

Research Report

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Evaluation of the Use of Information and Communications Technology to Support Careers Education and Guidance

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Executive Summary

The study

- ❑ The objective of this study was to evaluate the use of Information and Communications Technology (ICT) to deliver Careers Education and Guidance (CEG) within schools and colleges.
- ❑ The research assesses the extent and nature of ICT usage within CEG programmes currently and the implications for the introduction of the Connexions Service.
- ❑ In appraising the role and weighting given to ICT in the delivery of CEG, the report identifies ways in which it can be developed to assist pupils and students to become independent in the management of career-related plans and information.
- ❑ Investigations were carried out via Case studies, comprising interviews and focus groups held in 21 schools and 5 colleges. A follow-up survey of 146 schools and colleges was undertaken, to further explore issues emerging from the Case studies.

Main findings from the report

- ❑ The use of ICT to deliver CEG is more or less standard practice throughout schools and colleges and is regarded positively by both practitioners and young people, offering a time-efficient method of managing growing quantities of CEG-related information.
- ❑ A variety of methods are used to deliver CEG, although the potential for utilising ICT within programmes has not yet been fully realised. The most common delivery pattern is via a regular slot in the Personal Social Health Education (PSHE) carousel. Effective and well-received programmes are integrated across curricula, involving institution-wide commitment, often with block weeks/days set aside exclusively for CEG.
- ❑ While the role assigned to ICT for CEG purposes differs between institutions, in most schools and colleges, ICT is used for specific tasks, such as job-matching, word-processing CVs, UCAS forms etc and to meet defined information requirements. College programmes tend to focus on guidance aspects of CEG (rather than education) and assume that schools have made a good start. Currently there is only limited use of ICT-based resources to increase responsiveness to CEG and labour market information (LMI).

- ❑ Pupils and students do not perceive CEG provision as a coherent programme and feel they have little input in determining the choice and pace of activities. Pupils' prefer to receive face-to-face advice, yet guidance interviews are increasingly rationed to those at risk of disaffection. There are fears that the introduction of Connexions will further reduce the time available for face-to-face contact, particularly for young people with intended goals in Higher Education.
- ❑ Most young people have mobile phones, PCs and Internet access at home. However, pupils without a home PC, especially attending schools where ICT access is limited or unreliable, are particularly disadvantaged. Not only do they have greater difficulty completing homework assignments, because of limited access for word-processing or research; the development of their ICT-related skills is impeded, and their opportunities to explore a wide range of career and educational options. Lack of home access to computers and the Internet also seem to preclude career choices linked to ICT.
- ❑ Levels of teacher ICT competence do not figure highly amongst barriers to its use for CEG purposes, nor does pupil/student competence. There are problems linked to access and quality aspects of ICT equipment (including lack of technical support) and insufficient information about software, web sites etc. Matching (of individuals to jobs/careers) software is not well regarded by students, and practitioners felt there was room for improvement. Overall, teachers consider the most important barrier to increased use of ICT to be the lack of time to explore how technology relates to CEG and to devise relevant, practical activities that can be incorporated into programmes.
- ❑ Where practical barriers can be overcome, ICT offers considerable benefits in terms of CEG and can facilitate systematic career planning activities, linked to the development of key skills. ICT can also provide greater diversity of CEG delivery, including video conferencing and on-line enquiries/discussion and may encourage the development of independence in the research and management of careers information and advice.

Recommendations

- ❑ In order to encourage independent learning, pupils/students should be offered a flexible, menu-based approach to CEG. This would facilitate awareness of the whole CEG programme and allow access to particular topics/guidance as required, via a range of delivery options. Students would gain greater control over both content and flow of CEG activity.
- ❑ As part of the Connexions service, the role of career teachers may need to be reviewed. One model, worthy of further investigation, involves a 'facilitator' to support the increased use of ICT, one who is able to put students in touch with appropriate resources for themselves.

- ❑ More consideration should be given to the development of key skills while pupils/students are engaging in ICT based CEG-related activities.
- ❑ Software products should be better tailored to different users and individual needs. Refinements need to be informed by improved liaison between producers and consumers of software and web-based products.
- ❑ As the use of ICT for CEG disadvantages pupils and students with poor home-based access to technology, options should be investigated to compensate for disparities. These options could include preferential access to school/community-based ICT resources or the actual provision of PCs and Internet connections for those families without them.
- ❑ Effective networking of PCs is an important element contributing to the integration of CEG across the curriculum, enabling students to access resources on any machine, whilst alleviating the need for dedicated CEG terminals. Funds to support this and for the purchase of additional software licences are required.
- ❑ There is widespread need for improved levels of technical support for ICT resources. Optimal models of service provision, offering best value, require investigation. This should include recognition of the importance of adequate numbers of reliable peripherals, such as printers.
- ❑ Tools to facilitate the allocation of CEG-related resources need further investigation and refinement.

1. Introduction

Utilising the 'right' technology does not, in itself, guarantee high quality careers education or guidance; just as the act of placing materials on the web or CD-Rom cannot ensure improved levels of understanding or engagement¹. However, technology media provide significant opportunities for the individual to select and *undertake* tasks, to take an active approach to their own learning and information searches. This, in turn, may accelerate learning and skill acquisition, as part of a dynamic process of carrying out careers education and guidance-focused activity. The same skill development may then ease the transition of the individual: from taught pupil to independent and self-directed learner, defining and managing his or her own career information, training and educational needs.

Delivering careers education and guidance (CEG) via information and communications technology (ICT) holds out possibilities for the development of sensitive, flexible materials to take account of individual needs and aspirations, varying levels of ability and degrees of engagement. The opportunity is there for students to control both the flow and content of material, to respond at their own pace and to determine a personal agenda for acquiring CEG. The use of ICT may help to avert the possibility of overloading students with information, allowing them to select activities and to delineate their own enquiries on the basis of interest and readiness to engage.

1.1 Fundamental aims

In broad terms, the *Northern Economic Research Unit's* (NERU) understanding of the fundamental aims of this project was to:

- (i) provide an exploration of the issues surrounding the use of ICT for CEG purposes;
- (ii) suggest how usage may be facilitated; and
- (iii) to indicate any further research that may be necessary.

1.2 Terms of reference

In order to optimise the contribution that the use of ICT may make to the delivery of Careers education and Guidance, CEG was defined in the broadest terms to

¹ See Bostock S.J. in Khan B.H. (ed), *Web-Based Instruction*, 1997

incorporate all activities and resources related to careers, education, training and information.

ICT was broadly defined² to include all technically mediated interventions, including the Internet, e-mail, video-conferencing, telephone helplines, CD-Roms, Internet cafés, digital TV and mobile phones.

1.3 Key objectives of project

The key objectives of the project were understood to consist of:

- A fundamental appraisal of the role and weighting given to ICT in the delivery of CEG in schools and colleges
- An examination of the current situation in schools and colleges, regarding the delivery of CEG via ICT
- Identification of the key factors affecting best practice and limitations upon optimising utilisation
- The location of gaps and weaknesses in both availability and capabilities of hardware and software
- An overview of levels of staff and student confidence and competence in ICT usage as part of the process of identifying barriers to its' increased use
- Exploration of some of the pertinent pedagogical issues surrounding the delivery of CEG-related information via ICT, including those associated with transferring control of the flow and content of information and activities to the individual
- To take account of the potential impacts of planned changes, such as the introduction of the Connexions Service and including the launch of the Connexions Card
- To obtain feedback from practitioners on the NGfL (National Grid for Learning) website, including user perceptions.

² See BECTa, *Connecting Careers and ICT*, 2001

2. Research Methodology

The investigation examined qualitative issues in the delivery of CEG via ICT, such as usage patterns and access to facilities, while taking account of costs versus available budgets, existing technology, and staff and student competency levels. The research team sought to identify and explore the nature of the different roles ascribed to ICT in schools' and colleges' CEG programmes – its position in the chronological delivery of programmes, the degree of integration and the specific purposes that ICT is used to serve.

2.1 Approach adopted

Case studies furnish a preferred means for the examination of *qualitative* issues, including those associated with pedagogical and attitudinal matters. This approach also allowed exploration of issues around access and usage of ICT, linked to its deployment for purposes of careers education and guidance. The original brief specified a large-scale questionnaire-based survey, accompanied by a limited number (8) of Case studies. However, in order to avoid overloading schools and colleges with requests for information, the specification was amended by the commissioning body (then the DfEE, now the Department for Education and Skills) to consist exclusively of Case study-based research of a larger number of institutions (25).

This seemed both a logical and positive step. It allowed greater account to be taken of the body of extant research³, which provides considerable amounts of quantitative data, including information about equipment, online links and student and staff capabilities. It also permitted the agenda to be moved forward, to include greater exploration of the *potential* for utilising ICT in CEG programmes.

However, while the revised approach permitted a fuller, qualitative exploration of the issues mentioned above and reduced the overall number of institutions involved; the change did place a significantly greater burden upon those institutions participating than a questionnaire was likely to have done. Around two-thirds of schools and colleges approached refused to take part in the research, usually citing lack of time as the reason. Researchers were conscious therefore, that a degree of caution was necessary in interpreting the evidence obtained: the sample of institutions agreeing to participate may, to a degree, be self-selecting rather than representative, because of particular interests or enthusiasms related to ICT and/or CEG programmes.

³ DfEE, *Information and Communications Technology in Schools in England*, SFR35/2000

In addition, while the change in approach offered enhanced detail and precision and a more in-depth qualitative study, it was inevitably weaker than a large-scale questionnaire survey, in terms of being able to generalise from its findings. However, in our assessment, the potential gains, especially given other sources of baseline information, outweighed any losses and allowed a shift of focus more in keeping with an inclusivity agenda and creating routes and capabilities for lifelong learning.

2.2 Sample selection

Case studies were selected in a purposive manner, to reflect the main dimensions of heterogeneity: of institutions, catchment areas and populations. This was done in conjunction with the Associate Consultant on the Project, Peter Beven⁴, as well as with the assistance of DfEE and NACGT⁵ representatives,.

At a practical level, whilst arranging visits, account was taken of general availability, half-term holidays, OFSTED inspections and INSET days. In order to complete the project within the given time frame and because of prevailing travel difficulties, efforts were made to establish pairs of institutions in more distant locations.

Case study institutions were selected from:

- a. **Across the whole of England**, in order to offer a reasonable geographical spread
- b. **A range of locations, types and sizes of place** across the urban hierarchy i.e. cities, medium-sized towns, small towns and those serving rural communities
- c. **Those drawing students from different populations** i.e. varying social, economic and ethnic groups, reflecting different catchment areas and populations. Though it was recognised that this factor may partly be accounted for within (b), it acted as a check step in the search for variety and mix
- d. **A range of types of institutions** i.e. comprehensive schools for 11-16 yr olds and 11-18 yr olds, an independent grammar school, single sex Roman Catholic school for 11-18 yr olds, schools for 13-18 yr olds, VI

⁴ Peter Beven is Course Leader, MA Guidance and Counselling, and tutors the MA and postgraduate diploma in Careers Guidance at the University of Northumbria

⁵ National Association of Careers Guidance Teachers

Form colleges, Further Education colleges and Community Technology Colleges

2.3 Methodology

The methodology adopted was in four stages:

Stage 1: A *pilot study* was carried out within the North East region, in order to test a questionnaire for careers teachers and to shape activities designed to test the views of pupils and students and allow modification of the research framework.

Stage 2: Detailed *semi-structured interviews* with Careers Teachers/Advisers/Student Services Managers in all Case study schools or colleges (see Appendix 1)

Stage 3: Activities with *Focus Groups comprising Pupils/Students* in different years in each institution (see Appendix 2)

Stage 4: A *Small-scale follow-up Survey* of self-selected schools and colleges to further explore issues emerging from Case studies (see Appendix 3)

2.4 Pilot Study

The pilot study comprised four schools and one FE College based locally, within the North East region. The aim was to alert the researchers to potential issues and to allow expedient modification of the survey framework, prior to the project being rolled out nationally. It was possible to undertake this activity at the same time as the full range of Case study institutions were being identified across the country, appointments set up and arrangements for focus groups made.

Pilot study institutions comprised:

Institution 1: a city-based FE/HE College, across three campuses with approximately 25,000 students (full and part-time). This particular college offers many different types of courses – non-vocational, vocational, specialist, and academic courses. The college plays an integral role in the delivery of education to the North East region as a whole and in the delivery of SRB⁶-funded initiatives in the city.

Institution 2: a Community College on the city's periphery with approximately 880 pupils, aged 11 - 19 years, and with a variety of intended destinations in an

⁶ Single Regeneration Budget

area of relatively high multiple deprivation. This college also provides education to the wider community, in order to meet the needs of adults locally.

Institution 3: located in a semi-rural part of Northumberland and a Beacon school with Technology College status, catering for approximately 950 pupils, aged 13-18 years. The former head developed the school's role within the regeneration of the local community and this underpinned a successful application for SRB funding. The school is at the apex of the local education pyramid, with thinking skills tuition delivered in local primary schools, a technology trailer, staffed by high school students visiting middle schools to enhance skill development in technology. There is also a community bus, supported by the school, equipped with PCs and used for outreach work with young people in the area.

Institution 4: a suburban boys-only Roman Catholic High School, drawing in approximately 1,100 pupils between the ages of 11 and 18 from a wide range of social and economic backgrounds. The institution itself is regarded as effective and characterised as traditional in its approach to the delivery of Careers education and Guidance.

Institution 5: an inner city comprehensive, drawing pupils from varying ethnic backgrounds, including recent intakes of refugees. It is located within an economically and socially deprived district, the heart of a large SRB area, with lower than average levels of attainment and parental involvement. Currently, for a variety of logistical reasons, ICT is not used at all to deliver CEG. Also, it is planned to cease to offer A or A/S levels, in favour of concentrating on more vocational courses, such as NVQs, because the majority of the school's pupils enter FE, or seek direct entry to the workforce at 16.

During the pilot study an additional Case study, from the independent sector was added, with the agreement of the Steering Group.

Institution 26: an independent boys' grammar school close to the city centre, with just less than 1,000 pupils and within the top 50 schools in national league tables. An independent inspection carried out in 1999, while largely positive, criticised the school's investment in and commitment to the use ICT in general. As a result, expenditure plans were changed quite radically, in order to invest heavily in computer technology - hardware, software and support staff - and strenuous efforts made to integrate usage into all aspects the school's programmes.

This 'extra' Case study helped to benchmark our findings. As was anticipated, pupil responsiveness to CEG was positive, as were levels of familiarity with ICT. All pupils have e-mail addresses and e-mail is used to allow communication to and from parents wherever possible. However, given the nature of the school's intake, though most pupils were well motivated towards CEG and well informed, interest focused on a comparatively narrow range of career destinations.

Nevertheless, pupils attending focus groups were able to offer reasoned, critical analysis of software programs and websites. Their input was therefore helpful in defining activities to be explored elsewhere, particularly to brainstorm potential uses of ICT in relation to CEG.

Completion of the pilot study exercise allowed the modification and adaptation of the Case study framework, including the teacher questionnaire and the focus group activities, whilst also taking into account recommendations from the first Steering Group meeting. This enabled NERU to construct a research framework, (see Appendices 1-3) which would more effectively produce responses to the full range of issues to be explored, while remaining sufficiently flexible to allow adaptation on site.

2.5 Key to Case study Institutions

Case study	Institution Type	Number of pupils	Profile	% attending Parents Evenings	Location	IMD Rank ⁷
1	FE College	25 000	3 Campuses across region. Diverse range of courses and integral role in local community.	N/A	Urban City North East	36
2	11 – 19 Comprehensive	860	Community College on city periphery. Provides education and facilities to wider community.	70	Suburban North East	693
3	13 – 18 Comprehensive	950	Beacon School with Technology College Status, within SRB Area.	70	Semi Rural North East	2408
4	11 – 18 Boys' Comprehensive	1100	Traditional methods of CEG, large % of pupils going on to HE.	80	City North East	565
5	11 – 18 Comprehensive	1400	In heart of SRB area, large % of ethnic minorities. Low levels of attainment and parental involvement.	30	City North East	183
6	City Technology College	1400	Created from two grammar schools, single sex classes up to 16. One of the first CTCs, covers wide catchment area.	90	City London	996
7	11 – 18 Comprehensive	1550	50% of pupils from outside 'normal' catchment area. Specialist accommodation for all subjects.	75	Rural North Yorkshire	3879
8	13 – 18 Comprehensive	1400	Upper School and Community College. Caters for 3000+ adults p.a. Has its own farm unit.	85	Semi Rural South East	7288
9	11 – 18 Comprehensive	1080	Mixed comprehensive, over subscribed, serving wider community. Technology College Status and tradition of academic, cultural and sporting excellence.	97	Urban West Midlands	2319
10	11 – 18 Comprehensive	1400	Large institution in heart of city with average use of ICT.	65	Urban W Yorks	4518

⁷ IMD Ranking derived from *Index of Multiple Deprivation, 2000*, (Source: ONS), calculated via range of indicators and comprises 8414 wards in total with 8414 = least deprived, 1 = most deprived. Rank allocated refers to ward in which school or college is located

Case study	Institution Type	Number of pupils	Profile	% attending Parents Evenings	Location	IMD Rank
11	11 – 18 Comprehensive	1100	Mixed comprehensive with both Language College and Beacon School status. Serves wider community	100	Rural Town East Midlands	3138
12	11 – 16 Comprehensive and VI Form College	1300	Coastal , quite isolated, average attainment, some courses delivered via A/V conference	45	Semi rural E Yorks	3392
13	FE College	11000	One of biggest catchment areas in England. Courses at 50+ venues incl IT at 'Community Houses'	N/A	Semi-Rural North East	620
14	11 – 18 Comprehensive	1070	Attainment levels above average. Average use of ICT but below average for CEG	90	Town South East	8329
15	FE College	2814	Large institution on several campuses serving wide catchment area	N/A	Suburban/ Town South East	7494
16	11 – 18 Comprehensive	1400	Diocesan school taking in pupils from 3 counties. Reflects socio economic balance of diocese rather than immediate residential environment	100	Town South East	2878
17	11 – 16 Comprehensive	1200	Below average attainment levels, located in economically and socially deprived area	65	City North West	59
18	11 – 16 Comprehensive	1300	Overall, better than average use of ICT, average use for CEG	60	City S Yorks	1314
19	City Technology College	1100	Catchment area entirely within city. Students representative of multi cultural city, 40%+ pupils from ethnic minorities	85	Urban Yorkshire	42
20	11 – 18 Boys' Technology School	1300	Technology College Status, popular institution, over subscribed. Recent developments include new science and technology suite.	90	Suburban South East	8291
21	FE College	6500 FTE	College located in wealthy suburban area but attracting pupils from inner London. Higher than might be expected number of students from ethnic minorities.	N/A	Suburban South East	8291
22	VI Form College	1466	VI Form College, predominantly academic courses	N/A	Town South	2317

Case study	Institution Type	Number of pupils	Profile	% attending Parents Evenings	Location	IMD Rank
23	FE College	1700	Technology College offering wide range of courses, mainly vocational and less academic	N/A	Town South	5012
24	13 – 18 Comprehensive	950	Amalgamation of Grammar and Technical Schools. School takes in children from visiting families; in all around 150 bilingual pupils, speaking over 30 languages	75	City South East	6007
25	Mixed Grammar	900	Over subscribed high achieving, selective school with national reputation for sport.	90	Medium sized town South East	8373
26	Independent Grammar	1000	Selective Boys' Independent Grammar located close to the city centre. Selective institution in top 50 in national League Tables.	90	Urban City North East	6941

Summary of Case study institutions

5 x FE Colleges

1 x 11-18 Technology School

2 x Community Technology Colleges

8 x 11-18 Comprehensives

3 x 13-18 Comprehensives

3 x 11-16 Comprehensives

1 x 11-19 Comprehensive

1 x 13-18 Mixed Grammar

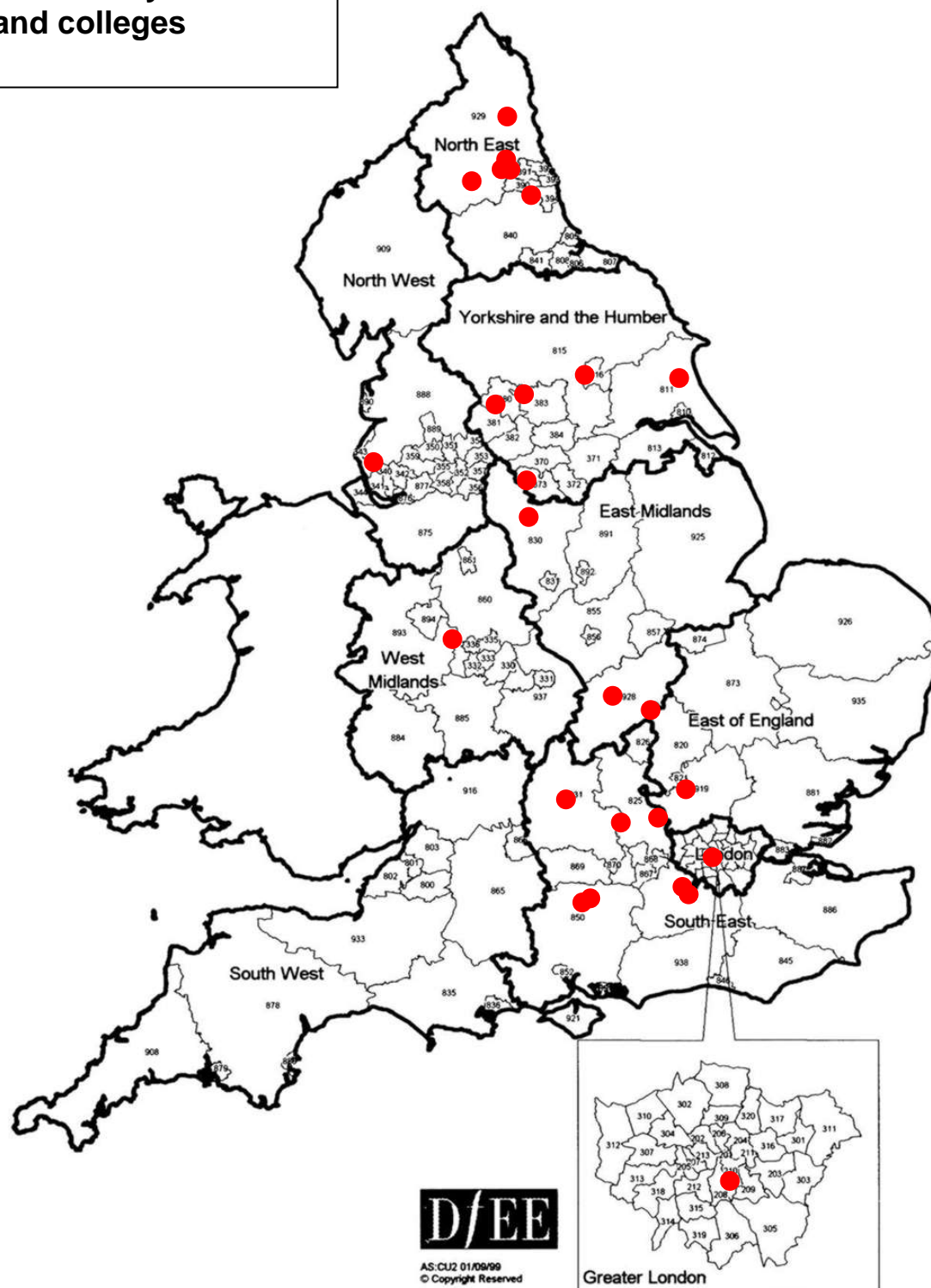
1 x 11-18 Independent Grammar

2 x VI Form Colleges

Total 27 institutions

(Institution no.12 recorded both as VI Form College and 11-16 Comprehensive - run as two separate entities)

**Map 1: Locations of
Case study schools
and colleges**



2.6 Supplementary research activities

Workshop with trainee Career Advisers

A workshop was held with 20 students training to be Career Advisers with the University of Northumbria and studying for the Diploma in Careers Guidance (either on a part-time or full-time basis). A small number of the students (4) were in the final year of their undergraduate programme and had participated in a one-week placement in a school or college. The majority of the group were full-time postgraduate students, who had completed a two-week placement and were involved in weekly attachments to careers companies.

The format of the workshop was semi-structured, with three main areas of discussion, centred around the use of ICT to deliver CEG, (i) experiences and perceptions, (ii) barriers to use, and (iii) the potential uses of ICT.

Careers Library Initiative Exhibition

Members of the research team attended a Careers Library Initiative exhibition and demonstration of CEG software, run by the Tyneside Careers Service. This provided opportunities to obtain first hand experience of the different types of software available, as well as to interview practitioners⁸ responsible for the delivery of CEG in schools and colleges, and members of the Careers Service. As the focus of the event was specifically software, this provided an opportunity to ask practitioners what they think works best, why they were choosing a particular piece of software, how they had arrived at a particular decision including whether sufficient, reliable information was available in order to do so.

Careers Education and Guidance Network Workshop

Teachers attending a meeting of the Careers Education and Guidance Network, convened by Tyneside Careers Service. This session allowed the gathering of views of local teachers (not participating in Case studies) and discussion of the developments in the uses of ICT to deliver CEG they would like to see and the likely impacts anticipated upon the introduction of the Connexions Service.

Flavour of Assessment Workshops

As part of the local Careers INSET Programme, these workshops covered a wide range of issues. Within this however, some had a very specific focus: to

⁸ Practitioners is used to describe all those involved in delivering careers-related information and guidance to pupils and students, e.g. careers teachers, careers co-ordinators, student support officers, advisers etc.

compare and contrast new and existing tools for the targeting of CEG-related resources and advice. The aim of most tools considered was to allocate young people (aged 13-19) to specific groups, in order to assign priorities and target CEG resources. A number of measurement tools have been specifically designed to measure 'distance to effective engagement' with CEG, for use with those at risk of disaffection and with multiple barriers to be overcome.

The research team considered that ICT had particular relevance here, principally for two reasons: (i) as a relatively low cost method of delivery of CEG resources with those young people requiring *minimal* intervention and (ii) its potential to raise awareness and improve levels of engagement, amongst those *at risk of disaffection*.

The workshop programme included:

- **MAPS** – a soft interactive tool to measure motivation, ambition, adaptability and perseverance, which can be used for all abilities to segment the market for CEG provision
- **Distance to the Labour Market** – an assessment framework to measure distance to the labour market and currently used with young people on the Learning Gateway on Tyneside
- **JIG-CAL** - Job ideas and information generator and computer assisted learning
- **CITB** – Construction Industry Training Board assessment tests to select potential trainees
- **Getting Connected** – a new tool used in Years 10 and 11 to help divide students into three priority groups for careers guidance
- **Progress Map**, a new, interactive website for young people working with Personal Advisers to tackle problems and make progress in their lives, and focusing on engaging young people via ICT.
- **Rickter Scale** – a tool to measure distance travelled, dealing with barriers to employment and gaining self-confidence, mainly for use with those who are harder to help.
- **Basic Skills** – How basic skills assessment works in practice
- **Stop, Look and Achieve** – Accredited groupwork materials to assist and encourage hard to help young people to self assess; includes communication skills, team work, social skills, problem solving and target setting

Careers education and guidance conference

In the later stages of the project, a large CEG conference, focusing on Connexions, provided an opportunity to disseminate key findings to practitioners and obtain feedback. This ensured that the views and current practices of the CEG community within schools and colleges were being represented as fairly as possible and allowed the expression of reactions to the findings. Opinions were also sought on possible future directions for research and the development of the role of ICT.

Findings from all of the above related activities have been incorporated into the body of the report, where relevant, and are not presented separately.

3. Views of practitioners

Careers teachers or co-ordinators within schools and colleges were interviewed about in-house CEG programmes. Discussions covered delivery methods and the targeting of resources, ICT hardware and software (see Appendix 1). They also examined more qualitative aspects, such as utilisation, strengths and weaknesses, and possible barriers to the use of ICT within CEG (for example teacher or pupil competence and confidence levels with technology). Views were sought on the potential uses of ICT, the forthcoming Connexions Service and the NGfL website.

Practitioners, as suppliers of CEG, were interviewed before the focus groups with pupils/students were held. This helped researchers gain the necessary information to prompt pupils/students about elements of the CEG programme which they are supposed to receive and test the 'consumers' reactions to the provision on offer.

3.1 Careers education and guidance programmes

3.1.1 Overview of CEG in schools

Provision of CEG started in Year 9 in all Case study institutions, with an increasing focus in Years 11 and 13 upon young people planning to directly enter the workforce after school. Concerns were frequently expressed about the additional pressure on the time and resources of both teaching staff and pupils, caused by the introduction of Advanced Subsidiary levels, which in turn was considered likely to reduce the time available for CEG.⁹

Schools principally drawing from multiply-deprived local populations acknowledged that *'the pupils are not very responsive in terms of CEG and do not find sessions particularly relevant until the very last minute'* (5)¹⁰ and that *'when they (the pupils) are very close to leaving, the importance of careers interviews suddenly hits home and the (careers) co-ordinator is inundated with requests for interviews'* (2).

⁹ Note the research was carried out in January and February 2001, prior to recent expressions of concerns about the AS levels (June 2001).

¹⁰ Numbers in brackets following quotations refer to the relevant Case study institution (see Key to Case studies, p.10). The quotations themselves have been chosen as representative of commonly held views or of polarised positions. It has been chosen to use the actual words of interviewees, where the sentiments are representative, rather than to paraphrase.

In terms of where and how careers education and guidance is located within the curriculum of the participating schools, a variety of delivery models were found to be in operation. These, in descending order of incidence, included:

- part of the Personal and Social Education (PSE) or Personal, Social and Health Education (PSHE) carousel
- offered during 'block' weeks or days, when the timetable is suspended to allow cross-curricular activities, focusing on careers and employment or education
- as a separate, probably weekly, timetabled subject
- to permeate the whole curriculum.

By far the most frequently encountered delivery pattern (found in around 80% of sample schools) was CEG as part of a PS(H)E carousel. One in four Case study institutions combined this with some form of 'block' week or suspended curriculum provision.

This combined approach, and the commitment necessary from all members of staff to exclusively dedicate time to CEG, was indicative of schools where CEG appeared to be delivered most effectively, and as part of a coherent, integrated programme.

Targeting of CEG programmes

Targeting of CEG programmes appears to lack consistency and to demonstrate a taxonomy of approaches, ranging from: *'the delivery of CEG does not differ among students with different intended destinations because it is difficult to identify individual need amongst a mixed group of pupils'* (2), to *'careers education is not targeted on particular groups of pupils but guidance is'* (3), while other institutions report that *'the delivery of CEG differs quite significantly between pupils with different destinations'* (7).

Overall, it seems that the middle way is that most commonly employed – careers education provided relatively uniformly by year group, with some specific activities and assistance directed to those young people *not* planning to progress into FE or HE. Guidance interviews tend to be rationed in most places: in some cases allocated to those not planning to progress into education or training; in others upon specifically those considered to be at risk of disaffection; and in yet other schools (a minority, but approximately one in four Case study institutions) to any pupils specifically requesting interviews. In the schools surveyed, targeting of provision did not appear to take place on the basis of any specifically designed diagnostic tools.

Case study 26: Effective use of team teaching to deliver CEG

CEG - Delivery of CEG relies on one 'dedicated' teacher, supported by a team of twelve others, who carry out personal careers interviews and a further ten teachers who support and guide the UCAS application process. The Careers Service is heavily involved, offering personal interviews, feedback on job matching programs (JIIG-CAL) and attending Parents' Evenings, though it seems that its role is to supplement, rather than direct activity.

CEG software purchase - Elsewhere schools have told us that they rely substantially on advice and funding from the Careers Service to make choices. While making use of CLI funding, this careers teacher stated that, though taking account of Careers Service advice, he makes decisions by consulting publishers' catalogues directly. He seeks to avoid information overload, not to offer anything trivial, and in order to qualify any software purchased has '*at the very least has to equal printed information, or it's not worth bothering*'.

3.1.2 Overview of CEG in FE colleges

Delivery methods and content of CEG programmes also varied in the colleges surveyed. Support service staff, while also providing careers information, regard their primary responsibility as being to ensure that students are correctly placed on courses in the first instance, in order to improve student retention. In designing the services to be offered, the starting point assumed by colleges was that schools '*have already taken care of the education part of CEG*' (23). This assumption has implications for services provided for students coming from a variety of schools and backgrounds, where programmes may or may not have met their needs, and where the students themselves may have failed to engage with available provision, prior to entering FE. Services are often provided on demand, frequently via software packages. In some cases, such careers provision in colleges is '*almost entirely IT-based*' (21), which inevitably has implications for those students less competent or unfamiliar with IT. This model of provision tends to presuppose that students will identify their own needs and seek the appropriate assistance.

For students studying vocational courses, it is largely assumed that members of course teams, with specialist knowledge and relevant contacts, will deliver the greater proportion of advice and information. Such staff are considered to be very supportive of CEG, though inevitably of a very specific nature. Vocational courses usually include a significant element of careers-related content as a prerequisite; some reserve timetabled slots for presentations by careers staff. However, questions were raised by those responsible for CEG in colleges about the degree to which teaching staff in general (as opposed to those on vocational courses) could be relied upon to offer careers guidance. Criticism was not intended in such comments but reflected an acceptance that, with the many pressures upon teaching staff, '*it's inevitable that anything "non-essential" will be pruned*' (1).

CEG resources in colleges surveyed tended to be physically concentrated in a central location, based in generic student support facilities, and offer a range of services, including information, help with CVs and job search skills. Resources concentrated in this manner may disadvantage those students based in 'outreach centres' and where colleges are spread across a number of campuses, *if* alternative delivery methods or locations are not made available. There are also considerable cost implications for the colleges where access to software programs is needed across several sites and multiple site licences must be purchased.

Targeting of CEG provision

Where CEG provision is targeted, it is usually on the basis of students considered to be 'at risk'. However, means employed to determine risk seem relatively unsophisticated. In most of the colleges this group mainly comprised students on one-year courses (and therefore likely to leave the college soon and with limited qualifications), rather than those identified by their experience of CEG to date, or because they lacked practical plans for education or employment in the future. Increasingly, however, provision is beginning to be concentrated on students considered to be disaffected (due to their non-attendance), and efforts made to try to contact them at home. The incentive for this type of intervention presumably comes, at least in part, from the issue of retention and the anticipated impacts of student drop-out upon college funding. As in schools, it did not appear that diagnostic tools or data were being used to systematically identify students 'at risk'.

Attendance records (where kept) are usually far from being a foolproof tool in FE colleges for identifying 'at risk' students, especially when they are spread across a number of sites. Given the range of course start dates and timetabling permutations, it can be particularly difficult to track students (NERU, 2000¹¹), particularly when students change courses and/or switch schools within a college. Most colleges have access courses, covering a wide variety of disciplines, and these are often administered separately; students moving on from these can be hard to trace, with success relying upon the determination and resources of teaching staff.

3.2 The role of ICT in CEG programmes

At the extreme, only one Case study institution claimed to make no significant use of IT-based resources for CEG: *'the school has not really tried to implement any ICT use in careers, we have no strategy or direction for doing so and I feel*

¹¹ 'West into Work: Labour Market Study', report for Newcastle SRB Partnership (**Northern Economic Research Unit**, June 2000)

that I lack expertise and don't know who to go to for help' (Careers Coordinator, Case study 5).

This is particularly poignant, given that this is an institution where many problems already exist. On average, only one in ten families are represented at parents' evenings, the catchment area is multiply deprived, the school has had numerous management problems and was recently without a principal for 12 months. The careers co-ordinator is new to the role and the relationship with the local Careers Service appears to have broken down at present. While these circumstances are undoubtedly extreme, and policy and provision cannot necessarily be designed to take account of such conditions, in some ways it also represents a lost opportunity. In the absence of other measures or means of delivery, ICT could at minimum be used to provide a 'virtual' baseline CEG service, offering consistency, which would be of particular value in an area where young people already lack valuable input and experience, related to careers and education.

Elsewhere, the use of ICT is the norm, although the role that it plays differs. With one or two exceptions ICT is employed within schools' CEG programmes to *lay off* demand rather to stimulate it. In other words, the role assigned is to satisfy queries for information etc, generated by other activities within CEG programmes. *'ICT plays an important role in the quest for careers information – it fills information gaps and has become an indispensable resource'* (4).

Case study 8 - Generating and using CEG information in school

An 'Annual Careers Aspirations Audit' was carried out throughout the school, involving the circulation of lists of fifty popular jobs, requesting students to shortlist their top five. The data generated provides information to inform the design of the following year's programme, inviting employers from the most frequently occurring occupation choices. The result is a series of thirty-minute presentations from 'grouped' professionals (such as medical-related, careers in science, etc). Meetings are open to all, with everyone allowed to attend three such meetings, but invitations are specifically targeted (by e-mail wherever possible) upon those pupils and their parents who have expressed a particular interest. Records of students' choices are kept across the years, in order to monitor the impacts of the CEG programme and the progress and changing preferences of individuals.

ICT is also used for specific purposes, such as job matching programs, in order to focus activity and for more generic packages, such as word processing *'we use PCs to produce CVs and complete UCAS forms'* (22). As already described, colleges tend to make greater use of ICT-based resources as activity was more likely to be student-initiated: *'our programme is almost entirely IT-based, books are repetitive and solitary – IT allows the students to look at things together and learn from each other'* (21).

As in Case study 8 above, some institutions have made strenuous and innovative efforts to *integrate* the use of ICT into CEG programmes; this type of approach tended to characterise those institutions with the most effective programmes.

Case study 7 - Integrated use of ICT

Year 10's summer term careers project (an accredited piece of work) requires students to use ICT-based resources to research and retrieve information in order to create a careers profile. The profile is then used to identify suitable work placements and pupils go on to complete CVs on computer, which in turn form the basis for interviews with prospective employers, who come into school for jobs' fairs – during which the normal timetable is suspended. A careers café is also available – run by the pupils. The coordinator here has made considerable effort to involve local employers and seek commitments from them to come into school and assist with the delivery of the CEG programme in a variety of ways.

On the whole, ICT-based resources are regarded positively, specifically because they represent a more time-efficient method of managing the increasing quantities of information (in terms of both volume and keeping resources up-to-date). However, teachers expressed concern that the *increased* use of ICT would inevitably involve the generation of more information/data – which would need to be managed – and for which no resources are currently available.

Shortage of time

Shortage of time was frequently mentioned as a factor inhibiting development of the use of ICT-based resources: *'we do not have the time to explore how to use the software – new or what we already have – and it is not promoted to demonstrate how it fits into our CEG programme'* (2).

The careers co-ordinators spoken to in schools typically had 6 – 8 hours per week to devote to CEG, spread across 1,000 – 1,400 pupils on average, in up to seven different year groups and with a variety of aspirations, needs and levels of engagement. These duties were set alongside teaching responsibilities and sometimes, additional extra-curricular school activities.

The need to intervene and mediate student usage was highlighted by a number of the Case study institutions *'we don't have enough time to brief students about the use of job-matching programs and debriefing can be patchy'* (8) and *'pupils need support and guidance to shape their menu choices because it is easy to get lost in the software programs'* (4). *'ICT broadens the information available but needs to be filtered as it can just add to the confusion – and quality control is vital'* (26). Somewhat more critically, *'ICT is a weak tool for helping students to choose careers: when they make independent choices the programs fail to*

corroborate their preferences and this is counter-productive, especially given how crude these programs are' (14).

While the impacts of the lack of time may be similar, very different kinds of need are being alluded to here. Some are fairly general tasks (e.g. guidance to shape menu choices), which require relatively low levels of 'facilitating' support. Some might be delivered, almost as blanket provision, by practitioners without specialist knowledge of individual pupils (e.g. preparatory briefing for matching programs). Even for relatively straightforward activities, intensively-resourced teacher support may be necessary. *'The use of IT to produce CVs and job applications is really limited, because we need to work closely with pupils to build up their confidence and help them to recognise the skills and experience that they do have, so they can put them on the form' (5).*

Questions may need to be posed about whether programs could be improved, or teacher competence levels enhanced to address these negative perceptions. However, evidence from elsewhere (Rolfe, 2000), suggests that teachers need help and explicit guidance about how materials can be used, in order to be encouraged to deploy them. The reason given for reluctance to do so is, once again, lack of time and competing priorities, rather than attitudes towards the use of ICT: *'I don't have the time to really explore the technology to find out what its full potential is for our careers programme' (5).*

Case study 17 – Facilitating pupils' use of ICT

An administrator is employed by the LEA to work within the school's careers department, alongside the Careers Co-ordinator and Careers Adviser. This particular school is a pilot for the Connexions Card. The post of administrator started as a work placement offered to graduates. Initially the role included organising work experience, CV preparation, and mock interviews and complementing the role of the Careers Coordinator, who only has a few hours per week allocated to CEG.

However, the role of has since changed and is highly valued by pupils. The administrator is only a few years older than the pupils, has just come out of HE, and is closely identified with by pupils. He assists with information retrieval, the use of ICT software and help to navigate the Internet. Pupils see him as the first point of contact, who will help them in a non-authoritarian manner, offering informal but accurate advice on how to access information.

3.3 ICT and barriers to use

3.3.1 Access and hardware

Overall access to ICT facilities is good and improving within both the schools and colleges used as Case studies – including availability in terms of hardware, locations and timing. Indeed it is thought that by 2002, all schools and libraries will be connected to the Internet (CRAC/NICEC Conference Briefing, Sept 2000).

However, teachers (and students) expressed concern about the necessary levels of technical support available to make systems work. No comments were made about obsolete equipment, just unreliable computers, prone to breakdown and which took a long time to be repaired.

In fact, an important barrier to the increased use of ICT (*'the principal barrier'* (7)) is considered to be the lack of effective technical support. The most commonly experienced problem was printer breakdown which, though seemingly minor, was considered to be a major problem by users, as it inhibits the production of a 'product' which many pupils like to have and which, for CEG purposes, can be taken home and shared with the family. *'If it breaks (the printer) you're in trouble. There'll be a backlog; it will run out of paper/ink. We need more printers'* (20).

There was also however, considerable disparity reported in terms of hardware resources. For instance, two schools (located within five miles of each other and under the auspices of the same funding strategy) found that, because of targeting of provision upon sixth-formers, one with 1,550 pupils (Technology College status and a sixth form) had 360 PCs (a ratio of one PC to four pupils), while its neighbour with 700 pupils had only six PCs in the school (a ratio of one to 117).

Within schools, many award preferential access to computers to sixth formers, either via a 'fast track' booking system or dedicated equipment. Most allowed supervised access between 8:00 or 8:30am and 5pm, including during lunchtimes. Some offered computer clubs and those schools acting as community education or learning resource centres, could sometime offer week night access until 8:00pm. One of the most important factors in determining access, however, was the effective networking of PCs, which substantially alleviates the need for dedicated CEG terminals. However, if CEG is accessed in the science laboratory (for example), it is unlikely and certainly not current practice, that specialist help would be available to guide choices. Supervision that is available is usually designed to 'police' activity rather than to guide or support CEG-related work.

3.3.2 *Confidence and competence with ICT*

Teachers and careers co-ordinators in the Case study institutions rated their own ICT confidence and competence levels relatively highly and those of students even more highly. They did not perceive their own IT literacy to be an obstacle to more extensive use, though this view maybe open to question (e.g. evidence of need presented to the New Opportunities Fund, ICT Training for Teachers¹²). Also, however, Case study institutions may have mainly comprised those who feel relatively confident about the use of ICT. Many careers co-ordinators have

¹² For further information see: http://www.nof.org.uk/edu/temp.cfm?content=edu_4

been motivated to acquire or improve their IT skills in order to function effectively, some even seeking to develop the necessary skills to be able to solve problems and repair minor breakdowns, in order that the momentum of programs can be maintained. Further training is available, and teaching staff acknowledged this and were aware of provision – either generic IT courses or CEG-related – though few felt that they had the time to attend or that relief cover would be readily available.

Careers co-ordinators and teachers thus do not view pupil confidence and competence with technology as any barrier to usage. However, not having access to a PC or the internet at home does appear to have a noticeable effect: *‘I see a major improvement in IT literacy for the kids with computers at home – for those who don’t, it’s a major barrier’* (17). This inequality, ‘the digital divide’, has become a priority of many strategies to address exclusion, with resources allocated to ensure that disadvantaged households are not further marginalized by lack of equipment, connections and the skills to access information. In one Case study school, where the New Deal for Communities’ *Excellence in Cities* programme has provided one hundred PCs for poorer households, the school’s staff is now being asked to volunteer to help train families to use them. While this may improve levels of confidence and competence with ICT in the community, and in doing so contribute to capacity building, unfortunately it also appears likely to increase the burden upon local teachers.

3.3.3 Gender differences?

A number of teachers described different *patterns* of usage between various groups of pupils, in particular between boys and girls. *‘Boys seem to have a greater level of expertise but probably less focus and motivation in terms of CEG’* (8); *‘Girls have a good standard of IT competence and boys are polarised – they’re either geeks or they’re hopeless’* (7); *‘Lads tend to do some rapid catching up in Year 11 – girls pick up on what’s available in Year 9. Girls know what they want, boys need ideas.’* (17) and *‘boys and girls are equally capable – but the girls are more efficient and more focused, the boys are easily distracted’*. (12).

The research team had not anticipated these distinctions, so during the pilot study the research framework institutions no attempt was made to identify or explore them. Subsequently, in focus groups, efforts were made to identify ways in which different groups utilise technology, in order to see if (a) there was any consistency and (b) whether existing patterns of provision are capable of meeting different needs.

3.4 Software related issues

Purchase decisions

Careers co-ordinators usually bear the responsibility of making choices about software purchases, costs that represent a considerable proportion of the available funds for CEG. For schools with between 1,000 and 1,400 pupils, CEG annual budgets appear to average £500-£600 (or around 46p per capita). As commonly used software programs seem to cost in excess of £400, plus the cost of licences, it is obviously important that appropriate choices are made first time around, as schools are unlikely to be able to replace software quickly.

Some careers co-ordinators reported feeling relatively well informed about the CEG-related software available for purchase, often because of advice and information provided by local Careers Services: *'This institution relies heavily on the Careers Service for information and advice about software. We believe that they know what is good and help to set the standards'* (1). Others were in need of specific guidance: *'I don't have enough information to make software purchases'* (5); *'I'd like ideas for some good CV packages – do you know of any?'* (13).

Relationships with manufacturers

Some teachers reported problems with CEG-related software, which may be solved by improved contact with manufacturers. The following remarks were typical: *'Manufacturers have the upper hand and we can't give direct feedback – we need something that will record learning outcomes'* (10). *'Manufacturers don't deliver directly and we pay by direct debit, so we don't get the chance to talk to them face-to-face if we're not happy'* (8). *'Complaints take time because no reps call at the school, though I know we can use the [manufacturers'] websites'* (12). *'I'd like to tell the manufacturers about how the system operates – there are niggling problems which I bet could be easily solved'* (7).

On the one hand, for reasons of time and resources, schools and colleges rely quite heavily upon the Careers Service to inform (and possibly exercise) their software purchase choices. However, if products fail to live up to expectations, often there is no direct relationship between supplier and customer to call upon. Most major manufacturers seem to have websites or helplines that can be contacted, but co-ordinators appear to express a preference for a more personal link, to be visited by manufacturers' representatives in their schools. Teachers are keen to pass on complaints and their specialist knowledge, *'Text-based programs and websites are a waste of time – it must be interactive'* (10), and *'I'd like to let manufacturers know that too much text can be off-putting for the lower ability pupils. I've told the Careers Service but there's no guarantee that the message gets through'* (20). A careers co-ordinator in a relatively high achieving school made this last comment, and it captures the views of a number of

practitioners, voicing concerns that programs do not adequately take account of students' reading abilities.

Software costs

The costs of software licences were mentioned on a number of occasions as a limitation upon use: *'networking means that we don't need to make multiple purchases or dedicated PCs – but the cost of software licences curtails the extent to which programs can be networked'* (3). This appears to be a greater issue for colleges than schools when, as mentioned in Section 3.1, they are spread across several campuses *'site licence costs have limited how much we are able to network our multiple sites and outreach centres'* (13). This would seem to run contrary to an inclusion agenda and efforts to capacity build in terms of ICT and lifelong learning, in disadvantaged communities. Costs of updates for existing software or additional packages to personalise programs and provide locally-specific content have also acted as barriers and curtailed usage.

3.5 Introduction of the Connexions Service

Most practitioners within schools were positive about the introduction of the Connexions Service *'I can't argue with the philosophy'* (5). There were noticeable levels of anxiety, however, about what was seen as a lack of practical information and plans for delivery: *'It's been like finding our way through a fog, though we think we're getting it right'* (Case study 17, already conducting trials on the Connexions Card).

Connexions card pilot

The administrator at this school (*Good Practice Case study 17*) has been working on the Connexions Card initiative, encouraging young people to improve their attendance and earn points, in order to qualify to apply for prizes. He has used his knowledge and feedback from pupils to suggest more appropriate (and motivational) prizes to reward participation. Prizes now include cinema tickets and short city breaks. Prizes are not automatically awarded; pupils must gain the requisite number of points and then may apply to be considered, and they have a 50% chance of being picked. The school has reported an improvement in attendance rates, up by 3-5% each month on average and with a 9% improvement between January and February. In addition, pupils seem to feel that their views have been listened to. The administrator believes that advertising forthcoming prizes to be won has had the greatest impact, with pupils planning and working towards the awards that they wish to apply for.

With differing dates around the country for the introduction of the Connexions Service, areas were at varying stages during the research with cross-service

consultations and the preparation of delivery plans. This was reflected in how well the position was understood in schools and colleges and had a direct but apparently inverse relationship with the degree of anxiety reported. *'I'd like to see more teachers involved in planning and delivery - I'm worried about the quality of staff and the loss of expertise'* (12). From a college: *'I'm concerned what the impacts will be on student retention if levels of personal guidance are cut'* (21). Another suggested that *'we need a Connexions Co-ordinator in school'* (10).

Concerns were also expressed that *Connexions* would result in even greater concentration upon the 'hardest to help', leaving the rest to fend for themselves with fewer resources. *'I'm in sympathy with an inclusivity agenda but it shouldn't be at the expense of students who work hard'* (20). *'The concept is good but it requires careful consideration in order not to tie up all the resources on those at risk of disaffection'* (2). There is sensitivity that students who do not form part of a priority or target group will not receive adequate assistance, because such activity will not receive support and *'it won't help towards achieving their outputs'* (10).

3.5.1 Assigning priorities

Consideration was being given by many co-ordinators to the ways in which young people would be assigned to different groups, in terms of priorities for CEG-related resources and activities. One described a three-tier system, with those in the 'Red' group offered a personal interview, those in 'Amber' a group interview and those in the 'Green' group *'very little support'* (8). This hierarchy of needs was a fairly common approach but does not appear to allow a great deal of flexibility. There is little capacity apparent to incorporate *proactive* intervention designed to ensure that students' plans are realistic and that back-up plans exist, and thus to pre-empt failure. For instance, students in the lowest priority group, on the basis of declared plans to proceed to HE, may be at risk of becoming more needy because their plans are not adequately challenged until it is too late. They may have excluded themselves from high priority groups because of their declared plans and yet are in need of a personal interview. With pressure on time and resources, it must also be regarded as an inevitable temptation not to challenge the plans of those who appear to be 'sorted out'.

In the same vein, when researchers looked at commercially available tools¹³ to divide Year 10 and 11 pupils into priority groups for CEG provision (market segmentation tools), the underlying philosophy behind some seemed to be open to question. One tool presented and currently undergoing trials in the North East and elsewhere, relies upon a self-administered questionnaire, which seeks to allocate young people to one of three groups: high priority pupils who have no

¹³ *Flavour of Assessment Workshops*, Tyneside Careers Conference, March 8, 2001.

clear career path and need a range of support to make effective career choices. Those of medium priority are 'those pupils who would benefit from an individual career interview' and those with least priority 'should be offered a variety of career development activities' (descriptions drawn from producers' presentation).

From a practical perspective, where this had been on trial, schools had found that catering for group work caused logistical problems. Dealing with whole classes or taking individuals out for one-to-one sessions is not difficult to arrange, but creating opportunities to deliver CEG activities to groups of young people who would not normally be gathered together, cross-cutting classes and teaching groups, caused considerable timetabling difficulties.

Philosophically, while those young people in the highest priority group were assigned on the basis of their perceived need, (and note: *not* aspirations), for the other two groups allocation appeared to be on the basis of the service to be provided. It is open to question whether there are many students who would *not* 'benefit from an individual career interview' (see above), described as characterising those in the mid-range group. Underpinning this are assumptions that around 20% of pupils would fall into the high priority group (and be of lower ability), 30% into the middle group and 50% would require low levels of intervention (and be high achievers with academic interests).

Clearly, this suggests a resource-driven model of provision, rather than one based on need. Distribution of CEG resources on this basis runs counter to the notion of young people becoming self-directed in their use of CEG, and able to access resources.

3.6 The NGfL website

Researchers were specifically asked to explore levels of awareness and satisfaction with the NGfL website¹⁴. This site, designed by BECTa and established by the DfEE, is for careers professionals and those associated with the delivery of CEG and the Connexions Service, to assist access to resources and online materials.

Unfortunately knowledge of the NGfL website seemed to be extremely scant. Only one institution claimed to have heard of it and tellingly commented that '*its presence and the benefits need to be promoted – along with those of other websites*' (8). Printouts from the website were taken to workshops – in order to inform practitioners and to elicit their comments. Examples were extracted from the pages directing users to appropriate resources, with the aim of showing how the information from the website could be useful. However, there are simply no responses to report.

¹⁴ See <http://careers.ngfl.gov.uk>

3.7 Blue sky planning

Teachers and pupils alike found it hard to shed practical concerns, in order to think creatively about how ICT may be used to deliver CEG. With both groups, the most popular commonly occurring wish was for more time. Pupils felt that the constraints of course work, the increased load produced by the introduction of the AS system, preparing HE applications etc., left too little time to investigate options, even if the technology could facilitate the search.

Teachers were confident that ICT could deliver more – particularly in terms of keeping information up-to-date and the management of large databases. They were also aware of the potential for yielding additional data about student usage of particular programs, information which could both facilitate the assessment of the impact of the CEG programme and the development of individuals' engagement with CEG. However, they could not foresee how the time would be made available to permit analysis of this data. Thus, while quite capable of perceiving the potential benefits, they were unable to contemplate how this could be resourced.

The Connexions Card has a clear role here as a recording and tracking device, but again does not overcome the apprehension amongst teachers about where the resources will come from to handle the information generated. Practitioners in schools were optimistic, however, that the introduction of 'citizenship' skills into the curriculum would provide an opportunity to explore issues of data and information management and may, at least in part, contribute to a solution.

Overall teachers, careers co-ordinators and other providers of CEG would like opportunities, practical advice and the time to develop more sophisticated integrated use of existing software and technology *rather* than a greater range of products and websites.

4. Views of consumers

4.1 Focus Groups

A total of 394 pupils and students participated in the focus groups – 189 females and 205 males. The groups were split within institutions in order to identify and explore any differences in the motivations and experiences of those with differing destinations (see Table 4.1 below). In schools, the split was between pre-GCSE (Yrs 10 &11) pupils and post-GCSE pupils (Yrs 12&13). In a number of cases groups were specifically requested by researchers in order to represent young people with varying destinations in career terms. In schools these consisted of pupils currently not intending to proceed into HE or FE, in Colleges of students on vocational and those on non-vocational courses.

Table 4.1: Composition of Focus Groups

	Numbers of Females	Numbers of Males
Pre GCSE	96	120
Post GCSE	52	54
Vocational (College)	20	15
Non-vocational (College)	21	16
TOTALS	189	205

4.2 Access to technology

Access to some form of technology, both at home and at school was widespread. Approximately 80% of students had mobile phones, with 1 in 20 possessing a WAP phone (web access phone). WAP phones were not considered a popular option for the delivery of CEG or other information – the students who have them (around 5% at most) found them expensive to use relative to other mobile phones, with poor graphics and image resolution, and a limited range of websites accessible.

Computers were more commonly found, and apparently at an increased rate of incidence amongst younger pupils.

- Pre GCSE – 92% of boys had computers at home, 89% of girls; 77% had Internet Access
- Post GCSE - 85% of boys had computers at home, 86% of girls; 76% had Internet Access
- College – 85% of students had computers at home; 72% had Internet Access

There appeared to be little market penetration by Internet-enabled televisions (less than 5%) and hardly any use of Internet cafés was reported. Few students were familiar with video-conferencing, with a notable exception in Case study 12, where an AS option is offered, supported by academic input from a lecturer on the other side of the country, via video conferencing. Pupils acknowledged the drawbacks of the medium – the inevitable time delays in conversation and that the teacher was not available on an *ad hoc* basis to answer questions. These difficulties however, did not outweigh the value of being able to study this particular AS option locally.

Gender differences?

Boys and girls appeared equally competent and confident in the use of computers but reported somewhat different purposes and approaches in patterns of usage. Of those using PCs for homework and research, 46% of the group were boys and 54% girls with proportions remaining fairly similar in both pre and post GCSE groups. Boys did seem to use computers slightly more frequently, more often for games and for general ‘surfing and browsing’.

Boys seemed to more frequently arrive at successful outcomes as the result of ‘trial and error’. Girls seemed more likely to take a focused approach and to follow instructions carefully in order to obtain the desired result. Teachers seemed to corroborate these impressions. Girls and boys reported different usage patterns with computers – boys were more likely to use the computer daily and to use it for games. While fewer boys had well-developed career plans, they were more likely ‘surf’ and therefore to explore unusual or ambitious options.

This aspect of the research requires further investigation, in order to explore whether activities and programs need to be designed with these different usage patterns in mind.

4.3 Computer Usage

Table 4.2: Common uses of PCs by student grouping

	<i>Pre GCSE</i>	<i>Post GCSE</i>	<i>Vocational</i>	<i>Non Vocational</i>
Homework Assignments (WP etc)	91%	98%	90%	100%
Research	87%	96%	71%	97%
Games	68%	57%	38%	36%
Chatrooms	43%	47%	39%	32%
E-mail	73%	86%	39%	50%
Downloading Music	46%	42%	65%	12%

As can be seen in Table 4.2, the most common uses for computer technology across all groups were associated with academic work, in the form of word processing assignments and carrying out research. Use for games was quite high in pre-GCSE groups (68%), but rates dropped off quite noticeably in the other groups. E-mail usage was relatively high in both pre and post GCSE groups of pupils (73% and 86% respectively), but lower amongst college students, at 39% for those on vocational courses and 50% on non-vocational courses.

Overall, computers were used predominantly to support course work, with usage for leisure purposes declining in the post GCSE and college groups. The only real departure from this pattern was in the downloading of music by college students on non-vocational courses – 65%, versus 12% for vocational students and 46% and 42% respectively amongst pre and post GCSE pupils at school.

Those young people with computers at home reported using them, on average, five times per week. All students preferred to use computers at home to those at school or college, primarily for reasons of improved access and reliability, including the availability of peripherals such as printers. Home use was particularly preferred for Internet access, the reason given that connection time at home was usually much quicker (probably due to the later time at which students are trying to get online). It also seemed that students appear to develop their confidence and familiarity with computers and the Internet via their home-based, recreational activities.

Students without access to a PC at home seemed to be doubly disadvantaged. Access or technical problems at school impact unevenly on them versus other groups. They are obliged to rely on gaining access at school – and therefore reliant upon peripherals, such as printers, to be working or the network not to have crashed. Understandably, young people without PCs at home also reported

lower confidence and competence levels with ICT. All young people considering careers in ICT had a PC at home, while no one interviewed who was without a PC at home (very much the minority) was considering a career in ICT.

Case study 19 - ICT provision influencing career choices

This institution has almost one computer per pupil, which does not reflect the level of Multiple Deprivation of the ward in which the school is located. ICT permeates the whole curriculum and pupils are encouraged to make use of it in all subject areas; they undertake a large amount of ICT training and engage with it on a daily basis. The high levels of ICT confidence and competence that exists amongst the staff and pupils reflect this.

The careers co-ordinator reported that a large proportion of post-16 pupils were becoming increasingly ICT orientated in their career choice, even if it was not in an area they had initially been interested in (because of the rewards these types of occupations bring). This indicates the ways in which pupils may be influenced by up to date LMI data and to define their career choice in terms of realistic labour market opportunities. It also demonstrates how generous, well-maintained provision may compensate for lack of ICT facilities outside of school, improving confidence and competence.

4.4 Using ICT to build career plans

CEG programme awareness

In pupils' and students' minds ICT does not appear to have a large role to play in career planning. Many had to be prompted in order to recall the CEG-related software that they had used. Its use to date does not seem to have made significant impact upon them and, other than visiting the UCAS website, few were planning to utilise it in order to develop their career plans. Overall, while aware of different elements and resources, students seemed to lack a sense of a coherent CEG programme and all the elements that were on offer.

Software issues

On the whole, matching software was not well regarded, though most students seemed well briefed and to appreciate the difficulties of producing a sensitive tool: *'they are too mathematical in their methods and usually give you the wrong information'* (26). *'One of the problems is that you often feel you ought to answer their questionsin a particular way because the best answers get the best jobs – so it doesn't encourage honesty'* (3). Thus pupils do appear to appreciate the subtleties of the competing tensions here, while still acknowledging their own failings.

More specifically, many pupils commented that some software programs, especially matching tools, can provide crude and insensitive outcomes, and this may contribute to disaffection from the CEG process. *'Some of the jobs I'd never*

go in for – like leather cleaners, also, one of the questions asked about a two-way radio – what is that?’(6). The use of such products requires extra time for preparation beforehand and support afterwards. Failure to provide this and the generation of inappropriate career options or options which appear to undervalue students can, in some cases, damage pupil confidence, fostering cynicism and wariness about the whole CEG process. Young people also reported frustration at the time taken to complete programs, for what was regarded as insufficient reward *‘they take so long and by the time you’ve finished you’ve had enough. But then it doesn’t tell you what most jobs mean, what’s entailed, or what you need to do to get them’* (10).

Students and pupils who were more self-aware, as well as many teachers, mentioned the need for advance briefing with matching programs; training to shape responses appropriately and face-to-face debriefing opportunities. Where time is in short supply, this need to prepare pupils to use a specific product and to cushion its outcomes is not viewed positively.

4.5 Preferred forms of CEG provision

Most students felt that they needed face-to-face advice about career/education and training choices, ideally from someone who knows them: *‘these people know you and know what you are like – a computer doesn’t’* (7); *‘more guidance from the school is needed – university isn’t the end of the road, I’d like to know more about careers’* (14).

Students and pupils alike also valued their own time carefully and wanted specific, targeted help – they did not want to spend a lot of time browsing for CEG information or idly chatting online to an unendorsed source. They seemed to lack sufficient information about relevant websites – they wanted to know more and they wanted it earlier: *‘we don’t get taught about the Internet. Basically you go away and do it yourself’* (14), another potential indication of the ways in which those without access at home to a PC and the Internet are disadvantaged.

Focus groups participants responded very positively to the idea of computer conferences and video conferencing. They were not interested in pooling information with students at the same stage as themselves in other locations, perceiving little benefit and a risk of perpetuating misinformation. This reflects a level of what seemed to be healthy cynicism about the value to be derived from *‘aimless chatting’* (4). However, the idea of communicating with young people a few years ahead of themselves, on similar paths to the ones that they are contemplating (i.e. the same course, the same job, etc.) was popular. Students were also enthusiastic about the possibility of conferences with experts in a particular field. Pedagogically, the use of conferencing would require students to delineate issues and questions for themselves, rather than having problems anticipated and delineated by teachers. This could represent a considerable learning gain.

4.6 Examples of good practice

Hertfordshire Careers Services Ltd. – Directions for Success

Hertfordshire Careers Services has developed a software package, designed for use by young people to explore their options for future careers. Information is accessed through an easily navigated menu system and is presented in a lively and attractive format. Through the main menu, twelve options are available to explore particular careers, education and training avenues. Once within a particular option, it is possible to explore all inter-related themes available from the main menu (e.g. within the work option there are links to Modern Apprenticeships, and labour market information). Each option is self-contained, minimising the difficulty of using the package and confusion through too much information) for the end-user.

The package includes access to:

- *Routes 16+* *Alternatives for this age group*
- *Looking Ahead 17-18* *What happened to 16 year olds*
- *Destinations* *Numbers entering HE/FE/jobs*
- *Resource* *For practitioners – groupwork etc.*
- *Making Plans* *Reminders and prompts to ensure the process flows*
- *Qualifications* *Descriptions of qualifications options available*
- *Higher Education* *Options for Higher Education*
- *Employment* *Labour market information*
- *Careers calendar* *Schedule of events throughout the year with reminders*
- *Work* *Vacancies, what employers are looking for*
- *College* *Courses and entry requirements*
- *School* *Courses and entry requirements*

Case studies of current participants within FE/ Modern Apprenticeships and sixth formers present their experiences, the choices they faced and the decisions they made in relation to their particular circumstances.

As previously discussed (Section 3.3.1), many Case study institutions report that improved technical support is necessary to facilitate the use of ICT for CEG. Although institutions are gaining greater access to ICT facilities and hardware, the lack of efficient maintenance inevitably has a negative effect on pupils' confidence. Some pupils have reported that they do not like to use the technology at schools because it is not as good or as reliable as their own

computers. However, for pupils with no computers at home, this often results in virtually no ICT usage and low confidence and competency levels.

Case study 19 – Best Practice in using and maintaining the technology

The institution has almost one computer per pupil, they have access to up-to-date technologies such as video conferencing and electronic whiteboards and are regularly kept informed of ICT developments and innovations via e-mail bulletins that are sent to their own personal e-mail addresses. The high levels of ICT confidence and competence that exists amongst the staff and pupils reflect this.

In contrast to many of the institutions visited, this one stood out because of the considerable technical support it employed. Like other institutions, it inevitably experiences problems associated with ICT hardware, however, there is a technical support Help Desk, staffed by professionals and a number of pupils who assist the maintenance team. Overall, pupils appeared very satisfied with the level of support they receive.

The computers are predominantly located in ICT intensive areas as well as classrooms and the library. Although priority is given to sixth formers, which has been reported as causing some problems, open access is offered to all pupils. Pupils can utilise the technology before and after school, during lunch and breaks or when ever a classroom is free. Due to the effective networking of PCs, pupils have universal access to all software programs, thus alleviating the need to book rooms and the problem of blocking machines.

Overall, this institution does not deliver CEG in a way that differs from many institutions, but it does encourage a systematic and consistent use of ICT. Integration of ICT into the curriculum coupled with ample technical support and facilities enables young people and teachers to become fully confident and competent in its use. Pupils seem both willing and comfortable to access CEG material, via the web or software programs of their own accord. This demonstrates how the emphasis on ICT has enhanced pupil independence in the exploration of CEG information, thus encouraging autonomous learning. It is also apparently reflected in high levels of motivation amongst most pupils.

Career Decisions Company, Liverpool

A manager within the local Careers Service, in conjunction with Cambridge Training Development, has created a 'Virtual Guidance Project'. This package is available on CD-Rom and provides links to appropriate Internet sites and to various careers-related packages. Users are able to create personal diaries or databases to record their CEG activities, and this is intended to allow tracking by practitioners (though this latter aspect has not worked to date).

Students can e-mail questions to careers advisers and are guaranteed a response to their query within five days. Leaflets can be printed off and a CV package is being piloted. Labour market information is also available via the package. Local vacancy information held at 'Merseyside Workplace' online is updated daily by students at Liverpool University, on IT courses, who receive

accreditation for the work. Visitors can submit applications online, in response to advertised vacancies. This aspect is currently ESF funded.

There are a number of other Careers Services that may offer comparable materials. These examples merely provide a sense of what is available, though few practitioners seemed aware of activity 'outside their patch', which may indicate overlap rather than the pooling of information.

Other initiatives

At least two examples of networking were also encountered: (1) MEON or 'Merseyside online', which connects schools in the area and has also received ESF funding (led by Merseyside TEC), and (2) EriL, East Riding Internet Link, which also links schools, colleges and community-based groups etc. in the area to various educational resources.

'Progress Map' has been developed by Patrick Tully of Tyneside Careers and is an interactive tool for young people working with an adviser to tackle problems and make and measure progress.

5. Examination of emerging issues

A number of issues emerged from the Case studies, which appeared to warrant further investigation and clarification. These included: the nature of information available to CEG practitioners about available software and relevant websites; perceived obstacles to extending the use of ICT; likely impacts of the the introduction of Connexions; and ways in which CEG programmes are communicated to students.

A sample of 146 institutions were contacted, all of which had expressed willingness to participate in the original research, via the auspices of the NACGT. It was not possible to use all of these as Case studies (only 25 were required anyway), nor was it considered desirable to draw all Case studies from a single, self-selecting source. When the 146 institutions were contacted and thanked for their interest, they were invited to respond to a short set of questions, either by post or electronically. A response rate of 32% was achieved, from 11-18 comprehensives, 11-16 comprehensives, VI Form colleges, grammar, selective and independent schools, and FE colleges.

5.1 Information flows: contact with software manufacturers

Careers coordinators were asked if they felt that had sufficient information to make effective choices to buy CEG-related software. The overwhelming majority (87%) answered in the affirmative; although there were still a few who felt on shaky ground: 'I always feel behind in this area'. A couple of respondents pointed out that they had to make decisions without being able to sample the software – e.g. 'I would like more free samples to try out'.

Nearly six in every ten replies (57%) indicated that the CEG software could be improved. Teachers from schools catering only for 11-16 year olds were more satisfied with the existing software than FE colleges (47% of whom felt there was room for improvement), while among VI Form colleges and 11-18 comprehensives, some two-thirds replied that changes were desirable. However, this does not mean that, overall, teachers are dissatisfied with what is available: as one respondent put it, 'There is always room for improvement, but what we use is good'; another was content with the process whereby 'the publishers improve their software regularly'.

'Better graphics and livelier presentation' was one comment, which echoed the remarks made in one or two of the interviews. On the practical side; it was recognised that 'the software is inevitably targeted at a broad market, leading to packages becoming bigger and slower. Once we can all guarantee efficient internet links, then that seems the way to go, but at what price?'

Among the suggestions for improvement, was through the inclusion of Labour Market Information (LMI): 'Material could be improved by the inclusion of more localised information and greater focus on vocational routes linked to local colleges, training providers and employers'. In this vein, an FE college respondent felt that 'The Careers Service could add this labour market information directly, or prepare it so that the college could add it'.

Some 63% said they had adequate opportunities to feedback information about gaps and problems to software manufacturers. Their responses confirm that some software producers do actively seek feedback (the producers of Kudos, for example). Several respondents indicated that the opportunity exists for providing feedback, but, yet again, that there is often 'not enough time' to respond properly.

Asked whether they would like more opportunities to provide feedback to producers, many respondents were concerned over the time such activity would take. Thus, while around a third indicated that they would like such an opportunity, with a further 10% in favour but with reservations, nearly six in every ten were opposed to the idea. One respondent suggested that a 'quick response' card might be the solution – allowing some basic observations but taking only little time; another said that visits by manufacturers' representatives to LEA Careers Co-ordination Groups would be a good way of obtaining this feedback.

The survey revealed that more than half (54%) of respondent schools obtain information (fully or in part) for making CEG-related software purchases from publishers' catalogues. However, the main source of information and guidance are the local Careers Services, with 85% (91% of schools, 70% of colleges) using this as a principal source, and which thus bears the brunt of a considerable responsibility.

5.2 Obstacles to extending the use of ICT to deliver CEG

The survey attempted to gather responses on the significance of potential obstacles to the greater use of ICT for CEG. Respondents were asked to give their assessment of the significance of a range of factors, each of which has been indicated as potentially obstructive. The returns suggest that both funding and availability of hardware are significant obstacles – to a greater extent than revealed in the interviews in Case study institutions. These plainly overlap, but in respect of both factors, half or more of the respondents reported that these constituted a 'significant' obstacle, with a further quarter indicating that each of these factors are a 'minor' obstacle. Again, there is a significant difference between the replies of the schools catering for the two main age groups: just 12% and 6% see funding and hardware availability respectively as 'not an obstacle' in schools for 11-18 year olds, compared with 38% and 25% in the schools for the 11-16 age group.

Table 5.1: Practitioner rating of obstacles to extending use of ICT to deliver CEG

Factor	Significant Obstacle	Minor Obstacle	Not an Obstacle
<i>Funding</i>	50%	25%	25%
<i>Equipment</i>	56%	27%	17%
<i>Staff IT skills</i>	20%	50%	30%
<i>Staff willingness to use IT</i>	27%	24%	49%
<i>Student IT skills</i>	5%	40%	55%
<i>Staff knowledge of websites</i>	46%	44%	10%
<i>Staff knowledge of CEG software</i>	24%	61%	15%

Staff ¹⁵IT skills and willingness to use the technology are plainly a less significant obstacle to the use of ICT for delivery of CEG. Staff skills are identified as a minor factor or not an obstacle at all by four out of five respondents, indicating perhaps the need for some training, but not suggesting a significant problem. Willingness to use IT by staff engaged in CEG is regarded as a significant problem in more than a quarter of the institutions, though half reported that this is not a problem at all.

Student skills are the least important of the factors, considered only a minor factor or no obstacle whatsoever in all but 5% of cases (particularly among the schools catering for the younger 11-16 age range – reflecting a difference in IT abilities - detected in the visits to schools - even between ages 11-16 and sixth-formers). Willingness on the part of students to receive CEG via ICT was similarly unimportant as an obstacle: none of the respondents identified this as significant.

Staff knowledge appears to represent another obstacle to the use of ICT in terms of their restricted knowledge of relevant web sites and CEG software. The survey shows that restricted knowledge relating to CEG software amounted to a 'minor' obstacle in a substantial proportion of cases (61%), with almost 1 in 4 respondents (24%) regarding it as a significant problem.

Staff knowledge is, however, a much bigger obstacle in respect of abilities to make use of web-based resources. Some 46% of respondent institutions identified this as a 'significant' obstacle, with a further 44% describing it as a minor factor. A total of 90% of respondents therefore find lack of knowledge to be an impediment.

¹⁵ It should be noted that 'staff' here does not refer solely to careers co-ordinators, but may mean other teachers with CEG remits, such as UCAS referees etc.

5.3 Website information

Exploring further the issue of the adequacy of information concerning the *existence* of websites that might be relevant for the delivery of CEG, only one-fifth of respondents said that such information was fully adequate for their purposes. The majority (55%) described the information as partially adequate, with a little over one-fifth reporting unsatisfactory levels. In all therefore, 76% did not find the information made available to be adequate. Interestingly, the information was regarded as 'fully adequate' by a larger proportion of respondents in schools for 11-16 year olds, than was the case in those covering the full secondary age range, i.e. up to 19 years.

Table 5.2: Extent to which CEG-practitioners are satisfied with website information

Factor	Degree of Satisfaction	% of respondents
Existence	<i>Fully adequate</i>	24%
	<i>Partially Adequate</i>	55%
	<i>Not Adequate</i>	21%
Content	<i>Fully Adequate</i>	13%
	<i>Partially Adequate</i>	53%
	<i>Not Adequate</i>	34%
Range	<i>Fully Adequate</i>	21%
	<i>Partially Adequate</i>	55%
	<i>Not Adequate</i>	24%
Access	<i>Fully Adequate</i>	42%
	<i>Partially Adequate</i>	40%
	<i>Not Adequate</i>	18%

The survey showed an even greater degree of concern over the adequacy of information about *content* of web-sites, with one-third reporting inadequate levels of information from their perspective, and proportionately fewer indicating that the information on content was fully adequate, compared with that on the existence of particular sites. Again, the problem was more pronounced among schools covering 11-18 years rather than those only going up to 16. Across all groups 87% could not be regarded as satisfied with the content information available to them.

Information about the *range* of websites was found wanting by 79% of respondents, with almost half (55%) finding it only partially adequate and a further 24% not adequate.

Respondents seemed generally more content with the available information on the means of accessing relevant websites, though 58% of respondents found access information inadequate or only partially adequate and there was a proportion – nearly one-fifth of the total – who considered the information reaching them to be inadequate.

5.4 Communication of the CEG programme

Table 5.3 shows the ways in which the content of the CEG programme is currently communicated within surveyed institutions.

Table 5.3: Commonly used methods of communicating CEG programmes

Chosen method of programme communication	% of institutions employing
Letter to parents/guardians	59%
Booklet for Year Group	49%
Letter to students	33%
Menu available via School/College IT Network	26%
Booklet covering whole programme	15%
Outline to students at start of year	13%

The motivations behind the exploration of this topic area were twofold:

First, to explore the notion of student *entitlement* to CEG provision and the use of ICT to communicate this (i.e. is a commitment being made by the institution and over what period of time). Second that if control of the flow of information is to be in the hands of pupils/students, to facilitate engagement in relation to responsiveness, it is important to establish whether students are aware of a coherent strategy and the total provision available to them.

It appeared to be the case that slightly more priority was given to communicating programme information to parents, rather than to pupils/students. Information provided tended to be available by year group, a practical and understandable strategy, but not one which facilitates access to information for those students who engage too late to find out what they missed in Year 9. Only one in four institutions replying used ICT to publicise the programme.

Using school websites to publicise the whole CEG programme and the range of related activities would make information accessible to both students and parents. It would enable individuals to take greater control of their own CEG activity and help those engaging late to access for themselves the elements that have been missed. In order to promote activities and provide reminders, it may still be necessary to publish year group booklets/flyers etc., but these would be supplementary to the core information.

5.5 Introduction of the Connexions Service

The Case studies were carried out in January and February 2001, and the most commonly expressed concern was the lack of definite information on how the service is likely to operate. On the whole, the response to the perceived philosophy behind the service (holistic and joined-up) was positive, but teachers and careers advisers consulted were very unsure about practical issues related to delivery.

The follow-up survey was carried out in April and concerns were still reported, but their focus had shifted. There was a stronger sense that resources are too concentrated on the 'most disadvantaged', with less available for the 'more academic', especially those with declared HE goals. Regret was expressed over what was seen as the loss of the universal individual interview entitlement and there was frequent acknowledgement of the inherent tension between the need to test the appropriateness of plans of those with HE goals and the temptation not to do so, in order to conserve resources.

Respondents were asked to record their thoughts about the introduction of the Connexions service and how they thought it would affect their CEG programme. A random selection of the comments received is included.

11 - 16 Comprehensives

It will take resources and help away from mainstream students. Students need specialised advice and personal contact and attention to feel valued.

Unsure, as I feel that goalposts of delivery and outcome change. There has already been a reduction of time available to careers advisers to conduct interviews to year 11 students.

Not sure about this one! Time allocation to school for Careers Adviser already stretched to limit-even further decreased?

I have no real knowledge of Connexions.

11 - 18 Comprehensives

CEG Programme might have to target those young people who may not receive an in depth guidance interview due to the re focusing agenda.

I have attended various meetings to do with the pilot in Devon. The biggest negative is that all students do not automatically have an interview anymore.

The emphasis of Connexions on a reduced client group means that the majority of students will not necessarily get the range of support mechanisms which were available up to the end of the last academic year.

Unsure until more information is available; so far I have not been able to get answers on help available.

Still awaiting the outcome of the pilot in local area. I personally feel there still much to do and still unclear.

Who knows?

No idea. It's very vague at present. I fear the independence of advisers will be compromised.

Reduction of time from Careers Consultant. Targeting disaffected is fine but you cannot assume that those who are conscientious and apply themselves to study do not need help with choices. Their needs are different but still important.

VI Form College

Give me a crystal ball!

Independent Schools

Will emphasis be placed on 'disaffected' at expense of more academic young people (but many with a range of social, emotional problems)?

It will distract Careers Services' attention towards a group of individuals who do all that they can to avoid help, and leave the rest of us stranded.

6. Issues for further investigation and policy implications

6.1 Quality issues

A number of quality-related issues emerged regarding CEG software products (and websites) with implications for the ways in which products are created and the combination of skills that are required. Product development appeared to be the result of a somewhat limited dialogue, between two types of expert – CEG professional and ICT expert. All three of the following areas warrant further examination and enquiry if ICT usage is to be optimised and the technology is to perform a role in raising responsiveness.

6.1.1 *Matching software*

Software programs that offer 'matching' and the generation of job ideas, based on questions about interests and abilities, were the most frequently commented upon. Issues here are indicated from the ways in which questions are often phrased and grouped together in software programs, forcing inappropriate choices: e.g. *'Do you like reading and writing?'* *'Would you like to use a phone or two way radio?'*. The two aspects are linked, demanding an all or nothing, yes or no response. Sometimes there can be a sudden jump in the level that questions are pitched at – from *reading and writing* to *'Do you enjoy the analysis of statistical data and information?'*. This suggests that expertise in the design of questionnaires and surveys should be inserted into the creative process.

As was indicated by the research, products also need to take account of reading ability, but in light of the age of the target audience. Programmes aimed at lower reading age ranges tend to scale down the assumed aspirations of users and are perceived as being childish by users and practitioners, thus risking disaffection. It may be also be worth considering the development, or certainly further investigation of programs which, while not necessarily gender specific, offer options for CEG that reflect differences in current usage. A better level of understanding of the ways in which 'consumers' (and within this, particular groups of consumers) are likely to react to questions needs to be reflected in the products. In part, this may be obtained through market research and product trials, but the early introduction of enhanced search analysis skills into the design process may also avert some of the potential difficulties.

6.1.2 *Improving appearance and interaction*

Similarly opportunities seem to be lost for engaging young people and improving their responsiveness to CEG via the medium of ICT. Products are often quite text-based and do not offer a great deal of interaction and/or have relatively slow response rates. This has implications for reading ability but is also relevant for those with the high, perhaps quite sophisticated, levels of ICT use. Also students with lower than average reading ages still share the same cultural environment of

their peers and may have similar aspirations. Some expressed resentment towards what was interpreted as childish CEG-related material.

At times there also appears to be insufficient recognition of the qualitatively different expectations of young people who are frequent users of ICT. They are accustomed to high quality imaging and to receiving highly targeted, personalised information in a very visual form. On the whole they neither want nor expect to just read information on screen. Again, the skills used to produce programs seem to concentrate on the knowledge of CEG and ICT-related issues but are not able to offer the presentational quality of computer games or fully exploit the possibilities of the medium to engage or retain an audience. This is not to suggest that intelligent content should be sacrificed in favour populist 'gee-whizzery'. In fact, teachers commented that students with lower than average reading ages sometimes feel patronised by CEG provision that is too childish and lacks serious content. But overall, activities and information needs to be shaped by the awareness of the fledgling (and therefore vulnerable) relationship¹⁶ between pupils/students and the process of CEG, en route to becoming independent managers of career information and 'lifelong learners'.

Policy implication

There is a need for the incorporation of a wide range of skills and expertise into the production/generation of CEG-related ICT products (survey design, presentation/marketing, pedagogical), processes that would benefit from embedding the input of both practitioners and 'consumers'. These sentiments are also relevant to website design; a recent BECTa report¹⁷ stresses how important it is to 'choose a balanced team of people who can make different contributions to the site'.

Tailoring products for different user groups should also be investigated. Developing a more sophisticated, carefully targeted range of choices may be a desirable route to improving responsiveness - rather than more tools produced for a broad market. Such refinements may be particularly important if CEG-related products are to be accessed independently by young people.

6.2 Gaps in information flows

Structurally there appear to be gaps in the flows of information between purchasers and suppliers of software systems, which need further exploration if quality is to be both maintained and improved. As the research shows, several

¹⁶ Beatty-Guenter, P. (1992), *Sorting, Supporting, Connecting, and Transforming: Student Retention Strategies at Community Colleges*, Berkeley: University of California.

¹⁷ *Connecting Careers and ICT*, BECTa, 2000.

institutions reported that they do not have adequate opportunities or time to respond to the manufacturers with their opinions on products or to comment on any gaps/problems. Purchase decisions are the result of advice from the Careers Service rather than the direct consumers and because of resources and threshold purchasing costs, schools may be stuck with a particular product for a number of years. Adverse selection of products may occur, given conditions of imperfect knowledge. Manufacturers may also be acting upon the basis of imperfect information, as messages from consumers of their products fail to reach them directly, via the operation of the market. The issues indicated here may be as much associated with local purchasing and procurement procedures, as with a failure on the part of manufacturers to seek feedback from customers.

It seems highly unlikely that more time or resources will be made available to schools, in order that practitioners can be better informed. However, there may be mechanisms and strategies that could be put in place to improve information flows. Opportunities for consumers to liaise with suppliers on a regular basis could be enhanced and for manufacturers to receive consumer feedback.

Policy implication

Pressure of work discourages teachers from making changes to established programmes and assistance to promote integrated use of ICT for CEG is sought. Strategies to overcome these difficulties and improve information flows need to be explored. It is recognised that information may be available (for instance, at the websites of software manufacturers or training courses by Careers Service staff) but clearly it is not always accessed by careers co-ordinators. Alternative methods of transmission should therefore be investigated.

6.3 Defining needs and targeting provision

Related to initiatives to tackle barriers and statements of entitlement or similar are the methods chosen to target CEG provision. How is the client group, the consumers of the service, divided into smaller groups for resource allocation? We encountered many inconsistencies here, by area and by institution. For instance, in some areas anyone can have an interview with an adviser on request, while in others students planning to enter HE are automatically excluded. This seems to ignore the wider implications of students making inappropriate choices – affecting retention rates in HE and FE and resulting in possible downward displacement of the less academically able. Tools exist to measure ‘distance to the labour market’ which might be adapted to facilitate better targeting of CEG resources (to segment the market). However, there may still be an issue with how the information so generated is acted upon in order to avoid discrepancies in provision.

The concept of needs in relation to young people's requirements for CEG provision demands greater unpacking. Different needs¹⁸ require different approaches and how a need is *held* by an individual may determine the design of an activity (tuition, support, facilitation).

As mentioned elsewhere, the market segmentation tools available for the targeting of resources seem to be based on a resource-driven model, rather than upon the identification and meeting of needs. This is not universally true, however: professionals working with disadvantaged and excluded groups of young people¹⁹ are looking at different ways to both provide appropriate packages of assistance and improve responsiveness.

Policy implication

This is a complex area but understanding the ways in which needs are held is vital to inform product development and the design of activities. It is also crucial to make sure that young people are guided towards the correct products and activities for them, at appropriate levels of complexity and with account taken of their levels of preparedness.

Potentially ICT could provide a method of exploring needs and how they are held, on an individual basis. Identifying and defining needs have important implications for the role of ICT in CEG provision. Few students in the Case study institutions were able to articulate ideas about the help that they needed (other than to request face-to-face advice) and found it very difficult to conceptualise what they might need or could be helpful to them. Existing tools do not seem to be tackling the full range of issues here and this area warrants further extensive, exploration.

6.4 Offering clarity and choices

Young people used to receive a *statement of entitlement* but since the changes to the Careers Service in 1999, and the increased targeting of resources upon those perceived as 'hardest to help', this seems no longer to be the case. Many schools reported that provision now changes from cohort to cohort and within years, from student to student, in line with resources and initiatives. Consequently there is apprehension about offering guarantees of what will be provided; CEG practitioners are understandably wary of making promises that

¹⁸ This discussion of the taxonomy of needs is based upon a seminar given by John Cowan of the University of the Highlands and Islands for the Open University, Birmingham, June 1999.

¹⁹ See for example '*Progress Map*', developed by Patrick Tully, Tyneside Careers Service and Scotswood Youth Support Project.

they fear they may be unable to deliver. Yet informing the 'end-user' of what is available to him or her is a vital element of meeting needs and providing a quality service.

At the risk of repetition, the methods chosen to ration the individual, vocational guidance interview (VGI), outsourced from Careers Services, and to target provision on priority groups, demonstrates the lack of clarity and contradictions that exist. Many practitioners commented that they were unhappy with this situation and thought that it was likely to worsen with the introduction of the Connexions Service. The NGfL website, however, in the material targeted on 'Young people', states

Before you have to decide what you are going to do after your GCSEs, you should be offered one or more interviews with the Careers Adviser from your local Careers Service/Connexions Service. The Careers Adviser will tell you about all of the options and will give you a Learning Card and an action plan to help you with your next steps.

If the above statement of entitlement is true, then this does not reflect the position, as it was understood within many Case study institutions. Yet if young people are to become independent managers of career information, they and those delivering the service clearly need to be aware of what can be expected from the CEG programme (elements and content).

'Construing the user's needs and *contracting* with him or her as to what these are, and how they may be met, is a fundamental mark of quality in guidance systems of all kinds' (Offer & Sampson Jr, 1999). Access to information about the whole programme may also enable those slow to engage with CEG provision to take control at later stage and request those parts of the programme that they have missed.

What the NGfL website talks of is universal entitlement to baseline services. Within schools or colleges information about what should be expected could be in the form of an online menu of core provision, displaying what pupils should expect to receive and when. It could also incorporate different options for delivery (e.g. face-to-face, paper-based, ICT, including CD-ROM, online or video). While this may be in a different form than the original presentation it may also be preferred by students and is likely to be less resource intensive. It would also help more if users can gain access when they are most receptive, as it is likely that more benefit will be derived.

The delivery of various elements of the careers programme may not coincide with students' receptiveness to the information and skill development on offer. This in turn may inhibit the potential benefit to be derived from any information, feedback or advice provided. Receptiveness of individuals may be influenced (or

even determined) by factors that are outwith the control of the school, careers teacher or Careers Service

As it cannot be practicable to repeat elements of the programme to suit the individual's level of engagement, then opportunities should be available via a variety of methods of delivery (electronic, text-based, workshops), which would permit asynchronous engagement with CEG provision. In order for this to work students need to be in possession of information about all elements of the programme, so they may identify which parts they have not engaged with to date and seek alternative means to address the deficit.

Materials provided via ICT can also guarantee a degree of consistency to users, not offered by current delivery methods (as was illustrated most acutely by the breakdown of provision in Case study 5). Similarly, providing up-to-date information about relevant websites *centrally* (i.e. administered centrally and delivered online), would seem the most reliable and economical method of ensuring consistency and inclusivity – assuming of course that all schools and colleges will be online by 2000.

Policy implication

Investigate of the feasibility of a flexible, menu-based approach to CEG, allowing students to access particular topics/guidance as, when and in what form required. Provision could be available via a variety of means, including face-to-face, group work, written materials, telephone, video conferencing and online. Students should be able to vary their choice of delivery method for different elements, according to preference and convenience.

6.5 Barriers to ICT usage for CEG

Overall, the research did not reveal significant barriers to the use of ICT for CEG-related purposes and attitudes amongst staff and students were, on the whole, very positive. The incidence and distribution of resources and access to them are improving. However, within schools and colleges enhanced levels of technological support would be beneficial to improve reliability.

Skill levels, and therefore levels of comfort with the technology, are improving among staff and pupils. Guidance on how to better integrate ICT-related resources would probably increase usage, as would an enhanced range of products. Additional information about websites would be certainly regarded as helpful. Most of the above suggest that the trends are positive and changes that are occurring are taking provision of CEG-related materials, supported by ICT, forward.

However, the biggest cleavage exists between the vast majority of young people interviewed who have home-based access to PCs and the Internet and those young people who do not. The development of proficiency and confidence with the technology is severely impeded for those without PCs, access to information is restricted and the possibility for chance discoveries, facilitated by moderate levels of engagement at home.

This does not only affect students' CEG-related activities, it can affect coursework commitments, restrict career options and tend to isolate young people from their peers. Costs extend beyond threshold costs of hardware purchase, to include the ongoing costs of supporting Internet connections and call costs.

Policy implication

Possible options to address this disparity should include preferential access to PCs in schools or community centres, additional 'out of hours' access for those without PCs, increasing numbers of Internet cafes or other possibilities. The full range of options needs to be explored and local solutions of measures, or packages of measures, proposed. Investigations should also examine the implications of providing and supporting PCs and Internet connections for families or households without access, possibly via New Deal for Communities.

6.6 The role of careers staff

The role of careers teachers may need to be modified or supplemented to support increased and effective use of ICT in CEG programmes, with someone who can be available 'on demand' to act as facilitator and networker. This mediator cannot be the arbiter of progress and dispenser of information, but should be able to put pupils in touch with appropriate resources for themselves as and when the query occurs (though this may be online or in a virtual form).

Facilitating students' CEG related activity should include:

- helping to shape student expectations
- judging the appropriate moment to intervene
- offering support and guidance by showing routes through the available information
- creating an atmosphere of safety which allows students to explore their own, particular CEG needs, both immediate and longer term
- providing appropriate challenges for students to appreciate and refine their own learning needs

- acting as a 'safe pair of hands' to guide students through their individual programme of CEG activity, ensuring that they are aware of the various stages and provision and have the necessary information to proceed.

Overloading students with information needs to be scrupulously avoided. The flow and quantity of materials or suggested activities should thus be carefully controlled in order to minimise disaffection. Too much information too soon may hinder the pupils'/students' ability to absorb information or access appropriate help. 'Unmediated open access to software on a network can lead to greater quantity but less quality of usage' (BECTa, 2000). CEG has to be viewed as a process allowing young people to construct their own unique packages of CEG related material, rather than a series of one-off opportunities to provide students with all the information and advice that they may need.

The facilitating help that may be required, to provide 'scaffolding' support for the individual's CEG-related activities, seemed most effectively demonstrated by Case study 17, where a recent graduate was providing low-key assistance, as and when needed. His role seems similar to the one described in some Connexions' delivery plans as that of the Assistant Careers Adviser or what one co-ordinator in the Case study research called for – a Connexions coordinator in school. In the United States, persons fulfilling such a role are sometimes referred to as 'para-professionals'.

Policy implication

Assistance provided to pupils and students should provide a framework and indicate the availability of support. Guidance may involve helping individuals to prioritise and evaluate their CEG-related requirements. Students might also be helped to maintain a learning log or portfolio of their careers activities in order to develop a personal record and to permit the tracking of skill development.

While encouraging self-directed assessment, search and information retrieval skills, assistance should foster a sense of 'enabling' and building confidence. Support requires high levels of IT competency, familiarity with CEG-related software and websites and considerable empathy with young people. The introduction of Connexions provides a good opportunity to introduce such facilitating support. The nature of the role and how these functions will be performed needs further refinement, taking account of the needs of young people and institutions.

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USE OF ICT IN CAREERS AND EDUCATIONAL GUIDANCE

School Contact

Location..... Type.....

1. How many pupils in the school/college?

On FSM?

2. **How and when** is Careers Education and Guidance delivered? (*Briefly describe the programme*)

Permeating the whole curriculum

Part of PSE Carousel

A separately timetabled subject

Part of a pastoral/tutorial programme

Long block timetabling

3. By whom? – including role of the Careers Service

(Number of teachers play a role, Careers teacher only, jointly with Careers Service, other)

4. Does delivery of CEG differ between pupils with different destinations?

(those staying on at school (post GCSE), not staying on at school, HE applicants, Other post 18 destinations)

5. Do you think the students, on the whole, are responsive to the CEG programmes?

6. In your opinion are parents/guardians supportive of the CEG programme?

7. Estimate the proportion of parents that attends Parents' Evenings

Teacher Questionnaire

8. **How many** computers are used exclusively for CEG?

As a proportion of the total number of computers in the school/college (approximately)?

9. Are the CEG computers

a) Networked

b) Internet access

10. Are computers elsewhere in the school/college able to access CEG information and advice?

11. **Where** are the computers principally used for CEG located?

12. **When** and how can students access computers for CEG and other purposes?

Particular time slots of day/week? – by year group? – do 6th Form have priority?

Does Access time have to be booked – limited options? – fairly liberal?

Can computers be accessed outside school hours? Specify

Rooms kept locked? – computers kept in secure cupboards?

13. What role does ICT play in the Careers programme? –

Integral part

Used as substitute when other means not available

Preferred source for particular uses/ particular pupils?

To stimulate demand/improve responsiveness

To lay off demand (satisfy specific/difficult queries)

14. **Which** software programs/websites/ IT related provision/generic provision (such as MS Office) do you principally make use of in the CEG programme?

Teacher Questionnaire

15. Which, in your opinion, get the most positive response from students?
16. Do you find particular **types** of programs/sites do the best job of delivering intended outcomes to students?
- *diagnostic interests and abilities,*
 - *careers/courses information databases,*
 - *CV/Interview skills building*
 - *Other (please specify)*
17. Have you looked at
- (i) NGfL (National Grid for Learning) Career Development website? *What did you think of it?*
- (ii) The Real Game? *What did you think of it?*
18. How do you obtain information to make software purchases for CEG?
(Careers Advisory Service, publishers' catalogues)
19. Is the software funded via the Careers Library Initiative (CLI)? Does the school's budget supplement this?
20. Have you had issues/problems related to software licences?

Does the school have agency agreements for software – via the Careers Service? *Please specify any arrangements*

Teacher Questionnaire

21. Do you feel confident and competent using ICT for your work and to guide/support students effectively?
22. Are adequate training opportunities available for you or other staff for new CEG software?
23. Is sufficient technical support available for ICT in the school/college?
24. **(Where appropriate)** Do you perceive any differences between boys' and girls' use of ICT for CEG?
25. In your opinion do students' levels of IT **competency** impede their use of ICT for CEG? *(or are there more important issues around motivation? hardware + software limitations and reliability issues?)*
26. Do you think students have sufficient information to conduct independent research for Careers Info/Advice? – *website addresses etc*- How is this provided?
27. Do you have any general comments about the use of ICT for CEG? *(Positive or negative)*
- *Preferred source for particular purposes - specify*
 - *Better for keeping careers information up to date*
 - *Broadens info available but quality control an issue*
 - *Has to be at least equal to printed matter available*
 - *Good for very specific queries – partic unusual ones – eg study in the US*

Teacher Questionnaire

28. In what ways do you think the introduction of Connexions will affect what you do in CEG?
(interviewee may lack sufficient information – in general concentration upon those termed ‘in greatest need’ may necessitate expansion of the role of ICT to deliver CEG) - some mention fears about how need will be established – even most able need help and to be challenged

29. What **potential** do you see for ICT to deliver CEG?

- *WAP phones to access CEG info/advice*
- *Chat rooms for pupils across institutions to share info/check perceptions*
- *Expert mediated conferences online (Asynchronous) eg Vets, Music technologists*
- *Video conferencing for University applications*

30. Do you maintain records of student progress and activities within their CEG programme?

if not, would such information be useful?

track students’ exploration of options/information searches

measure the progress of individuals with careers planning,

assess the impacts of elements of the CEG programme

support accreditation of skill acquisition in info retrieval, communications etc

31. What do you see as the principal **barriers** to maximising the role of ICT to deliver CEG?

APPENDIX 2 Focus Group Questionnaire

School/College (name).....Type.....
No of pupils in group.....Sex.....School Year.....

Using computers for Careers & Educational Guidance - FOCUS GROUP ACTIVITIES -

*Background information about what the Project is about and who we are.
Reassure that this is not a test – no or don't know are OK answers*

1. Do you know what a Focus group is?

Explain – helps us to judge the priority that they give to things, helps to generate answers and questions that we may not have thought about, helps them to prompt each other and generate ideas and opinions that they wouldn't have come up with on their own

Exercise 1 – Are you connected?

in groups (appoint a scribe for groups of 3 or 4 then take feedback)

2. Do you have a mobile phone?
3. Do you have a WAP phone?
4. Do you have a computer at home? *Numbers*
5. Does it have an internet connection? *Numbers*
6. **How often** *on average* do you use a computer per week/per day?
7. **Where** do you use the computer, At home? At school?
8. **What** do you use the computer for?
 - Homework assignments – word processing
 - Research – surfing the net
 - Games
 - Chat rooms
 - email
 - Other things – what?
- **Which of the above do you use it for most? – At home? At school?**

Exercise 2 – Future Plans

Via Question and answer direct to students

9. Do you have a plan for what you're going to do when you leave school?
(Remind them that No is an OK answer)

10. **Yrs 10/11** – Are you planning to stay on after GCSEs?

11. **Yrs 12/13** - Are you planning to go on to college/university? (*Which course/which institution*)

12. Do you know what you will need to do to make your plan happen?

If yes How did you find out?

If no How will you find out?

Use these responses to explore pragmatism/realism of plans - knowledge of training or qualification requirements

13. Have you used computers for Careers advice or information?

14. What have you used?

15. What did it do?

Examples:

(Quiz based diagnostic for interests/abilities)

(Career info/database)

(University or college course info)

(CV training)

Practice letters of applications or forms

(UCAS form)

Web based or software?

What did you think of it?

16. What worked best and why?

17. How did you use IT for careers or courses advice or information - *in formal lessons, teacher supervised, or on your own?*

Exercise 3 – Using the technology –

in groups of 3 or 4, then feedback

Other students have told us the following things about using computers to find out about careers and courses

Divide the following statements into 3 categories and come up with some examples of what you mean

- (i) **this is true**
- (ii) **this isn't true**
- (iii) **this doesn't bother me either way**

The computers at school/college aren't reliable

The computers aren't in the right place – they aren't where we need them to be

I can't get at the computers when I want to

There are never enough printers available that are working – if I find out about a career or course I want to be able to print it off and take it home

Technical support is available when I need it

The technical support in school/college is good - things get put right

The network (or the server) is always crashing

Connection speed is as fast as I need it to be

I can't get to the websites that I need to (firewalls/net nannies)

I know some good websites/software programs where I can find out about careers/courses

I get enough help to find the right websites for careers/courses information

The advice/feedback from careers software is disappointing – it puts me off

I like the careers and courses software programs – they tell me what I need to know

The teacher doesn't know enough about the computers to help us out

I don't know enough about IT to get what I want from it

I'd rather ask a friend/teacher/someone in my family about careers than a computer

Using the computer for careers/courses information or advice I can ask anything I like without feeling stupid

Exercise 4 – Blue Sky Planning or Brainstorming – via open discussion

Explain that everything is relevant – nothing should be discarded at this stage

If anything was possible how could you see technology being used to help you or other young people make decisions about their futures?

- *WAP phone technology*
- *Chatrooms with other students interested in doing what I want to do*
- *Discussion forums online with people already doing what I want to do*
- *Video conferencing with experts – including outside the UK*

What would need to happen to make this work?

- *Barriers/obstacles*
- *Practical problems*
- *Finance*

APPENDIX 3 Follow-up Questionnaire

In Strictest Confidence

USE OF ICT IN CAREERS EDUCATION AND GUIDANCE

School.....

Contact Details (if you wish to supply):

Type of institution.....

Telephone Number.....

Location.....

Email address.....

	Male	Female
Number of pupils in the school/college	<input type="text"/>	<input type="text"/>

Approximate number receiving free school meals

1. Please list the CEG software programs most frequently used in your school or college.

2. How do you obtain information to make your CEG software purchases?
(eg Careers Advisory Service, publishers' catalogues).

3. ***Do you have sufficient information to make effective choices when buying CEG software to meet the needs of pupils in your school or college?***

4. Do you think that the software that you use (or have used) for your CEG programme could be improved?

Yes ☐ No ☐

If yes, please elaborate

5. Do you have sufficient opportunities to convey feedback/suggestions about problems or gaps in CEG software to the manufacturers?

Yes ☐ No ☐

6. Would you like more opportunities to provide feedback/suggestions to overcome difficulties and/or modify software?

Yes ☐ No ☐

Please elaborate

- 7. Please describe how the Internet is used within your CEG programme and list the websites most commonly accessed by pupils (to the best of your knowledge).**

8. Do you have adequate information about relevant **websites** for CEG?

	Fully Adequate	Partially Adequate	Not Adequate
A. Existence of websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Content of websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Range of websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Means of accessing websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Please estimate your annual budget for CEG-related materials and equipment

10. From the list below please rate the significance of potential **obstacles** to the greater use of ICT for CEG in your institution.

	Significant	Minor	Not an Obstacle
Funding for software/hardware for CEG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability/shortages of equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge of ICT amongst staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge of ICT amongst pupils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff knowledge of available CEG software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff knowledge of CEG websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Willingness/Readiness of staff to deliver CEG via ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Willingness/Readiness of pupils to receive CEG via ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (*Please specify*)

11. Please describe the ways in which CEG provision (including the Careers Interview) is targeted to certain groups of pupils.
(*e.g. by destination, 'hardest to help', on demand*)

12. In what ways do you think the introduction of *Connexions* will affect your CEG programme?

13. How do you communicate information about the different elements of your CEG programme to students? (Please tick)

Letter to parents ☐

Letter to students ☐

Booklet for each year group ☐

Booklet for entire programme ☐

Menu accessible via school/college computer network ☐

Other (*Please specify*)

14. Any other comments or feedback on the use of technology to deliver CEG?