

JOURNAL OF THE

National Institute for Career Education and Counselling



NICEC STATEMENT

The Fellows of NICEC agreed the following statement in 2010.

'The National Institute for Career Education and Counselling (NICEC) was originally founded as a research institute in 1975. It now plays the role of a learned society for reflective practitioners in the broad field of career education, career guidance/counselling and career development. This includes individuals whose primary role relates to research, policy, consultancy, scholarship, service delivery or management. NICEC seeks to foster dialogue and innovation between these areas through events, networking, publications and projects.

NICEC is distinctive as a boundary-crossing network devoted to career education and counselling in education, in the workplace, and in the wider community. It seeks to integrate theory and practice in career development, stimulate intellectual diversity and encourage transdisciplinary dialogue. Through these activities, NICEC aims to develop research, inform policy and enhance service delivery.

Membership and fellowship are committed to serious thinking and innovation in career development work. Membership is open to all individuals and organisations connected with career education and counselling. Fellowship is an honour conferred by peer election and signals distinctive contribution to the field and commitment to the development of NICEC's work. Members and Fellows receive the NICEC journal and are invited to participate in all NICEC events.

NICEC does not operate as a professional association or commercial research institute, nor is it organisationally aligned with any specific institution. Although based in the UK, there is a strong international dimension to the work of NICEC and it seeks to support reflective practice in career education and counselling globally.'

NICEC FELLOWS

Lyn Barham, Anthony Barnes, Laurie Cohen, Helen Colley, Audrey Collin, Lesley Haughton, Ruth Hawthorn, Leigh Henderson, Wendy Hirsh, Tristram Hooley, Charles Jackson, Arti Kumar, Kate

Mackenzie-Davey, Phil McCash, Allister McGowan, Barbara McGowan, Stephen McNair, Claire Nix, Hazel Reid, Jackie Sadler, Tony Watts, David Winter.

NICEC INTERNATIONAL FELLOWS

Gideon Arulmani, Lynne Bezanson, Edwin Herr, John McCarthy, Col McCowan, Peter Plant, Jim Sampson, Ronald Sultana.

CO-EDITORS OF THE JOURNAL

Phil McCash, Career Studies Unit, Centre for Lifelong Learning, University of Warwick, Coventry, CV4 7AL.
p.t.mccash@warwick.ac.uk

Hazel Reid, Centre for Career and Personal Development, Faculty of Education, Canterbury Christ Church University, Salomons, Broomhill Road, Southborough, Kent, TN3 0TG.
hazel.reid@canterbury.ac.uk

EDITORIAL BOARD

Anthony Barnes, Barbara McGowan, Phil McCash and Hazel Reid.

TITLE

The official title of the journal for citation purposes is *Journal of the National Institute for Career Education and Counselling* and the ISSN number is ISSN 2046-1348. It is widely and informally referred to as 'the NICEC journal'.

Its former title was *Career Research and Development: the NICEC Journal*, ISSN 1472-6564, published by CRAC, and the final edition under this title was issue 25. To avoid confusion we have retained the numbering of editions used under the previous title.

AIMS AND SCOPE

The NICEC journal publishes articles on the broad theme of career development in any context including:

- Career development in the workplace: private and public sector, small, medium and large organisations, private practitioners.
- Career development in education: schools, colleges, universities, adult education, public career services.
- Career development in the community: third age, voluntary, charity, social organisations, independent contexts, public career services.

It is designed to be read by individuals who are involved in career development-related work in a wide range of settings including information, advice, counselling, guidance, advocacy, coaching, mentoring, psychotherapy, education, teaching, training, scholarship, research, consultancy, human resources, management or policy. The journal has a national and international readership.



GUIDELINES FOR CONTRIBUTORS

Manuscripts are welcomed focusing on any form of scholarship that can be related to the NICEC Statement. This could include, but is not confined to, papers focused on policy, theory-building, professional ethics, values, reflexivity, innovative practice, management issues and/or empirical research. Articles for the journal should be accessible and stimulating to an interested and wide readership across all areas of career development work. Innovative, analytical and/or evaluative contributions from both experienced contributors and first-time writers are welcomed. Main articles should normally be 3,000 to 3,500 words in length and should be submitted to one of the co-editors by email. Articles longer than 3,500 words can also be accepted by agreement. Shorter papers, opinion pieces or letters are also welcomed for the occasional 'debate' section. Please contact either Phil McCash or Hazel Reid prior to submission to discuss the appropriateness of the proposed article and to receive a copy of the NICEC style guidelines. Final decisions on inclusion are made following full manuscript submission and a process of open peer review.

SUBSCRIPTION AND MEMBERSHIP

The journal is published twice a year (cover price £20/issue) and can be purchased via an annual subscription (£35 UK or £50 overseas, including postage).

Membership of NICEC is also open to any individual with an interest in career development (£100 per annum). Members receive the journal, free attendance at all NICEC events and access to publications and seminar materials via the NICEC website. Individuals from one organization can share their membership place at events.

For information on journal subscription or membership, please contact Wendy Hirsh: membership@nicec.org

COPYRIGHT AND DISCLAIMER

Articles are accepted on the condition that authors assign copyright or licence the publication rights in their articles to the National Institute for Career Education and Counselling (NICEC). An important goal of NICEC is to encourage freedom of expression. Individual viewpoints expressed in the journal do not represent NICEC as a whole.

PUBLISHER

The *Journal of the National Institute for Career Education and Counselling* is published by: National Institute for Career Education and Counselling (NICEC), 1 Croft Road, Godalming, Surrey, GU7 1BS.

www.nicec.org

EDITORIAL

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 ICT-based 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 programme’ 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) (Odi, 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

How the internet changed career

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

1 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/>.

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 (Doherty, 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

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

How the internet changed career

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. 'I 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:

1. 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-to-many 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-to-many 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 re-shape 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/>.

How the internet changed career

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.



References

- Bartram, D. (2000) Internet Recruitment and Selection: Kissing Frogs to Find Princes, in *International Journal of Selection and Assessment*, 8, 4, 261-274.
- Betts, K., Lewis, M., Dressler, A. and Svensson, L. (2009) Optimizing Learning Simulation to Support a Quinary Career Development Model, in *Asia-Pacific Journal of Cooperative Education*, 10, 2, 99-119.
- Betz, N.E. and Turner, B.M. (2011) Using Item Response Theory and Adaptive Testing in Online Career Assessment, in *Journal of Career Assessment*, 19, 3, 274-286.
- Bierema, L.L. and Hill, J.R. (2005) Virtual Mentoring and HRD, in *Advances in Developing Human Resources*, 7, 4, 556-568.
- Brandenburg, C. (2008) The Newest way to Screen Job Applicants: A Social Networker's Nightmare, in *Federal Communications Law Journal*, 60, 597-614.
- Carrick-Davies, S. (2011) *Munch Poke Ping! Vulnerable Young People, Social-Media and E-Safety*. Training and Development Agency. http://www.carrick-davies.com/downloads/Munch_Poke_Ping_-_E-Safety_and_Vulnerable_Young_People_FULL_REPORT.pdf [Accessed 10 June 2012].
- de Raaf, S., Shek-wai Hui, T. and Vincent, C. (2012) *Career Motion: How Web-based Technologies can Improve the Career Choices of Young People*. Ottawa: The Social Research and Demonstration Corporation (SRDC).
- DiMicco, J.M., Geyer, W., Millen, D.R., Dugan, C. and Brownholtz, B. (2009) People Sensemaking and Relationship Building on an Enterprise Social Network Site, in *2009 42nd Hawaii International Conference on System Sciences*, 1-10.
- Din, N., Yahya, S., Suzan, R. and Kassim, R. (2012) Online Social Networking for Quality of Life, in *Procedia - Social and Behavioral Sciences*, 35, 713-718.
- Doherty, R. (2010) Getting Social with Recruitment, in *Strategic HR Review*, 9, 6, 11-15.
- Dougherty, H. (March 15, 2010) Facebook Reaches Top Ranking in US, in *Experian Hitwise* (blog), http://weblogs.hitwise.com/heather-dougherty/2010/03/facebook_reaches_top_ranking_i.html [Accessed 18 June 2010].
- Dugosija, D., Efe, V., Hackenbracht, S., Vaegs, T. and Glukhova, A. (2008) Online Gaming as Tool for Career Development, <https://www.comsys.rwth-aachen.de/fileadmin/papers/2008/2008-steg-vaegs-gaming.pdf> [Accessed 11 June 2012].
- Econsultancy (2012) *Internet Statistics Compendium*. London: Econsultancy.com Ltd.
- Eshet-Alkalai, Y. (2004) Digital literacy: A Conceptual Framework for Survival Skills in the Digital Era, in *Journal of Educational Multimedia and Hypermedia*, 13, 1, 93-106.
- Farrar, A., Grays, L., VanderPol, D. and Cox, A. (2007) A Collaborative Voyage to Improve Students' Career Information Literacy, in *35th National LOEX Library Instruction Conference Proceedings*, 9-13.
- Feldman, D. C. and Klaas, B. S. (2002) Internet Job

- Hunting: A Field Study of Applicant Experiences with On-line Recruiting. *Human Resource Management*, 41, 2, 175-192.
- Goddard, T. (2010) Online Career Counselling: Developing a Pedagogy for E-Career Learning. IAEVG-JIVA Conference October, Bangalore, http://www.training-innovations.com/files/Online-Career-Counselling_Jiva2010.pdf [Accessed 11 June 2012].
- Gomes, L. and Murphy, J. (2003) An Exploratory Study of Marketing International Education Online. *International Journal of Educational Management*, 17, 3, 116-125.
- Grubb, W. N. (2002) *Who Am I: The Inadequacy of Career Information in the Information Age*. Paris: OECD.
- Harris-Bowlsbey, J. and Sampson, J. P. (2005) Use of Technology in Delivering Career Services Worldwide. *The Career Development Quarterly*, 54, 1, 48-56.
- Headlam-Wells, J., Gosland, J. and Craig, J. (2005) 'There's Magic in the Web': E-Mentoring for Women's Career Development. *Career Development International*, 10, 6/7, 444-459.
- Hollister, C. (2005) Bringing Information Literacy to Career Services. *Reference Services Review*, 33, 1, 104-111.
- Hooley, T. (2011) Careers Work in the Blogosphere: Can Careers Blogging Widen Access to Career Support, in Barham, L. and Irving, B.A. (eds) *Constructing the Future: Diversity, Inclusion and Social Justice*. Stourbridge: Institute of Career Guidance.
- Hooley, T., Hutchinson, J. and Watts, A. G. (2010) *Careering Through the Web: The potential of Web 2.0 and 3.0 Technologies for Career Development and Career Support Services*. London: UKCES.
- Hooley, T., Watts, A.G., Sultana, R. and Neary, S. (Forthcoming) The 'Blueprint' Framework for Career Management Skills: A Critical Exploration. *British Journal of Guidance and Counselling*.
- Howieson, C., Semple, S., Hickman, S. and McKechnie (2009) *Self-Help and Career Planning*. Glasgow: Skills Development Scotland.
- Kuhn, P. and Skuterud, M. (2000) Job Search Methods: Internet Versus Traditional. *Monthly Labour Review*, 3, 3-11.
- Lambley, C., Smith, A. and Fairbrother, L. (2007) *Connexions Direct Website Evaluation*. Thirsk: VT Education and Skills.
- Law, B. (2010) Career Learning on the Net: Colonise or Inhabit? <http://www.hihohiho.com/newthinking/crlrinternet.pdf> [Accessed 10 June 2012].
- Learning and Skills Improvement Service (LSIS) (2011) *The Blueprint for Careers - Brief Guide*. Coventry: Learning and Skills Improvement Service.
- Leiner, B. M., Cerf, V. G., Clark, D. D., Kahn, R. E., Kleinrock, L., Lynch, D. C., Postel, J., Roberts, L. G. and Wolff, S. (2009) A Brief History of the Internet, in *ACM SIGCOMM Computer Communication Review*, 39, 5, 22-31.
- Lloyd, A. (2003) Information Literacy: The Meta-Competency of the Knowledge Economy? An Exploratory Paper. *Journal of Librarianship and Information Science*, 35, 2, 87-92.
- Lloyd, A. (2005) Information Literacy: Different Contexts, Different Concepts, Different Truths? *Journal of Librarianship and Information Science*, 37, 2, 82-88.
- Maxwell, K. and Angehrn, A.A. (2008) *Games in Career Guidance: Effectiveness of using SmallWorld Simulation to Develop Social Skills in the Work Place*. Fontainebleau, France: INSEAD.
- McArdle, S., Waters, L., Briscoe, J. and Hall, D. (2007) Employability During Unemployment: Adaptability, Career Identity and Human and Social Capital, in *Journal of Vocational Behavior*, 71, 2, 247-264.
- Morgan Stanley (2010) Internet Trends, CM summit 7th June 2010, <http://www.slideshare.net/CMSummit/ms-internet-trends060710final> [Accessed 19 June 2011].
- Odih, P. (2004) Using the Internet, in Seale, C. (ed.) *Researching Society and Culture* 2nd ed., London: Sage.
- Offer, M. (2004) *What is e-Guidance?: Using Information and Communications Technology Effectively in Guidance Services*. Manchester: Graduate Prospects/HECSU.

How the internet changed career

Office for National Statistics (2010) *Internet Access 2010: Households and Individuals*. London: ONS.

Office for National Statistics (2011) *Internet Access - Households and Individuals, 2011*. London: ONS.

Page, R., Newton, B., Hawthorn, R., Hunt, W. and Hillage, J. (2007) *An Evaluation of the Ufl/learnDirect Telephone Guidance Trial*. Brighton: Institute for Employment Studies.

Race Online (2012) *Manifesto for a Networked Nation*. Race Online, London.

Raffo, C. and Reeves, M. (2000) Youth Transitions and Social Exclusion: Developments in Social Capital Theory. *Journal of Youth Studies*, 3, 2, 147-166.

Rosado, E. and Bélisle, C. (2007) *Analysing Digital Literacy Frameworks*. Lyon: Université Lyon.

Salmon, G. (2004) *E-Moderating: The Key to Teaching and Learning Online*. London: RoutledgeFalmer.

SCONUL Working Group on Information Literacy (2011) *The SCONUL Seven Pillars of Information Literacy*, http://www.sconul.ac.uk/groups/information_literacy/publications/coremodel.pdf [Accessed 5th June 2012].

Strehlke, C. (2010) Social Network Sites: A Starting Point for Career Development Practitioners. *Journal of Employment Counseling*, 47, 1, 38-48.

Tracey, T. J. G. (2010) Interest Assessment Using New Technology. *Journal of Career Assessment*, 18 (4), 336-344.

Tuominen, K., Savolainen, R. and Talja, S. (2005) Information Literacy As A Sociotechnical Practice. *The Library Quarterly*, 75 (3), 329-345.

Venable, M. A. (2010) Using Technology to Deliver Career Development Services: Supporting Today's Students in Higher Education. *The Career Development Quarterly*, 59, 1, 87-96.

Watts, A. G. (2002) The Role of Information and Communication Technologies in Integrated Career Information and Guidance Systems: A Policy Perspective. *International Journal for Educational and*

Vocational Guidance, 2, 3, 139-155.

Webber, S. and Johnston, B. (2000) Conceptions of Information Literacy: New Perspectives and Implications. *Journal of Information Science*, 26, 6, 381-397.

For correspondence

Tristram Hooley
Reader in Career Development
University of Derby

Email: t.hooley@derby.ac.uk