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Synchronous online CPD: empirical support for the value of webinars in career settings

Julia Yates

Abstract

The career profession in England is facing unprecedented challenges. Initiatives to improve service delivery whilst keeping costs low are attractive and online training holds the promise of high impact at low cost. The present study employs a qualitative methodology to evaluate a series of online "webinars" conducted with fifteen careers advisers. Results showed that the technology itself could impede learning, and participants missed out on the peer to peer interaction that takes place in a "bricks and mortar" setting but that overall participants found that access to relevant, good quality training from the convenience of their workplace more than compensated for the challenges. The paper offers conceptual support for the viability of online learning through the theory of equivalency, andragogy and transactional distance theory, and makes recommendations for practice.

Keywords: synchronous; online-learning; CPD; career service; webinars

Main Text

Introduction

The economic and political landscape has resulted in an extraordinary context for career delivery in England and Wales. Hooley and Watts (2011: ii) foretell that 'the current environment is having a potentially disastrous impact on the career profession' highlighting the redundancies, reduced pay and conditions, and erosion of expertise and experience within the profession. Watts (2012:2) particularly stresses concerns about 'how quality is to be assured' within careers services now and in the future. The role of continuing professional development (CPD) here is key. Nadler and Tushman (1999) describe staff competence as an important factor to be exploited to gain a competitive edge and the opportunity to learn at work has been shown time and again to increase staff job satisfaction (Roelen, Koopmans and Groothoff 2008) which is particularly valuable in the current climate of uncertainty (Carless and Arnup 2010).

CPD accessed online is an appealing notion. With rapidly developing technologies and more widespread access to ever faster broadband services, the technology can offer a practical, cost-effective, time-efficient way to improve services or skills; travel costs are negligible, time away from the front line is greatly reduced and sessions can be easily recorded and viewed many times by many people. There remains, however, a question mark over the efficacy of training delivered through this medium, and specifically, what we do not yet quite understand is how the learning experience online compares to that within a more traditional classroom-style environment nor how trainers can maximize the opportunities that the technology brings.

The literature provides us with some evidence about the effectiveness of online facilities as learning tools. Online training can take a range of forms (Venable 2010). The most widely used and widely studied is asynchronous training (Swan 2001), where resources are uploaded to a website or intranet that participants can access as and when it suits them. This type of training could include discussion boards, surveys, quizzes, questionnaires, video clips and readings. More recently a range of software has become widely available that facilitates synchronous online learning, using webcams and microphones to allow real time viewing and interaction between participants, and between participants and tutors. Peer –reviewed articles that report research into synchronous online learning are thinner on the ground, but the research on synchronous online teaching has found, overall (e.g. McBrien, Jones and Cheng 2009, West and Jones 2007, Anderson et al. 2003) that this mode of delivery is well received by participants, in that the convenience of the medium outweighs the frustrations with the technology itself.

Participants' views on the quality of interaction within the synchronous online sessions were found to be fairly mixed and we will now turn to explore this more complex picture and the impact it has on student learning.

Interaction in learning

Interaction has been shown to have a crucial role in learning. Vygotsky's (1978) theory of the zone of proximal development suggests that learning takes place in a social context, with students learning from each other. A social cognitive view of learning (e.g. King 1989) puts forward the idea that students learn by confronting their peers' views and ideas which may be different from their own. Social modeling theory (e.g. Crook 1994) suggests that students co-construct learning through building on each other's ideas.

There is evidence that interaction is equally significant in a virtual learning environment. Sims (2003) looks at the relationship between interaction and learning online and argues that the success of online learning depends in part on learners taking a more active participatory role, and Ritchie and Newby (1989) conclude that high levels of interaction online lead to better performance and a more positive attitude.

The evidence consistently suggests that 'interaction' is important, but the picture becomes more complex when we try to identify what kind of interaction is needed. Researchers (e.g. Anderson 2003) conceptualise three types of interaction that may be relevant to a learning situation: participant to participant, participant to tutor and participant to content.

The research around the quality of interactions found during synchronous online learning experiences suggest strongly that the participant - tutor interactions seem to be adequate: as good and occasionally superior to those found in a classroom setting. Participants (e.g. from Anderson 2003) report that there are sufficient opportunities to get their point across to the tutor by asking questions and giving comments, and some go further and report that they find it easier to get their point across and be 'heard' when given the opportunity to type their comments and questions than they do in the classroom.

Opinions on how participants feel about interacting either with each other in an online environment seem to be polarized. There is evidence that because students don't tend to be able to build up the same rapport with colleagues, some feel less confident about contributing online (McBrien, Jones and Cheng 2009). Others however gain confidence from the virtual nature of the classroom and feel able to contribute more often and with more personal details than they would in a classroom (Ng 2004).

One possible explanation for the reduced interaction online is the way the technology is used within the sessions. The technology has developed to allow considerable peer to peer interaction, with features such as polls, surveys and break out rooms, but in practice the interactive technology is not always used to its full potential. Ng (2004) found that teachers using the new software tended to stick to the traditional didactic lecture-style of teaching, estimating that they devoted a quarter of the time to interactive activities online that they would in a comparable classroom setting.

We can tentatively conclude that whilst participant to tutor interaction remains strong as training moves from the classroom to the web, participant to participant interaction is more mixed. What remains unclear is the impact any reduction in interaction may have on learning.

Technology

The single area that seems to be most challenging for synchronous online learners is that of the technology, which is consistently reported to impede learning. Studies have repeatedly found that participants' experience of online learning is affected by unreliable technology (e.g. Sims2003, Ng 2004, McBrien et al. 2009). They have also found that challenges with the technology itself were compounded by variable IT skills, with participants finding even basic combinations of functions such as microphones and powerpoint slides confusing (McBrien et al. 2009). A number of studies remind us that online learning although widely accessible in some ways, relies on participants' IT skills: Robertshaw (2003) points out that participants need to type reasonably quickly, and Moule, Ward and Lockyer (2010) find that the variation in levels of participant IT skills creates barriers to learning.

We are urged in the literature not to overestimate users' ability to use technology effectively. There has been considerable comment in the academic literature (e.g. Bennett, Matson and Kervin 2008) about the increasing familiarity with, and reliance on, IT shown by the younger generation (the 'millenials' born between 1980 and 1994). Discussions about a generation of 'digital natives' (Prensky 2001) and the 'net generation' (Tapscott 1998) have encouraged a view that our current young professionals are skilled at using and utilizing emerging technologies. More recent evidence (e.g. Eagleton , Guinee and Langlasi 2003, Lorenzon and Dziuban 2006) guards against an assumption that just because this cohort are regular users of Facebook and text messaging services they are also competent at all kinds of IT usage, finding that 'whilst technology is embedded in their lives, young people's use and skills are not uniform' (Bennett et al 2008: 783).

It is encouraging to note that there is some evidence that career practitioners (Bimrose, Barnes and Attwell 2010:40) are competent IT users: "the skills needed to engage effectively and efficiently with technology seem to be well developed amongst Connexions staff", although Kettunen, Vuorinen and Sampson (2013) remind us that successful integration of technology into careers services can entail a steep learning curve for careers service professionals.

Online learning in professional settings

Much of the research cited above (e.g. Ng et al. 2004, McBrien et al. 2009, Anderson 2003) has used undergraduate participants but there have been some studies exploring the impact of this kind of input on professional and adult learning.

One factor that emerges from the literature on online CPD for professionals is the importance of balancing the demands of front line work with training needs. Haley (2008) conducted an

evaluative study into asynchronous online CPD with staff working at public libraries. Haley found that whilst the great majority of participants (87%) found that face to face training was more effective, most (66%, rising to 80% of those who had to travel considerable distances to the training venue) reported that on balance they preferred online training, explaining that the benefits of convenience and the lower costs associated with the online training outweighed the reduction in learning from the training itself.

A literature review of workplace-based e-learning (nearly all were examples of asynchronous online learning) within the healthcare industry (Booth, Carroll, Papaioannou, Sutton and Wong 2009) highlights the importance of flexibility to the participants, explaining that synchronous learning, within this context would simply not provide the flexibility that staff need to allow them to participate: 'such a requirement [to engage in a real-time CPD session] is contrary to the very features that made e-learning attractive in the first place' (2009: 15). Their findings emphasized the need for the training to be relevant and applicable to participants' day to day work, and the frustrations associated with technological problems, particularly in the context of their 'hard-won window of learning opportunity' (2009:15) highlighting that pressure of work can pose a considerable challenge to those wanting to develop their professional skills.

A notable gap in the research concerns the use of online synchronous technologies for CPD. Seddon, Postlethwaite, James and Mulryne (2012) provide a notable exception to this, noting that 'since this field is developing rapidly, peer-reviewed published research is limited' (2012:433).Their study confirms some of the findings in the research that have explored the experience of undergraduate students (McBrien et al 2009 and Steeples, Jones and Goodyear 2002), finding that participants preferred lecture-style input from the tutor, as they struggled with the multitasking needed to engage with text chat whilst reading the slides and listening to the speaker, and they appreciated the immediacy of the real time, synchronous framework. Their study is exceptional within the literature reviewed here in that 'there was little reference to the technology itself' (2012:442). The authors, themselves surprised by this finding, wonder if it could be explained by the participants' familiarity with the technology, and this provides some encouragement for the notion that technological problems can be overcome with time.

Theoretical frameworks

Theories have been put forward to explain the processes underpinning distance learning (Black 2002), frequently highlighting the need for good interaction between the tutor and participant in order to allow the participant to engage with learning. One of the most widely adopted is Moore's (1993) Transactional Distance Theory (TDT) which has been hailed as 'the global theory that can explicate and ensure the sustainability of distance education in a technology-driven world' (Gokool-Ramdoo 2008:2). TDT conceptualizes distance as a pedagogical phenomenon, referring to the sense of psychological distance perceived by the student rather than as a geographical concept. The theory argues that the geographical distance between the

tutor and learner does not need to be a barrier to learning, as long as the learner is engaged. Engagement is derived from an appropriate structure to the teaching sessions and strong interaction between the tutor and learner.

Anderson's (2003) theory of equivalency helps us to make sense of the empirical evidence about online interaction. The theory of equivalency of interaction holds that out of the three types of student interaction (student – tutor, student – content and student – student), only one needs to be present to make the environment good enough for learning. The research evidence above seems to suggest that whilst participant to tutor interaction is no worse online than in a classroom, participant to participant interaction is more likely to suffer in an online context. The theory of equivalency suggests that one kind of strong interaction (in the case of online learning, this is likely to be the participant to tutor interaction), is sufficient for learning, so a poor participant to participant interaction should not entail a reduction in learning.

A third theory which although not originally conceptualized to apply to online learning, is relevant to the current study in that it aims to explain how the learning of adults differs from learning of children. Knowles's theory of Andragogy (1958) suggests that for adults to engage with learning, the learning needs to be much more facilitative than didactic. According to the Andragogy, adults are more motivated when the learning is 'problem-orientated' rather than 'content-orientated', with tutors posing questions and encouraging participants to challenge their own thinking and integrate new ideas within existing structures. This style of learning requires a higher level of tutor – student interaction than traditional didactic approaches for learning to be at its most effective.

These theoretical frameworks can help us to understand the processes underpinning distance learning, but it is disappointing to see that much of the research conducted into distance and online learning is conducted without reference to these theories. There are accusations that the speed at which the technology has been developing has led to the research predominately focusing on the technology itself at the expense of the learning. Gokool-Ramdoo, (2008:2) for example goes so far as to claim that research into online and distance learning 'is carried out in an atheoretical manner'.

Viewing the empirical research within the theoretical framework reveals some support for the theories and identifies some gaps in the existing body of literature. Theories stress the need for participant to tutor interaction. The empirical research looks in some detail at online interaction, but whilst there is considerable evidence that interaction, in particular participant to participant interaction, suffers (Ng 2004) in an online context, there is little that has explored the nature of this interaction and the impact this has had on participants' learning. Theories propose that adult learners need the content of their sessions to be appropriately structured and made relevant, but there is limited empirical evidence that might help us to describe a suitable structure, or to allow us to identify whether relevance is equally important to learning in an online environment.

The current study

The study evaluates the effectiveness of a programme of CPD delivered to careers advisers by a series of six synchronous 'webinars'. Narrative textual data was generated from the participants to ascertain their views about the learning experience, focusing on their perceptions of whether synchronous online learning suits the needs of adult career practitioners. The study addresses some of the unanswered questions that arise from the above review of literature, in particular exploring the participants' experiences of different types of interaction within an online setting, and the impact that these experiences have on their learning. The study goes some way to addressing the challenge of the atheoretical nature of much of the research in this field by explaining the findings in the light of relevant theoretical frameworks.

The research questions are:

1. To what extent did the online CPD meet the needs of career practitioners?
2. What is the nature of participants' experience of interaction during online CPD and what impact did this have on their learning
3. What are the antecendents of engagement in an adult online learning environment?

Design

The current study evaluates a series of six one hour long webinars on career coaching delivered weekly to a group of adult learners, (all practicing careers advisers) in the south west of England as part of their ongoing CPD programme. The series focused on skills enhancement and included topics such as motivational interviewing and cognitive behavioural coaching.

Careers South West provides careers support across south west England participants for this series of webinars were invited from across the region. The head office for the organization (and the traditional venue for training) is based in [name of town], and although located right in the geographical middle of the region, it can take staff over three hours to get there.

Participants logged on to the sessions from a PC at a venue of their choice, some at home, others at a school where they provided careers guidance and others from a local office. All participants were able to hear and see the tutor and each other. Most participants had access to a webcam and microphone, to enable others to see and hear them, but some were only able to contribute by typing in. Some of the participants were employees of the organisation and knew each other as colleagues. Others worked with partner organizations and did not have pre-existing relationships with each other.

The series ran for six weeks and webinars were held for one hour on Wednesday mornings at 10am. Powerpoint slides were emailed out to participants the day before the sessions.

The software used for the webinars was Megameeting. This software allows all participants and the tutor to see thumbnail images of each other and speak to and hear each other, if they have

access to a PC with a webcam and a microphone. Participants without webcams and microphones can still hear and see the sessions and can participate by typing into a "public chat" box. In addition to the basic functions of audio and video links between all participants, the software allows for a number of other functions such as the ability for participants to see a powerpoint presentation at the same time as the thumbnail images of tutor and other participants, surveys and polls, a virtual white board, the opportunity to watch video clips, and the functionality to have small group discussions in separate virtual rooms. Participant interaction was either by talking through a microphone to the whole group, typing into the 'public chat' area, or typing directly to one other person through a 'private chat' box. The tutors and participants in this study made little use of the functions beyond audio and video links and powerpoint slides, so data from polls and public chat has not been included in this analysis.

Methodology

Participants

The participants were all female, aged between 25 and 55. They were all qualified or working towards a qualification (QCG or NVQ4) and were practicing careers advisers working with young people and the long term unemployed. All were regular computer users.

Data collection

The research project was explained to participants at the final webinar. Once ethical approval was obtained and informed, written consent sought, all 15 participants from the webinars were sent a link to an online survey and encouraged to fill it in fully and honestly. Twelve completed forms were submitted. The online survey consisted of eight open questions, asking participants to comment on their experience and learning from the series of sessions. The questions ranged from the very broad "what did you think about the series of webinars?" to the more focused "how did the interaction with fellow participants at the webinars compare to interaction in a more traditional "classroom" setting?", and included specific inquiries about the interaction with the tutor and with fellow participants, and the impact that the lecture-style delivery had on their learning.

Online surveys are becoming increasingly prevalent in academic research (Hooley, Wellens and Marriott (2012). They allow researchers to reach large numbers of potential participants at the click of a button and they provide fast and straightforward mechanisms for collecting and analyzing data. In addition to these practical advantages, online surveys can provide researchers with other valuable advantages (Madge, O'Connor, Wellens, Hooley and Shaw 2006) such as data accuracy, anonymity, flexible design and access to particular populations. One of the challenges of data collection faced in the current study was that the participants were scattered across a wide geographical region, based over two hundred miles from the researcher. An online survey provided a low cost, fast and convenient solution to the problem. The methodological challenges acknowledged to be associated with online surveys, such as sample bias,

measurement error and non-response bias (Madge et al. 2006) were not considered to be significant as all participants were known to be IT literate and the data generated were qualitative.

Data analysis

The data were analysed using a thematic analysis. Thematic analysis was chosen because of its suitability for analyzing narrative text and identifying prevalent patterns of meaning making across a body of data. It is a method of qualitative analysis that allows the researcher to identify patterns of meaning whilst acknowledging the participation of the researcher in the generation of the analytic findings. This was particularly suitable for the current study in which the researcher was also the tutor. The data were analysed using an inductive rather than a theoretical thematic analysis to allow for a 'bottom up' approach: coding the data without trying to fit them into a pre-existing set of themes, and the data were coded at a semantic or explicit level. The underlying ideologies and conceptualizations that might have emerged through a latent level coding were beyond the scope of this study.

The process of thematic analysis involves six phases, during which the data is given an initial coding and this coding is worked into themes that are then reviewed, developed and defined (Braun and Clarke 2006).

As the author was both tutor and researcher interpreting the data, it is likely that her assumptions and preoccupations would have shaped the knowledge claims. With full acknowledgement of this during analysis, particular care was taken to stay as close as possible to the data.

Results

The thematic analysis revealed three key themes: participants' positive engagement with the training, the positive impact of training that allows minimal disruption to service provision and the challenges that the technology presented to the learning experience.

When synchronous computer based training is engaging

Participants reported that they felt engaged with the series of webinars, because they found both the content and the format of the sessions appealing and that limited participant to participant interaction did not detract from this engagement. Responses from participants suggested that any reduction in their engagement that might have occurred as a result of the medium of the training was offset by the quality and relevance of the sessions. All twelve participants reported that they felt the training was interesting , and eleven mentioned that they found it relevant to their work.

Engagement through quality and relevance.

Participants found that they were able to maintain attention throughout the sessions because the sessions were of a high quality

> "it was fine simply because of the quality of the training"; "content was informative and kept my attention during the session".

Participants also felt engaged with the training because they found it so relevant. Some simply found the sessions directly applicable to their work:

> "Due to the sessions being so relevant with our own delivery we were able to connect with each session very easily",

others commented that the sessions were particularly relevant now to them due to the impact the current economic climate has had on their clients:

> "The current situation in the labour market is resulting in us seeing more people with more complex issues and [name of tutor]'s ideas have certainly helped me to rethink my delivery".

A third group were in the throes of working towards an NVQ, and found these sessions relevant to that qualification:

> "I am undertaking my NVQ4 and there was an enormous amount of info that has really helped me with the assignments**"**.

Engagement through the format.

The technology allowed for a programme of one hour sessions that ran over six weeks, and the training was delivered through lecture style sessions, with tutor input punctuated with occasional individual exercises and structured opportunities for feedback and questions. Positive views around the format were raised by ten out of the twelve participants. Participants found that this format aided learning and allowed for greater engagement with the learning. Participants appreciated the opportunity to try out some of the ideas in between sessions:

> "[the one hour slots over six weeks] give you enough to be going on with and then you have a week to … try out some of the learning before coming back a week later".

Participants also felt they gained from having time to process the information between sessions:

> "it is practical to deliver something like this in six short sessions with time to develop ideas in between".

The brevity of the one hour sessions proved popular with participants, "as it was for an hour it was easy to remain engaged".

Engagement despite limited participant to participant interaction.

The final element within the theme of engagement was participants reporting that although participant – participant interaction was inferior to that they might have found in a real

"classroom" situation, for the most part, participants did not find that this impeded learning, with nine of the twelve participants suggesting that they felt that they had learned more or the same as they would have done in a classroom setting. Some participants felt that they missed out on the opportunity to learn from colleagues:

> **"**I got the feeling that the other participants had a wide range of experiences and knowledge and would have liked to talk to them more".

Others felt that rather than missing out on learning from colleagues, they missed out on the informal networking that they would have had in a classroom setting:

> "I felt I could comment on other advisers thoughts during the webinars but with the online nature you do not have the opportunity to interact, chat, network as you would at a training event in a 'classroom'".

In general participants agreed that there was less participant to participant interaction than there would be in a classroom:

> "I guess it's easier to discuss in a classroom situation and you can get the whole group to join in the discussion better",

but for the most part, the participants didn't feel that their learning experience particularly suffered for this:

> "there was little opportunity for interaction with other students…but in the context of these particular session I was not worried about this".

When synchronous computer based training allows uninterrupted service provision

The second theme that emerged was the accessibility of the training, about which participants were unequivocally positive. The main message (referred to by ten of the participants) was how useful and practical it was to have a one hour training session that only took one hour out of their working day. The advisers involved in the training are clearly under considerable pressure on the front line and although they are keen for any input that increases their professional effectiveness, anything that takes them away from their work with clients is difficult for them:

> "So the fact I could do the training whilst maintaing contact with clients and the guidance work I need to fulfil was a BIG plus".

The geographical region in which the participants work compounds this, as training usually takes place a considerable distance from their offices:

> "I could take an hour out of my day to learn rather than travelling for half a day before the training even started".

When difficulties with technology lead to difficulties with learning

The final theme concerns IT as a hindrance to the learning experience, and this was mentioned by half the participants. Some of the themes above suggest that training via IT allows the training to be offered in such a way as to be valuable to the participants – in particular, it makes it feasible for training to be offered in the popular one hour a week for six weeks format. But the technology itself was not without problems and participants reported that it interfered with their learning. This paradox was neatly summed up by one participant who comments that "The technology was both brilliant ... and a let down".

Technology unreliable.

Consistent with previous literature, the technology was not reliable, and participants reported intermittent problems with sound, vision and connections:

> "the first webinar I had an echo, which wasn't good. I think I somehow logged on twice. Freezing, sometimes you didn't know if you were frozen out, so I would log out and have to come back in again."

Others reported problems with the hardware and struggled to find an appropriate pc and broadband access.

Technology unfamiliar.

As this was the first time that tutors and participants had been involved in this kind of training, it is perhaps no surprise that the lack of familiarity with the software proved problematic. Participants reported that the tutor's lack of expertise hindered learning:

> "tutors need to be better at using the technology" "[in the first session] very little learning took place as trying to get the ICT to work and it seemed the tutor was learning as she went along about this kind of delivery"

and that their own attitudes to the technology caused some apprehension "I was a little self-conscious about the camera to begin with"; "I was skeptical". There was some acceptance that this improved as the sessions went on and we could extrapolate that this reduction in learning would diminish with more experience.

Discussion

This research project set out to identify to what extent a series of synchronous online webinars met the needs of career practitioners, looking particularly at the nature of participants' engagement and online interactions and the impact they may have on their learning.

The results suggest that participants found the training engaging because of the relevance and format of the programme, and whilst they found the online medium reduced the participant to

participant interaction, the participant to tutor interaction remained strong and learning was not impaired. Unreliable and unfamiliar technology was thought to hinder learning, but despite these reservations, overall, participants reported that the online medium suits the current context for career practitioners.

It is useful to consider the results in the light of previous research and within the context of the theories.

Participants reported that they were engaged with the training because they found it relevant, and because the format of six, one hour long sessions, a week apart suited them. Knowles's theory of andragogy (1968) holds that adult learners need to see the relevance of the content in order to engage with the learning. Here we see the participants explicitly acknowledging the importance of relevance to their learning experience. Andragogy was a theory developed within a classroom setting. The results of this study provide some support for the relevance of this theory within an online context. One element of Moore's (1993) transactional distance theory is that distance learners are at their most engaged with learning when the structure of the sessions is suitable. The participants in this study reported that the combination of brief session with gaps in between served to cement their learning, giving them time to reflect and digest the information they had absorbed and to consider it within their work context. This supports Moore's idea that the structure of the session has an important role to play in the learning, and provides one possible structural framework that enhances learning.

Participant to participant interaction was thought to be both qualitatively and quantitatively inferior to that within a classroom setting, but on balance, participants felt that this did not impeded learning significantly. The message that participant to participant interaction is less fulfilling online echoes a number of research studies (Anderson 2003, Ng 2004, McBrien et al 2009). The idea that this does not necessarily impede learning, however, leaves us with a challenge. Many learning theories highlight the importance of social interaction in learning (Vygotsky, 1978, King 1989, Crook 1994), so how can we account for the finding that the lack of social interaction does not impeded learning? An explanation for this can be found in Anderson's theory of equivalency which holds that as long as participants can engage fully with either the tutor or the content of the sessions, learning is not dependent on peer to peer interaction. Our participants reported strong participant to tutor interaction and strong participant to content interaction, and this perhaps compensated for the weaker interactions between participants.

The second identified theme was the value that the professional participants placed on a training programme that allowed uninterrupted service provision. This finding echoes previous research, such as that of Booth et al (2009) whose study highlights the time pressures faced in the workplace, and Haley (2008) whose professional participants reported that they preferred the efficiency of online training even when they felt that a classroom setting would have resulted in better quality learning. This time-efficient style of training may help to preserve the quality of

career service provision that concerns Watts (2012), allowing staff to improve the quality of provision, through enhanced skills, whilst not reducing the quantity of provision.

The final theme concerned the challenges of the technology. The current research replicated the findings of many other studies of online learning (Sims 2003, Ng 2004, McBrien 2009), reporting that unreliable technology impedes learning. Our participants overall felt that this medium for training was a good one, so the benefits were thought to outweigh the challenges brought by the unreliable technology, but we should proceed with a note of caution. Bennett et al. (2008) warn us not to get caught up with a 'moral panic' changing our practices before the infrastructure is able to cope fearing that we may see 'new technologies promoted as vehicles for educational reform [which] then fail to meet unrealistic expectations' (2008:783). Taking advantage of emerging technologies is valuable, but new services must keep pace with the developing technology, and should only be implemented when the technology can appropriately support the service.

Tutors' and participants' lack of familiarity with the technology was also cited as a block to learning. Whilst Bimrose et al. (2010) provide encouraging evidence of strong IT skills within the career sector, the current study perhaps more resonates with Kettunen et al.'s (2013) and Bennett et al's (2008) warnings not to assume that introducing new technologies to services will be straightforward. Although all participants and tutors in this study used computers on a daily basis at work, there was some evidence that their skills and attitude took a little warming up before allowing participants to make the most of the training, and the tutors to create the best learning environment.

Implications

The findings suggest a number of important implications for practice.

In the current climate, online CPD offers excellent value for time.

The experience of the webinar participants who responded to this survey was overall a positive one, with participants finding, in particular, that this method of accessing CPD responded well to the demands and requirements of a front line service job in a challenging economic climate. Transactional distance theory highlights the importance of an appropriate structure to maximise learning. The current political and economic climate has had a great impact on the working environment of career practitioners. Pressures on the front line have never been more intense and career practitioners find that their time is an increasingly precious resource. One structure for learning that greatly suits practitioners in the current climate is one that reduces time away from the front line, and online CPD can provide this.

The pedagogical limitations of the online medium can be compensated for by a range of strategies

The study was interested in exploring more specifically the nature of the participant to participant interaction, the lecture style input and the impact these had on participants' learning experiences. Participants reported that although the technology led to reduced participant to participant interaction and less variety within the teaching techniques used, this was more than compensated for by a range of other factors, resulting overall in high levels of engagement and positive learning outcomes.

The current study points to some practical ideas that service managers could introduce to maximise the benefits and minimize the limitations of online CPD.

- Sessions should be relatively brief, of high quality and clearly relevant to the participants' work.
- Webinars should be arranged a week or so apart to allow participants time for reflection and practice.
- Participants and tutors alike will need to familiarize themselves with the new technology. A series of sessions, as opposed to a one-off event, may help to reduce the number of technical glitches during the sessions as all involved learn how to handle the software, and tutors and participants could reflect on the technology and where necessary change tack during the series.

Limitations and future research

The study has some limitations which should make us cautious about its generalisability. First the study was of a small scale: there were 12 participants and the study looked only at one series of seminars, delivered by one tutor. The findings could have been influenced by the nature of the topics or the delivery. Second, the participants were self-selecting at three levels: they decided whether to sign up to the series of webinars, they decided whether to continue attending the webinars, and they decided whether to complete the questionnaire. Finally, participants were asked to report on their own views of their learning. A future study could use an objective measure of learning to enhance the validity of the findings.

Future research could involve a larger scale study, with a bigger sample size and could be based on more than one series of webinars, delivered by more than one tutor.

Participants in this study reported that whilst the reduced interaction did not reduce learning, they felt that they missed out on informal networking. This finding echoes that of Hayley (2008) in whose study participants mourned the lack of networking opportunities when learning online. Whether this might have a long term impact on the nature of relationships at work is beyond the scope of this study, but is an interesting question for future reflection.

Conclusion

This study contributes to our understanding of online provision and provides some empirical support for three learning theories: the Theory of Equivalency, Andragogy and Transactional Distance Theory. In this study, a combination of strong participant to tutor and participant to content interaction and weaker participant to participant interaction led to positive learning outcomes, providing support for the theory of equivalency which holds that it is not necessary to have all three types of interaction to engender a good learning environment. The study showed that adult participants valued the relevance of the training to their work context, suggesting that the importance of relevance highlighted in the theory of Andragogy may be equally applicable in an online context as well as in the classroom. Finally, the study provides some evidence of the effectiveness of one particular training structure which seemed to enhance learning, supporting the importance of structure highlighted in Transactional Distance Theory.

The current climate brings great challenges to the career profession. A focus on professional training may help to ensure the quality of provision and keep a potentially disenchanted workforce a little more motivated. Online CPD seems to be one way to provide a good learning experience with minimal disruption to services.

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