturity by third year, and at this stage begin to focus on their future careers in the profession. Students and graduates supported the choice of either third or fourth year, and observed that at this stage of the course, the student would be in a position to link material covered in the classroom to practical examples in industry.

The findings outlined above would advise that work placement on this quantity surveying course should consist of six months placement in industry, to be conducted in year three in the second semester.

5.5 Employers and Work Placement in the current economic climate.

McMahon (2010) talks about the employability of graduates and the benefits of work placement in this regard. Johnston (2010) reinforces this theory with his view that courses must be economically viable. This research reinforces these opinions, with all employers interviewed expressing the view that graduates who have completed work placement modules in their undergraduate courses have an advantage over those students who have not. Such strong endorsements of work placement must be acknowledged by course committee’s on quantity surveying courses; to do otherwise is placing students at a disadvantage. Tradition and culture have been offered as reasons why no work placement modules have been introduced to the quantity surveying degree course in DIT to date, however the strength of findings in this research would suggest that this omission must be addressed in the near future.

Toohey (1999) has offered some commentary on the logistics of organising work placements, what if work is not available? Who will liaise between the employer and the college? And problems generally surrounding the organisation of placements This research has found that employers are still confident that positions of this nature will be available going forward, despite the current economic crisis. Employers see the employment of work placement students as an investment in their company, and at the very least an extended interviewing process for potential

employee's in the future. Thankfully, employers do not foresee industrial relations problems employing students in the face of redundancies among more senior staff. They feel that existing staff recognise work placement students for what they are! I.e. students in the process of learning, rather than inexpensive replacements for their own roles.

Lecturers advise that vetting of potential employers is paramount to the success of a work placement programme. The employers participating in this research process have extensive experience of work placement students, and how to engage with these students in a proactive manner. However that is not to suggest that there aren't unscrupulous employers out there who are intent on exploiting students to their own gain. This research informs that careful vetting of perspective employer's would neutralise this risk, along with a structured supervisory system, in which both employers and lecturers would collaborate to ensure a successful outcome for all concerned.

The common perception relating to employment in the construction industry at present is one of negativity and pessimism. There is widespread media coverage of the numbers of construction professionals and workers alike emigrating to Canada and Australia to source employment. The figures from CIF and SCSI illustrate the magnitude of the collapse with the number of people working in the construction industry dropping from 270,000 in 2006 to 90,000 in 2012. One of the primary aims of this research was to evaluate the influence of this collapse on the viability of work placement as a course option. Surprisingly, Employers have been very positive with regard to employing work placement students going forward, and still see opportunities regarding employment of these students.

5.6 Module descriptor design based on findings.

The findings gathered during this research process form the basis for designing a module descriptor for work placement on the quantity surveying course in question. The full module descriptor can be viewed in Appendix X. The following sections will form the outline of the module descriptor itself.

Module Description.

This module covers the industrial placement for the programme which will take place in semester 2 of year 3, and will account for 30 credits on the course. The duration of the placement will have a minimum period of one college semester and will not exceed six months. A recommended remuneration package will be agreed with perspective employers.

Module Aim.

The aim of this module is to provide students with experience of industry in their chosen field, and to consolidate the theoretical content from the modules covered in the programme.

Learning Outcomes.

On successful completion of this module, the student will be able to:

- Show an in-depth understanding of how the construction industry operates, with a particular focus on the quantity surveying profession.
- Analyse and evaluate work based problems.
- Justify actions taken on decisions made during work placement.
- Demonstrate an ability to meet deadlines set for monthly reports, visits, and diaries.

Learning and Teaching Methods

Work experience is entirely based on the premise that the student is responsible for returning various documentation at agreed dates to his appointed work placement mentor.

Module Content

The student will be placed with a company operating in the construction industry, which employs Quantity Surveyors as part of its structure. This can be Quantity Surveying within a professional practice setting or within a contracting organisation. Work experience will be monitored by one industrial placement visit by an appointed lecturer, a monthly report sent back

by the student, daily record / diary of experience, employers report, and a final presentation made by the student to his college mentor.

Module Assessment

The module will be assessed in the following way:

- Four monthly reports 40%
- Lecturers Assessment 20%
- Employers Report 20%
- Final Presentation 20%

The assessments will be formative in nature with regard to the monthly reports, giving the student an opportunity to ensure that the required experience is obtained and learning outcomes achieved.

5.7 Overview,

The research findings have included interesting opinions in the context of a construction industry going through probably the most turbulent period in the history of this state. The positive views expressed by all of the participants with regard to work placement presents a strong rationale for adopting a work placement approach in quantity surveying courses.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter summarises the findings arising from the research conducted throughout this study, and presents conclusions in the context of the aims and objectives of this study. It outlines experiences and opinions from all the main stakeholders regarding work placement and discusses implications for college practice in this area going forward. It also discusses the recommendations arising from this research. The chapter concludes with an evaluation of whether the research aims and objectives have been achieved, and advises on possible areas for further research

6.2 Review of the Research Question.

The overall aim of this thesis was to research the use of internships as a work placement option, with particular emphasis on quantity surveying courses, and to explore the viability of work placement modules due to the current economic state of the construction industry Although this was the core aim guiding this research, it was necessary to identify a number of objectives which were researched in the process of achieving the overall aim. These objectives were outlined in the following way:

Discuss the main issues, benefits, and problems relating to work placement as a mode of learning.

An extensive literature review was carried out in chapter 2, which explored writings by eminent academics in this area. Their views coupled with current literature from the Irish Construction Industry formed the basis of an in–depth study of opinion on this mode of learning. This review presented work placement as a vigorous and multi-faceted educational approach, which is supported by the general view that learning occurs via active involvement in meaningful tasks in authentic contexts.

Examine current models of work placement on quantity surveying courses as they exist in Ireland at present, highlighting difficulties being experienced due to the current economic climate.

Employers who participated in the interviewing process all had extensive experience of work placement students. Their views made a major contribution to the overall findings in this thesis. They advised that shorter durations for placements going forward would be advisable. They also indicated that despite the current levels of unemployment in the construction industry, there was still an appetite for employing work placement students. Employers were also negative in relation to the idea of unpaid internships, and felt that payment must be an integral part of these placements. Employers also felt that the work placement approach provided valuable opportunities to recruit short term staff, and vet them as potential full time employees.

Research the use of internships as a work placement option. Investigate how internships may function from both the employers and students point of view.

This research found that the term "internship" can be adapted to many employment models. Government initiatives relating to internships, have mainly dealt with sourcing employment for graduates who are in need of work experience. The model of "internship" being advocated in this research referred to an American type arrangement where students can access work experience, with the benefits of learning being the overriding principle, and payment is not included. Students and recent graduates were supportive of this type of arrangement; however it did not find favour with Employers or Lecturers. Employers were concerned that in this type of arrangement, students may not value the placement. Lecturers were concerned that students may be exploited, and the whole experience would not mirror "real life" industry.

Based on research findings, design a work placement module for a specific quantity surveying degree course.

The proposed work placement module was discussed in chapter 5, and a copy of the proposed module descriptor is included in Appendix B. Biggs (2002) advises that effective course design requires a clear identification of appropriate objectives and learning outcomes, supported by effective learning strategies. This has been achieved in this thesis by taking on board opinions

and expertise offered by employers with experience in this area, supported by commentary from the other participating stakeholders.

This research has elaborated in detail on the above themes, and has identified a number of implications for practice.

6.3 Recommendations based on findings

The recommendations arising from this body of work echo the observations of Johnson (2010) who advises that courses must be economically viable, and Auburn (2007), Hunt (2011) and Daore-Pool (2007), who all insist that an increasing emphasis must be placed on employability in the work place.

The first and most important recommendation is that the course committee on the undergraduate degree course in quantity surveying in DIT, introduce a work placement module as a matter of urgency.

Secondly, the work placement module should be six months in duration and be introduced into the course in semester two of the third year. This placement should attract some form of basic payment.

This research has informed us that students who have not completed a work placement module on quantity surveying courses are at a disadvantage when competing for entry level employment within the profession. With unemployment within the construction industry at unprecedented levels, course committees have a responsibility to ensure that students are equipped to face the requirements sought by industry

The findings analysed in this thesis lay the foundation for a more rigorous and informed module descriptor with regards to work placement modules on Quantity Surveying courses in the current economic climate. The module descriptor design has taken into account the views of the key stakeholders with regard to vital components such as duration, payment and learning outcomes. The implementation of these findings with regard to practice can only enhance the student's learning experience, and better serve the needs of industry. In conclusion, the implementation of these findings in the form of a new work placement module is ultimately a decision for the

course committee, however the content of this thesis provides current and in depth research to assist the committee in making an informed decision.

6.4 Recommendations for further research.

There is a substantial body of existing literature and research carried out on work placement and associated strengths and weaknesses. The overwhelming opinion on this mode of learning is positive in nature. However every course is different, and the specific requirements and learning outcomes of each course must be reviewed before adopting this approach. The prevailing economic conditions within the construction industry have a significant impact on the views offered by the various participants with regard to work placement. This situation has to be monitored on an on-going basis, and findings revised to reflect the ever changing nature of the industry.

The evolution of building information modelling in the construction industry is seen as an area of expertise which may radically change the way we do business in the coming years. This technology will enhance the collaboration of various professional roles within the industry. The construction industry has witnessed significant advances in the information and communications technology sector over the last fifteen years across all associated professions. The push towards more expedient production of drawings, specifications, bills of quantities etc has encouraged the various construction professions to invest in software and technology that can enhance their performance to achieve ever more ambitious deadlines. Client requirements are demanding closer collaboration between construction professions to simplify information flows, and reduce delays in production and lessen opportunities for contractors to pursue financial claims. The idea of collaboration is a central theme in the philosophy that supports the growing phenomena that is Building Information Modelling within the industry. The rapid evolution of BIM within the industry is testament to the fact that clients are now expecting construction professionals to be fully educated and fluent in the application of BIM techniques. As a result, graduates from construction related courses are expected to have been exposed to BIM related technologies during their studies, and this can be a major factor when seeking employment. Classroom learning in itself may fall short with regard to facing this challenge, and work based learning in

conjunction with third level institutions may be the ideal collaboration to meet this challenge. Research on how work placements and internships may address the challenges posed by these new technologies is an area that requires attention in the short term.

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