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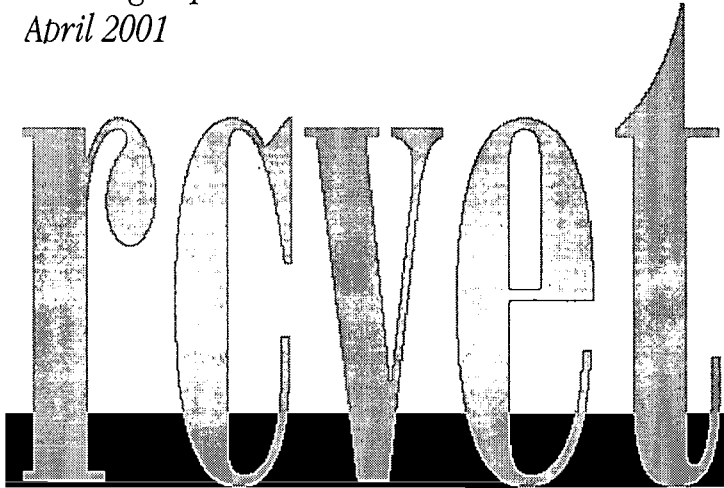
ABSTRACT

The attitudes and experiences of 18 vocational education and training (VET) practitioners considered to be at the leading edge of online education in technical and further education (TAFE) in South Australia were examined to determine how leading-edge VET practitioners engaged in designing, developing, and facilitating online learning understand their changing roles and professional practice. The practitioners' responses reinforced the fact that online learning is a new frontier pedagogically, technologically, and organizationally. The new tasks of designing, developing, and facilitating online learning both required and stimulated new forms of work organization for VET practitioners. The practitioners generally considered this work a positive experience and credited it with increasing their job satisfaction. However, they also cited negative effects of the introduction of online instruction that call into question the long-term sustainability of online work as it is currently organized. It was concluded that the quality and extent of online education will inevitably be constrained unless the human resource management of training organizations addresses the organization of online work more explicitly. Issues that must be addressed include better job design to accommodate the working conditions associated with online work and institution of sophisticated strategies for building and sustaining work and knowledge networks. (Contains 24 references.) (MN)

Online learning and the new VET practitioner: implications for the organisation of their work

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UTS Research Centre for Vocational Education & Training*

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Online learning and the new VET practitioner: implications for the organisation of their work

Kaye Schofield, Anne Walsh & Bernice Melville

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ABSTRACT

Online learning is a new frontier not just pedagogically and technologically but also organisationally. The new work of designing, developing and facilitating online learning both requires and stimulates new forms of work organisation for teachers. Based on a collaborative research project with leading-edge online practitioners in TAFE SA, this new work is generally a very positive experience for practitioners and, as a result of their online work, their job satisfaction has increased. But as with any flexibility strategy, there are negative effects that call into question the long-term sustainability of online work as current organised.

Unless the organisation of online work is more explicitly addressed by the human resource management of training organisations, the quality and extent of online learning will be inevitably constrained. Best practice human resource strategies would give particular attention not only to better job design and different working conditions associated with online work, but also to sophisticated strategies for building and sustaining work and knowledge networks. Training organisations which want to succeed in online learning will need to become knowledge-making workplaces.

INTRODUCTION

What is it that online practitioners actually do in their day-to-day work in order to achieve what they themselves or their organisations expect them to achieve? What are their experiences of the new forms of flexible work associated with working online?

The organisation of work for online delivery is still in its infancy, still being defined and constructed and therefore is unfamiliar, unstable and constantly changing. The research identifies just some of the material dimensions of changing work practices associated with designing and delivering vocational education and training online. This paper aims to stimulate further debate about the organisation of online work and the human resource policies most likely to support it.

THE RESEARCH PROJECT

This paper is an outcome of a collaborative project conducted during 2000 by the Research Centre for Vocational Education and Training (RCVET) at the University of Technology Sydney in partnership with Adelaide TAFE and TAFE SA Online.¹ The research was designed to examine how leading-edge vocational education and training (VET) practitioners who are engaged in the design, development and facilitation of online learning understand their changing roles and their professional practice.

For the purposes of this research project, online learning was defined as *a form of flexible learning which is facilitated by the use of the Web-based technologies and resources.*

Collectively, the 18 participants in the research project represented 204 years of TAFE experience, with the average of 11.3 years working in VET. The first of the participants to become involved in online learning did so in the early 1990s, the most recent to do so became involved in 1999. On average the participants had 3.4 years involvement in online learning.²

While most were formally trained as teachers, not all were. The research did not explore the validated skill and formal qualification mix within the group or record differences, if any, between those who were teacher-trained and those who were not, although one participant was obviously conscious of difference when commenting that *...I don't know all the fancy words to use - I'm not a trained teacher.* Nor did the research examine empirically the industrial conditions associated with online work.

Because of the small self-selected and unrepresentative sample involved in the research, and the constraints of the original research design, it is not valid to generalise the research findings to all online practitioners or all VET practitioners. Nevertheless, the findings are indicative and provide a base for further research and analysis.

CHANGING WORK ORGANISATION

There can be no doubt that the work organisation of TAFE teachers (and VET practitioners more broadly) has changed in quite fundamental ways in recent years and is likely to change even further in coming years. For these practitioners, online learning has been an important but certainly not the only trigger for change.

The first of the online research events within the research project was titled *The Cryogenic Teacher*. The event was designed to gain insight into how the participants thought their role as a teacher/educator had changed over the past 5 years. They were given the following scenario through a dedicated online Research Hub.

¹ Other Working Papers and Conference Papers arising from the research complement this paper. These are available for download from the RCVET website at <http://www.rcvet.uts.edu.au/>

² See Working Paper 00-23, *Online learning and the new VET practitioner: Project methodology and data* for further details of the participants, their views and their experiences.

A teacher (known by her friends as Chilly) was abducted by her students in 1995 and stored in a cryogenic freezer - a chilling thought for fellow staff members but good fun for the students. It is only now in 2000 that the technology has become available to thaw out the unfortunate popsicle (teacher on a stick?). You have been allocated as Chilly's mentor as she prepares to return to her teaching duties with the local TAFE college (just as soon as she stops shivering). For this activity please describe (from Chilly's perspective) what her teaching role was in 1995. Then take the perspective of her mentor and explain how this role has changed over the years and what she will be expected to do as a teacher in 2000.

The responses, communicated online through the Research Hub, indicated the vast scope of the changes in work processes. The following four responses are typical.

Five years ago

Participant A

... prior to being 'frozen', I was in the habit of being given a class of 10 - 15 students for a specific module. I would prepare my lesson plans and deliver the module, using mostly up-front teaching. I was not concerned with anything other than teaching my class.

Participant B

Chilly was perfectly happy in her role as lecturer in Information Technology. She had a full-time load of 6 x 3 hour classes that she had been teaching for the past couple of semesters. The Educational Manager of the section dealt with the 'administrative tasks' of 'curriculum hours planning', etc and the co-ordinator of the section was responsible for the planning of the timetable, apart from her teaching load the only other administrative portfolio was that of processing status applications. Her classes had a maximum of 15 students (the number of PC's in the classroom), she delivered her planned lectures with dedication, but the lectures focused on what she thought was important and they were delivered in the way she thought appropriate...she was the fountain of all knowledge...when a student comes to study at TAFE then they must follow the TAFE 'system' rules and regulations....

Today

Participant C

Well, Chilly, let me tell you things have changed. Your old computers would make good boat anchors today! The Internet has exploded with millions of sites across the world that assault your senses with sound, music, animation and real time videos. You can watch a full length feature film on your PC and communicate face to face in real time over the Internet with anyone, anywhere in the world.

...Students are now 'Internet ready' by the time they get to you and rather than exchange their home addresses they exchange their email addresses.. Your students will not be phased by the technology and will expect you to be on top of your technology.

Chilly, you will need to get your head around the skills of web page design and learn one of the web page generator packages. In addition you will need to be more aware of the devastation that can be caused by viruses that have increased to plague proportions in the PC world.

Chilly, in the fee for service area, your salary will no longer be fully funded. Your income stream must now generate sufficient funds to cover all your costs - right down to the last paper clip. You are a cost that must be funded in some way. You must maintain your competitive edge in the market place too. 'Competitive neutrality' has hit.

Sorry, Chilly, these are not the only changes. In the award area there are no longer learning outcomes, but competencies. The (National Office Skills) modules have disappeared and training packages are in. Chilly, to be able to teach in this area now, you will need to become an accredited trainer and assessor.

On-line learning has taken over from external studies. Students utilise the Internet to learn. Materials are presented in more interesting ways than was possible with external hard copies. Students are able to read text, look at animated pictures, view real time pictures, listen to sound clips all in their own homes and at a time that suits them - yes even 2 am! You will notice less personal contact with students and more electronic contact because of the expansion in the on-line learning mode and the explosion of electronic communications.

Chilly be prepared for a stressful work environment with no guarantee of permanency of tenure. The best you can hope for is a short term contract. You will be expected to do more with less. Welcome, Chilly to TAFE 2000.

(I would like to thank my students for being so thoughtful as to put me on ice for the last 5 years. It has extended my use by date, and allowed me to see the changes without having had to battle on all fronts the constant changes.)

Participant D

Chilly returned to her work place to find that she had slept through the five year rule for contract teachers and was informed by her mentor that she was now an hourly paid instructor.

You'll probably notice that a lot of people have gone. A lot of people have taken (*voluntary redundancies*) but we still have to get the work done. We're an ISO 9000 organisation now so quality of service is paramount. It's probably a good idea if you try your hand in more than one program area too because as a HPI (Hourly Paid Instructor) it helps if you're seen as versatile and adaptable. And if you really want to guarantee ongoing employment I suggest you get into the using the Internet in your teaching. And you'll need to brush up on the content of our new training package....

Training package?

Yes, they've replaced our old curriculum.

Replaced the curriculum? We'd only just started using it.

Yeh I know. And make sure you keep a copy of EVERYTHING you do with your students. The auditors will be focusing on this program next semester

Here's your desk. You'll have to share it (and the PC) with a couple of part time lecturers, but that shouldn't be too much of a problem. Just make sure that you each set up a different email account.

What kind of account?

Email.

I don't have an account with Email.

Well I suggest that you get one. That's the way we all communicate these days.

There used to be pigeon holes here...where are they now?

We don't teach ornithology here.

Multiple changes in the organisation of work are reflected in these responses. The shift in work focus away from the classroom is evident. Participants report that now they are becoming increasingly involved in functions other than educational ones, especially in administration, and report a strong emphasis on financial accountability and auditing. Job insecurity is a significant issue, as is stress at work. All these changes are the result of efforts to make teaching and training organisations more flexible, more efficient, more responsive. But other more subtle changes, arising from working online, are also evident.

JOB REDESIGN

In the formal processes of job design, the requirements of individual jobs can be analysed with varying degrees of objectivity on a number of criteria – knowledge, expertise, functional breadth, authority, job environment, etc. In job redesign, functions, activities and tasks are combined in different ways to form complete jobs and to shape the relationships between those jobs within the organisation (Bratton 1999). This research suggests that the nature of online delivery (and the work practices of online practitioners which underpin it) is driving a de facto job redesign process that has not yet been made explicit in human resource policies.

Functional breadth and multi-tasking

Online work, at least in its initial years, is blurring traditional boundaries between different occupational functions, activities and tasks. Multiple roles were the norm, with only 3 of 17 survey respondents describing a single role. Nearly half of the respondents had 3 or more roles and the average was 2.7. 11 had some form of co-ordination role such as program or project coordination or staff management. Roles spanned technical, instructional, content development, marketing, professional development and management functions.

This research raises the question of the extent to which jobs in the area of online teaching and learning are or may need to be multi-functional.

In the past, the professional functions of training program design, resource materials development and teaching were more likely to be occupationally separate and specialist functions, although good vocational teaching has always had a design and development dimension. However, most of the participants in this project worked across these three functions in a relatively seamless fashion, and considered functional separation to be highly undesirable. Three quarters of the participants disagreed or disagreed strongly with the statement: “In the area of online learning, design, development and teaching are really separate and distinct activities, best done by people with different skills”.

However specialist instructional designers have suggested to the authors that traditional teachers, even excellent face-to-face teachers, under-estimate the specialist skills involved in taking theoretical material (traditionally in print form) and transforming it into an engaging, entertaining and educative interactive learning experience. They have

argued that designing online learning highlights the core problem of interactivity. This view is consistent with the claims of Anderson (and others) that ...*the single most important pedagogical characteristic of the Internet is its support of human interaction, unbounded by the restraints of time and distance (Anderson 1994).*

In a classroom setting, multiple opportunities for interactivity arise from being physically present in a group, from watching, listening, sensing. In online learning, these sensory cues are absent and it can be argued that specialist occupational skills are needed to simulate such interactive experiences online.

At the very least, this highlights the need to ensure that teachers who are assigned design and development functions have sufficient skills to make maximum use of interactive opportunities presented by online learning.

New functions performed by TAFE teachers working online (and also in face-to-face modes) are not confined to those traditionally regarded as professional functions. They are increasingly including a wider range of administrative functions including planning and budgeting, formerly done at middle management level.

What is needed is a better grasp not only of the knowledge and skills required for the design, development and delivery of VET online, but also of the options for configuring the knowledge and skill mix within jobs, how these should be represented in the design of jobs, and what multi-skilling and developmental strategies could be adopted by VET employers.

Relationship-building

Relationship-building was a key element in the work of all the practitioners contributing to the research. Many saw that central to their jobs were communicating, influencing, leading, convincing, persuading, coaching, counselling and motivating others to commit to or co-operate with online learning initiatives. This work also seemed to require well-developed skills in negotiating, justifying and defending online practice. This important relationship-building function has both internal and external dimensions.

Most practitioner effort was applied to building internal relationships - with peers, subordinates and management. For this group, peer relationships were essential to the process of designing, developing and delivering online learning programs. These relationships are best described as a loose form of the concept of community of practice (Lave & Wenger 1991). The research tends to support the scepticism of Chappell about a focus on knowledge and skills and to support the claim of Darrah, in his analysis of Internet-based training, who notes, ...*Skills training writ large is only one strand of learning how to work; participation in a community of practice may be equally important (Darrah 1999).*

Some participants in some TAFE Institutes reported feeling locally isolated at times, facing resistance from workplace colleagues and indifference or obstruction from line managers. But, when participants were asked directly whether they felt part of a community of online practitioners, the overwhelming answer was yes, although it was also clear that some felt they belonged to not one but several communities of practice spanning local, national and international networks.

Huge! It is my whole focus! This is my passion...a community of TAFE SA online

I feel integrated into the global community

I feel part of the ESL community online through module delivery group

Within the 2 LearnScope Programs I find it exciting and a 'community of like minds'...I also enjoy the international community of ESL teachers (I haven't met them but I feel very close to them)... - I wouldn't call it 'virtual' anymore, it has become part of my life.

Extremely strong [sense of community] I've worked with people with passion... the community is extremely important to me.

I use the community network of committed people and talking to them renews my enthusiasm and confidence

I also belong to a WebCT online community group...WebCT chat is the biggest support...although I'm alone on campus I do feel part of a wider community

Yes - I feel part of a community being a writer ... they are great people - energised, passionate people! I could pack groceries all day and like it with people like that.

Web-based communication has been a key work practice that has fostered and sustained these communities that serve multiple functions including knowledge-making, professional support, encouragement, and information sharing.

The research suggests that online learning causes teachers to communicate with and relate to students in new ways although the new form is not yet clear. These changes are not simply changes caused by new technologies, although these are different enough as teachers use email, forums and chat facilities and are doing so more frequently. The changes arise from a shift in the balance between individual and group communication and its timing. The participants reported that in their traditional classroom teaching, communication with students was generally limited to the period of time spent in the classroom and was mostly teacher - group, in contrast to teacher - individual. However, online communication was largely teacher - individual. Some practitioners say this has resulted in a change in relationship with students in terms of knowing them better as individuals and being more aware of their individual needs and differences. The participants also report that it places a greater time burden on them. Some were troubled or frustrated by the way online causes the teacher to become a learner, by the shift from being a 'knowledge-giver' to a learning facilitator and by having to live with the feeling of not being in control.

There was insufficient evidence to indicate the extent to which relationship-building work encompassed building external relationships with industry clients, but there was some evidence of building relationships with suppliers of online learning software, notably WebCT, and with professionals working online in other countries.

Creating and sharing knowledge

Good vocational teaching has always been knowledge-work, rather than a routine-based form of work. Done well, it always involves analysing and making professional judgements, responding to learner diversity, interpreting individual situations, evaluating and choosing between alternative courses of action and constantly learning. But, in the case of traditional institutional or workplace-based vocational education and training, there is a body of conceptual or propositional knowledge about teaching and learning which has evolved over time and which can be interpreted, drawn upon and integrated with working knowledge in what Hager and Beckett have called the 'knowledge as judgement scenario' (Hager 2000:60).

In this scenario, which values not just disciplinary knowledge but also professional knowledge that is acquired from work performance, and which seeks a holistic conception of knowledge, judgement is understood ...*as deciding what to believe or do, taking into account a variety of relevant factors and then acting accordingly* (Hager 2000: 60).

Online learning is a new pedagogical frontier. Every decision about design, development and delivery requires judgement about what to believe or do and how to act in and on the online world. Participants described their work as *making it up* as they go along.

The participants believed that online learning is... *making everyone go back and ... think about the general education issues.*

As there is, as yet, no established body of propositional knowledge about teaching and learning online that participants can readily draw upon, they are drawing down from multiple sources to make sense of their experience. Distance education, adult education and educational technology theories are all evident in their practices and in their description of their values and philosophical position.

...in 1997 when I was studying adult education I kept looking at this thing called androgogy and thought "I'm bugged if I can see the difference [from pedagogy]". Learners of all ages have the same drivers and need to be listened to. They need to be respected, to experience the excitement of discovery, to be able to develop the capacity to discover for oneself, to have a feeling of care and getting positive feedback (if you are 'loved' you will respect that relationship), and have a need for structure...it is the clear and definite role of the nurturer (teacher) to provide an environment where this can happen and I have firmed up in that view.

Participants have had few opportunities (and little time) to reflect on the value of the various teaching and learning theories which are often cited as informing online learning - theories or groups of theories and ideas such as constructivism, cognitive apprenticeship and situated learning, social cognition, peer based learning and cooperative learning.

While a number of authors report a growing interest in constructivist theories in online learning (Harper 2000; Alexander & McKenzie, 1998) there remains a big gap between theories of constructivism and the professional knowledge of this group of leading edge practitioners whose achievement is nationally recognised. However, one participant did comment on the inherent tension between competency-based training and (more radical forms of) constructivism.

The world of online learning is a complex and dynamic environment pedagogically, organisationally and technologically. Unfamiliar problems and issues arise continuously. Practitioners are constantly identifying, defining and resolving problems and breaking new ground for their organisations. Because most participants in online work were also continuing to work in traditional modes, they were moving constantly between the old world and the new e-world, trying to make sense of their experiences along the way. They are applying great ingenuity as they interpret their past and present experiences and adapt their practices. They are developing new hypotheses or approaches not previously tested and reported. They are simultaneously discovering and inventing knowledge.

The knowledge being created takes two main forms: knowledge about teaching and learning online and knowledge about how to encourage and support others to enter and progress through the new world of online work. Practical design, development and delivery projects and activities drive the first, while the state-wide strategy to use mentoring as a core developmental tool drives the latter.

Hager argues that in the 'knowledge as judgement' scenario, knowledge resides in individuals, teams and organisations (Hager 2000:61). The findings of this research project are consistent with this view.

While the knowledge of some individuals is valued more highly than others, primarily because of the scope or length of their experience and their approaches to supporting (mentoring) others, all individuals are recognised as knowledge-makers within their own workplaces. No individual was seen as simply applying codified knowledge, even as best-practice guidelines and procedural manuals emerge.

The research highlighted in particular the power of the collective knowledge. Time and time again, individuals identified the importance of the group in generating knowledge.

US colleagues say to us "you guys are awesome". The difference is that we are willing to share and collaborate.

Meeting challenges every day is enormously helpful in putting things in perspective and gradually building skills, strategies and understanding. I've needed enormous amounts of support as I have learnt intuitively. Had I not had a great colleague to solve problems with, moan and dream with I'd have fallen off the bus years ago.

I like working with a team ... focusing on a problem and working it out together

While the participants in the group were drawn from a number of TAFE Institutes, came from different discipline areas and have each had very different roles and experiences, they all believe that staff collaboration is central to the development and application of online practices. All their personal experiences of online have been through collaboration and sharing and they believe that where an organisation does not promote this way of working, online innovation and take-up is impeded.

From an extensive literature review, Boreham and Lammont (2000: 57) conclude that work-teams in which knowledge is freely exchanged and where consultation is a constant are a vital part of knowledge-making work. They suggest that the knowledge-making workplace is best represented as a network of interacting employees, and that a significant part of working knowledge is contained in the interactions between the nodes, not within the nodes themselves.

This has important implications for the way online work is organised. The design of jobs and work processes therefore become central to the knowledge-making project. Hager notes that

...the extent to which workers make judgements during the course of their work depends, among other things, on the way that work is structured and organised (Hager 2000: 60).

It also has implications for organisational competitiveness and productivity.

In traditional economic thinking, labour is a factor of production similar to land and capital - a cost to be reduced. In a knowledge based economy, however, people represent a key resource. Organisations are valued not only on the basis of their products or machines but primarily on the knowledge-creating capacity of the workforce, the people who work for them, how they work, what work means to them. The rate of innovation and change in products and technologies is so rapid that the competitive advantages of companies and countries will be the capacity of the workforce to create knowledge (European Commission 1997).

From the very different perspective of computational organisation science, Carley notes that networks linking people, knowledge, and companies both enable and constrain the impact of technology and the way organisations change.

... adaptive organizations tend to change differently than do maladaptive organizations... high performers tend to spend more effort at changing the knowledge network by changing who is doing what (retasking) and changing the social network by changing who reports to whom (redesigning) than do their less adaptive counterparts. In contrast, maladaptive organizations spend more time upsizing and downsizing thus simultaneously affecting the social, knowledge and work networks...(Carley 1999:10)

There is a final point to be made about the knowledge-making dimensions of online work, one which emerged in the final research workshop with participants. When asked to comment on their participation in the research, they highlighted the importance of a chance to talk and, through talk to tease out threads and meaning. Talking was for them a way of reflecting, questioning their own practice and being exposed to other perceptions.

Oliveira highlights the importance of language as a tool for the construction of knowledge in the workplace, and argues that the use of language tends to reflect organisational culture. In Taylorist environments, talking is seen as a waste of time and is actively discouraged but learning organisations encourage the free exchange of ideas and information (Oliveira [1996] cited in Boreham & Lammont 2000).

Job satisfaction

All participants were highly-motivated volunteers in the world of online practice. The single most important factor triggering their individual decision to become involved in online learning was personal and professional interest. The other two factors which were significant in triggering their involvement were the availability of resources and anticipated demand from students. The least likely drivers were pressure from the Institute and demand from industry. Most often, initial involvement was a question of chance - being in the right place at the right time when an opportunity presented. Participants reported high levels of job satisfaction. 10 survey respondents indicated they were very satisfied and 6 indicated they were satisfied. Most interestingly, involvement in online work has been a very positive experience for the majority, actually increasing professional satisfaction for 15 of the 18 respondents.

When asked whether their first experience of online had shaped their subsequent involvement, most indicated that it had prompted a fundamental shift in their professional lives. It has provided more (and welcome) work challenges, more involvement in planning the content and sequencing of teaching, more focus on the teaching process rather than the content to be 'conveyed' and more opportunities for team-based work which they clearly valued highly.

In a classroom ...I wasn't stimulated...it's now stimulating and challenging trying to train the staff up...I'd be disappointed at the thought of going back to face-to-face without the flexibility of online

I feel its more interesting - it always was but now it's more so. I think more about why I am doing what I'm doing.

I now do more research instead of relying on old material - material online is easier to update
I'm extremely lucky - I'm not bored...I really like the variety

As a result of their involvement in online learning, most participants had a positive feeling of being part of a big story beyond the confines of their own day-to-day work, of feeling that their professionalism has been extended by the challenges of online and, in most cases, acknowledged.

...I have gone from being a classroom teacher to a global teacher involved in research and communication with a student base from anywhere in the world (Interview)

We are ordinary people but the technology has allowed us to become globally significant...(Interview)

Teachers don't get recognition generally but we do (individually and as a group) because of our involvement in online... (Workshop comment)

The concept of play figured prominently in practitioner discussions about their work, suggesting that their work was fun.

‘I felt like a little kid playing with a toy!’

When asked, in the fourth online research event, what advice they would offer to colleagues wishing to prepare themselves for participating in online delivery, time to play was regularly mentioned in a positive context.

Give them plenty of mentoring, and playtime to develop their own skills in the new areas and don't expect them to do it in their own time on top of their current workloads.

If they like to play, I'd tell them to go away and play around then try a little module.

While online practitioners themselves conceptualise the creative side of their work as ‘play’, colleagues not involved in online work describe it as ‘playing around’, an implied criticism of the work of those involved in online practice.

The analysis so far has offered a very positive picture of the new jobs and work practices of TAFE staff responsible for designing, developing and facilitating online learning. This picture is consistent with the management assertions and academic literature on the benefits of new forms of work organisation for high-skilled workers in the knowledge economy.³ But is there a down-side?

In their extensive analysis of the labour process literature, Boreham and Lammont note that while there is considerable research into the sources of job dissatisfaction in Taylorist - Fordist organisations, there is relatively little recognition of the dissatisfactions that occur in the flexible firm (Boreham & Lammont 2000: 47).

Relentless proselytising that online work offers an opportunity for professional growth and modernisation obscures the possibility of even contemplating that there might be a downside, that online work may not only yield great benefit but, simultaneously, bring its own dissatisfactions and threats to the quality of working life and therefore the sustainability of online learning. The following sections canvass some of the dissatisfactions arising from working online.

Intensification of work

Despite very high levels of personal enthusiasm for online learning, and a highly developed sense of professionalism, almost all participants expressed deep concern about current workloads and the additional demands online work makes on their personal and working time. There is a general view amongst participants that the current highly intensive nature of the work is not sustainable over the longer term.

The problem of work intensification is a generic one for most VET practitioners. Additional demands have arisen from systemic changes as VET tries to be ever more flexible, to speed up production and delivery and as organisational pressure for cost

³ For example, Peters, T. and R. Waterman (1982) *In Search of Excellence*, New York, Harper and Row; Fukuyama, F. (1995) *Trust: the social virtues and the creation of prosperity*, New York, Free Press; Hammer, M. and J. Champy (1994) *Reengineering the Corporation. A Manifesto for Business Revolution*, New York, HarperCollins

reduction grows. However, there is some indication that online work brings its own, additional, demands arising from the 24 hours x 7 days culture that is emerging (and promoted) around online work and from the impact of technologies on the content and practice of the work.

...most teachers are working harder - more is imposed on them - reports, assessment, evaluation, - there's less time for preparation -system upon system, upon system!

Individualising is a two-edged sword. It meets individual needs but it is incredibly time consuming and teachers are working overtime.

There are not enough people - we are always playing catch-up

How long will the goodwill last?... teachers are tired...they can't keep doing it all in their own time... you have to keep looking at e-mails to check if figures are on target because if you are under hours then you are seen as having too much [funding] and if you go over hours then you are seen as doing more for less and you don't need that much funding... so it's a 'no-win' situation...looking for fee for service we joked the other day that we should 'open a brothel' to raise funds

Now the system is asking more and more of people - you take away from another area to allow for additional responsibilities - there's only a certain amount of time

There are no hours for 'over and above', there is no support for backfill (release teaching) for QA release... We are doing juggling and number crunching.

(I) need to work weekends and nights outside of normal time online because there are too many interruptions during the day, as it is not the only thing I do.

Due to ever increasing workload and a number of additional tasks, I am not (currently) involved in online work (apart from meetings) and I can't justify more hours for the greater good of TAFE. I've spent a lot of time and money learning online and although I have gained personal satisfaction from this I can't afford not to be reimbursed for at least some of my efforts. Sad when it comes down to it

Intensification is arising not only in terms of working time but also in terms of the emotionally intense nature of working online for some but certainly not all participants.

Sometimes I can't face turning the computer on...although I'm generally excited by it ...it's disembodied...there's a difference in how people relate online...I can't explain it but it's different...there's a hypnotic 'pull of the thing' in doing e-mails...there's something almost too smooth about online.

Last term I was not in a class but was involved with distance learning online but I would find that difficult to do this continually' as it was emotionally draining dealing with low-level learners. Online you sit in a swivel chair trying to simulate one-to-one what happens in peer groups.

Participants also reported intensification arising from the new forms of communication. They believe that communicating with an online group of students requires significantly more time than does communicating with a classroom-based group, even when the number of students is the same. This one-to-one communication, which they consider essential to successful learning online, is not accounted for in measurement of the scope of their work.

Job security

4 participants in the research were full-time continuing employees while 13 were full-time contract employees, mostly on long-term contracts. One was an hourly-paid/sessional teacher. This pattern of employment status within the group is interesting of itself. While a quantitative analysis has not been undertaken, it is highly probable that the employment status within this group reflects a wider trend towards non-standard employment in TAFE Institutes in SA as a whole, and indeed nationally. Other questions arise. Are contract staff more likely to become active participants in online learning activities than full-time continuing employees? If so, why? Are contracts the best way to achieve the work flexibility seen as desirable? Further work is required to answer these questions.

Importantly, participants suggested that being on a contract had been a factor leading them to their initial engagement with online VET. As contract staff, they felt a need to develop and maintain a profile and to keep a range of employment options open (another string to the bow; another tool in the toolkit) and believed they would be more employable if they diversified their skill base by moving into online work. Participants seemed somewhat reluctant to comment expansively on their feelings of job security but it is obviously a 'below-the-surface' issue for many of them, not surprising given their employment status. In the online research events, comments were frequently made about the introduction of contracts, and moving from full-time continuing employment to insecure part-time and contract work. More worrying was the suggestion that more tenuous employment has impacted on their role and work in a number of significant ways. Especially troubling is the suggestion that the shift to individual contracts has caused some TAFE staff to be increasingly reluctant to speak out.

...more teachers are on contract and live in fear of losing [their job] and don't speak out...
there is fear and frustration around their jobs.

Continuing involvement in online work is not guaranteed. It is subject to resources. One participant, when asked what were the challenges for the next 5 years responded: *That's provided I'm still here. I'm on secondment. We are more like a business so people have to market us.*

Concepts of a career pathway were rarely raised by the participants. Perhaps there is an unspoken assumption that vertical careers are inevitably limited within the VET workforce and horizontal careers are the only way to secure professional challenge. If this is indeed the case, it has important implications for the organisation of work in VET organisations and for professional development strategies.

There are obviously substantial additional barriers to greater involvement of part-time teachers who are paid only for their class-time and not for associated design or development work involved in taking learning online.

Monitoring and control

All VET practitioners have experienced a closer monitoring of their work in recent years, as VET organisations respond to pressures for greater productivity, usually measured by student contact hours (although it is highly debateable whether this is a productivity measure at all).

At one level, the experiences of online practitioners with monitoring their work productivity are no different from those encountered by face-to-face practitioners. At all levels and for all forms of teaching, there is a stronger emphasis on budgetary restraint, income generation and intense pressure to meet (but not necessarily exceed) budget targets expressed as student contact hours.

The research suggests high levels of practitioner concern that current industrial agreements and productivity measures do not account for the different nature of student contact hours online, the preparation and marking time required for online work and the increased demand for teacher-student communications online.

At the same time, in terms of their educational practices, practitioners reported high levels of professional autonomy in making judgements about design, development and delivery.

Work and family life

The need to balance family and working life is rarely discussed in the TAFE context, despite the trend to the intensification of work of practitioners and of managers as organisations have stripped down their middle management layers. Some of the practitioners involved in the research are under stress as they search for the right balance between their passion for and interest in online work, their sense of professionalism and their family life.

Everything I do for online is on top of actual class time and is done in my own time and as I'm the breadwinner this becomes difficult when I am not paid for the time I put in

...balancing time and budgets at work has to be done in the context of my whole life- my own life as a wife, mother, administrator and educator - if there is more pressure on the administrative side then one of the others has to go!

For the leading-edge practitioners involved in this research, online work is highly valued. It provides meaningful, challenging, creative, exciting and satisfying work. It provides freedom to side-step the constraints of other forms of delivery, and since there is no set way of doing it, practitioners feel they are given permission to take risks. It both pushes and allows them to be more innovative problem-solvers. For some, it offers opportunities for peer and management recognition that they would be otherwise denied. They work within a state-wide culture that encourages those with creative ideas to run with it. Work is performed through multiple knowledge-making networks that operate locally, nationally and internationally. Despite these very positive benefits, there are dissatisfactions that need to be addressed in human resource management, most notably around questions of work intensification, job security and balancing work and family life. There is also the wider question of how best to establish and maintain

the knowledge-making networks that seem essential to the design, development and delivery of online learning.

ORGANISATIONAL CONTEXT

Van Hootegeem argues that flexibility has become something of an ideological fetish, virtually synonymous with the idea of labour being flexible in the interests of capital. On the other hand, it would be too easy to conclude that the flexibility debate is only a matter of ideological mystification. Flexibilization is ... not simply a one-off process of removing a set of entrenched rigidities, but also a means of adapting institutions to the certainty of uncertainty. The significance of the contemporary flexibility debate is therefore the emphasis on its dynamic implications: changes to social or economic regulations and practices which permanently increase the capacity to respond to change. (European Commission 1997: section.3).

Individual jobs sit within and form part of the way work is organised in a firm (or in this case, in a group of South Australian TAFE Institutes). The research did not set out to gather data on the organisational context in which online work is undertaken but some issues emerged as practitioners discussed their experiences of work.

Many (but not all) participants believed that online work is under-valued by their Institutes, and that it is a practice still struggling for organisational legitimacy. They held strong views that online activity needs to be regarded as legitimate and recognised as 'real' teaching by Institutes and work colleagues alike.

...because sitting on the Internet is perceived by some as 'play' there needs to be recognition of online as part of the workload - there are issues around the hidden, intangible nature of working online

There are some issues about having it [online teaching] legitimised by management by being resourced...let's see the support! Getting support where it is needed is important - valuing at all levels is important...What is legitimate learning...if you are in front of a class, that is legitimate, if you are in front of a computer you are asked 'are you playing around on the internet?' and it is not seen as legitimate. If you are doing PD online no one respects the time - 'Oh I'm glad you've got time to play!' How do you legitimise the experience? It means changing the culture and perceptions - it is not seen as core business - there is a need to integrate online into core business

Participants also drew attention to the need for the new work practices of VET online to be reflected in human resource policies, most particularly in job descriptions.

Change won't take place until online capability is part of job descriptions. The agency is what is in the job descriptions for both teachers and managers.

Those who 'switch the lines on and off' [middle managers who allocate funding for PD and senior teachers] don't quite know what we are dealing with yet...So until Institute Directors reward, encourage and approve and until job specifications [through HR] recognise and include online as part of duties it will not be a priority

Most participants were aware, at least in general terms, that online learning was a priority at state-wide level, but many commented that their policy was not always backed up with the necessary financial support. But when asked whether they felt their institute saw online learning as a priority, the results were very mixed. In some Institutes, managers appear to walk the talk.

I wanted to then get my students hotmail accounts - the initial reaction was 'what! let the students use the internet?' - but I had a supporting manager

My managers will see that this continues for me

I'm pregnant and I have local support as I'm going to run my classes from home online... students are supportive, my colleagues in my local work team are supportive and will cover if necessary, the educational manager is...also supporting me. It is an experiment... it has potential for staff to work from home

In other Institutes, the necessary support and commitment was not evident.

Managers see it as a way of getting numbers and making money

We now have a manager who says 'we'll have to get more into this online' but up until then there has been no real commitment

Regional manager is not online aware - at a meeting he stated that he doesn't agree with online, and he has control of the funding

The institute is slow to move - hasn't prioritised - but I'm on a flexible delivery committee and online is part of it...maybe this committee is turning it around a bit

When asked what characterises those training organisations, which are most likely to become proficient in the field of online learning, there was an almost universally consistent response. These core characteristics were:

- a commitment by the organisation to online learning and an organisational view that its application is beneficial to both staff and students;
- a willingness to embrace change, and an ability to put change management strategies into place;
- support for staff professional development and the provision of adequate resources to enable staff to undertake necessary training;
- resourcing for mentors, online learning facilitators and IT support staff and a helpdesk;
- having both technical expertise and instructional design expertise (including online pedagogy); and
- having the IT hardware and the ability to create or find and license good content.

It seems quite ironic that, as part of an organisational change strategy, practitioners are formally cast as change-agents to influence not only their colleagues but also to convince their managers of the value of a state and national priority.

The move to online learning is widely considered to be a change management question. Just what is to be changed is often vague. Often the focus is on changing 'attitudes' and 'culture'. This leads to questions such as: What is required to re-engineer the business processes? What is required to re-engineer the technological infrastructure? What is required to skill staff in use of the business processes and technologies? What is required to change the culture?

The research literature suggests there is another way to think about change management in an organisational context. It highlights the importance of networks in the online learning challenge. From this perspective, change can be approached through a different set of questions. What is required to bring about changes in the way knowledge is produced and managed (knowledge networks)? What is required to bring about changes in how people relate to each other (social networks and work networks)? What is required to bring about changes in the way organisations relate to each other (inter-organisational networks)? (Carley 1999). These questions have great significance for the way online work is organised within and between TAFE Institutes.

CONCLUSION

When VET practitioners are being asked to 'do things differently' and work online, the challenge is not simply an educational or developmental one. They are also being asked to change their work processes. This paper suggests that insufficient attention has been paid to the new work processes associated with online work and to the consequences of those processes for VET online.

Good job design is a central but neglected element in any human resource management strategy. It is of particular importance in the area of online work where the design of jobs and the relationship between jobs can make or break the online endeavour. The requirements for jobs involving the design, development and delivery of VET online are now taking shape. So too are the dangers arising from poorly designed jobs. Indeed, poor job design, poor work organisation arising from poor human resource practices, rather than personal recalcitrance or skill level, may be the key factors in explaining the resistance by the majority of VET practitioners to engage with online practice.

The research suggests that online practitioners are being 'upskilled' as they assume high-level design, planning and development functions in addition to their traditional teaching functions. They enjoy considerable job autonomy and exercise high levels of professional judgement. They are actively producing new professional knowledge to resolve new, unfamiliar problems. They are testing and sharing their knowledge with others through multiple communities of practice. For this group of practitioners, involvement in online learning is both exciting and challenging and has increased their job satisfaction.

But there are danger signs. Online practitioners can feel very isolated. Job insecurity, stress from the intensification of their work and the pressure of balancing work and family life are all evident.

Best practice human resource strategies would give particular attention not only to better job design and different working conditions for those engaged in online work, but also to sophisticated strategies for building and sustaining work and knowledge networks. Training organisations which want to succeed in online learning will need to become knowledge-making workplaces.

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