COVER SHEET FOR CONTRIBUTION TO NADEOSA-NWU DISTANCE LEARNING AND EDUCATION CONFERENCE 2010

I am/we are submitting the following contribution to the Programme Committee for consideration for presentation at the conference to be held at the North-West University, Potchefstroom Campus.

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Who teaches Educational Technology to promote WBTL in South African Higher Education?

Abstract

This article draws on a case study of eight South African Educational Technology lecturers who use Web-Based Teaching and Learning (WBTL) in teaching their modules. Educational Technology is offered by higher education institutions in South Africa and as such this article not only gives these lecturers a voice but also looks at the WBTL challenges they face. Universities claim to treat all fields of studies equally but these lecturers tell different stories about the way they are treated by their institutions. Data collection occurred through semi-structured interview, observation and questionnaires. Guided analysis theory (Freeman & Richards 1996) was used as a framework and this produced the five themes, while the article is framed by connectivism theory because it is suited to the digital age (Siemens 2005).

1. INTRODUCTION

> *The explosion of the Internet during the 1990s provided a compelling new vehicle for colleges and universities to extend the reach of the institution and introduce dynamic new teaching and learning environments. [WBTL] defined as instruction delivered at a distance over the World Wide Web, primarily for credited-based courses and programs leading to certifications and degrees has achieved strong growth in a short time. Eduventures analysis indicates that more than 350 000 students were enrolled in fully [WBTL] in 2001 – 2002, a figure growing more than 40 percent annually (Newman, 2003: 2).*

Educational Technology (ET) in South Africa is becoming a source of information in promoting Web-Based Teaching and Learning (WBTL) environments. Most universities in South Africa have been advertising positions related to this field of study and list some of the main duties as WBTL promoting knowledge and skills. Most of these positions are still vacant because they don't find suitable candidates or they can't afford to pay the suitable candidates for the positions. This suggests that there is a shortage of ET lecturers in South Africa which needs to be addressed. In order to unpack ET with the aim of addressing this shortage one needs to explain its two main components first and then deal with other important issues.

Percival and Ellington (1988) divide ET into Technology in Education (TIE) and Technology of Education (TOE). TIE consists of Hardware (machines or tools used for teaching e.g. Overhead Projector, Computer, etc) and software (materials used in conjunction with teaching machines or tools e.g. transparency, computer disc, etc). On the other hand TOE is the part of teaching that one cannot see and touch e.g. teaching methods, learning theories, etc.

WBTL has come to higher education with both these main components of ET (TIE and TOE). WBTL is understood as learning that is facilitated online by means of network technologies (Garrison and Anderson 2003). If WBTL is well-designed to facilitate learning it will combine components of both the TIE and TOE of ET. Even modules in ET involve the components of WBTL which becomes clear that they are being taught with an aim of promoting WBTL. Perhaps one of the reasons for promoting WBTL is because it is perceived in this field of study as the most relevant mode of facilitating blended learning (Evangelisti, 2002) (Combination of face-to-face and distance learning) as it has the ability to combine all relevant teaching and learning resources into one environment (Oliver and Herrington, 2001).

Studies on WBTL have shown that WBTL is important because it promotes active and reflective students (Poe and Martha, undated). According to a survey conducted by the Office of Academic Planning and Assessment at UMass (Poe and Martha, undated) indicates that students are interested in WBTL more than they are interested in face-to-face education. More than 50% felt that it was better for them to use WBTL because they could learn even if they were in their living room. The results of this survey suggest that today universities are forced to use WBTL in order to reach more students than they have now.

Many international education institutions have used ICT to their advantage. One of these institutions, for example, is Athabasca University in Canada. This institution used the WBTL to triple its graduation rate (Anderson and Elloumi, 2004). The institution, furthermore, had to find innovative ways to save itself

after the Alberta Government reduced their subsidy 31%. According to Anderson and Elloumi (2004), by 2004 the institution was enjoying every moment of its new teaching and learning environment by serving about thirty thousand (30 000) learners annually.

However, the WBTL environment comes with "an entirely new vocabulary, institutional policies and structures, and substantial institutional budgets" (Ravjee, 2007: 2). This brings to light one of the main challenges to using the WBTL environments. This means that lecturers need more time to learn new vocabulary, policies and structures before they think about their module content. According to Bonk (2001) lecturers need a lot of support from their institution in order to help their students. One of the findings from a study conducted by Graham, Cagiltay, Craner, Lim and Duffy (2000) indicated that lecturers felt that managing WBTL was very time consuming. This means that lecturers need more time on WBTL than they do on face-to-face teaching and learning.

Another main challenge is that WBTL has been criticised for not having pedagogical tools for lecturers as revealed by Bonk's (2001) survey. One of the main findings of this study was that lecturers were in need of pedagogical tools, ongoing monitoring, WBTL guidelines and advice structures, expert answers to problems and peer-communities to ensure successful use of WBTL technologies. The lecturers felt that these issues needed to be addressed in order to help them to foster their students' critical and creative thinking in their WBTL efforts. Kendall (2001) believes that critical thinking is a function of working on WBTL. This means that if students are working on WBTL they automatically develop critical thinking skills and at the same time enhance their learning.

Another major finding from the study conducted by Graham *et al* (2000) was that while the lecturers were motivated to teach through WBTL they were not always familiar with the strategies that would be most successful in their WBTL environments. This suggests that the lack of pedagogical tools and time as a resource are becoming two of the biggest challenges faced by lecturers in utilising the WBTL environment.

Research Objective and Research Questions

Therefore, this paper intended to explore lecturers' WBTL environments with the aim of understanding, framed by connectivism theory, their experiences and challenges in promoting WBTL environment in South African Higher Education institutions. This article may help higher education institutions answer the question of 'who teaches educational technology to promote WBTL environment?' One possible answer to this is: 'I the digital immigrant'.

The data production was organised to respond to the two research questions of this paper:

A. What are the experiences of Educational Technology lecturers in South African higher education institutions regarding the use of Web-Based Teaching and Learning (WBTL)?

B. What challenges do these Educational Technology lecturers face in using WBTL environments?

Research Design and Methodology

This is a qualitative case study of eight university lecturers from four universities in South Africa. Qualitative approach is important for this study because it is more descriptive, holistic, explorative and contextual in its design and aims to produce rich description of investigated phenomena (Creswell, 1994 and Vorster, 1995). For this study qualitative case-studies have helped to understand the deeper meaning of the lecturers' experiences and challenges through their use of WBTL environments in teaching their modules.

Sampling

Participants of this study consist of the eight most accessible ET lecturers from four universities in South Africa as shown in Table 1. I focussed on the experiences of the ET lecturers because I myself am an Educational Technologist in South Africa. This does not mean, however, that I am undermining other personnel or issues involved in the use of WBTL environment. The eight lecturers and their universities were given new names for the purpose of ethical considerations as suggested by Creswell (1994).

Informed consent and ethical considerations were acquired in terms of confidentiality, voluntary participation and anonymity.

Table 1: Information of participants

Institution given names	INSTITUTION 1	INSTITUTION 2	INSTITUTION 3	INSTITUTION 4	Total
Number of white lecturers as participants	2 (Respondent 1A & 1B)	1 (Respondent 2A only)	1 (Respondent 3A only)	None	4
Number of African lecturers as participants	None	None	1 (Respondent 3B only)	1 (Respondent 4A only)	2
Number of Indian lecturers as participants	None	None	None	1 (Respondent 4B only)	1
Number of coloured lecturers as participants	None	1 (Respondent 2B only)	None	None	1
Total number of participants	2 (Respondent 1A & Respondent 1B)	2 (Respondent 2A & Respondent 2B)	2 (Respondent 3A & Respondent 3B)	2 (Respondent 4A & Respondent 4B)	8

Participants consist of four female (Respondent 1A, 2A, 3A & 4A) and four male (Respondent 1B, 2B, 3B & 4B) lecturers. In terms of race they consist of four White, two Africans, one Indian and one Coloured (Table 1).

Data collection and analysis

Instruments used in this study for data collection were participant observations, individual semi-structured interviews and questionnaires. The three instruments were used for the purpose of triangulation of data (Clark, 2000) to achieve measures of trustworthiness (Krefting, 1991). Observation was conducted once with each of the eight lecturers. Interviews were conducted after observations for about one hour each. Audio-tape was used to record the interviews for ease transcription. Two research questions were asked: 'what is your experience in terms of using WBTL in teaching your modules?' and 'what challenges do you encounter in using the WBTL environment?' Follow up questions were generated from these two research questions for more data. Questionnaires were sent to the participants after the data from the two instruments were generated. This was done to verify that the data was consistent across the three instruments, that triangulation was supported and to ensure trustworthiness of the findings. In terms of data analysis this study used guided analysis where researchers have categories that can be modified through interaction with data (Freeman and Richards, 1996). The findings are exploratory in nature; five themes with categories were generated from the data with connectivism principles (Siemans 2005) and followed by conclusion with recommendations.

Findings

Table 2: Lecturers' experiences and challenges in terms of WBTL

THEMES	CATEGORIES
THEME 1: Learning and knowledge rests in diversity of opinions	- Academic Qualification - Context - Opportunity through employment - Power
THEME 2: Learning may reside in non-human appliances	- Advancement of ICT in Institutions - Course resources - Level of Interaction
THEME 3: Learning is a process of connecting specialised information sources	Teaching and learning theories
THEME 4: Capacity to know more is more critical than what is currently known	- Publications - Work load
THEME 5: Ability to see connections between fields, ideas, and concepts is a core skill	Exposure to different fields

Discussion of findings

Categories of findings are presented under each theme mostly by means of direct quotations and substantiated with discussions to re-contextualise them with relevant literature.

THEME 1: Learning and knowledge rests in diversity of opinions

Academic Qualification

Through questionnaires it was established that all the eight lecturers have at least a Masters degree in Computer Science or Education. Others even have PhD or D.ED over and above their Masters degrees. The majority of respondents studied Educational Psychology, English and Computer-related education as part of their qualifications. Respondent 2A indicated in the interview, for example, that as a part of her Masters degree she had to acquire more knowledge and skills in the following areas: 'Higher Education Practice; Assessment in Higher Education; Mentoring in Higher Education; Curriculum Design & Development in Higher Education; Research Methodology in Education; Learning Materials Development and Design'. She said of this,

> *I consider these areas as one of the most important areas to be combined with English and Educational Psychology to produce a well equipped Educational Technology lecturer to facilitate WBTL for constructivists.*

The results suggest that in order to successfully manage Educational Technology, one needs to study English, Educational Psychology and Computer related studies. This suggestion is clear if one looks at Respondent 1A's words (she has a Masters degree in Computer Science) which were supported, through interviews and questionnaires, by most of the eight lecturers:

> *I think I am strong because in my BA and HDE qualifications I was specialising in Psychology and Guidance Counselling respectively where most of these theories come from. I am particularly interested in the use of technology to support different learning styles (behaviourism, cognitivism, constructivism), and in the cultural constructivism issues related to the use of educational technology'. Cultural constructivism brings in issues of culture that need to be taken into consideration if one needs to teach or learn effectively…* (Repondent 2A)*.

Respondent 2A also included the subjects, objects, community and tools as identified in Activity Theory as well as other symbolic systems that are useful for facilitating Web learning interaction from Vosnaiadou (1996).

Respondent 1B did not have much knowledge and skills with computers and as a result he was not successful in using the WBTL environment. Respondent 1B said:

> *I am currently studying towards my PhD in Higher Education in South Africa, because I want to move away from Educational Technology field of study to deal with higher education issues. To tell you the truth I am no longer interested in ET because of the high-tech that keeps on reshaping the field. I am old enough to take my pension*

now instead of attending courses that have to do with high tech in teaching and learning. Joining Higher Education will make me comfortable to use the knowledge and skills that I have now instead of attending training in the field of ET with rapidly changing and challenging technologies. I am not good in using these Web technologies in teaching and learning, but I am very strong in using search engines and blog sites in teaching and learning as well as working as a constructivist. For me to be able to use these I was helped by my friend from USA, but it took me almost three years to understand it. I am not prepared to go through another process of learning something new at my age. This means I have to learn how to design web sites and use the [LMS] with many different tools. I am not prepared to do that. But I understand that working as a constructivist I will find my new home in the field of Higher Education as I have already started to work with this field of study to facilitate few modules'. I like the constructivist approach because it involves students' previous experience and it also help lecturers to grow using students' contributions during the time of interaction.

Context

The questionnaires and interviews indicated that the context in which one is operating plays an important role in promoting good frames of reference that assist WBTL participants to operate successfully. Respondent 1A's account in the next paragraph serves as a good example in indicating this. She suggests that her development of basic knowledge about computer systems and usage was largely facilitated by the context that she worked in. The opportunities were available to her to construct in-house courses and develop training manuals. This context also provided her with the language and skills development needed to further explore and engage in computer aided learning. In addition, the context enabled her to work with the WBTL environment, with advanced Web technologies (e.g. tools used to train lecturers, work as a WebCT & INSTITUTION 1 Vula Learning System manager and administrator) and Web theories (social, cultural & communal constructivism). Other lecturers were also influenced by their context.

According to Respondent 1A:

My first position was titled User Consultant with a specialisation in training. During this time I developed in-house courses for XyWrite III Plus, DOS, VP Planner, dBase III Plus, WordPerfect, Windows and Ms Word for Windows. I also did training on internal systems such as "A guide to the Medical School Local Area Network", and the university…Departmental Student System. During this period I received two merit awards and was promoted to Senior User Consultant.

Her account continues as follows:

With the development of personal computers in the late 80s and early 90s I became involved with the development and investigation of Computer-Based Education (CBE) programs and sat on the Multi-media Research Committee. In this light and with other colleagues we investigated the use of CBE in South African Tertiary Educational Institutions and made recommendations to the University regarding its use and implementation.

As the technology developed and the Internet became pervasive my job description changed. I was made responsible for the support of online learning at the University as a member of the Academic Computing section of the Information Technology Department.

In the early 2000s the University set up a section called Information Technology in Higher Education, and here my job entailed the support of Academic staff wishing to develop online courses, WebCT Administrator and lecturer of the Online Languages and Human Computer Interface courses which form part of the course work for a postgraduate degree in Digital Media.

In 2002 I was offered a two-year contract position at the University…and [my] University graciously allowed me to take a two

year leave of absence effective from January 2002 to December 2003. My job title at the University…was Training Manager in the IT Department. I was responsible for developing and implementing a training plan for the division. This included the development and implementation of a training plan for long-term degree training for citizen staff as well as short-term courses, conferences and professional development for all staff in Information Technology Development. I also acted as the technical support for the University's e-learning initiative doing server maintenance (with a great deal of assistance from the networking manager) for the WebCT server, helping the staff with WebCT administration when called upon and was the IT Department's representative on the UEL (University E-Learning) committee.

On returning [to INSTITUTION 1] I continued with my support and teaching duties along with the supervision of honours and masters research dissertations. The institution had changed its Online Learning Management System from WebCT to [INSTITUTION 1 Vula source] a home grown open source application. I was also made responsible for assisting the Medical School move its WebCT courses to [INSTITUTION 1 open source]. I am also currently involved in the ongoing training of other academic staff members to use the system and I offer support on the system when required'.

Her teaching, learning, philosophy and research interests are as follows:

I am familiar with current theories (behaviourism, cognitivism, constructivism with, AT, TLT, ANT, connectivism and engagement theory) related to online learning with a strong leaning towards social constructivism in the virtual learning environment. Social constructivism indicates that when students learn there are other people who are involved that can influence the students' construction of meaning/knowledge/reality. For example, lecturers have a major task in their students' construction of knowledge. Other people

involved are other students, technical support staff, administrators, educational technologist, parents and many others.

The above experience suggests that the context in which people operate promotes Educational Technologists if it is rich enough to have learning theories and WBTL tools.

Opportunity through employment

Most of these lecturers were given the opportunity to develop WBTL environment because of the nature of their job as Educational Technologists. Looking at their qualifications, most of them were employed with WBTL knowledge and skills that were then facilitated by the course that they taught. If one looks at most accounts from these lecturers, one realises that most of them were involved at different levels of computer related courses in their teaching, research projects or qualifications. Respondent 1A even revealed this opportunity in her account above.

This indicates that even if one is not specialised in ET one can become an Educational Technologist provided one is given the opportunity at work to learn by developing certain courses that are relevant to WBTL environment.

Power

Other lecturers, according to the results for this study, have acquired knowledge and skills in WBTL environment because they have power (high position) at their universities. Their power helps them to influence their university decisions on the implementation of advanced ICT. In the following, Respondent 3A's case serves as an example of this because she represents her university in different ICT committees and is also working as a head of the ICT faculty. As Respondent 3A explains:

Currently I am the Head of Research in the ICT faculty. In this capacity I have to support and strengthen all research activities, work together in research teams and transform certain research teams where necessary. I am also the Research focus leader of our Faculty

with 4 niche areas. I am Chairperson of the Faculty Research Committee and represent the Faculty at the Central Research Committee. Currently we have… students at Masters and Doctoral level in the Faculty of ICT development sessions related to research and have initiated the development of a website for research and development for the Faculty of ICT where students can also monitor their progress

I was also the Chairperson of the Faculty Quality Committee (QIT) 2004-2005 where I coordinated all quality related aspects in the Faculty at … different campuses where we offer ICT courses. I have also initiated the development of a website for QIT for the Faculty of ICT. [I] have managed to arrange two successful quality peer reviews between 2004 and 2005 for the Faculty of ICT. I am involved with NEPAD in this project where we provide e-learning to rural schools and monitor the quality of the process at rural schools and communities for 2004 and 2005. I am also involved with the MRC (Medical Research Council) and the University… in a telemedicine project for rural communities. With regards to teaching philosophy, although I respect other theories, I believe strongly in critical constructivism as a teaching philosophy for WBTL. I believe in critical constructivism because students should be critical in their thinking in order to use the Web in learning.

The lecturers' experiences indicate that they are learning from a diversity of opinions (Seimans, 2005). Involvement in research projects becomes one of the factors that promote WBTL Educational Technologists that become interested in theories that promote learner-centred approach (constructivism).

THEME 2: Learning may reside in non-human appliances
Advancement of ICT in institutions
Advancement of universities in Information and Communication Technology (ICT) has been identified in this study as one of the powerful forces that influence the field of Educational Technology (ET). As a consequence of the

fact that older lecturers are not comfortable with this advancement, Respondent 1B's account is a good example of the reasons many leave the field. On the other hand, other lecturers are enjoying this move because they come with a background that includes computer knowledge and skills. Most of the respondents had the necessary knowledge and skills to accommodate even advanced technology because they acquired the knowledge and skills in advance.

Course resources

In other WBTL environments the lecturers did not have resources and used course notes instead (established through observation and interview). Respondent 2B, for example was using WBTL environment for course notes (as indicated in his account in the next paragraph). Some of those resources were online, although he reproduced them for the WBTL environment instead of linking them. This method of reproducing resources in order to be published on the WBTL environment is one of the elements that may promote the act of plagiarism (Harris, 2009). It also takes a lot of unnecessary space on the server. Therefore, I believe that it should be avoided by linking all the online resources if it has to help students for the digital age. However, most of these lecturers did use the linking methods.

> *I can't teach without giving my students the notes because the notes help me to achieve the intended outcomes faster. If I allow my students to use different sources of information it becomes difficult, even impossible, for me to achieve the intended outcomes. Time is another factor that one needs to consider in teaching any module. It becomes impossible in most cases to finish the module on time if you allow your students to search for information, but if you give them notes on your web and handouts it is easy to finish the module on time.*

This account further suggests that certain university modules do not have enough time and resources that allow WBTL facilitators to promote WBTL environment.

Levels of interaction

It was established through observation and interview that most of the lecturers had involved their students in all four levels of interactions as identified by Moore (1989) and Hillman, Willis and Gunawardena (1994). Student-interface interaction is important for students to master before they begin the student-content interaction. Learners need to master this level in order to deal with contents of their subjects effectively. Moore (2002) argues that if students want to fully benefit from WBTL they must be self-motivated and be in full control of Web technologies. Garrison (2007) claims that students who have better learning experience are those that mostly appreciate student-student and student-instructor interactions. Respondent 1B and Respondent 2B were limited in promoting student-interface and student-student interaction because their methods of teaching indicated that they wanted easy ways to finish their modules (see their accounts above). They even use handouts (hard copies) in their teaching.

In recent years (2000–2010), the use of the Web as part of the curriculum across different disciplines and researchers at higher education institutions has increased as predicted by Wilborn (1999). Harmon and Jones (1999) identify two out of the five ways of using the Web in teaching and learning, namely: first, for informational and, second, for supplementary functions. Informational usage refers to the situation where the Web is used to access information such as course templates, course notes, resources, learning guides, assignments. As a supplementary teaching setting, the Web is sometimes used as an essential communication tool for learning in order to promote deeper learning.

The different uses as identified by Harmon and Jones (1999) perhaps explained the trend towards an increase in Web usage. Therefore, this suggests that these lecturers have a big challenge in using WBTL environment because they seem to be using this environment only for the two functions (Harmon & Jones, 1999). According to Salmon (2003) five-step model, these two functions are the first and second steps in effective use of the WBTL environments. It is unlikely that the lecturers can reach the last two steps (knowledge construction and development) of Salmon (2003). At the knowledge construction stage, lecturers

and students use conferencing Web tools (e.g. chat and discussion tools). Lecturers facilitate the process of constructing knowledge. At the development stage lecturers and students provide links outside closed conferences. They are also involved in the process of supporting and responding to each other. At this step lecturers and students use constructivism while the first two steps are characterised by behaviourism (Salmon, 2003).

A well planned, organised and designed WBTL environment indicates that learning may reside in non-human appliances (Seimans, 2005).

THEME 3: Learning is a process of connecting specialised information sources
Teaching and learning theories
The interview and questionnaire indicated that constructivism was a common theory that all lecturers (except Respondent 2B) recommended in their WBTL. Respondent 1A went further to specify and define constructivism in terms of social constructivism (as indicated in her account above). It was interesting to find that they were using both components of Educational Technology (TIE and TOE) in the design of their WBTL environments. Although Respondent 2B did not believe in constructivism, he did have projects that incorporated the characteristics of constructivist approach identified by Herrington, Reeves and Oliver (2004).

It also appeared that not all of them attended formal training in WBTL, but were helped by the above emerging factors or categories. This indicates that Higher Education institutions have a serious responsibility to train their lecturers if they are going to continue to use the WBTL as one of their approaches to teaching.

Systems approach was found to be one of the useful approaches in some of the courses. Respondent 4A (as shown in her account in the next paragraph) strongly believes in it while others were denying it because it has more elements of behaviourism. One of the reasons for the denial is that systems approach needs a well-trained person in a specific area of a linear fashion (step-by-step system) (Romiszowski, 2004). Respondent 4A enjoyed it because she had a specific training in WBTL. Other theories which were promoted by

these lecturers were Transformative Learning Theory (TLT), Actor Network Theory (ANT), connectivism, engagement theory and Activity Theory (AT).

Respondent 3A states:

> *I analyse, design, develop and evaluate curricula and learning environments together with experiences (*using Systems approach*). I undertake Continuing Professional Learning, monitor processes with procedures, conduct ODL Scholarship and Research, undertake Academic (Institutional and Community) Citizenship, have experience in WebCT, Authorware and MS Front Page; conduct workshops and training of Lecturers in courseware development, storyboarding for paper-based and ICT platform and online courses.*

The above accounts suggest a high quality of access to Information and Communication Technology tools (Brown & Czerniewicz, 2007) that may result in motivating the lecturers and gain more experience for the WBTL promotion.

THEME 4: Capacity to know more is more critical than what is currently known

Publications

Most of the eight lecturers indicated that they publish articles in this field in order to get connected to other lecturers in the field. They are involved in different research projects because they believe that publications and research projects help them to be connected to the world all the time and grow at the same time in the field. This is clear if one looks at Respondent 3A's account above. Respondent 4A also agree with Respondent 3A's account.

Most of these lecturers are also members of other professional organisations in the field which facilitates their connection to others specialists. Respondent 1B indicated that he was helped by his USA friend who taught him how to use blogs and search engines in teaching (as shown in his account above).

However, Respondent 1B's experience is different from the other seven lecturers because he revealed that if one is working as an Educational

Technologist one does not get enough respect from other field of studies as follows:

> *We do not have enough Educational Technologists in South Africa because the field is being undermined as if it is for technicians not professionals. Most of our university managers think that Educational Technology is the same as Computer Science or Technology Education. Such misconceptions lead to a situation where everyone from these two fields ends up serving as an internal or external examiner for Educational Technology students. Most of these examiners from Computer Science and Technology Education or Media Studies sometimes use positivist approach while our students use interpretive approach. This has been a problem for* most of my students... one *of my students was given a fail by an internal examiner (new Doctor) from Computer Science and a distinction by an external examiner (senior Professor) from Educational Technology. There are many other cases that I can show you but I am leaving the field to one of the most respectful field (Higher Education) or I have to take my pension. I can't publish because I cannot even manage my workload because this university has been searching for qualified Educational Technologists since 2003 to fill the existing vacant positions. Therefore, we are carrying other peoples' workload because the university is unsuccessful in trying to fill these positions.*

Workload and ET status

Workload and ET status came up as other challenges that are being experienced by lecturers in ET if one looks at Respondent 1B's account above. Others revealed that they manage even if they are understaffed because they are in powerful positions in their institutions. Therefore, they delegates most of their activities to their Masters and Doctoral students.

THEME 5: Ability to see connections between fields, ideas, and concepts is a core skill

Exposure to different fields

The eight lecturers felt that qualifications in Computer Science and Educational Psychology serve as a good ingredient for the study of Educational Technology. They felt this way because WBTL is driven by computer technology and theories that mostly come from Educational Psychology. It was not a coincidence that they became lecturers in Educational Technology after having studied other modules in different fields of studies. Respondent 2A indicated that as a part of her Masters degree she had to acquire more knowledge and skills in the following areas: 'Higher Education Practice; Assessment in Higher Education; Mentoring in Higher Education; Curriculum Design & Development in Higher Education; Research Methodology in Education; Learning Materials Development and Design'.

She said of this,

> *I consider these areas as one of the most important areas to be combined with English and Educational Psychology to produce a well equipped Educational Technology lecturer to facilitate WBTL for constructivists. Before I joined this institution (1971-1997) my previous experience includes teaching, academic software development and marketing; training; multi-media courseware development and community development work. My current duties include the following: Development and maintenance of online learning technical systems at [INSTITUTION 2]; development; support and training of lecturers; design and delivery of workshops and of the online learning programme for staff; and research in the field of online learning, particularly in Web-based teaching and learning.*

Conclusion

In conclusion, in the question, 'who teaches Educational Technology to promote WBTL in South African Higher Education', the answer is, 'I the digital immigrant'. These lecturers are not receiving formal training of the WBTL environments and instead draw from their experiences which seem to be challenged by the new WBTL technologies. Therefore, it is clear that they are 'digital immigrants' (Thomas, 2006) in the absence of formal WBTL pedagogical tools and technologies. This situation is narrowing the field if the lecturers are leaving the field. But if the WBTL training can be planned for the new young lecturers who are used to the new technologies the field can grow and South Africa can have enough Educational Technologists. The field should start from undergraduate courses in order to overcome the shortage of Educational Technology lecturers in South Africa and motivate those who are in the field with enough support.

Bonk (2001) reveals that lecturers are in need of pedagogical tools, ongoing monitoring, WBTL guidelines and advice, expert solutions to problems and supportive peer communities. The same situation was clear in this study as there was no formal training to help these lecturers in terms of pedagogical tools. This means they should master Salmon's (2003) five steps of WBTL environment. In order to master these five steps they should be able to use the three schools of thought (Oliver & Herrington, 2001). This however becomes difficult in the absence of clear guidelines that are mostly acquired from formal training.

Additionally, the ET field that should promote WBTL environment is severely undermined when anyone can mark ET research projects. Most of these lecturers felt very strongly that this situation is discouraging, Respondent 1B even indicated serious problems, such as unnecessary student failure, that were caused by this. This situation would be prevented by providing two external examiners in cases where there is no Educational Technologist to serve as an internal examiner.

Finally, with enough qualified Educational Technologists, South African can introduce electronic-Universities to speed up the Government's 2013 service-delivery target which requires that every learner be Information and Communication Technology literate (Asmal, 2003).

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