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Contents

EDITORIAL

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•

•

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•

•

•

•

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2 Digital technologies in career education and guidance

Hazel Reid

ARTICLES

3 How the internet changed career: framing the relationship between career development and online technologies

Tristram Hooley

13 On-line careers work – hit and myth

Bill Law

21 Using career learning theory to inform the design and evaluation of ICT based CEIG services

Tracey Innes

27 Face-to-Facebook: a blended approach to careers work

Elle Dyson

33 E-learning for the careers profession: what are the lessons for the use of IT in the delivery of IAG?

Anne Chant

39 An experiment in blended career development: The University of Derby's social media internship programme

Debra Longridge and Tristram Hooley

47 A developer's perspective on CEIAG

Andrew Manson

52 Orientation, navigation and engagement: a philosophy for human and digital navigation

David Dickinson and Leigh Henderson

Digital technologies in career education and guidance

The theme of this issue is clear from the title: digital technologies in career education and guidance. From a number of perspectives, the issue provides an overview of the current use of digital technologies in the field. As individuals we engage with such technologies (and the plural - technologies - is the better word) to varying degrees in our personal lives, but in our professional roles we need to be informed of developments and their impact on career education and guidance practice. Many embrace the technological phenomenon, others may wish to keep it at a distance - the latter position is, increasingly, untenable. The internet now provides a significant context within which people explore and develop their career thinking and development. Examples of how digital technologies can shape that context are discussed in what follows.

The leading article is by **Tristram Hooley**. Tristram was asked to provide a summary of the current state of development: a Sisyphian task! However, beyond a mere description of the inter-relationship between the internet and career development, he discusses the 'conceptual architecture' that underpins the expansion of the internet and highlights the importance of digital career literacy. **Bill Law** then offers an evaluation of what works well in terms of online careers work, alongside a critique of the emerging issues. His conclusion demonstrates the need for what he terms 'grasp, reach and embodiment' - in effect a repositioning of careers work.

Tracey Innes is a senior practitioner working in the university sector. She writes about a project designed to consider how career learning theory can underpin the design and evaluation of ICTbased careers intervention. From her analysis, Tracey proposes a framework that can be used to both design and evaluate the effective use of such services. **Elle Dyson** works in a Youth Employability Service which has adopted a broad approach to working with young people; incorporating both online and offline services. Her article celebrates the success of using a blended approach; seen as vital for the engagement of young people and the future of careers work.

Next, **Anne Chant** discusses the changes in the way that career professionals access their own

continuing professional development. She offers an evaluation of e-learning and blended learning experiences. Anne extends her argument to explore the parallels between the learning experiences of these adult learners and those of young people. Whilst highlighting the benefits, she also points to the limitations where these may reduce the engagement of learners - if there is a sole reliance on the use of digital technologies. Debra Longridge and Tristram Hooley also write about the effectiveness of blended learning, by analysing the experience of running a 'social media internship progamme' at their university - an intervention designed to develop students' digital career literacy. They suggest that while we often assume good ICT skills are evident, not all young people are able to identify how to apply these skills in the context of the development of their own careers.

The penultimate article by **Andrew Manson**, explores the role that online Labour Market Experience plays in challenging stereotypes in the construction of personal narrative for students in years seven and eight (ages 11-13). Andrew is a software developer who is concerned to broaden the focus of young people's views regarding their own potential, beyond the often narrow emphasis of the employability agenda. Through the use of case studies in the online video player 'Talking Jobs', he provides an interactive challenge to promote creative thinking and, potentially, social mobility. Finally, David Dickinson and Leigh Henderson discuss internet navigation and their thoughts regarding an application that can support sense-making in the career decision process. They explain 'intermediated facilitation by the careers adviser', as one of a series of professionals who can support the client's continuous 'Orientation, Navigation and Engagement' process.

There seems to be a general consensus within all the articles that engagement with digital technologies for careers work is not only inescapable, but also highly beneficial: alongside a clear recognition that a blended use with face-to-face work is essential. With the rapid growth of such technologies it is vital the field keeps up to date – this issue provides an interesting insight into current developments.

Hazel Reid, Co-editor

How the internet changed career: framing the relationship between career development and online technologies

Tristram Hooley

This article examines the inter-relationship between the internet and career development. It asks three inter-linked questions: How does the internet reshape the context within which individuals pursue their career? What skills and knowledge do people need in order to pursue their careers effectively using the internet? How can careers workers use the internet as a medium for the delivery of career support? The article develops conceptual architecture for answering these questions and in particular highlights the importance of the concept of digital career literacy.

Introduction

The internet is a highly complex social, as well as technological, phenomenon which is increasingly interwoven into every aspect of life, learning and work. Consequently this article will argue that it is not sustainable to continue to view the internet solely as a tool which can aid (or challenge) the careers worker: rather there is a need to see the internet as an integral part of the social fabric and to recognise that it provides a major context in which career development is enacted. This article will set out a framework that can be used to situate discussions about the role of the internet.

'Career development' is a term that describes two linked concepts. Firstly it describes a process of moving through life, learning and work that individuals are undergoing with varying degrees of consciousness, purposefulness and support. An individual can be said to be developing their career without seeking help (professional or otherwise). An individual's career develops whether they try and develop it actively or not. The ticking of the biological clock, the actions of others and the shifting of the wider political economy all change and develop the career of an individual. This article will therefore explore how the internet and associated technologies reframe the way in which individuals develop their careers.

'Career development' also describes the process of actively intervening in careers. This raises further questions about how the internet shapes both the content of career development interventions ('what do people need to know to pursue their careers in the internet age?') and the mechanisms by which the intervention is made ('how can we use the internet to provide people with support for their careers?'). These issues will be examined in turn and further conceptual architecture developed within each concept.

How does the internet reshape the context within which individuals pursue their career?

Computers have been used to facilitate communication and information sharing since the early 1960s (Leiner et al, 2009), but the transformation of this network of university and government computers into a popular medium only really happened when Berners-Lee developed, in 1989, and demonstrated, in 1990, the World Wide Web (WWW) (Odih, 2004). From 1990, the pace of change around internet technologies accelerated with the development of browsers (tools for reading and accessing the web) and search engines. However, Watts (2002) notes that whilst careers work had always employed new technologies, first the mainframe and then the microcomputer, it was not until the late 1990s that the field began to make serious use of the internet.

Thinking about the role that the internet might have in relation to career development is therefore building on a short but highly compressed period of development. Twenty-two years ago nobody was using the internet as part of their career building. By the mid-1990s browsers and email enabled large numbers of people to use the web as a source of information and communication. Employers (Bartram, 2000) and learning providers (Gomes and Murphy, 2003) quickly recognised the value that the internet offered for them to make opportunities available to a wider audience. From the late 1990s careers services were also beginning to use the internet for the provision of information and services through the creation of websites (Watts, 2002). Furthermore, those individuals who grasped that the internet provided them with a new series of resources and opportunities for their career were able to gain competitive advantage over those who did not (Kuhn and Skuterud, 2000; Feldman and Klaas, 2002).

A further shift came in 2004 when O'Reilly developed the term Web 2.0 to describe a new approach to web development and the use of the web. Theorists of Web 2.0 stressed the constantly developing nature of the internet, the co-productive relationship between developers and users, and the social and user generated nature of the web. This period saw the creation of tools like Myspace (2003)¹ and Facebook (2004)² which involved different, more communicative and more social ways of using the internet. The development of social tools such as weblogs, wikis, and social networking sites created new ways of using the internet to communicate and new ways of communicating. Social media typically enshrined open and many-to-many approaches to communication that allowed the creation of new social and cultural forms. Furthermore the brand names associated with these

tools (Wikipedia³, Youtube⁴, LinkedIn⁵ and Twitter⁶) entered the popular consciousness.

Hooley et al (2010) identified eight trends in the Web 2.0/3.0 era that had the potential to impact on how individuals pursue their careers and on how they access support to do this. They described these trends as: community; collectivising knowledge; individualisation; recognising time and place; located in the cloud; free or almost free; diverse and integrated; and games. These trends have changed the way that people use the internet both for resource discovery and for communication. In 2009, total social network usage passed that of email (Morgan Stanley 2010); in March 2010, Facebook overtook Google as the most popular site on the web (Dogherty, H., 2010). The way people are using the internet is changing and this in turn is influencing how people relate to each other, their employers and the state. Employers have been quick to recognise the possibilities that social media offers for recruitment (Doherty, R., 2010) and screening applicants (Brandenburg, 2008). How people manage the fact that vast amounts of personal data are now routinely available to their present and future employers is a major career development question.

While the speed of technological development has been rapid, the speed at which demographic penetration of technologies has taken place has been even more rapid. In 1994 the internet organised a network of around 3 million people. By 2011 there were 2 billion internet users (EConsultancy, 2012). In the UK alone, 30.1 million adults use the internet every day or nearly every day (ONS, 2010) with strong evidence that this number is increasingly rapidly (ONS, 2011). Furthermore, users are accessing the internet in new ways including through mobile devices.

It is important to recognise that whilst internet use continues to grow and to penetrate new demographics, it remains far from ubiquitous. The distinction between the internet haves and have

I MySpace is an online social networking site that is strongly focused on music and entertainment. It can be accessed at http://www.myspace.com/.

² Facebook is an online social networking site. It can be accessed at http://www.facebook.com/.

³ Wikipedia is an online socially produced encyclopaedia. It can be accessed from http://www.wikipedia.org/.

⁴ Youtube is an online film sharing site. It can be accessed from http://www.youtube.com/.

⁵ LinkedIn is an online professional networking site. It can be accessed from http://www.linkedin.com/.

⁶ Twitter is an online microblogging and social networking site. It can be accessed from http://twitter.com/.

nots is often referred to as the digital divide. The implications of this divide for individuals seeking to access employment and learning are clearly a subject of concern for career development professionals. In the UK there are around 10 million adults who have never used the internet with those in this group tending to be older, poorer and less educated (Race Online, 2012); although it is also important to note that both poor digital access and a lack of digital literacy can be found across the population. While lack of digital literacy is to some extent a consequence of disadvantage, it also contributes to perpetuating and deepening disadvantage. In other words many people do not know how to use the internet because they are poor and have not had the opportunity to learn, but the fact that they do not know how to use the internet keeps them poor by making it more difficult for them to access the labour and learning markets.

The ability to utilise the internet is a spectrum rather than a binary divide. At one end are 10 million adults who have never used the internet, while at the other are individuals with both high levels of familiarity with the internet and a strong understanding of how to leverage this to benefit their career. Individuals therefore need to be able to access internet technologies, to learn how to use them technically and then learn when and how to use them in ways that support social and economic participation (Carrick-Davies, 2011). How these abilities are then combined with existing career management skills is what defines an individual's digital career literacy.

It is possible to identify a series of ways in which the internet is shifting the context within which individuals pursue their careers. The internet is:

- a career resource library through which individuals can find information that informs and relates to their informational needs
- an opportunity marketplace where individuals can transact with opportunity providers (employers and learning providers)
- a space for the exchange of social capital within which conversations can be undertaken, contacts identified and networks maintained
- a democratic media channel through which individuals and groups can communicate

their interests and concerns to the wider world, raise their profiles and manage their reputations.

It is also important to recognise that all of these functions are underpinned by an individual's digital career literacy and their capacity to take advantage of the opportunities that the internet affords.

What skills and knowledge do people need to pursue their careers effectively using the internet?

It is possible to describe the knowledge, skills and attitudes that are employed to pursue a career and make use of the online environment as digital career literacy. Digital career literacy is concerned with the ability to use the online environment, to search, to make contacts, to get questions answered and to build a positive professional reputation. For example Strehlke (2010) has suggested that careers workers should explore clients' use of social networking sites and has provided a framework for doing this. Digital career literacy is already important to an individual's ability to pursue a career successfully, but it is getting more important. Careers workers who are not developing digital career literacy will soon find that they are not developing careers at all.

The concept of digital career literacy intersects with information and digital literacies as well as with career management skills. Information literacy is a concept which is used largely within the domain of information science to describe the ability of individuals to find, access, and utilise information (Webber and Johnston, 2000; Lloyd, 2003). A range of frameworks has been developed to provide tools for librarians and others involved in the development of information literacy (e.g. SCONUL, 2011). While it is possible to identify a number of generic elements to information literacy, there has also been recognition that information literacy happens within particular contexts and that career development (Hollister, 2005; Farrar et al, 2007) represents one of these contexts. However, as it is currently framed, the concept of information literacy has been critiqued for undervaluing socially transmitted forms of information in favour of

the ability to source information from printed or authoritative online sources (Lloyd, 2005; Tuominen et al, 2005). This is a considerable limitation in any attempt to repurpose the concept for career, where implicit and socially transmitted forms of knowledge and information are recognised as being of crucial importance (Raffo and Reeves, 2000; McArdle et al, 2007).

The concept of digital literacy is also useful as it builds on information literacy and recontextualises it within the digital environment. There is a strong inter-relationship between these two concepts to the extent that it is difficult to think about the getting and using of information without digital technologies. However, conceptualisations of digital literacy and associated frameworks (e.g. Eshet-Alkalai, 2004; Rosado and Bélisle, 2007) tend to add in a number of new concepts such as the ability to use ICT tools, the ability to use digital tools in learning, the ability to create content and the ability to interact effectively online. But as with the concept of information literacy, these concepts are rarely conceived or articulated within the context of career.

A third concept that it is important to consider in relation to the question of digital career literacy is that of career management skills. The term 'career management skills' is used to describe the skills, attributes, attitudes and knowledge that individuals need in order to manage their careers. The Blueprint family of frameworks is perhaps the most successful articulation of a career management skills framework and has been iterated in the USA, Canada, Australia and most recently in England and Scotland (Hooley et al, forthcoming). The Blueprint framework thus represents an attempt to describe a set of career learning outcomes which can be focused upon at different times during a life journey. The learning areas that are described in Blueprint type frameworks can easily be reapplied in the context of the online environment e.g.'l interact confidently and effectively with others' or 'I find and utilise information and the support of others' (LSIS, 2011). Furthermore in the case of the more recent iterations of the Blueprint, an attempt has been made to draw out the implications of the learning areas in an online context. However, these still remain secondary to a more general articulation of career management skills.

Each of these three concepts (information literacy, digital literacy and career management skills) is useful in thinking about how to develop effectively a career in the online context. However, even taken together they do not fully describe the skills and attributes required. Furthermore, the development of information literacy

Figure 1: The Seven C's of digital career literacy

- **Changing** describes the ability to understand and adapt to changing online career contexts and to learn to use new technologies for the purpose of career building.
- **Collecting** describes the ability to source, manage and retrieve career information and resources.
- **Critiquing** describes the ability to understand the nature of online career information and resources, to analyse its provenance and to consider its usefulness for a career.
- **Connecting** describes the ability to build relationships and networks online that can support career development.
- **Communicating** describes the ability to interact effectively across a range of different platforms, to understand the genre and netiquette of different interactions and to use them in the context of career.
- **Creating** describes the ability to create online content that effectively represents the individual, their interests and their career history.
- **Curating** describes the ability of an individual to reflect on and develop their digital footprint and online networks as part of their career building.

and digital literacy may not be perceived as being part of the domain of careers workers by either careers workers themselves or their clients. It is therefore useful to develop a statement of what is meant by digital career literacy to help careers workers to conceive career development programmes that address the new online context.

Figure 1 synthesises the key issues identified by information literacy, digital literacy and career management skills frameworks into a framework of seven elements for developing digital career literacy.

While it would be possible to deepen the articulation of this framework, it provides an initial mapping of digital career literacy. Digital career literacy can therefore be seen to encompass technical, cultural, social and presentational abilities which can be developed in the context of a career. If, as argued above, the internet offers individuals a career resource library, an opportunity marketplace, a space for the exchange of social capital and a democratic media channel; it is through the use of digital career literacy that the individual is able to make effective use of these opportunities. For example using the internet effectively as a career resource library is enabled by the ability to use new tools and sources of information (changing), to find, source and manage information (collecting), to understand and verify that information (critiquing) and by the ability to create networks that aid in the identification and accessing of resources (connecting and communicating).

To be effective providers of career support, careers workers will need to be able to support individuals in the development of these abilities. Inevitably this means that many careers workers will need to work on their own digital career literacy to enable them to provide this support from a position of expertise.

How can careers workers use the internet as a medium for the delivery of career support?

The internet also provides an important medium for the delivery of career support. This career support might be concerned with the development of digital career literacy, but might also use the internet to deliver more general career support.

There has been considerable research and thinking about the way in which the internet can be used to deliver career services (Watts, 2002; Harris-Bowlsbey and Sampson, 2005; Venable, 2010). Hooley et al (2010) argue that the online environment can be used variously by careers workers:

- I. to deliver information
- 2. to provide an automated interaction
- 3. to provide a channel for communication.

Delivering careers information

The internet offers a massive information resource for career explorers. Careers workers may be tempted to view the internet as a vast careers library stuffed with information about jobs and courses. Indeed many careers websites have been designed with the idea of recreating a conventional careers library, but without the limitations of space. However, this kind of technology also provides an opportunity to improve the quality of information, to harness the linked nature of the web to draw in external resources (such as employers' sites) and to provide a more media-rich experience through the use of pictures, audio and video.

Since the mid-1990s there has been a proliferation of career related websites which have sought to provide careers information in a variety of forms. Although there have been a number of evaluations or commentaries on particular career websites (e.g. Lambley et al, 2007; de Raaf et al, 2012) there has been little research that has sought to identify effective approaches for the communication of online careers information. There would be value in further research which examined the approaches used on different careers information websites and explored their relative effectiveness.

The internet as careers library is only one metaphor that can be used to describe the kind of careers information environment that it provides. An alternative would be to see the internet as a career marketplace in which traders with varying degrees of authority and integrity set out their wares. This understanding of the internet as a complex

How the internet changed career

marketplace returns us to the discussion of digital career literacy and particularly to the abilities of collecting and critiquing that were highlighted earlier in this article. Elsewhere Grubb (2002) has urged caution about celebrating the availability of online careers information without also recognising the skills and literacies that underpin the effective use of these. Empirical studies (Howieson et al, 2009) have also questioned the usefulness of information based careers websites without a strong supportive infrastructure for learning and development.

It is important not to 'throw the baby out with the bathwater' and to recognise and celebrate the value that online careers information now provides. An informed career explorer can quickly draw together information about labour market trends, occupational profiles and vacancies. They can also supplement this quantitative information with qualitative information such as career narratives, advice and opinion: all of which support career building if engaged with critically. This information is now readily available, when previously it was a considerable task for a specialist to assemble the material. Nonetheless it is important to recognise that there are limitations to what information can achieve without an informed consumer. Careers education and guidance can provide interventions that support the development of the informed consumer and address the inequitable distribution of digital skills and knowledge.Without the provision of these kinds of interventions, the ready availability of information may reinforce individuals' existing career thinking by simply offering them the tools to answer their immediate questions more easily. One social consequence of failing to challenge and problematise people's career thinking is a tendency towards social and occupational reproduction.

Providing an automated interaction

The second way in which online technologies might be used to deliver career support is through the development of an automated interaction. Automated interactions seek to recognise the individual and to deliver a service that is, to varying extents, tailored to their needs. The fact that this does not directly involve a careers worker, or indeed direct engagement with any human being, raises the possibility of efficient and scalable services. Automated interactions can be used to facilitate the initial exploration and diagnostic elements of the traditional advice and guidance service: for example, it can facilitate psychometric, matching and reflective tools, and perform some initial diagnostic tests. There is considerable research that supports the idea that these kinds of automated interactions can be highly effective if administered appropriately (Tracey, 2010; Betz and Turner, 2011).

Technology can also be used to support people to develop their career learning skills: for example, through games and simulations that can be used to provide an interactive way of exploring the worlds of learning and work (Maxwell and Angehrn, 2008; Betts et al, 2009). Increasingly online games are also becoming a channel for communication between different players. Dugosija et al (2008) identified that the range of career benefits that individuals acquired from participating in online gaming, included increasing their social and professional networks.

Providing a channel for communication

There are online tools that facilitate communication and interaction between people. In some cases these online technologies have simply transferred offline practices (talking/writing etc.) online, in others they have resituated other technologically-mediated practices within the online arena (for example the move from telephone networks to Skype-type⁷ online synchronous audio technologies). However, many types of online communication have created entirely new modes of communication. The many-to-many social networks of Facebook and Twitter with their conventions of short personal updates and the sharing of photos, weblinks and resources have no direct offline equivalents. Consequently thinking about how to transfer career development online is unlikely to be simply a question of shifting existing practices into the online environment. Rather, it is likely to require a willingness to re-imagine paradigms and to innovate. It is possible to classify communication tools into three categories: those that facilitate one-to-one, one-tomany and many-to-many forms of communication.

⁷ Skype is an online synchronous discussion tool. It enables both video and audio discussions and one-to-one and many-tomany discussions. It can be accessed from http://www.skype. com .

One-to-one forms of careers practice remain an important tenet of practice amongst career guidance practitioners. That practice can be translated effectively to communication over the telephone (Page et al, 2007) and via the internet (Offer, 2004). Offer examined channels that could be used to do this, such as web chat, email, on-line discussion fora and message boards. Eight years later, the range of communication channels has increased further, but attempts to reshape the paradigm of online one-to-one approaches to make better use of the online environment appear to remain largely the province of early adopters (Goddard, 2010).

One-to-one communication does not necessarily have to be with a careers professional to support career learning. There is considerable research which describes and evaluates the practices of various forms of online mentoring in the context of career development and human resource development (Bierema and Hill, 2005; Headlam-Wells et al, 2005). Finally, it is likely that much peer-to-peer career support is now conducted online.

One-to-many communications using technologies such as radio and television operate in broadcasts mode. One person (in this case the careers worker) has something to say and the many has simply to listen. However, technologies like blogs and video-sharing sites provide one-to-many communication channels with additional opportunities for interaction with the many. This can create a blurring between activities that are primarily about information giving and those that include more interactive advice or guidance. Career blogs provide a good example of this and offer an effective and efficient mode of delivery for career support (Hooley, 2011). Alternative one-to-many/ many-to-one approaches include the use of other social media technologies to create video channels, Facebook groups and fan pages and other online activities that combine the delivery of information with interaction.

One-to-many/many-to-one communications also encompass the application of interactive e-learning techniques (Salmon, 2004). The use of interactive e-learning technologies by careers workers has so far been limited and has not been effectively evaluated. However, it is possible to make a strong argument that the way in which interactive e-learning encourages discussion, reflection, engagement with learning materials and integration of learning into the learners' current situation would lend itself well to career development.

Finally it is also possible to see opportunities for careers workers in the many-to-many communications that exist online. Individuals are using online social networking sites to provide each other with peer support around career development (DiMicco et al, 2009; Din et al, 2012). This might include using tools like LinkedIn to form online communities of practice which transcend organisational boundaries and allow the exchange of intelligence around a professional community, or the development of internal communication environments perhaps using tools like Yammer⁸. One application of this is for careers workers to use these technologies to comprise their own communities of practice. However, seeking to intervene in other many-to-many networks to provide career support can be challenging. Further thinking about effective and appropriate ways for careers workers to intervene in and utilise online many-to-many environments is clearly of crucial importance. To be effective, careers workers will need to find modes of engagement that avoid accusations of colonising online social or professional spaces (Law, 2010).

Conclusion

This article has argued that the online environment reshapes the context within which individuals pursue their careers and that consequently this requires individuals to develop their digital career literacy in order to operate effectively within this context. This creates a new set of learning areas (the Seven C's) which careers workers need to both master and be able to support the development of in others. Finally this article has argued that the internet offers a range of mechanisms for career support that are based around the delivery of information, automated interactions and communication. As these issues have been explored, an attempt has been made to

⁸ Yammer is an internal social network designed for use within organisations. It can be accessed from https://www. yammer.com/.

synthesise existing knowledge on these questions and to propose frameworks for action that might be helpful to careers workers seeking to reframe their role in the light of these rapid shifts in the nature of career and career support.

A key theme is the importance of seeing the online environment as an embedded part of life and career. Online can no longer be seen as a parallel world where individuals take refuge from reality. Rather, online is interspersed with all aspects of life and career. Individuals blend these online and onsite contexts all the time with conversations and meetings even being conducted simultaneously in both. Given that people experience their careers as a blend of online and onsite experiences it is highly likely that they will seek, expect and respond to career support that recognises and utilises the potential of this blended environment.

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On-line careers work – hit and myth

Bill Law

Much of careers work is located on-line and this article examines what on-line careers work does well. That makes the internet a careers-work hit; but there are also internet myths. And the article identifies them as camouflaging what is at times no worse than a shortfall, but which can also do actual damage.

So there are issues. The article sets out evidence to show how careers work is well-equipped to deal with them. The conclusion illustrates the need for what it calls 'grasp', 'reach' and 'embodiment':

- grasp enables critical thinking in an on-line search for reliable learning
- reach connects on-line learning to off-line usefulness
- embodiment internalises on-line experience as off-line identity.

All require direct-and-personal conversation between careers workers and their clients-and-students. The article therefore significantly repositions careers work in relation to the net. And in relation to policy.

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Introduction

The internet is content – what is said and shown. It is also technology – a tool that makes saying and showing possible. And it is process – an activity which engages with both. The argument here is that coverage is pretty well out of our control. And the technology is changing at such a rate that people with any kind of off-line life are in no position to keep up with it. But, when it comes to process, people need professional educators who know how to pose the questions that stir up constructive engagement with the net. Or so we're entitled to hope.

One of the most useful scene-setting analyses of

the internet is suggested by Christian Fuchs and his colleagues (Fuchs, Hofkirchner, Schafranek, Raffl, Sandoval and Bichler, 2010). It is useful because it invites us to understand the internet not in terms of what it contains, nor even in terms of how it works, but in terms of the conversational process it calls on.

web-1.0	is cognitive enquiring – searching sources for off-line use
web-2.0	is interactive communicating – putting issues and seeking feedback
web-3.0	is cooperative changing – sharing, probing and challenging

Each of these is a means of communication; and every such means has, sooner or later, been captured by powerful interests. Enthusiasts for the internet claim to be exceptions to this rule. The journey from web-1.0 to -3.0 is celebrated as leading to self-propelled independence, where the net's multiple connections outflank all that corporations and governments might do to contain them. Careers work figures in that negotiation between what the enthusiasts seek and the powerful impose. It has set up sites dedicated to careers work. A comprehsive analysis (Law, 2012a¹) shows that some careers work on the net has sought to contain what is done on-line inside familiar offline use. This article argues that the internet will not be contained like that. It sets out the outflanking of careers work by the internet. Careers work does not adopt the internet, the internet adapts careers work.

On-line life

Web-1.0 carried more-or-less static pages - people used it like a library or a lecture theatre. But *FaceBook*, *YouTube*, *Second Life*, *Twitter*, *Linked-in*, *Skype* and *Xbox*

I further references to this publication are referred to here as 'the analysis'

are Web-3.0 events – not for library or lecture-theatre. This is where clients-and-students meet their friends and find new ones, where plans are hatched, alliances forged, and action rehearsed. While users were once outsiders and consumers they are now insiders and producers. We have no idea how far this can go.

The analysis finds varying degrees of this interactivity. Some expect an immediate response, others allow time for reflection. People may or may not know each other. Content may be abiding or transient. Access is increasingly portable. Tech-upgrades advance accessibility for some and retard it for others. They use a mix of numbers, words and images – variously animated. Users browse for hours and come-and-go in seconds. They find verified information and gossipy opinion. Some sites protect disclosure. Some divert user information to other interests. Sites are used for fun, shopping, indulging obsessions, carrying out research and fomenting revolution. None of these pursuits necessarily excludes any other.

The analysis also shows that educators may or may not be up with this. Unsurprisingly, they are not comfortable with the full range of its uses in their programmes. They tend to seek clearly-bounded uses that support familiar schooling activities. There are calls for educators to catch-up with technology. On the evidence of the analysis that strategy is probably futile. A different line is to characterise the need for creativity, critical thinking and learning-to-learn. That need was less urgent in the quiet library, but it is becoming imperative in the noisy forum. In this thinking the website still provides the content; and technology remains the tool; it is critical thinking that becomes the process.

Careers work on-line

The analysis shows that careers workers have taken a position similar to educators in general. They find the technology daunting. The range of careers-work activities is limited. There may not be much of an understanding of internet culture. Interest can get focussed on ready-made processes. There are also significant developments. A growing number of sites set out career-management experience in narrative terms. They mimic Web-3.0 social-networking. The need to retain attention means that an account of labour-market experience is presented as though it were reliable labour-market information. There is also a temptation to favour 'inspirational' stories – which can mean that bad experiences of work-life are edited out. It can also mean that anecdotes are treated like facts (Law, 2012b).

Career-related blogging is also gaining ground. It is a call-and-response activity: career 'experts' canvass facts, suggestions and questions; people come back with reactions, feedback and comments. The process can develop lengthy and discursive keyboarded discussion, where everybody sees everybody's. There are similarities with group discussion – like that set up in curriculum. And blogging raises familiar issues, for example concerning the assertion of self-interest by the loud and articulate – in both expert calls and user responses.

Linked-In may well be the preferred route for improving working-life prospects. It is a social-networking site which announces itself as a way for job-seekers to stay visible to potential employers and to learn from each other. It uses a combination of information and blogging formats. It also sets up on-line groups with shared interests. On-line games also figure in careerrelated on-line activity. They give practice in managing tasks requiring command of space, time and logic. We don't know much about careers workers following people in their navigation of the processes – whether they are raising useful questions, or learning about their students-and-clients.

The analysis shows careers workers are relying on familiar techniques - derived from comfortably-familiar word-processors, data-bases, spread-sheets and calculators. Dedicated careers-work sites use Web-3.0 cautiously. But their students-and-clients are more adventurous. And, among careers-work commentators, Michael Larbalestier (2010) distinctively points to risks. His point deserves expansion - the risks are not going to be dealt with by uncritical enthusiasm nor curmudgeonly scepticism. But they do need to be addressed. Web-3.0 is sometimes celebrated as taking people to places where nothing is singular, agreed or enduring. It is true that what you find in any web location is quickly overlaid with updating, elaboration, illustration, and contradiction. Does this multiply-linked enthusiasm strengthen people's grasp on reality - or weaken it?

Bill Law

Enthusiasts

An influential enthusiast is Clay Shirky (2008, 2010), characterising the net as a 'consuming, producing and sharing' activity. It can mutiply perspectives on, say, working life – and in ways which no expert source can outflank.

Enthusisasts see the net as an expanded living space where identity and options can be multiplied.We'll come back to an example of that – Second Life.A corrolary of the belief is that the net empowers change agency. The net-based movement 'Occupy' is a non-violent and articulate debating movement opposing arbitrarily imposed containments. It emerges, more-or-less simultaneously, world wide. Paul Mason (2012) claims that it is unprecedented – born of a unique alignment of interests, zeitgeist, and technology. It is a career-related event, strongly supported by young graduates, whose ambitions are thwarted by the failures of policy and commerce.

Most of such optimism is Web-3.0 based. It is taking clients-and-students into territories that influence the way they see themselves, their own work, and the credibility of careers work. It is easy to see all of this as 'empowering' – people can access more material, engage in more conversations, and – it is claimed – exercise more control. And that sense of liberation may well be exhilarating for people who don't feel at-ease with experts and professionals. The net offers them more congenial ways of finding out what is going on, and figuring out what to do about it.

If people are changing the way they learn, then careers work must change the way it helps. But we need to know more.

Sceptics

Nicholas Carr (2010) points to the superficiality of the internet. His analysis includes evidence that brain plasticity can mean that tick-and-click activity may diminish concentraton, persistence and resistance. That would be significant – personally-held sustained memory is where thinking is embedded in re-usable form.

Cass Sunstein (2009) signposts the net's insularity.

It reaches any separate interest group, forming each into an enclave welcoming 'people-like-us'. On-line friends are often off-line mates – situated by both url and post-code. Each meeting-point celebrates its own beliefs, values and expectations – based on what is worth listening to, worth doing and worth possessing. But enclaves enclose, and enclosure can entrap.

Both sceptical voices are influential. But they do not see a deliberate intention to harm, they see collateral damage. Social networking is disclosing. And corporate interests act on the basis of disclosure what 'people-like-you' like. They form what are called 'long-tails', which comprise many different niches each avoiding alternatives - 'people not like us'. More seriously, protective barriers are breached by corporate interests who pay for 'deep-net' searches of disclosures. There are also predatory uses of social networking - some among acquaintencies, some life-threatening. Savvy surfers are alert. But the 2012 analysis shows that habitual users are less sophisticated, they value the net for its ease-of-use, pay little heed to who operates a site, and do not probe the credibility of sources.

How does all of this fit to work-life? Work calls for reliability, as well as flexibility; it is about consideration for others, as well as self-fulfilment; it relies on understanding, but will listen to opinion; it needs sustained engagement, though there may be immediate rewards. There is no simple unravelling of the issues. But careers work needs to know how to work with students-and-clients on their use of what is easy to find, looks familiar and feels comfortable. It is an educator's job to invite people out of their comfort zones.

Web 4.0

No genuine educator wants to shackle students; but no educator can liberate students from circumstantial influence. Education can, however, enable a student for independent autonomy in any circumstance. Not all behaviour that is circumstantially free is independently autonomous.

Web-3.0 celebrates whatever liberation the enthusiasts can find. But the sceptics have a point: Web-3.0 confuses appearance and reality, plausibility and credibility, looking and seeing, believing and knowing. Movements like *Occupy* – with its use of seminars, argument and exchange-of-view – has moved beyond the enclaved and playful uses of Web-3.0. It is signally the emergence of a more rigorous and challenging use of the net.

Working with those conflicts and confusions is the stuff of education. We might, then, think of an educative movement from Web-3.0 to 4.0. The conversational process would be critical thinking – questioning, linking, internalising. Table I sketches in some of the elements. They are worth careers-work attention if its workers find any of the attitudes listed on the left among their students-and-clients. The table suggest how...

- on-line looking becomes reliable seeing
- on-line connectedness links to wider realities
- on-line self relates to an **embodied** identity

Table 1: people on Web-3.0 – careers work on web-4.0

	3.0 experience	4.0 questioning	
grasping realities	settling for immediate 'yes-no' ticks-and- clicks	engaging careful and sustained application-of-mind	
	believing they know all that they need to know	facing that whatever they now know they could find something else	
	valuing things with binary polarities - extremes of approval and disapproval	finding more aspects of life than at-first- sight seem obvious	
	seeking simple answers from quick-fix sources	figuring out explanations and taking responsibility for action	
reaching for links	acting without realising other possibilities	imagining other possible selves in other possible futures	
	seeking confirmation of ready-made beliefs	learning from what is new, surprising and disturbing	
	'liking' and re-visiting the familiar and undisturbing	welcoming and exploring unforeseen ways of seeing	
embodying learning	taking appearance and what is easily found as reality	looking beyond appearance to realise inner life	
	looking to familiar, spectacular and celebrity-iconic models	seeing that finding a quick `like' is not knowing what to do about it	
	working with sharp-and-fixed branded self-presentations	getting into self-repecting touch with their own natural bodily life	

There can be a-bright-and-breeziness on Web-3.0. If well-enough protected that is fine for party-time². But professional educators know that on-line devices are not just toys, they can be tools. The table maps – left-to-right – the migration of on-line virtuality into off-line reality.

² as many joyous teachers and careers workers can testify

Careers workers as educators

Careers work cannot be judged by how far it improves the economy or changes behaviour. It can be judged on the useful relevance of the learning it enables. What happens after that is not in careers-workers' hands. Furthermore, no professional, educator can hold back technology. But all professional educators, however misleading and damaging the net can be, can enable people to make good use of it. Careers workers are needed, not to manage a content nor master a tool, but to enable a process.

Educationist Lev Vygotsky's work (1978) anticipates the task – it proposes graphic learning tools-for-learning. The role of teachers is, then, to frame learning – the writer calls it 'scaffolding' – to support a movement into progressively-enlarging learning zones.Vygotsky's work reaches beyond the enclosure that Cass Sunstein fears.

Sociologists also anticipate the management of on-line identities. Erving Goffman (1959) shows how we each take different roles in different social situations – some private, others public. And David Riesman's (1961) analysis of the cultures of identity – inherited tradition, inner life and social expectation – tells of people juggling with where they come from, where they are, and who they are with. He assembles all into a basis for autonomous action.

Sociologist Neil Selwyn (2011) extends these linesof-thinking into on-line life. He acknowledges that the tools will forever develop, but he claims that does not equate to progress – especially where appearance loses contact with reality. He urges educators to step back from the technology and be prepared to see it as strange, and needing investigation. He is inviting us out of comfortable habits-of-mind. He suggests that the students most likely to be damaged are the least likely to realise it – with consequences for entrapment, and therefore for restricted social mobility. He concludes that we are mis-applying technological solutions to cultural and sociological problems.

But Selwyn is countering the trend. The 2012 analysis shows vocational pressures on curriculum are assessing success on a subject-by-subject basis. It reports regret concerning the failure to use interdisciplinary work, which is claimed to be more likely to develop creative change. One source comments that learning how to change things is the greatest gift that education can offer. A widely-held position is that there is more than one form of digital literacy. And, although the content and tools change, the ability to be critical in examining sources is learned for life.

A learning web

Table 1 records what optimists welcome as evoking good feelings. But it also responds to what the sceptics say goes badly. It makes good use of bad news. The 2012 analysis shows that there is no more pressing issue for careers work than grappling with the hits and myths of on-line experience. It suggests three key concepts³, speaking of enabling a *grasp* of what is worth knowing, so that seeing can *reach* into learning for off-line living, which will lead to the *embodiment* of that learning...

- I. grasp: getting a basis for appropriate, fulfilling and sustainable action
- 2. **reach**: enable learning for life in other settings, on other tasks and with other people
- embodiment: becoming part of inner life internalised as part of identity

The conclusion seriously undermines policy trends in consigning much of careers work to on-line use.

I. grasp: In his account of on-line learning Hubert Dreyfus (2009) proposes a six-stage sequencing of learning for action: practising as a 'novice', in real-life action becoming 'advanced', and then a 'beginner'; on the way to becoming 'competent', then 'proficient'; and eventually having 'mastery'. John Morgan, Ben Williamson, Tash Lee, and Keri Facer (2007) condense such thinking into a four-stage curriculum design, working from 'eliciting' data, through 'defining' the approach, on to 'making' a product, and then 'presenting' it to others.

The research-based career-learning framework (Law, 1996) is adaptable to a questioning process which parallels what both Dreyfus and Morgan and colleagues propose. It generates the questions that can move on-line looking into off-line seeing.

³ An extended account of this analysis was applied to the uses of narrative in Law, 2012b. This is a focused re-application to on-line learning. A fully-documented and illustrated account is at Law, 2012c

Table 2: interrogating the net

sensing	finding things out	have you got enough to go on?
sifting	sorting out what is found	can you get this into any kind of useful order?
focusing	checking out what is important	are there any surprises here – things worth following up?
understanding	figuring out how it all happens	can you see how things got this way and what you can do about them?

The research-based career-learning framework (Law, 1996) is adaptable to a questioning process which parallels what both Dreyfus and Morgan and colleagues propose. It generates the questions that can move on-line looking into off-line seeing.

This is a process – not setting out information but questioning in a way which people can learn for themselves. It is critical thinking – working with questions that affect life-chances. The questions are progressive – a journey where each step relies on a preceding step. They are interactive, each question is shaped by the preceding answer. And it is learningfor-action, leading to an ability to anticipate the consequences of action. Careers workers do not need to be technical whizzes, nor experts on content. They have a process which engages that tool in sorting out that content. It is the process which gives us our hold on survival – on the savannah, on the street and on the net.

Dreyfus urges process because people need to learn to do it for themselves. The way careers workers pose questions is a model for how their studentsand-clients can do it. In a process-driven programme students find the content and educators ask the questions. That method is Socratic: it invites people into the habit of questioning what they find, and developing curiosity about who does what – and why. It is a partnership – educators and students learn from each other. There is no single authority. Client-centred counselling is an example. So is what is sometimes called 'flipped learning' in a classroom.

It needs the educator to know the students well

enough to anticipate what line-of-questioning can be useful. It needs sensitivity to what people might ask and need to ask. It needs the right language – Nicki Moore and Tristram Hooley (2012) show how basic that language must sometimes be. But, most basically, such a disclosing conversation needs mutual comprehension and reciprocated trust. And that means direct-and-personal contact.

2. reach: The idea of reach poses questions about how extensively learning is connected to life. Career learning needs to be carried from where it is acquired to where it is used – knowledge is gathered in one location and used in another. If career learning is not – in this sense – transferable, then it is not working. The evidence (Law, 2012c) is that transfer requires learning to be, at source, encoded with markers signaling where in life it can be used. Where students are reminded of life in their learning, they are reminded of learning in their life.

A useful framework is role thinking, which positions a person at locations, in relationships, taking on tasks. It includes work roles such as employee, entrepreneur and colleague. And all work roles are taken up alongside domestic, neighbourhood, citizen, and activist roles. A face-to-face conversation about the use of on-line learning can, then, be encoded by inviting offline role-related markers – 'where can you use this?', 'who will you be with?' and 'what will you be taking on?' (Law, 2006).

A characterising feature of the internet is connectivity – linking one thing with another so that one image or idea becomes part of another domain. It migrates an on-line thought into an off-line location. However, that expansive potential is hampered by the tendency for the links to assemble into enclaves, reinforcing rather than diversifying. That tendency is most tellingly embedded where career is narrowly focused on competitive on-line moves - Web-3.0 becomes an arena for a race to win employability. Much of on-line career coaching is voiced in such terms -'coaching' is a sporting metaphor. But, the word 'career' is etymologically bigger than that: it is a double metaphor, imaging not just a race but also a journey (Law and Stanbury, 2009). The journey metaphor is exploratory. It has greater connectivity, linking to life roles stretching from the compliantly employable to the independently reforming. All of this is work. How much of it we reach depends on what wider off-line roles and realities we take into account in our search for 'career'.

3. embodiment: The idea of 'embodiment' poses questions about the authenticity of identity. Dreyfus (2009) chooses the on-line simulation *Second Life* as the occasion for questioning how far on-line experience can represent off-line life. The website seems to do so. It offers the appearance of a total immersion in an alternative way of living. It accommodates its own characters, locations, encounters and narratives. There are resonances with career-management: visitors can deal with products, markets and academies. And they can earn income, in a currency with a dollar exchange-rate.

But Dreyfus is sceptical. The simulation conveys nothing of the risks, or commitment or shared meaning of human engagement. The ready-made menus of on-line interaction, its derived icons, and its re-invented avatars cannot convey the authenticity which comes through embodied, shared and situated encounter. Embodied experience means that posture, style, expression and proximity carry subtle and spontaneous communication. It is how we know each other, and enter another culture - and it is how another culture enters us. Dreyfus shows that that embodied contact makes what we merely say no more than part of how people learn from us - it is more complete because it places less reliance on words. Much of what happens is subliminal - scent and semiochemicals play a part.Virtuality miss-fires on all of this non-verbal signaling - we call it body language.

Off-line narrative for on-line life

Conversational questioning elicits a narrative. The where-when-who-what-how-and-why tells a story. But the story has no uncompromised heroes. Educators are sometimes over-cautious. Policy is sometimes simplistic. Net users are sometimes gullible. Net enthusiasts are sometimes enclosed. And careers workers are sometimes self-serving. Although, the internet is in many ways a careers-work hit, there are myths – camouflaging both shortfalls and damage.

Careers work is well-equipped to deal with this. The professional case for grasp, reach and embodiment substantially repositions it in relation to both internet content and internet technology. And, if it has any validity, this analysis seriously undermines claims for the dominant usefulness of on-line careers work. And that radically repositions careers work beyond the grasp, reach or embodiment of current policy.

In order to enable clients-and-students to question the hits and probe the myths of on-line living, careers workers do not need to be expert users of technological tools – cohort-by-cohort of studentsand-clients will do that better on a day-by-day basis. And impartial expertise is progressively less useful in a changing world where on-line students-and-clients connect and update on a minute-by-minute basis. But nobody does better what a professional educator can do in enabling people to take on board other pointsof-view, to take one thing with another, and to take nothing for granted. Or so we may hope.

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Using career learning theory to inform the design and evaluation of ICT based CEIG services

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Careers professionals are increasingly making decisions about whether and how to use the volume of new technologies available in the services they offer. This article is derived from a project which asks how theories about how people learn about careers, can be used to provide a theoretical underpinning to the design and evaluation of ICT based careers interventions. A critical comparison of career learning theories is used to propose a framework for careers professionals designing ICT-based careers interventions. With such a range of ICT-based services already on offer, an approach to evaluating the effectiveness of these interventions using learning outcomes is also proposed.

Rationale behind the research

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Through my careers advisory work I have found it increasingly challenging to keep up with ICT developments and incorporate new technologies into the careers services offered at the University of Aberdeen. In 2010, as a result of an earlier research project, new virtual services comprising online chat and eguidance were trialled at the University of Aberdeen. In reviewing these services, I identified some issues for concern relating to repeat use. The nature of the question submission system had resulted in a number of repeat-users submitting in excess of 20 queries showing very little evidence of progression in their career learning. This led me to think that a more structured approach to designing ICT-based CEIG services was needed and prompted me to embark on the research project. With the relevance of, and connection between, learning theory and careers work recognised by career researchers, such as Mitchell and Krumboltz (1996) and Hodkinson (2009), I decided to approach my research from the career learning perspective. Law (2010) outlines some key issues for careers professionals to consider regarding career learning and the internet, proposing that whilst it is unlikely that educators know more about technology than their students, it is unlikely that their students know more about learning processes than their teachers. The research asks how careers services and professionals can design ICT-based CEIG services which facilitate and deepen client career learning.

Learning and career theory literature review

My literature review started with the work of Kolb (1984), a widely recognised experiential learning theorist from which I identified a number of key points. Kolb proposes that learning is best conceived as a process, not in terms of outcomes, and that this is a continuous process grounded in experience. In describing the process of learning, Kolb outlines a four stage cycle and within this process proposed that two basic dimensions of equal importance are required: how experience is grasped (within which he proposed two opposing forms termed apprehension and comprehension) and how it is transformed (with two opposing ways termed extension and intension). From what Kolb outlines, I think he is suggesting that for

learning to occur, at the very least, the individual would need to grasp experience via Concrete Experience or Abstract Conceptualisation and transform that experience via Reflective Observation or Active Experimentation. It seems he is also suggesting that for the best learning to take place, activities in all four parts of the cycle are necessary, and that framing the services offered by careers professionals in a way which prompts and facilitates students to engage in each of the parts of the cycle could be helpful. For example, students undertaking work experience could be provided with materials and support enabling them to reflect, and therefore transform their experience. This view of the process of learning is helpful as it can be applied to a wide variety of situations which appear very different; for example internships, simulation, action research or projects, giving the potential to apply this approach to designing ICT based interventions applicable to a range of careers topics.

In their social learning theory of career and career counselling, Mitchell and Krumboltz (1996) make claims about how people learn about career and how career counsellors can intervene constructively. Mitchell and Krumboltz (1996: 234-235) propose that two forms of learning ('associative learning' and 'instrumental learning'), together with genetic endowment, special abilities, environmental conditions, events and task approach skills, influence an individual's self observation and world view generalizations (beliefs). Associative learning, relates to the positive or negative emotional connections clients assign from a direct experience and by gaining information indirectly through books, media and objects. Recognition of how these indirect factors influence a client's beliefs is particularly important, given the increase in volume and accessibility of indirect influences via technology. This perspective is helpful because it suggests a role for careers professionals in enabling clients to recognise these beliefs which might restrict or have the potential to widen their career learning.

Although Kolb and Mitchell and Krumboltz describe the range of influences on learning, these authors tend to focus on learning being an individual process, a view which contrasts with that of Hodkinson who views learning as being an integral part of living. Hodkinson (2009:12) argues that learning is 'a central part of career construction' which happens formally and informally and is 'ubiquitous in peoples' lives'. Hodkinson's work suggests that careers professionals could helpfully focus on ensuring clients are able to broaden their exposure to external influences (their field). However, it is equally important to consider how clients use these 'exposures' for learning, which relates to Kolb's point about transforming experiences for learning to occur.

Implications for designing ICT-based CEIG services

Considering the ways people learn about careers, has led me to re-evaluate the role that careers professionals and services can play in the process of career learning - which is far wider than a formal careers education programme, guidance interaction or ICT-based intervention. Designing ICT-based CEIG services for clients is important as the increase in accessibility and volume of influences on career learning can be difficult to make sense of and filter for clients. This increase in accessibility and volume of influences via ICT presents an opportunity for clients to 'grasp' a fuller range of 'experiences' (relating to Kolb's learning cycle). However, relating to the remaining two opposing parts of Kolb's cycle, the challenges of this accessibility lie with helping clients work out ways to 'transform' these 'experiences' (extension and intension). To facilitate learning, Kolb recommends beginning the learning process by 'bringing out the learner's beliefs and theories, examining and testing them, and then integrating the new, more refined ideas into each person's belief systems' (1984:28). So Kolb suggests that even though learning is a continuous process, for facilitating learning there needs to be an identified starting point. Approaching the design of learning from the personal perspective poses challenges on a practical level, as learning interventions are most often designed without prior knowledge of each individual's starting point. Creating the opportunity for the learner to recognise the extent of their learning and establish their individual starting points could be a helpful approach; however this poses a further challenge relating to how well a client is able to identify and articulate their own starting point. Clients can find it difficult to identify why they have taken particular actions or think in a

particular way in relation to their careers. This point is made by Hodkinson who states that learning is 'an inherent and often tacit part of career construction and development' (2009:12). The complexity of influences on learning, the fact that it is happening all the time and that much of the learning is tacit, poses challenges and questions for service designers.

Kolb suggests that one condition for deeper learning is conflict, where learners are presented with and work through conflicting concepts, termed the 'dialectic relationship' (1984:29). This has similarities with the idea of 'points of view' made by Law (1996:60) where he proposes that examining two or more points of view which are concurrently held is one condition for learning. This point is valuable as this would suggest careers professionals encourage clients to question the validity of information presented to them, to analyse it and draw conclusions of their own. Thus, these points are important for aligning the role of ICT in career learning. Law (2010) proposes that the internet has resulted in an increasing range of, mostly informal, influences on individuals. Law also points towards the changing behaviours of individuals looking to learn about career which he terms 'career-management on-the-net' (2010:1) and points out the potential for these behaviours to be misleading. Sampson (2010a, 2010b) studied how clients use the internet as a source of information for problem solving and suggests that, to assist students, careers support online should incorporate ways to help students to understand, act and cope (Sampson, 2010b). Sampson refers to this in the context of designing online resources, but there is some scope for broadening this to helping students to learn how to utilise the ever expanding range of material online: not dissimilar to the concept of supporting clients in working through conflict outlined by Kolb. Some points made by Hodkinson provide a further helpful perspective here. Hodkinson cites the concept of 'hot source' which suggested that decisions are mostly made based on partial information from a 'hot source' i.e. information gathered from 'people whom they felt they could trust, rather than from, say, official printed materials' (2009:8). Law states that it is important for careers professionals to ensure students are able to 'probe and scrutinise what they find on the web' and to think critically about what they find (2010:2). So, an important aspect of ICT-based CEIG services could lie in supporting career learners in

Tracey Innes

sifting and making sense of this ever increasing volume of material. A holistic approach to the design of career learning could be built from encouraging clients to recognise and challenge the tacit elements of what they have learned, enabling them to work through conflict by comparing and contrasting this with new learning.

A final point Law (2010) makes about how careers professionals can support students suggests that we focus on 'shifting the emphasis from content to process' with the 'teacher as more of a partner than a source' (ibid:13). This may link with the earlier points made by Kolb focusing on learning being about the process not the outcomes. Applying this to our careers provision and framing the elements of our services in the learning process could give careers professionals a way of designing services, including those which are ICT-based within a theoretical framework.

Evaluating ICT-based CEIG service services

As the project moved on, I then focused on identifying ways to measure the effectiveness of CEIG interventions for career learning. Given that Kolb suggests a focus on the process rather than the outcomes, and that each individual comes to a learning intervention in a different way based on their experience; then some types of outcomes, even if they could be measured, will have too many other variables attached to them based on the beliefs and experiences of each individual. Killeen and Kidd (1991) reviewed research about the learning outcomes of guidance and outline four different types of measures: process measures, client reaction measures, vocational and educational measures and learning outcome measures. Their review identified problems and issues relating to all of the measures identified. This point is supported by Hodkinson (2009) who proposes that care should be taken not to make direct connections between the decision making outcomes of clients and the quality of the careers interaction offered. Firstly, because a client is unlikely to be able to fully explain how or why they have made a decision, and secondly, because the careers interaction is only one of a wide variety of factors influencing how career decisions are

made. From this, Hodkinson (2009: 14) recommends that 'effective policy needs non-outcome based ways of helping guidance providers maximise the chances of high quality provision within their services'. This recommendation provides some useful insight into the challenges of measuring the learning outcomes of guidance. However, whilst challenging, I think that designing learning outcomes which focus on the career learning processes that clients engage in, could help articulate learning goals to clients, attract and engage clients in using the service and also to report to management on the impact of services. Krumboltz (cited in section 2.3 of Bimrose, 2004) proposes the following questions which provide a helpful starting point:

 How successful have my interventions been in stimulating new learning on the part of my clients? How well have my interventions helped my clients cope with a constantly changing world of work?

I like these questions because they focus more tightly on elements of the learning process, rather than tangible outcomes such as successful employment applications. I decided to develop this approach further, seeking to relate measurement of the extent of career learning to the four parts of the learning cycle proposed by Kolb. For the client in figure 1, I have suggested learning outcomes and examples of ICTbased career learning that clients could engage in, using the first question about stimulating new learning.

In seeking feedback about client career learning, questions could be designed to explore the extent to which clients feel confident in each of these four areas before and after engaging in ICT-based CEIG services.

Figure 1: Learning outcomes designed based on the 4-step learning cycle (adapted from Kolb, 1984:42)

Concrete experience

Clients can: Engage with opportunities to explore career



ICT-based examples: Online simulations, watch video case studies

Active Experimentation

Clients can: Implement findings in new contexts

ICT-based examples: Present findings to professionals via professional/social networking platforms

Reflective Observation

Clients can: Describe findings from experiences

ICT-based examples: Write blogs, contribute material to discussion forums, describe via videos/text materials



Abstract Conceptualization

Clients can: Interpret and explain findings

ICT-based examples: Critically discuss validity of findings including rating/sifting materials based on quality (post online reviews)



Building a framework for designing and evaluating ICT-based CEIG services

I next wanted to make some connections between the literature and designing new ICT-based CEIG services. Using my findings from the literature and considering the learning outcomes proposed in figure 1, I designed the framework outlined in figure 2. It is hoped this can provide a starting point for professionals seeking to design services from the career learning perspective.

Figure 2: Framework for designing ICT-based CEIG services

Considerations in designing ICT-based CEIG services	ICT service 1	ICT service 2	ICT service 3
To what extent (using 0-5 scale where: $0 =$ not at all; $3 =$ in part; $5 =$ fully) does each service enable clients to:	e.g. Online chat / eguidance	e.g. Social networking presenc	e.g. VLE career modules
Recognise career learning influences			
Assess extent of prior career learning			
Challenge their positioning regarding career learning			
Identify gaps and establish goals for career learning			
Recognise opportunities to engage in new career learning			
Critically review findings and make sense of conflicting views/materials			
Make decisions about validity of findings			
Apply / act on career learning			

The strength of approaching service design in this way is its application to any topic of career learning and any number of ICT-based CEIG services. Reflecting on my findings, and experiences in my own practice, I think it is important to avoid designing new services in isolation of existing provision. It is highly unlikely that one service will enable a client to achieve the full learning outcomes proposed in figure 2, and equally unlikely that clients will engage in only one aspect of careers service provision. Viewing ICT-based CEIG services as a suite of aligned services could allow clients to maximise the extent and depth of their career learning.

The types of questions to ask and activities and resources being provided, could be designed in relation to the topic of career learning intervention being developed and the method of delivery. I see the value of this approach in enabling designers of services to identify gaps in career learning provision and seek ways to frame services alongside others which will help fill these gaps.

Conclusions

Articles

This summary from my literature review, identifies some ways in which career learning theories can be used to inform the design and use of ICT in CEIG work. My review of this broad and vast field of study about career from a learning perspective, has identified potential in using learning outcomes to evaluate different ICT methods and services. I have explored issues around measuring the effectiveness of ICT-based CEIG interventions given career learning is happening all the time and is not confined to the intervention itself. There are difficulties in measuring the effectiveness of CEIG and care should be taken not to make direct connections between the eventual actions of a client and the quality of the intervention. Measurement of effectiveness can instead be more reliably based on elements of the career learning process.

The proposed framework for designing ICT-based CEIG assumes clients' career learning and actions are not restricted to individual careers interventions. This recognises that learning about career is happening all of the time with or without interventions from careers professionals. In seeking to support clients, the framework encourages a focus on: helping clients recognise the existence of this range of influences; supporting clients in making sense of this range of influences; and helping them work through any conflicts which arise.

Next steps

The next steps of my research will seek to apply the range of learning outcomes and framework proposed to analyse the effectiveness of three separate types of ICT-based service. The outcomes of this will be used to inform the design of new services at the University of Aberdeen; in order to test these propositions and to use as a basis for revising the framework for practitioners in designing ICT-based CEIG services.

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Face-to-Facebook: a blended approach to careers work

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With youth unemployment rising and government cuts across the country impacting on support services for young people, the Youth Employability Service in Brighton and Hove has adopted a broad approach to engagement, offering services to young people in both an online and offline context. This article uses the Youth Employability Service as a case study, demonstrating the success that integrating face-to-face work with online engagement opportunities has had on the service, and arguing that a blended approach to delivering services for young people is vital for the future of careers work.

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Introduction

The National Careers Service was launched at the beginning of April, promising a range of online support opportunities for young people aged 13-19, but no option for young people to access face to face information, advice and guidance (Department of Business, Innovation and Skills, 2012). Where faceto-face careers and support services exist for young people they tend to be provided by local authorities and aimed at 'vulnerable' or 'NEET' young people. Brighton and Hove's Youth Employability Service on which this case study focuses is one such service. However, cuts to careers services around the country have seen local authorities begin to adopt online technologies to support (and sometimes replace) services for young people (Hooley & Watts, 2011).

With the growth of online careers services, concern has developed amongst some professionals towards the use of new media within careers, with this sometimes being viewed as a cost cutting measure. This article will use the example of the Youth Employability Service (YES) in Brighton and Hove to address this view and to argue that online technology can be used as an excellent way to enhance, but not replace, face to face information, advice and guidance.

YES was developed in Brighton and Hove in April 2011, replacing the city's Connexions service with the aim of providing targeted support to NEET young people (YES, 2012). The service focuses on working with young people (academic age 16-18) who are not in education, employment or training, and offers a variety of ways in which young people are able to engage with their adviser and access information, advice and guidance. YES also supports a team of LDD Advisers working with young people with statements of Special Educational Need.

The service offers support through one to one appointments, drop in access points across the city, as well as through home visits, telephone and text support. This is now also complemented by a range of online services, developed by YES to drive service recognition locally, boost young people's engagement with services, and provide new kinds of careers support to the young people of Brighton and Hove.

Using Facebook to deliver careers services – initial pilot

YES's engagement with online technologies started with an examination of Facebook¹. With over 31 million Facebook users in the UK, this is currently the most prominent online social network (SocialBakers,

I Facebook is an online social networking site. It is available from http://www.facebook.com/.

Face-to-Facebook: a blended approach to careers work

2012). The fact that 10.85 million of these users fall within the 13 to 24 age bracket means that this network is of particular interest to YES. Clearly Facebook is an important channel for communicating with young people and consequently there is a clear case for exploring how this tool can be used to deliver career development to young people.

YES sought to offer young people a way of engaging with an adviser through Facebook. The aim was to bring the service to them by enabling them to build a relationship with an adviser and engage with the service in a different way. With this in mind, YES launched its adviser pages, offering young people the opportunity to engage with the service on Facebook. Status updates (a Facebook feature which allows a user to send a short message out to all of their 'friends') allowed advisers to promote new opportunities to all of their clients at the click of a button; whilst communication through private messages (allowing for private conversation with one or more clients) allowed confidential exchanges to take place online.

This was a move which required a great deal of consideration as the internet can be viewed as a dangerous place (Siegle, 2010; Mishna, et al 2012). Consequently the pages were built with the aim of engaging with vulnerable young people in mind. It was vital that time was spent ensuring the pages were set up securely, and that policies were in place for safeguarding and child protection. In order to do this effectively, considerable time was spent examining Facebook security settings; in order to find an appropriate balance that allowed advisers to be visible, searchable and contactable via Facebook, but without putting young people at risk. Security settings on Facebook make it possible for the user to determine the level of access that each connection has to each individual piece of content that they have posted, and so the service was able to adapt these settings appropriate to its needs.

Ensuring that online services would be set up securely and operate in a safe way also involved developing a simple and clear confidentiality statement. This was included on each adviser's page along with the understanding that advisers would remind their online clients of this statement, and the implications of linking with an adviser online, on a monthly basis. This statement echoed the confidentiality agreement which would be present in a face-to-face situation.

A concept that underpinned YES's work was the understanding that there was no situation that could occur during guidance delivered on Facebook, which could not also feasibly happen in real life. For example in a private message conversation on Facebook a client may disclose something which requires immediate action, just as in a face-to-face interview. Messages posted publicly, but not aimed directly at you (via the Facebook 'NewsFeed'; a stream of messages that your connections have sent out publicly) can be seen in a similar way as information overheard rather than disclosed to you. A child protection issue would require an adviser to follow the same procedures that would be followed in a face-to-face meeting. By relating each online situation to an offline context, YES advisers were able to see how issues encountered online and offline could generally be dealt with within a similar framework of ethical professional practice. When thought of in this way, it was far easier to determine appropriate action that should be taken if difficult circumstances arise through the use of Facebook with young people.

Initially the Facebook service was piloted with two advisers who developed a presence on the site and began engaging with their clients and other young people locally. The response was overwhelmingly positive. Although some researchers have argued that young people view Facebook as 'their space', and that it may not be somewhere that they would wish to engage with support services (Madge et al, 2009; Barnes et al, 2011), YES did not find this to be the case. Having a presence on the site enabled the advisers to engage more effectively with their current client base, increase the regularity of contact with clients, provide information in real time, and facilitate access to harder to reach young people.

Before the launch of the Facebook service the vulnerable and hard to reach group of young people were frequently missing appointments and consequently it was this group who benefitted the most from the online service. There may be a range of reasons why young people chose not to engage with services, but it is unsurprising if turning up for an appointment or for a 'drop-in' service at a location they may have never been to before, to see someone they have never met, to gain support from a service they know little about, constitutes a substantial barrier for some.

Facebook allowed YES to work to address this barrier. By engaging with this client group through Facebook, advisers were able to make a connection with young people and allow individual young people to take their time to review and respond to the connection (unlike a telephone call). The young person could find out more about the service through accessing information from the adviser's page, and through private messaging, and could begin to build a relationship with their worker. This approach breaks down the barrier the young person faces in accessing face-to-face support and over time can ensure that a client who may never have accessed the service feels comfortable to attend an appointment or 'drop-in'.

Feedback from young people was overwhelmingly positive, with strong agreement that being able to talk to their adviser online made contacting the service easier and simplified accessing opportunity information:

> 'It's good for me to be able to contact my (...) worker on Facebook because it's free, I check it regularly so I never miss out on anything and is [sic] a good way to find out about new courses and job vacancy's [sic]!'

> > Client A, 17

'I think the way (...) uses facebook I'd [sic] very interactive and inspired, because to [sic] allows people to connect with (...) more efficiently, and quicky [sic]. Not only that, it also makes it easier to view job vacancies that may be relevant and any opportunities that may benefit [sic] them ©'

Client B, 18

Mainstreaming the Facebook service

This work proved popular with the young people of Brighton and Hove. However, it soon became unmanageable for the two advisers running the pilot, as young people across the city (and beyond) sent requests to link via Facebook.YES then rolled out the pilot to all advisers across the city. Each professional was given a training day, designed to teach practical use of Facebook as well as addressing important issues such as safeguarding online.

Practitioners were invited to think about the ways in which a Facebook page could be used to creatively engage young people and this led to a raft of service innovations. A range of online tools was discovered that could be integrated with Facebook such as appointment booking systems², online publication programmes³, and interactive quiz creators⁴. Online campaigns were developed such as interview technique week, CV surgeries, career days, and apprenticeship information sessions.

Facebook offered the YES advisers new ways of communicating with their clients. The Facebook live chat facility offered young people the opportunity to engage with their adviser online in real time. This service proved to be particularly effective post-GCSE results day, where advisers made themselves available on the live chat facility all day for young people who had not achieved the results they had expected. Group chat enabled group advice sessions to take place online allowing advisers to discuss a topic online with a group of clients. This supported group work sessions which had taken place face-to-face, helped to motivate continued engagement and allowed advisers to track progress upon completion. The ability to 'tag' clients (linking a client's profile to a status update) enabled advisers to publicly congratulate clients on their successes: for example, when securing a job or college

² There is a range of services for free appointment booking programmes online. An example is available at http://www.clickbook.net/

³ Online publication programmes allow you to publish word and PDF documents online as magazines or booklets. An example is available at http://www.issuu.com/

⁴ Online quiz creators enable you to publish interactive quizzes using picture, text and video media. An example is available at http://www.quizrevolution.com/

place, thereby boosting morale amongst other young people and helping that young person to recognise their own achievement.

This kind of work also encouraged a more social way of engaging young people in career thinking. As young people made their interactions with their advisers and the service as a whole public, it enabled their friends to view their engagement and involve themselves in it by 'liking' or commenting on status tags. It also encouraged young people using the online service to help others with their career goals for example by identifying job vacancies and posting these to their adviser's wall for others to view. This was particularly effective where young people had successfully moved into employment or education and were able to advertise opportunities within their own organisation through their adviser's page.

These innovations offered a range of new services for the young people of Brighton & Hove, but they also offered important benefits for advisers in engaging, tracking and managing clients. Young people who they had never been able to contact were in touch and attending face-to-face services, young people who continually missed appointments were able to maintain support and contact online (and get quick and simple real-time reminders), those who had fears about meeting new people or going to new places were able to meet their adviser online to build a relationship first; and check out the venue they would be attending through a linked, personalised Google Map and photo tour.

These tools also supported recognition of the changes to the service city-wide. The map was created using My Maps⁵, a Google application which allows you to pin-point specific locations on an online map and add information on these locations. This enabled the service to create an accessible map, detailing each service access point and its opening times. Photo tours were created using a camera and taking photographs of the route a young person would need to take in order to access each 'drop in', and what they could expect when they arrived. These photographs were then uploaded into an album on the Facebook page, supported by text for young people to view.

Combining online with faceto-face work

Ultimately the online work enhanced the existing faceto-face and provided support for young people who may not have engaged at all without the online service. Existing clients were able to access a greater level of support through the online service and some young people who had refused support, both face-to-face and online, were later able to re-engage through Facebook. This system of allowing a detached way of asking for help, that did not require young people to remember a phone number or 'drop-in' day proved to be highly effective.

For many young people, being able to connect and form an initial relationship with their adviser online and in their own time helped them to feel safer in accessing support face-to-face. Online work in some instances could take young people all the way, enabling them to access opportunities successfully without meeting their adviser in person. However, more often than not, the online work provided a gateway for young people to access face-to-face work. There were many instances in which by the time a young person felt safe to meet their adviser in person, they already felt a good level of familiarity, enabling the face-to-face work to take place more successfully.

Facebook also supported face-to-face work by allowing for more regular sustained contact with their adviser. Young people were able to send messages and connect on their own terms, in their own time and for free, which had an enormous impact on the level of communication being upheld between adviser and client in between appointments. This supported continued engagement in the service ensured that young people did not slip through the net. In the same way, maintaining online contact with a client helped the advisers to track and monitor progress; this was particularly helpful for clients undertaking temporary work with an undetermined end date, or for pregnant young women: for example, for whom Facebook allowed a platform for advisers to monitor and offer support when appropriate, without being intrusive or losing contact.

⁵ Available from http://maps.google.co.uk/

Further developments

In November of last year the service decided against keeping its website, instead moving all of its information into Facebook. The service worked with a local agency to set up a fan page to represent the service online, providing information for young people, parents and employers in the city.

A fan page⁶ is a space on Facebook which represents an organisation as a whole. A user can view a fan page from their computer regardless of whether or not they are logged into Facebook, making this a good way to ensure information is available to everyone online, and not just those who are Facebook users. A fan page also allows the page owner to set up a specific web address to direct traffic to their page, making it far easier to publicise. Other features of a fan page, that are not included in a Facebook profile page, include the ability to customise the page (much like a website) and the ability to have multiple administrators managing the page.

This enabled the service to grow virally, both with the public in Brighton & Hove and beyond. One advantage was that it facilitated the sharing of information with other services locally and nationally, and increased the opportunity awareness of the advisers and their clients. The new page was custom built, in order to make it more visually attractive and useful for clients. The page included a news bulletin, promoting upto-date, relevant opportunities for young people, a frequently asked questions section for parents and carers as well as numerous links to useful websites.

Soon, the service developed into other online channels. A Twitter⁷ profile was created, enabling the service to reach out virally to the community and organisations locally⁸. Advisers also worked with local young people to develop 'YESTV', a YouTube⁹ channel providing fun and informative episodes all focussing on an employability theme. This was fantastic for the young people involved, who were able to develop skills in filming, acting, editing and producing, as well as being involved in generating ideas for the films which would be relevant and interesting to young people in the local community.

The first episode filmed¹⁰ was an introduction to the service, giving young people an idea about what they could expect from the YES, and showing the community what the service was all about. This grew into a number of episodes around interview skills, using the telephone to speak to employers and going to college. These are used independently online, but also as a tool to support face to face work; for example, during appointments to support an interview practise session.YESTV proved an exciting way to blend face-to-face engagement and online work. It allowed the service to engage local young people in the film making process and empowered them to produce content which was relevant, interesting and useful to them and their peers. The opportunity to publish this online then amplified its value by making the content accessible to young people across the city and beyond.

The Youth Employability Service is now engaging with in excess of 800 young people living in Brighton and Hove online, and continues to develop creative ways of using technology to build on careers services. The service has built a successful online reputation within the city that not only enhances the face-to-face work which takes place, but also works alongside it to ensure the best possible service for young people.

The developments within YES demonstrate that a blended approach to careers work can be successful and that the internet provides substantial opportunities for careers services to rethink how they deliver their work. The model developed by YES suggests that delivery is most effective where it offers a blend of online and face-to-face approaches. Whilst it is true that careers services can be delivered with some success through either channel on their own; in order to ensure the best possible outcomes for young people, using both methods in harmony is vital for the future of careers work.

⁶ The Youth Employability Service's Facebook Fan Page is available from http://www.facebook.com/yesbrightonhove/

⁷ Twitter is an online social networking site. It is available from http://www.twitter.com/

⁸ The YES twitter channel is available from http://www.twitter. com/yesbrightonhove/

⁹ YouTube is an online site designed for sharing user generated films. It is available from http://www.youtube.com/

¹⁰ YESTV is available from http://www.youtube.com/ yestvbrighton/

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E-learning for the careers profession: what are the lessons for the use of IT in the delivery of IAG?

Anne Chant

The increased use of online services for Information, Advice and Guidance has been paralleled by changes in the ways in which careers practitioners access their own continuing professional development. This article offers an evaluation of e-learning and blended learning experiences, which reinforces the importance of socialisation in learning. This paper concludes that such enhancement in learning may be limited in online advice and guidance services, reducing the opportunities for challenge, motivation and broadening of aspirations in some cases.

Introduction

Reduced availability of funds for continuing professional development for careers professionals, particularly those based in educational establishments, has in many parts of England meant the gradual erosion of in-service training (INSET) programmes. Once a well funded, essential support for the often isolated and marginalised careers coordinator; INSET has now disappeared in some areas and is sparse in others. In many areas, schools are now charged a fee by Connexions partnerships, or Youth Support Services, as funds are not allocated for such provision in their budgets. Although considerably diluted by legislation (Education Act, 2011), careers work and the careers profession are currently in a state of transition. The Careers Profession Alliance (to become the Career Development Institute) launched the professional register earlier this year and this has mobilised many of those working in or on the margins of careers to reconsider their training and

professional development. These changes, coupled with the opportunities offered by technology, have fuelled the development, and in some cases further development, of e-learning or blended learning courses in my institution, Canterbury Christ Church University, and in other Universities.

Concurrently, such opportunities for flexible access have of course also been embraced by government under the new arrangements for the provision of career guidance as, in some areas, largely a replacement for face-to-face services. Certainly the internet is for many young people and adults, the first and perhaps preferred source of basic information on careers or educational and training opportunities. However when this is extended to advice, and particularly to guidance, many in the guidance community are concerned.

In this paper I explore some of the feedback from e and blended learning courses to see if there are any lessons to be learnt about the benefits and possible limitations of these models. Can we learn something about learning FOR career development (clients and service users) from experiences of learning ABOUT career development (professional development)? Although it could be argued that accessing information and advice through the internet is not the same as engaging in a learning process, I suggest that this may be precisely the problem. Should we not be maximising all opportunities to enable young people to learn; about opportunities, about the world of work and about themselves? My aim in this paper is to explore possible further developments in e-learning and blended learning opportunities. However, I would also hope to encourage a broader debate about what

E and Blended Learning

E-learning could be described as an electronic version of distance learning. In the early days of our first e-learning course this was indeed what it was. Instead of materials being posted to learners to read, they were made available on our virtual learning environment. In addition to reading there were activities suggested such as having a discussion with a group of learners or reviewing a policy document. A discussion facility for learners to talk to each other about what they have read and done, and an embedded email system also allowed direct access to other learners and a personal tutor. Reflection was therefore encouraged, but initially not insisted upon. In 2010 a further requirement was added to the end of every unit of work: the writing of a short reflection on that unit, and its relevance or links to practice. Prior to that additional requirement it had been commented upon that unlike a taught course 'the only thing we actually have to do is pass the assignment'. No register of attendance was taken or insistence that learners engage in discussions with each other or reflect on what they have done or read.

The model used in the initial design of the course was Salmon's five-stage framework (Salmon, 2000;2002) and this has proved helpful in the further development of our e-learning and blended learning courses. The stages in this model have resonated throughout:

Stage 1:Access and Motivation is developed and is key for many who are not able to attend an equivalent taught course.

Stage 2: Online socialisation is built into the early stages of the course, as learners are asked to complete an induction exercise that asks them to consider their own career; sharing their reflections with other learners on the course.

Stage 3: Information exchange is encouraged through discussions relating to specific tasks and readings.

Stage 4: Knowledge construction is enabled through reading, exploring frameworks and legislation and considering their relevance to the work place.

Stage 5: Development of the learners' continuing professional development is encouraged, with reference to professional associations and lifelong learning opportunities.

However, although online discussion and information exchange was an integral part of the course not all learners engaged with it. The optional nature of such engagement, and the reticence of some, meant that important stages of e-learning were not experienced by those learners. Bassot observed (2008) that for some e-learners posting thoughts on a discussion board was uncomfortable and engagement with others through such a medium was held back by lack of confidence, 'I didn't want to sound like I didn't know what I was talking about' (2008: p37).

Blended learning was a natural extension of our centre's experiences of e-learning. It had been noted that individual and group tutorials, when available, had been wholeheartedly welcomed in e-learning courses. Feedback suggested that these 'helped to provide a structure and rigour' to the learning process, and the forging of relationships between learners encouraged conversations to be maintained in online discussion forums. Providing a broader range of learning opportunities enabled those with different learning styles to participate in the course more effectively; reading, doing and reflecting could be extended to include discussion, sharing of experiences, group work and the introduction of more active learning opportunities. In addition the reliance on the use of discussion boards, although still available, was lessened. From the perspective of the tutor I found the most important aspect was the chance to challenge ideas, assumptions and approaches to careers work. In particular, issues such as gender and cultural stereotypic roles and aspirations required discussion in order to review engrained notions of what is possible and, at its most basic, what 'career' is all about.

Methodology

In order to evaluate the learner experience for both e-learning and blended learning I used two

Anne Chant

approaches; both of them qualitative and interpretivist. A qualitative questionnaire was made available on the VLE for the courses and learners were invited to complete it and email it to me. In addition I conducted two focus groups; one with an e-learning group and one with a blended learning group. During the focus groups, notes were taken and shared with the group at the end. The same questions that were on the questionnaire were asked in the focus groups. Six e-learners completed the questionnaire and nine blended learners did so. The focus groups were made up of 20 blended learners and four e-learners.

Questions posed were largely open, inviting ideas and experiences rather than grading or ranking. Bell (2010) explains that the way in which questions are posed in a questionnaire has a considerable impact on the nature of the data collected. Some of the questions did invite some ranking, e.g 'which aspects of the course did you find MOST useful?' Others presented an opportunity for the learner to reflect on their own experience of the course, e.g 'how did your experience of this course impact on your role or professional practice?" 'Are there any further comments you would like to make about your experience of the course or approach to learning?' Some questions were focused on information needed to further develop or modify the courses, e.g 'What was your highest qualification before beginning this course?' 'In what way did this impact on your learning or engagement with the course materials?'

The ways in which questions were responded to in the focus groups were of course quite different. Bell (2010) reminds us that in focus groups the researcher must be wary of more dominant members of the group overwhelming the data and also that the researcher becomes 'less of an interviewer and more of a moderator or facilitator' (p.166). In the focus group of e-learners this was not such an issue, but in the larger blended learning group I was aware of some individuals speaking more than others and so at times asked specific questions of specific people. Furthermore in a focus group, Bell (2010) points out that discussion is facilitated between members and therefore certain issues or areas of interest can have a higher profile than those raised by other questions. I was also aware that over the term of both courses a relationship had been established between myself and

both groups, and so I was clear that this may have had an impact on the answers given. In the focus group there may also have been a reticence from learners who had criticisms or concerns about the course.

Data analysis

The motivation for engaging in either course was overwhelmingly related to their own professional development. 'I heard that the new CPA say that everyone working in careers will have to have at least a level 6 qualification and this was the only way I'd be able to do it.' 'I realised I was managing people better qualified than me!' The learners' engagement with discussion boards during their course was generally poor. 'I haven't yet but I will.' 'I just want to get on with the course and finish, so if I don't have to I won't.' 'I would if I had some deadlines or some reason to.'

This feedback related well to Bassot's findings (2008). Nervousness and lack of confidence about engaging with and contributing to the discussion board had prevented them from doing so. Consequently e-learners who did not have the opportunity to meet in person with other learners may not have shared ideas, talked to others or reflected effectively on their learning. Blended learning students really valued the opportunity to talk to other learners on taught days. In response to the question about what they had found most useful they answered, 'sharing ideas and thoughts with others', 'the chance to talk about what we do and why we do it that way', 'talking about the reading. I found this quite hard and only really got it when we went over it together. That's probably just me because I haven't studied for a long time...' In response, another member of the group said 'oh yes I'm the same. I really liked the reading, but some of them were quite difficult so it was good to talk it through here.' 'I thought the theory bit wouldn't have much to do with what I do at work but actually I found it did, 'cos I talked to other people who do things differently and that made me think'.

Both e-learners and blended learners reported that their engagement with their courses had a considerable impact on their practice, although there were exceptions (as in the final quote here).'I think I understand better why we do what we do and maybe Articles

ways we could do it better' (blended learner). 'I found it really interesting. I don't think we do enough stuff about the longer term. Now I've looked at it we mostly do things about the next choice like A-levels or UCAS' (e-learner). 'Not really. It's good to know that what we do is probably right. Not sure that the theory bits are relevant to our unit. I'm still waiting to find out something I don't know' (e-learner who did not engage in discussions).

Both sets of learners also seemed to feel that a tighter structure and strict deadlines for tasks to be completed would help their time management and motivation. 'Although I know that at level 7 we should take responsibility for our own learning, I do think that if we had to complete certain readings by a certain time and comment on it in the discussion, I'd be more likely to do it' (blended learning student). 'Maybe if we had to work in pairs through the site I'd get to know that person and be more likely to discuss things with them'(e-learner).

Both structure and socialisation emerge as being very important for online learning. Salmon's stages 2, 3 and 4 (2000; 2002) although built into the course structure, could be adversely affected by a reticence to engage socially online. It may be that some of the ideas suggested will be adopted in order to strengthen these aspects of the courses. Moving on, how might this help us to consider the use of technology with regard to Information Advice and Guidance itself?

E-based information, advice and guidance

Most of us do not hesitate to turn to the internet when we need information. Whether that is to explore holiday destinations, the best price for consumer items or symptoms of medical conditions, most of us will look online or at least start there. Using these three examples I would like to consider the advantages and possible disadvantages of doing so.

First the family holiday; what is Crete like in July and how much will it cost me? In the pre-internet days the first step for many of us would be a trip to the travel agent. Using online travel services is a very different experience. It is quicker (sometimes) and certainly easier (mostly) and it can enable us to save money by choosing unpopular or off-season options or travel times. However we are only able to enquire about the destinations that we know about. Who will suggest alternatives that might suit our interests better or introduce us to a part of the world that no one we know has visited? How will we know that we could afford to visit Sri Lanka when we had assumed that it was outside our budget?

If we want to find out the cheapest place to buy a specific lap top or other consumer product, the internet really comes into its own. It can search for retailers and compare and contrast prices, product packages and after sales service. If you know what you want and you have handled it in the 'real world' somewhere, you cannot loose. If you have no 'real world' experience you may indeed get the best deal but the wrong product.

The third example is that of medical symptoms. NHS Direct can be useful to check symptoms, rashes and treatment options. It has been a great success and may have reduced the number of people queuing up to see their over-worked GP. However, follow-up interventions are not always successful. A significant minority (26%) in a study by Byrne, Morgan, Kendall and Saberi (2007) failed to act on the advice given without personal face-to-face conversations. Those of us who have used it will know that for the vast majority of enquiries there is a default setting; if you are worried or if symptoms persist, talk to your GP. For the worried well, a headache can seem like a brain tumour. More importantly however for the busy, embarrassed or those in denial, they will not get the opportunity to ask the passing question as they leave the consulting room,' by the way doctor, I've had these strange dizzy spells...'

Are these parallels with career guidance services fair or useful? In all three examples above the key objectives were to access information. An educational or careers related example could be accessing information about the entrance requirements for a specific college or university course. Even within a face-to-face guidance interview such information sources can be invaluable for their speed, accuracy and ease of access. However such information is unidirectional. Such use of online information does not challenge, question or guide the questioner. The client is not encouraged to consider alternatives or venture into hitherto unknown or misunderstood areas that may be potentially within their reach. Moreover those who prefer not to think about future transitions or choices, those who put off such considerations until the very last minute may remain unsupported. Like the e-learners or blended learners who did not engage in discussion or dialogue, information may be delivered, but learning is not necessarily also achieved.

Online and telephone guidance as opposed to information may offer more opportunities for necessary challenges and broadening of ideas, but it is unlikely that non-verbal cues or nuances will be recognised.

Returning to the evaluation of e-learning and blended learning, analysis strongly suggested that online interactions were not as comfortable as face to face discussions. It was these elements in blended learning that were most valued and during which learning was consolidated and related to practice. If this is the case for those engaged in learning on a course using technology, can we extend such observations to suggest that a reliance on technology in the delivery of careers education and guidance for the majority of young people in England is fundamentally flawed? Clearly this depends upon the level of service required. Sampson et al (1992) developed a differentiated model of service delivery. The first level of service in this model is access to information and other 'self help' services. However the next levels, staff assisted services and individual case-managed services, including guidance, require a more analytical and exploratory approach. As well as a process of exploration, challenge and broadening of horizons, guidance also relies upon learning; about self, about opportunities and about decision making. Law's Community Interaction Theory (Law, 1993) concurs, emphasising the importance of recognising a range of influential factors in career development but all involving interaction with others. Learning, as we know from Vygotsky (1978), is constructed through social interaction. His description of the zone of proximal development (ZPD) for an individual; the distance between what can be achieved on their own and what can be achieved with help, illustrates that progress cannot be achieved without interaction with another.

This was echoed by the e-learning and blended learning students whose progress was made more effective when they engaged with each other and with their tutor.Without such interaction, or when learners resisted the use of online facilities to do so, learning was not as helpful or meaningful. It may be that young people are similarly reluctant to engage in the personal learning and reflection necessary in career guidance online, as opposed to that which social interaction enables in a face to face interview.

Nevertheless, before reaching any conclusions about parallels between these adult learners and guidance services for young people, the differences must also be considered. The most obvious is the difference in age between the two and their experience of online socialisation. Young people interact socially using the internet all the time. They text, tweet and chat on Facebook, maintain friendships and make new ones online with ease and without the self consciousness experienced by some of the e-learners. However this is self selecting and self directed and so perhaps does not have the challenge or access to previously unexplored possibilities that talking to someone can offer. One of the strengths of face to face guidance is the reflection that it encourages. Such non-reflective interaction may not achieve more than information (or knowing) and this Schön warns us can be problematic;

knowing in practice can have a negative effect as it could lead to a parochial narrowness of vision...resulting in a tendency to become selectively inattentive to phenomena that do not fit the categories of his (sic) knowing in action.

(Schön, 1983:26)

Conclusion

It is clear that in depth research into the impact of online, telephone or limited access to one-to-one guidance will be needed in the coming months and years. Quantitative measures of drop-out rates from keystage 4, post 16 and higher education may provide some indications, but that will only tell us what has happened, not why. We have yet to see the impact of changes on the quality and profile of careers education in schools in England. If this is ameliorated by developments in the curriculum, then it may be that the need for face-to-face guidance is in some ways offset. If personal learning and development is effective within the curriculum then information, online or otherwise may be adequate. However if personal learning does not take place effectively in the curriculum and through social interaction and engagement, then I remain unconvinced that this will be achieved effectively through online alternatives alone. Learning. London: Routledge Falmer.

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An experiment in blended career development: The University of Derby's social media internship programme

Debra Longridge and Tristram Hooley

t is possible to describe the capability of an individual to use the online environment to pursue their career as their digital career literacy. It is comprised of a range of different skills including the ability to: search; evaluate resources; communicate; network with other people; develop your reputation; and utilise an ever growing range of tools and environments as part of your career building. In another article in this edition of the NICEC journal Hooley (2012) has defined digital career literacy as encompassing changing, collecting, critiquing, connecting, communicating, creating and curating. This requires both the translation of offline skills and the development of new online ones. This article sets out the experience of running the social media internship programme (SMIP), an intervention to develop students' digital career literacy at the University of Derby.

Introduction

No one is born with digital career literacy; it is something that is acquired through experience and reflection. Furthermore, while some young people may have good ICT skills, this does not necessarily mean that they are able to identify what to do with these skills in the context of their careers. The idea that we have an onrushing generation of 'digital natives' (Prensky, 2001) has been criticised (e.g. in Bennett et al, 2008) in favour of an approach which recognises that technologies mediate existing skills and knowledge and that there is a wide range of things that you can do with a computer, which do not all draw on the same set of skills. It is clear that digital career literacy is highly varied across the population. At one end of the spectrum it is possible to identify individuals with extremely high digital career literacy. For example, Ulrike Schulz¹ built a website about herself and went looking for a job in London. She created the Twitter identity @TheLondonJob and asked people to use the #HireUlrike hashtag to accompany photos of themselves on Twitter. She used social media and a loose network of well-wishers to build her profile as a candidate for work. Ulrike built up her online brand and the associated campaign to such an extent that she was offered a job as an Account Executive at the company We Are Social.

At the other end of the spectrum around 10 million adults in the UK have never used the internet with those in this group tending to be older, poorer and less educated than the rest of the population (Race Online, 2012). Students in higher education generally have considerable experience of using computers (and other forms of ICT). However, the experience of running the SMIP suggests that despite this competence in ICT they are not using the kinds of strategies employed by Ulrike Schulz and that, in fact, they were unaware that these strategies even existed.

> A lot of people aren't geared towards the professional use of social media. They use it for fun and social life.

> > Sam McCaffrey, Third Year, Creative Writing, Focus Group²

I For more information about Ulrike Schulz see her website at http://ulrikeschulz.weebly.com/. In particular the press coverage in the Links section of the site.

² Participants have given permission for their full names to be used in the publication.

Recent studies that have examined digital career literacy (Bimrose et al, 2010; Hooley et al, 2010) have also found that career explorers are not using the internet in very sophisticated ways as part of their career exploration and career building.

Consequently it is possible to make a strong case that careers services should concern themselves with the development of digital career literacy. In fact it is becoming more difficult to imagine how people can develop their career management skills without considerable reference to the online environment. It is increasingly untenable to talk about self-reflection and not to mention blogging, or networking and not to mention LinkedIn ³ or researching the labour market without mentioning Monster⁴. However careers professionals who want to explore these kinds of issues can be challenged, both by the ever changing number of technological tools and perhaps more critically, by the lack of established approaches for supporting the development of digital career literacy (Barnes & La Gro, 2009; Bimrose et al, 2010).

This article will explore these issues through a piece of action research that was undertaken at the University of Derby during February and March of 2012. The Career Development Centre (CDC), with the International Centre for Guidance Studies (iCeGS) used funding from the University's Teaching Informed by Research programme to develop a new career development intervention. This intervention sought to develop students' digital career literacy and to explore a model of blended delivery that combined one-to-one support and group work, and took place in both onsite and online contexts.

The social media internship programme (SMIP)

The SMIP emerged out of discussions between staff at the CDC and iCeGS. CDC is a service that has enthusiastically embraced online delivery of service through its own website, a series of discipline specific careers blogs and a presence on Facebook⁵, Twitter⁶ and LinkedIn. The service is therefore well developed in terms of the delivery of careers services online. However, the CDC had a less developed approach for supporting students to improve their own use of the online environment for their career building.

An intervention was designed with the aim of recruiting a number of 'social media interns' from second and third year students. The interns would be supported for a six-week period through a training session and access to advice and mentoring. Their task would be to spend these six weeks using social media to develop their careers. To encourage and sustain participations it was decided that those who completed would receive a note of their participation in the programme on their Higher Education Achievement Record (HEAR) and this proved to be a motivating factor for some.

I wanted the thing on my transcript. Having a line about social media on my transcript would look good and would enhance my chances of jobs.

Sam McCaffrey, Third year, Creative Writing, Focus group

Interns would be asked to explore how to use social media effectively for their career development by experimenting with a range of packages and reflecting on their experiences through a blog. Support for the interns would come from a tutor (Debra Longridge, a careers professional) who would work with them throughout the six-week period in a variety of media. The interns were also encouraged to form a community of practice (Wenger, 2002) and to provide each other with peer support. They were provided with a LinkedIn group to facilitate this peer support as well as many-to-one interaction with the careers adviser; but they were also encouraged to interact with the adviser and their peers in whatever way and through whatever technology seemed most appropriate.

The SMIP was designed to foster engagement with

³ LinkedIn is a professional networking tool. It can be accessed at http://www.linkedin.com/home .

⁴ Monster is a career support and recruitment site. It can be accessed at http://www.monster.co.uk/

⁵ Facebook is a social networking tool. It can be accessed at http://www.facebook.co.uk .

⁶ Twitter is a microblogging and social networking tool. It can be accessed at http://twitter.com .

the online environment and to develop digital career literacy, but it was not about teaching students to use a particular tool e.g. Facebook, Twitter or LinkedIn. Rather it took a tool neutral approach in which participants were encouraged to try out a range of different tools and choose the one that met their needs and best enabled them to link to their professional networks. In the initial training session participants were briefly shown how to use a blogging tool called Posterous⁷ and encouraged to set up an account on LinkedIn, both for the purpose of professional networking and so that they could use LinkedIn Group as a private discussion forum. However these were introduced as sample tools rather than course requirements. Only two interns used Posterous as their blogging tool and the use of LinkedIn was variable. Tool neutrality was an important element of the programme design because it: (1) prevented the programme from being seen as an ICT training course; (2) allowed participants the opportunity to choose the tool that was most appropriate for the community that they wish toaccess; and (3) because it recognised students existing knowledge and investment in online tools.

The programme was advertised through the CDC's normal channels and applicants were asked to complete an online application form, which asked for some demographic information and explored their use of social media and their career planning. Fourteen applications were received but one was disqualified as the applicant was not a current student at the University. This meant that thirteen students were invited to the initial training session. Only eight attended this initial session, the remaining five students were contacted and offered the chance to receive the training session materials following the event. One agreed to this meaning that the final cohort numbered nine.

Running the programme

The programme was conceived as a piece of experiential learning and it is possible to map the elements of the programme onto Kolb's (1984) cycle as follows.

Table 1: Kolb's Learning Cycle and the elements of the social mediaintern programme

Concrete experience	The interns were encouraged to have experiences relating to both their career (e.g. contacting a potential employer) and online tools (e.g. trying out LinkedIn).
Reflective observation	The interns were required to reflect on their experience using their blogs.
Abstract conceptualisation	The interns were aided in conceptualising their experience through both the initial training session and through feedback from a guidance practitioner.
Active experimentation	The interns were engaged in the process over a six week period and were encouraged to develop their practice of their digital career literacy throughout.

⁷ Posterous is a blogging tool. It can be accessed at https://posterous.com/.

An experiment in blended career development

Career learning programmes tend to operate within a relatively small number of pedagogic modes: information provision; the one-to-one guidance interviews; group workshops; employability programmes and so on. There have been some attempts to explore how these modes might transfer online through either one-to-one e-guidance (Madahar & Offer, 2004), through a structured online learning programme (Goddard, 2010), or through looser kinds of intervention such as blogging (Hooley, 2011). However, none of these really offered many lessons for the SMIP which combined a rigid assessment structure (blog every week in order to get recognition through HEAR) with a loose multi-platform learning structure (talk to the programme's leader and to each other whenever, wherever and however you choose).

Despite the looseness of the programme's structure it was still important to ensure that learners' experience was scaffolded through training and support. An initial training session set out the structure and purpose of the programme and addressed both conceptual (how to build your career online) and technical (how to use online tools) issues. Following this the SMIP tutor stimulated engagement every week with an email which encouraged participation, highlighted examples of good practice amongst the cohort and reminded them about the programme requirements. The tutor also monitored all of the participants' blogs and their participation on the LinkedIn group and other social media platforms. Those who were not maintaining their engagement were contacted and provided with encouragement and additional support where necessary.

The tutor also provided support to the cohort across a range of platforms. This included face-to-face guidance interviews, conversations on the telephone, emails, comments on interns' blogs and responding to discussions on LinkedIn and other social media platforms. This level of attentiveness to the cohort was time consuming but not as complex to manage as the multi-platform approach might suggest. In essence the role was divided into proactive programme management (checking each interns' blog once a week and engaging with the LinkedIn group) and reactive learner support (answering queries in the media of the students' choosing, chasing non-participation, engaging in social interactions whilst using social media). Participants seemed very responsive to this multi-platform engagement and considerable rapport was built.

An unexpected benefit I've found from the internship is the input from the careers advisor co-running it... the input, anecdotes and insights she has offered have been really great. A careers advisor has had insightful advice on topics relating to finding a path to careers – I don't know why it is unexpected come to think of it.

Second Year, Graphic Design, Blog Post

It is possible to identify concerns about the movement of career guidance online. Key concerns include the idea that without face-to-face contact there will be a loss of quality and depth, as well as the idea that the move online will have the effect of reducing professional autonomy and skill. The experience of running the SMIP challenged these concerns and the programme's tutor found that she experienced deep and sustained levels of engagement with the interns, which required her to use both her guidance and technical skills to meet their diverse needs.

The student experience

The student cohort that began the programme was comprised of nine students. In their initial applications most of the cohort indicated that they were already engaged in the active development of their career and that they were also regular users of social media (Facebook in particular, but also Twitter, Youtube and LinkedIn). However, only one of the interns was blogging regularly at the start of the programme. In summary the cohort were digitally literate and engaged in career building (although this was often more in principle than in practice), but had not put the two together.

Seven out of the nine interns completed the programme successfully. One intern dropped out when he became ill, whilst the other unsuccessful intern did not engage with the programme at all. Interestingly he was the student who already had an established blog which he used to showcase his creative work. Despite a meeting with the programmes careers adviser he did not engage in any career development related

activities.

For those students who completed the programme the experience seemed to be both an enjoyable and personally productive one.

> It's coming to the end of this social media internship now and even in this short time my career prospects have grown, be that directly because of the internship and my exploration of social media forms, and the general activities I undertake being a final year "creative" student. I think both have contributed to the other.

> > Daniel Turner, Third Year, Popular Music with Music Technology, Blog Post

However, despite the generally positive experience, the interns also reported that the programme was more demanding than they were expecting. Samantha Neff (Third Year, Sports Psychology, Massage and Exercise Therapy) highlighted the difficulty in moving from her general (social) use of online tools, to the use of these tools for career building.

I decided to take part in this internship because, honestly speaking, I thought it would be easy...I spend half my time on Facebook, I have an account on Twitter, and I've set myself up on LinkedIn – therefore it should be easy...yet it is not.

However, the interns generally felt well supported

Figure 1: Summary of blog posts¹

during the project and recognised that the programme had enabled them to draw in support for their career development.

Whenever there was an issue in one of my posts I got an email. I knew that you were watching."

Sam McCaffrey, Third Year, Creative Writing, Focus Group

As will be discussed below, the peer support elements of the programme were less successful with interns' participation in LinkedIn being intermittent.

The interns used the programme as an opportunity to work on a wide range of issues relating to their careers. Blog posts covered diverse subjects within the broad frame of personal and career development, they included posts on: the student experience ("been a few highs and lows in the realm of my third and final year as an undergraduate"); transitions ("job interviews, final projects and a higher education fork in the road"; the evaluation of online tools ("so far I've found Linked In and Twitter to be especially helpful in my Social Media endeavours"); reflecting on skills and experiences ("I was praised by my managers for having the ability but lacking focus"); and career building ("it has given me new contacts and opened my eyes to new directions I could take my career in"). Figure I summarises all of the blog posts that were posted during SMIP.

atready although bit blog business career companies contacts different facebook following found going help idea interested internet internship interview job keep life linked linkedin looking market media networking people post potential professional project really search site SOCial start students sure things think twitter university useful website week work writing

year

I TagCrowd is a tool which can be used to summarise text. It presents the most frequently used words with those that are used most rendering in a larger font size. It can be accessed at http://tagcrowd.com/

The interns were able to report a range of impacts from their participation. One Second Year Graphic Design student found that through the course he gained insights into how social media could be useful to his career:

> Social media can be useful to establish connections, find information, engage with the right people and aid the pursuit of the right career path... I do think it is pretty obvious actually, but still it is quite surprising and exciting to actually do these things and share the experience of others doing them.

Other interns were able to report more concrete impacts such as expanding their support networks through social media.

> One journalist I have followed and started to message through Facebook has offered to help me in a mentoring role and he has already given me some very helpful advice and notes.

> > Sam McCaffery, Third year, Creative Writing, Blog Post

Daniel Turner (Third Year, Music with Music Technology) also used social media to expand his network. He used Twitter to make contact with a local company who asked him to write an article in a local magazine. Another intern was able to network with employers and find a job through the programme.

I thought you might like to know that I had an interview today with someone I found on LinkedIn and have provisionally accepted a job with him. If I hadn't done the social media internship I never would have found this opportunity, so thank you.

> Fiona Southcott, Third Year, Business Studies, Email

Lessons learnt about programme design

The SMIP was a pilot study which explored a new kind of intervention. As described in the previous section there seems to be evidence that participants in the programme both liked it and were able to identify clear impacts in terms of their skills, networks and labour market opportunities. However, there were also a number of lessons learnt through running the programme that this section will examine to inform future programme design. In particular these lessons focus on the establishment of the community of practice and the level of scaffolding that was offered to support the engagement of participants.

One of the aims of the programme was to use social media to provide participants with ongoing access to a peer support network or community of practice. The hope was that students could share their experiences of developing their careers online and learn from each other. A LinkedIn group was set up to facilitate this community of practice and the interns were asked to use this to flag blog posts that they had written or read, to offer peer support and to share information. However, the level of participation on the LinkedIn group was low with only three of the interns using the group regularly. LinkedIn was clearly not a technology that most of the interns were using regularly before they started the programme and did not become something that most of them checked regularly. Because there was no clear location for the community's interaction, the community itself did not cohere and consequently the levels of peer support were lower than anticipated.

I kept forgetting about LinkedIn. I didn't really keep up with other people's blogs.

Sam McCaffrey, Third Year Creative Writing, Focus Group

In essence the failure of a functioning peer-support community to emerge meant that the programme was operating through a one-to-many rather than a many-to-many paradigm. This increased the level of resourcing required from the tutor as all discussion was directed towards her.

It is possible to suggest a number of ways to improve the functioning of the community of practice. One option would have been to locate the community's interactions within a technology that the interns were routinely using e.g. Facebook. However, there are potential dangers in co-opting students' social spaces for learning and careers work (Madge et al, 2009), as well as potential benefit for the interns in increasingly their engagement in professionally focused social media like LinkedIn.A second possibility would be to increase the weighting that was given to participation in the community of practice within the assessment. In the current programme design interns are required to create content to receive credit on HEAR, but they are not required to interact. It would be possible to develop these criteria further. The third possibility would be to use greater structure to bring the interns into more regular contact and use this to support the development of the community of practice.

Feedback from the interns suggested that some of them would have liked more structure and the opportunity to meet with each other more. (Second Year, Graphic Design) complained that "being left to our own devices so much was not very engaging" and suggested that he would have liked "more directed goals". Fiona Southcott (Third year, Business Studies) would have liked tutorials on "the best ways of using each media". These quotes demonstrate how increasingly the scaffolding around the programme, perhaps by having a weekly workshop, could have provided a stronger social learning context, but also could have allowed more space to develop the interns' digital skills and managed the way in which they interacted with the tutor. In particular the focus of the programme around blogging, meant that some students felt that they would have liked more support to help them to develop their confidence as bloggers.

I would have found it helpful to know more about blogging – the different types of blogs and which is best for what type of writing, to be taught how to write blogs.

> Fiona Southcott. Third year Business Studies. Focus group

SMIP was designed to be an experiential learning programme in which the interns were required to engage outside of the "safe" space of the University. It was designed to encourage self-reliance, problemsolving and to develop confidence in presenting online. Given this it is unsurprising that some interns felt that SMIP moved them beyond their comfort zone and would have liked more support. It is important that the challenging elements of the programme are not lost, but given some of the feedback there may also be a case for developing the programme in ways that both enhance peer support and increase the programme's scaffolding.

Final thoughts

The social media internship programme was an experiment in the blended provision of a career development intervention. It worked well because it did not make artificial distinctions between online and onsite provision, but instead focused on providing an environment for experiential learning and reflection, and on engaging with the interns across the multiple platforms in which they were active. The experience of running and reflecting on the SMIP suggests that these kinds of blended career development practices can be highly effective. The experience also suggests that they make good use of career professionals' pedagogic and guidance skills and their knowledge of the labour market.

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A developer's perspective on CEIAG

Andrew Manson

This article is an exploration of the role online Labour Market Experience (LME) plays in challenging stereotypes and the construction of personal narrative in YR 7 and 8 students at school. Classroom and small group debate provides an invaluable opportunity to develop career related thinking in young people ahead of more focused one to one guidance and refined skills exploration work.

Introduction

As a software developer with an anthropology background, but not a career person, I've come to understand careers education, information, advice and guidance (CEIAG) work in schools as helping young people learn how and where they might fit into the work place. Students are directed to see how their qualities, experiences and skills meet employer imperatives. This seems especially true of recent policy and language where emphasis on skills and employability is primarily about work readiness: young people's ability to help contribute towards growth as they enter the workforce. While these are vital economic goals, I'm concerned that this narrow focus is at the expense of the key role work-related learning has to play in helping address social inequality issues.

However, there is now an opportunity to reframe the role of CEIAG and to make sure social inequality is not overlooked. Much rests on the level of support and continuing professional development (CPD) offered to teachers and careers professionals alike, particularly in relation to the application of new technology, to help them understand and differentiate between different approaches to CEIAG.

Resources for blended learning

The digital age has changed things for good and on the whole for the better. However, early over-emphasis on measuring, tracking, and even personalisation gave rise to many over-engineered products that, unlike the Tardis, were quite frequently far smaller on the inside. In the careers space these resources were often cumbersome and over-structured, with rigid pathways to e-outcomes that learners did not recognise as a reflection of who they were, or what they could yet achieve. Meanwhile in the wider school environment there appears to be a shift in favour of learning through open-ended enquiry. Educators have developed better instincts for what they think will work in the classroom in a blended way, where what happens on screen is not an end in itself. This process has started to filter into application design, as open ended resources that allow greater experimentation are preferred. It's a view that's increasingly articulated by teachers (see any #ukedchat archive on twitter) who want blended tools that help set scenarios for classroom discussion rather than providing end-to-end experiences where neither student, nor teacher, can fail. In other words, teachers are beginning to reject 'fast food convenience products' in favour of blended quality tools, where the interactivity happens in the classroom between students and not just on screen. In this new reality the teacher has become more of a co-explorer in which small fails are an essential part of the learning process. However, a big question mark still hangs over the CEIAG space where this thinking has only just started to seep through.

What is Talking Jobs?

It is against this backdrop that I launched www. talkingjobs.net in 2007/8 to deliver short series of case studies as cross sections of UK society through an online video player. The player itself allows users to watch a case study from end to end, but perhaps more usefully, to hang on a question and traverse the materials instead, or randomly using the 'Mix it up' feature. This level of interactivity raises the engagement significantly, whilst also helping young people come to value the experiences of others they might not normally meet. It is a blended career learning tool, for teachers to help seed classroom discussion about work, stereotypes and society, and a guidance tool used as preparation for face to face sessions with careers and IAG people.

Each module uses a common set of 30 or so questions about people's working lives, their experience in education and their family backgrounds. The interviewees are nominated by colleagues and or employers to avoid self selection impacting on the tone of the materials. The approach to the editorial is very light touch with most of the work done in a collaborative way with the interviewee during the recordings. The interviews include discussion of their experiences in both negative and positive ways and include questions about family backgrounds, attitudes to education at home, as well as their experiences in the workplace. Seeing the whole person in this way was a core part of the undertaking as people's backgrounds underpin the life choices they make. I work closely with a documentarist who splits his time between making films and working in care homes.We limit the number of interviews we conduct in a day to help focus on consistency and quality in the materials. Also, quite importantly, impartiality is a core feature of the approach, with company, product and brand names avoided during the recordings. The interviews were shot to capture personal insights and experience, not as a direct sponsorship opportunity or for implicit brand messaging.

The central premise in Talking Jobs comes from treating all contributors' experience equally, with

each response regarded as a useful fragment of labour market experience that can be approached from any direction. As such, reflections and insights from someone who left school at 16 are given equal weight to some with post graduate qualifications. To embed this in the learning, many of the lesson plans and activities ask young people to select clips across a variety of roles, and record their thoughts on what they have seen and how it relates to their own circumstance, and the impact on decision making. As such each module has to be viewed as a whole with case studies, video player and lesson plans used in concert to help move young people's thinking on. Through time, this premise was extended to include a 'Mix it up' button which shuffles the content so that the user does not know what response they will see next; as all opinions are useful provided there is a meaningful framework in which they can be discussed. As such, our CEIAG effort needs not just to encourage and develop young people to acquire skills, but also to ask questions across social boundaries. The tools they use need to not just offer accessible role models as inspiration, but must also help knowledge transfer between groups at the same time.

Triangulation

Recent discussion of the comparison effect is also worth mentioning. Young people are inclined to understand their own success through comparisons with those around them, in their everyday lives, offline, online or any other media. Failing by comparison is an effective way to switch young people off, threatening their ability to overcome confidence issues. We live in an increasingly image conscious age, where ideas around 'personal brand' and manufactured representations of self are both ubiquitous and sometimes even invasive. While developing a public persona through social media has become a central theme to many in careers higher education (HE) contexts, it needs careful consideration for school age children. While sites like Facebook do try to prevent the very young from setting up an account, this is routinely flouted by even primary school students, giving them access to very powerful communication tools which can leave them floundering if the

experience is at all negative. We need more informed classroom debate that lets young people understand their lives in context before these tools have too great a hold on their social and embryonic professional identities. This means schools developing more progressive social media policies while also helping young people develop the flexible mindsets they need to navigate the future, on line, off line or wherever. But it also means factoring into the CEIAG process a stage where very young people are encouraged to triangulate between other people's experiences, without immediately leaping towards comparisons between 'themselves' and 'other' in such a two dimensional way. This formative work, or triangulation between self and useful fragments of other peoples' experience, can then become a safe scaffold on which their own career narratives can start being constructed, yet without immediate risk to their own embryonic and perhaps fragile ambition.

You could do anything

During early piloting of the Talking Jobs resource back in 2007/8, I was working with a group of 16 Key Stage 4 students on a short set of twenty case studies in a school library with ICT equipment. Interestingly not all of the students had their own computer and some shared headphones. After 20 minutes exploring the materials, they came together in groups of four to share reflections on how what they had seen helped challenge stereotypes. At the close, they were asked, through a questionnaire, what had been the most significant thing they had learned about the world of work from the session. Four of the sixteen answers given were as follows:

- It doesn't matter what your family background is, you could do anything
- Even successful people have poor backgrounds
- Even if your parents aren't in a good job this doesn't mean you can't get a good job
- The jobs sound very different to the people that are actually in that career.

While this sample group was quite small and by no means a formal evaluation, it provided an early

A developer's perspective on CEIAG

indication that the CEIAG work has a vital role to play in challenging received ideas that could prejudice future life choices. This small feedback exercise suggests that using resources like this, with an emphasis on traversing experience, can help challenge expectations and perceived limits, many of which are implicit and need to be unpacked.

In more recent platform testing with a larger group of I 17 predominantly key stage 4 students, I asked the question: which approach do you think is more useful to you? Finding out about the jobs you like OR Finding out about a range of contrasting jobs. Unsurprisingly 72 per cent of respondents said 'Finding out about the jobs you like'. Reading between the lines I see a need for CEIAG work that quite deliberately prompts career exploration beyond personal interests in roles, as a core part of work-related learning. If followed up with a group discussion on findings, ideas and assumptions can then be challenged and also cascaded in both a blended and economic way, as essential precursor to the impartial guidance work that schools are obliged to provide.

Engine room of social mobility

At the 2010 Belfast ICG conference (4 Nov 2010) the UK Minister of State for Further Education, Skills and Lifelong Learning, said:

So what I want to say to you today is not just about careers guidance but about what good guidance can achieve. Careers guidance makes a difference. It's in the engine room of social mobility; a vital part of the machinery of social justice. Good advice doesn't just transform lives. It transforms our society by challenging the preconceived ideas about what each of us seeks. And what all of us can achieve.

However, set against this noble ambition, much of the debate on the conference floor, and in the run up to this speech, rested on the tension between practitioners seeing electronic tools as a direct threat to guidance, while workshop leaders and

Andrew Manson

speakers urged the community to resist polarising the conversation into a 'technology bad, people good' debate. Since that conference most of the UK Connexions Services have been dismantled and many of those working in schools and HE are now either out of (careers) work or self-employed, perhaps for the first time. Against this backdrop, the problem of efficacy persists, the way forward increasingly unclear, and the careers landscape increasingly fragmented.

How these technology tools get used is now even more central to the shape, value and survival of careers work in schools. For me this issue rests on whether the tools are used for self-directed online activities, with little input from teacher or careers people, or within a blended framework that deliberately sets out to challenge young people's assumptions about the workplace - before any matching exercises get underway.

The former scenario with self-directed learning and very little input is by far the easier to roll out, playing to what technologies are really good at; matching, searching and retrieving information, document management, creating portfolios, communications and of course tracking. But, these outcomes simply represent a migration to electronic from other media; in effect making more efficient processes that should happen irrespective of the technology. While this is all to the good, and may be more than enough for some students, it is likely to do very little to address the profound social inequality issues that exist and I'm not convinced this is the transformation the Minister was really getting at. Young people need support in widening their ideas about career and success and how this might differ between people, and this widening should sit in-front of any form of skills assessment. We can all acquire new skills, and even strive for desirable personal attributes, provided the motivation and support is there to help us do it.

'I want to do what she does'

A recent experience I had in a school beta testing the 'Talking Jobs' platform with 170 year 8 students in a series of back to back sessions with 25-30 students each at their own computer, illustrates these points more fully. The groups were all mixed ability and the event part of a wider careers day being put on by the school. Once a group had been given an exploratory task to complete, I started walking round the room talking to students singly or in pairs. During my walkabout, one year eight boy, who'd been quite cheeky on his way in, was now completely locked into one of the case studies. When I asked him how he was getting on, he turned to me, pointed at the screen and said; 'I want to do what she does'. The case study he was watching was a woman with spina bifida who had become an administrative assistant for a charity performing entry level clerical tasks. As with all of the Talking Jobs case studies, she talks about family, life at school and her childhood ambition to become a journalist, something she now felt unlikely to achieve. For me, what this young man had taken to heart was a respect for her tenacity and resilience, more than any specific skills she demonstrated in her current role. It was an exploration of her values that switched him on, providing teacher and or careers adviser with a hook for further conversation about career.

However, excessive pressure on teachers and teachers' time has created the quick fix scenario where these tools become a convenient way of meeting the curriculum requirements - no questions asked. Overall it feels like the CEIAG process needs to start from another point, with skills testing coming into the equation later on and handled by guidance professionals qualified to explore the results they offer. As such, the CEIAG tools we use need to take more account of the fact that we can all learn from everyone; that a butcher's life choices can influence a future barrister, and vice versa.

Teachers and careers professionals need resources which help students generate a broad and deep insight into people's working lives and experience irrespective of role or social background, and this needs to be delivered in a blended way. The 'see a vet be a vet' model is 'ok' but does very little to challenge assumptions and stereotypes and ends up maintaining the status quo, and the same types of children will get the same types of jobs as they have always done. Our young people will ultimately create the growth we need, but it will be all the more effective for us all, if they are allowed to define success on their own terms through exposure to ideas about career from across all backgrounds.

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The Talking Jobs website can be found at www.talkingjobs.net

The Talking Jobs Randomiser can be found at www.growingambitions.tes.co.uk/jobs

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Articles

Orientation, navigation and engagement: a philosophy for human and digital navigation

David Dickinson and Leigh Henderson

'You have to be someone before you can share yourself.' – Jaron Lanier (2010:1)

In this article, we discuss Internet navigation and the Personal Web and set out some of our thinking on an application to support sense-making in the career decisions process. We explain intermediated facilitation by the careers adviser as one of a series of professionals, supporting the client's continuous 'Orientation, Navigation, and Engagement' process. We consider how this supported personal navigation of information process can be more responsive to perceived life-episode shifts, affording a greater degree of personal control complementary to a positive sense of personal wellbeing. We have been developing these ideas over the past decade, through a variety of initiatives and programmes and more recently have begun to build the solutions capable of realising them.

Introduction

In scoping and designing the application software, there are two leading principles in our thinking. Firstly, while certain related services may be costed, the core navigation application must be open-source and free at the point of use. Secondly, however clever or accessible, no software or network intelligence can or should fulfil the role of information intermediators: e.g., at the first level, parents, friends and community: and at a professional level, the teachers, doctors and career advisers, experienced in counselling and the scaffolding of sense-making.

Economies of scale and big data

We are now so immersed in the ambience of the Internet that we have come to accept its primary commercial model: a supplier owns content and if a demander pays, s/he can see it or in some cases copy it. Personalisation is achieved by the supplier collecting and analyzing large amounts of data relating to transactions, often supplemented with information volunteered by a user. This is analogous to a store where the managers believe they know sufficient about their customers and their supply chain to meet the majority of their customers' demands and taking advantage of economies of scale, and therefore driving up profits. The store may well sell a small collection of cakes, with combinations of ingredients for different occasions, age groups and tastes. In the same way many online career guidance services combine text, and graphics in web pages assuming an average reader in average circumstances. We feel that in these very unpredictable times people seeking career information will increasingly need something more personal and relevant: the difference between simply buying a cake off the shelf (that someone else thinks we might want), or being able to create a recipe or get to a pre-made cake that we really want, perhaps talking to a baker as an intermediary.

In the early days of the Internet there was little concern for usability, the whole focus was on getting an enormously complex system to work. A simple example is the almost ubiquitous QWERTY keyboard. The arrangement of keys was to prevent people typing too quickly causing the lever mechanism to jam.

Orientation, navigation and engagement

Electronic keyboards predated the Internet but they retained the QWERTY keyboard.

There are similar unhelpful echoes of history in the way information is presented. Very often, the webpages, in-application search routines, reveal supply-side thinking and economies of scale rather than the unique needs of their clients. Personal information, including that to support sense-making for career decisions, is better served by economies of focus, a focus so accurate and relevant to the person managing his/her career that s/he sees the information as tailor-made, trusted, responsive and reliable. The good news is that just because historical development of the Internet dictated its current predominant use as a set of stove pipes, it doesn't mean that we have to be constrained by that residual culture and prevailing dominant logic.

There may be a few good reasons for imposing an underlying structure, such as maintaining design integrity, ensuring robustness etc, but emerging technologies and attitudes are moving towards the linking of data at an increasingly local level. The Internet in our view, should be experienced as an open repository of information broken down into much smaller and therefore repurposable content, curated and brought together with other granular elements of content, specifically tailored to meet the real needs of the individual. This process is known as granularity (small content elements) and aggregation (bringing together locally those elements of content: text; images; video and audio) in the way most relevant to the reader.

As the diagram below shows, using currently existing and readily available technology, it really doesn't matter where in the Internet the elements of content reside, so long as they can be identified, accessed and aggregated locally.

So if Internet information service providers are focusing on economies of scale, what mechanism do they currently use to determine what to pile high to sell cheap? Each person leaves a digital trail



Figure 1: The Internet as a "Network of Networks"

that is combined with other disclosed, inferred or purchased personal data. Combined with the data for other people in a defined segment, this builds into an enormous resource, traditionally perceived as being very valuable to the supplier. Aron (2011: 1) estimates the personal data market to be in excess of \$100Bn.

Personal choice, trust and security

So what price privacy and permission? The only safe way to deny access to the mechanisms of personal data collection is not to use the services, a step too far for most users enjoying the convenience of mobile devices as revealed in Ofcom's latest Communications Report (2012).

According to Ofcom:

- 39 percent of adults (27 percent last year) and
 66 percent of those aged 16-24 now own a smartphone, significant increases on last year
- 42 percent of these now say that their smartphone is the most important device for accessing the internet,
- 42 percent regularly use social networking sites and half (51 percent) using e-mail
- Owners say they are using PC and laptops less for a range of activities since getting a smartphone, including watching video clips (51 percent) and sending messages (47 percent).
- Tablet ownership rose to 11 percent of UK households, up 9 percent year on year, whereas smart TV ownership stands at 5 percent of TV homes
- 32.6 million subscribers accessed the internet via their mobile phones, an increase of nearly 10 million since 2010
- Total home Internet access continued to increase, reaching 80 percent of UK households in Q1 2012. The report was unable 'to conclude whether consumers are using voice communication services less, but it is clear that the way in which people are using telecoms networks to interact is changing, as new technologies and services emerge.

Services such as email, instant messaging and social networking sites, all of which offer alternatives to voice calls originating on fixed and mobile networks, have proved popular in the UK as take-up of mobiles, smartphones and fixed broadband has become widespread.'

- I9 percent predict that they will follow the Olympics on several different platforms
- Texting has overtaken speech as the prime mobile communications medium.

Increasingly, the information is not simply text and still images. According to predictions by the technology company Cisco, 90 percent of all Internet traffic will have video content by 2013. Whether or not that prediction comes to pass, it is clear that an exponential growth in video communication is taking place, notably through Skype and YouTube in addition to the commercial platforms on offer.

Implications and opportunities

In career development we now have access to online tools that help people access information, access mentoring and develop their career management skills. These tools and services include blogs, social media groups and mentoring sites. People use a wide range of sources of information to inform their career and learning decisions, including Wikipedia and social networking sites. Yet despite the power of search engines, people rely on their existing knowledge to discern the information that will help them; there is a significant element of chance that they will fail to locate the precise information and support that they need.

We believe this situation is exacerbated by what we refer to as the 'information engagement paradox' (Dickinson 2010: 4): where, typically, the less able a person is to manage information complexity, the more complex their lives often are. There is a correlation with the 20% of UK homes still to be connected to the Internet.

We liken the situation to trying to navigate a canoe down a canyon: the canyon being the hidden twists and turns (the career journey) the water, the ambient information and the white-water the resulting complexity. Just as the rocks and the gradient determine force and turbulence of the water, so too the difficulties of people's lives shape the complexity of the information they need to make sense of it all. Extending the analogy, 'intermediators' such as career advisers can be likened to canoeing coaches with an understanding of the needs of the canoeist and the characteristics of water in a variety of courses.

We assert that relevance is personal. As readers will know, the word 'career' has undergone a change of meaning over the years. The term **Career** is defined by the Oxford English Dictionary as an individual's 'course or progress through life (or a distinct portion of life).' The derivation is from the Latin word *carrera*, which means race. In 15th century French *carrière* meant a circular racecourse. 'Career' has come to mean 'what one does as a permanent occupation' or 'a life's work,' neither being an easy promise to keep in a highly fluid and increasingly 'portfolio' world.

We have taken this further; life is made up of a whole range of parallel pathways through time, such as health, finance, social/family, learning and work. We refer to this combined pathway as a career Gestalt¹, each pathway demanding our attention from time to time as our unique life-courses unfold. A sense of personal wellbeing might then be described as the feeling of balance one has in managing each of these factors as they present; a feeling that, taking into account broadly similar circumstances, varies markedly from person to person. Issues relating to our learning, employment, healthcare, social justice and spirituality to name but a few, all compete for attention. Individual responses too will vary from 'smiling in the face of adversity' to anomic dysfunction and disengagement. As all teachers know, while it may be their agenda to share quadratic equations last thing on Tuesday afternoon, on occasions there may well be more pressing issues on the minds of their students.

Imagine a person's personal construct series (in simple terms, their continually evolving take on the world) as a helical form reminiscent of DNA comprising all of the information currently important in life, arranged

Orientation, navigation and engagement

by relevance. As external circumstances change, so too does the information required to build understanding. A holistic career (learning, employment, health, sociallife, etc.) recognises the need to focus on different events (e.g., putting employment career ambitions on hold a little following a serious illness, accident or relationship problem). The two-dimensional diagram represents the three-dimensional model of this granular flow of information from the Internet and how it is used to scaffold understanding.

Figure 2: Whole career and personal information relevance



Content, Context and Communications

There is an interconnectedness, a harmony between Context, Content and Communications. Once understood from that new perspective, there is an opportunity to think differently about the Internet, the communities of users and the services they need. While we recognise that purists may challenge the linguistic accuracy, we offer the following explanation and diagram as being helpful to an understanding of the interrelationship between content, context and communications as the principal components of the Future Internet and therefore how the Personal Web is used to manage information for scaffolding.

I *Gestalt* is a German word for wholeness, often used in English to mean that the whole is greater than the sum of its parts.



Context describes all that is happening in a person's life and how that impacts on the way in which they use...

Content (much of which may be digital) to construct the knowledge they share via...

Communications, the network infrastructure supporting the Internet and the collaboration tools and devices that engage with it, enabling the inward and outward flow of information that support sense-making for the individual (Dickinson et al 2009:2).

As portrayed in the diagram, the communications enable collaboration (for example between client and career adviser, client and peers) making sense of content to gain information to compare with the context (health, family/friends, finance, qualifications, availability of work etc.) building knowledge to support sense-making, in turn informing decision-making. Unlike Minds coined the phrase for the interrelationship of these factors as: 'The Personal Web: relevant, networked content in context' (Dickinson DJ 2011: 2).

Mindful of the 'information engagement paradox', to access the information needed s/he has to search through the multiple single-focus portals containing information relevant to his/her particular situation. This requires a good ability to read and make sense of (often) jargon-laden websites, combined with the ability to integrate information from these sites in a way that makes personal sense. It is not uncommon to see people writing snippets of information from a number of different websites on scraps of paper.

The paradox applies also to public services. Users who are in greatest need often struggle to understand the relationship between service entitlement combinations and exclusions. This practice is a highly limiting, ineffective and of course ultimately inequitable way of working with online services. Take for example a young person with health, financial and criminal justice problems seeking a job. To make life-choices, or simply to prepare for meetings with a careers adviser and probation officer that same day, would require the information synthesis skills to which post-graduate researchers might aspire.

We envisage that, instead of individuals having to personally synthesise information and services from a number of discrete sources, intelligent Internet access should perform as much of this synthesis in the Cloud (as server-side processing, remote from the user's device and with minimal user intervention) increasing the immediate relevance to any given user and thus the likely degree of personal engagement.

The diagram below (Dickinson 2010) depicts how granular content is harvested from various locations in the world-wide web, and brought into the user's personal space to facilitate the anticipated discussions. In the solution that we envisage, we describe this interaction as being akin to a personal 'information satnav.' Unlike a map that has no understanding of (or reference to) context, a satnav knows where you are and your intended destination and it continually updates its information to accommodate changing contextual circumstances. We would like to stress that the navigation is complementary to other forms of intermediation, hence its depiction on the vertical line along with teachers, doctors and career advisers.

There is no doubt that the emerging sophisticated systems for managing information and aggregating services could do a great deal to streamline the provision of services by public servants, employment and benefits officials. But societal needs such as

Figure 4: Information systems to support all-age continuing personal development



For a video explanation of the above diagram see https://vimeo.com/25588449

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employability are influenced far more by individual attitudes such as perceptions of wellbeing, of health and readiness to participate.

The ability to reflect and accommodate individual perceptions (and ensure that any given digital interaction is informed by these) is a fundamental aspect of the Orientation, Navigation and Engagement philosophy and the associated navigational interface, both proposed by Unlike Minds.

Orientation, Navigation and Engagement (ONE)

This approach builds upon the European Commission's understanding of Personal Sphere:

...intuitive systems that help individuals secure, manage, visualise and interpret their personal information, attention trail and social history so as to enable the provision of personalised and context dependent information from multiple sources and services.

Bertolo (2009:Slide 10)

Cloud computing and the emerging Internet technologies enable the creation of a new way of working, which we described earlier as 'economies of focus,' where economies are achieved from only drawing down those resources required to meet a specific need or outcome. We anticipate economies of scale and economies of focus to be harmonised in personal web, enabling the individual to take genuine advantage of the massive projected growth in big data. The Orientation, Navigation and Engagement environment is the pedagogical underpinning of an important enabling component for economies of focus, representing at any given time individual context and therefore providing a rich insight into contextualised need.

Figure 5: The ONE Cycle "To plan, record, and control one's course and position ... " Navigate ...emotionally, physically and digitally ".... adjust or locate in relation to surroundings or circumstances." "..take stock of the situation Orientate to plan the next move" "... all-round vision Engage .. situated knowledge" "To occupy or involve oneself; to take part; be active."

To explain further:

Orientation

Together, as appropriate, with the intermediators in your life, (family, teacher, doctor, careers adviser), you have determined that you are at point A in your life journey, and need to be at point B (so this is the sort of data and information you need from these sources to help you to get there).

Navigation

You and your mediators agree that you want to be at

point B, (so let's tweak your navigator so that you get content more relevant to your context) knowing all about you from the inputs, these are the best options for getting there. Further, with regard to your learning and development, now you have learned X,Y and Z, we can now point your navigator at the next level of information and services commensurate with your development.

Engagement

If the above process were accepted (internalised), then we would argue the process of engagement becomes axiomatic.

In its consultation paper on the role of technology in career guidance, the UKCES (2010) described the career guidance market diagrammatically as below left. The ONE environment provides an additional element within existing provision as indicated in the right hand diagram.

It is our ambition that the satnav concept described above, underpinned by the ONE model, informs our solution, becoming the first port of call for anyone seeking information on employment, learning, healthcare, work related information, social care...



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Call for papers

Journal of the National Institute for Career Education and Counselling: March 2013 Issue

Theme: Career Coaching

There has been considerable growth in career coaching over the past few years as was discussed at the NICEC Network Meeting on 19th September 2012. There has also been growth in training and education with courses provided by independent trainers and postgraduate courses now available at some universities. Papers are consequently invited on any aspect of career coaching. This includes but is not confined to:

- Career coaching theories
- Links between career development theories and career coaching
- Career coaching with individuals, groups and/or online
- The management and marketing of career coaching
- The relationship between career coaching and other forms of career support
- The relationships between career coaching and wider coaching
- The organisation and management of career coaching
- Policy and governmental dimensions of career coaching
- Expanding areas of activity
- Tools, techniques and models
- Critical perspectives
- Case studies and other empirical work
- The client base for career coaching
- The context for career coaching
- The training and education of career coaches

Initial deadline for informal expressions of interest: 15th December 2012

Deadline for final submission: 15th February 2013

For more information, please contact the editor, Phil McCash: p.t.mccash@warwick.ac.uk