Perspectives, permutations and podcasting: an exploration of Web 2.0 applications for academic staff development at Durban University of Technology.

Abstract

This paper examines the development of a 'dynamic learning community' (Wilson and Ryder, 1996) of podcasters at the Durban University of Technology, comprising of a diverse group of volunteer academics. The programme is designed to facilitate the personalization and utilization of social networks, exploration of patterns and layering of knowledge and skills (Siemens, 2006) over an existing profile of knowledge and skills related to the Blackboard LMS to offer new learning opportunities. Participants develop from listeners of podcasts to podcast designers and producers. Within the programme, the academics are encouraged to weave into their curriculated learning plans opportunities for informal learning, allowing learners to engage, direct and personalize their learning. This is done in numerous permutations, but ostensibly they provide a means of maintaining the structure, guidance and cognitive challenge required of higher education, whilst simultaneously embracing the user generated, distributed and personalised approach found in Web 2.0.

This programme follows participant progress using Professor Salmon's five- stage model of E-learning (2002:10-36). In addition the establishment of the 'dynamic learning community' (Wilson and Ryder, 1996) is monitored to see how all participants share control, and everyone learns, including the *teacher* or group leader (Wilson and Cole, 1997) in a higher education professional development environment. Data derived from observations, recorded conversations, online surveys and the personal reflective journals of podcasters are used to inform this paper and form part of the presentation. Analysis reveals that a change in the value system of the educator is implicit within the experience of the podcasting development programme. Moreover, embracing the digital culture is difficult without immersion and first hand experience of the adventure and challenge that it brings.

Keywords: Web 2.0 applications, higher education, podcasting, professional development

1. Introduction
The unlimited nature of the Web, allowing freedom of choice and facilitating creativity in higher education learning through Web 2.0 applications, resonates with Tagore's poetic expression of the freedom to learn, he writes:

"Where the mind is without fear
and the head is held high,
Where knowledge is free;
Where the world has not been broken up
in fragments by narrow domestic walls
…………………
Where the mind is led forward by thee into ever-widening thought and action-"
an excerpt (Tagore, 1982:Poem XXXV, 20-21)

The global learning landscape of the twenty-first century is being transformed and shaped by the uptake of digital communication tools and ubiquitous networked applications, along with the changing characteristics, needs and demands of students (McLoughlin and Lee, 2010). Academic development, the professional support system of academics, needs to model these 'new spaces' in their programmes so as to provide opportunities for academics to experience how social media and technologies can be integrated into learning and teaching. Web 2.0. applications employed in conjunction with appropriate learning and teaching strategies are capable of supporting and encouraging informal conversation, dialogue, collaborative content generation and the sharing of knowledge.

The podcasting programme design is deliberately Web 2.0 in style and approach, emphasizing participation and collaboration, allowing academics to experience the shift from Web 1.0. to Web 2.0. Emerging from the constructivist Pioneers programme (Pete: 2008: 8-11) the pilot maintains the tenets of 'cascading capacity development' and social constructivist approaches to learning. It is focused on encouraging the participants(Podcasters) to challenge traditional pedagogy where the teacher is the celebrated expert, dispensing knowledge and prescribing learning resources and activities. The podcasters are acknowledged as active participants and co- producers of learning resources rather than passive consumers of content. Learning processes are participatory and social, supportive of personal life goals and needs (Brown and Adler, 2008). Moreover, the project is specifically aimed at participants experiencing the movement from 'the age of the individual to the era of community" (Feldman, 2000:xiii)

Participatory learning is well suited to professional development as   the absence of hierarchies of status within the collaborative modes of participatory learning allows each participant to share ideas, comment, customize and learn to accept multiple perspectives and community feedback. It reflects the Web 2.0 environment with 'nebulous environments of shifting core elements connecting specialized nodes of information sources' (Siemens, 2006). This opportunity to engage and develop mastery of knowledge and skills pertinent to the programme, but more than that is the sharing of responsibility in the continued advancement of the community's advancement (Freire, 1972).

Informed by the theory of situated cognition (Brown et al., 1989, Wilson and Stacey, 2004); the podcasting pilot provides the participants with a safe space to '*explore the adventure of sound and sight in our learning and teaching*' (the welcome message in the Blackboard Classroom). This approach enables me to position the participants and myself in authentic contexts (Samarawickrema et al., 2010) and providing opportunities for a deeper understanding of the e-pedagogy. It is anticipated that this 'new learning space' will nurture digital literacy and establish e-competence; both required to accept the emergent shifts in Web 2.0 learning.

2. The Podcasting Pilot

As part of an academic development programme, 'Toward Readiness for Mobile Learning' a podcasting pilot was initiated in October 2009 at the Durban University of Technology (DUT), funded by the Department of Education's Teaching Development Grant (TDG). Participants were invited to apply for the year long programme, which comprised of:
- a weekly two hour online meeting and
- a monthly face to face meeting (during the same allocated two hour period)

Although focused on podcasting, the larger purpose of the programme remains:
- to develop digital literacy,
- to enable academic staff to raise and maintain increased confidence,
- to evaluate and use a wide range of digital tools,
- to engender amongst academics, a level of enthusiasm and chutzpah,
- to embrace technology enhanced learning,
- to be innovative and explore curricular adaptation.

I believe that capacity development in one technology increases confidence to take on ever evolving new technologies. The intention is that the year long podcasting programme will be permeated with the spirit of fun and exploration within supportive 'affinity spaces' (Gee and Hayes, 2009), designed as an antidote to fear and resistance to change.

This paper explores the efficacy of the theoretical structure of the podcasting pilot, based on a 'mashup' (term used loosely) of the Salmon 5 stage model of e-learning/e-moderation with a Dynamic Learning Community, defined by Wilson and Ryder (1996) as:

> *'groups of people who form a learning community where both sender and receiver of messages are changed by the interaction'.*

As familiarity with the virtual learning environment was considered a minimum criterion, most successful applicants were graduates of the Pioneers programme (Peté, 2008) - DUT's programme for developing Blackboard practitioners. The podcasters were librarians, professors, senior lecturers and lecturers from departments of:

- Radiography
- Entrepreneurial Studies and Management
- Information and Corporate Management
- Media, Language and Communication
- Information and Communication Technology
- Educational Technology

3. Introducing the concept of a 'dynamic learning community'

Establishing rhythms of fun, exploration and collaborative learning during the first face to face meeting of the academics was critical to the survival of the programme. The first e-mail invitation "*Let's click, shuffle and sync*", sent to participants to become familiar with the other members of the podcasting pilot as well as learning the basic functioning of the iPod. At the face-to-face meeting the composition and characteristics of a dynamic learning community were introduced,

- *distributed control*
- *commitment to the generation of new knowledge*
- *flexible and negotiated learning activities*
- *high levels of dialogue, interaction and collaboration*
- *a shared goal, or project that brings a common focus and incentive to work together (Wilson and Ryder, 1996).*

These values were immediately implemented when I introduced the principle of distributed control. The group together made decisions regarding the frequency of face-to-face and online meetings (podmeets), and in this way agreed to the principles of sharing responsibility and establishing commitment.

Together we developed our pod-space ethos, characterized by
- a safe space
- having an open, adaptive system and
- high levels of dialogue, interaction and collaboration;
- with a common focus and incentive to work, learn and enjoy together.
  (adapted from Wilson and Ryder; 1996).

4. Tracing the perspective transformation and permutations.

I set up the project (in order to fulfill the funding criteria) with a timetable of activities that mirrored the developmental stages we have established in the Pioneers programme (Peté, 2008).

Table 1: Timetable of the Podcasting Project

Learner Phase	Designer Phase	Producer Phase	Facilitator Phase	Researcher Phase	Presenter Phase
09/2009 10/2009	11/2009 01/2010	02/2010 04/2010	05/2010 07/2010	08/2010 09/2010	10/2010

As a member of the DUT podcasters, I have been privy to the transitions promoting the 'conceptual jump', as they occur within the group. Using both Mezirow's perspective transformation theory and an adaptation of Keller's ARCS theory of motivation(2006),

we have traced the cognitive, affective and behavioural shifts occurring to satisfy the '*need to belong to the new age of educators*' (DUT podcaster).
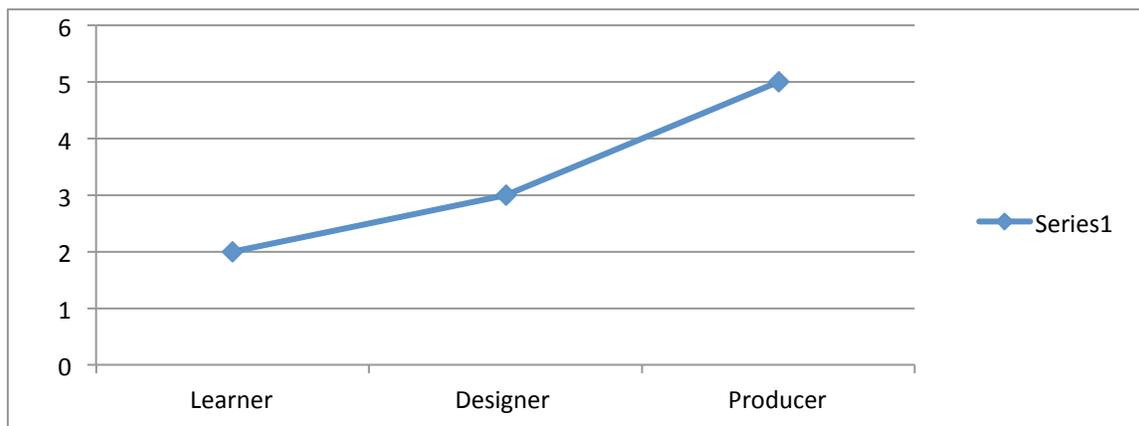
In analyzing thirty random postings from the weekly online discussions for each of the three completed phases, I noticed shifts with regard to:

- Control
- Confidence
- Relevance
- Joy

in the eight month period since the pilot began.

4.1 The control conundrum

Figure 1: level of participant control

There were two facets of control in the learner phase.

Firstly, the effect on the participants of being able/ unable to take charge over the functioning of the iPod and relevant computer software was visible and provided an opportunity for collaborative learning. Initially, participants seemed self-conscious and quietly asked for assistance from me, showing that the community spirit was yet to be developed.

The second facet was control over learning content and procedure. Predictably during the early stages of the first phase viz. learner podcaster, the participants attributed more authority to me as the 'convener' of the pilot. I consciously 'deprogrammed' myself from responding immediately. Not acknowledging the authority position had the favourable result of the online discussions being directed at the group and not the facilitator. This encouraged other participants to play the role of supporter, and consequently led to the development of social affinity between the podcasters, as reflected in an example of the postings below.

Discussion (online discussion dated 29 September 2009):
How do I .... on my iPod?
Let's talk about "how to..........on our iPods" - or my personal favourite "Why can I not...........?"

Responses:

Participant 1:'*I am feeling really lost'*

Participant 2: *"I'm lost too – perhaps we should both go on an Alice in Wonderland adventure"*

Participant 3: "Maybe you should check to see if you have the updated version of the software on your laptop …..can be downloaded from the website (url included in message).

Suggestions regarding learning activities were forthcoming from participants by the designer phase. A member from DUT's drama department was invited to share her expertise on scriptwriting at the suggestion of a podcaster. Another podcaster suggested a change in the pattern and procedure of the online podmeets to accommodate the time poor academics by including reading time within the two-hour online podmeet period. I particularly appreciated this as it represented a move toward an open adaptive system.

Although we made strides with regard to distributed control, I noticed a relapse when introducing new hardware and accompanying software (the iMac with Garageband editing software) for producing podcasts. Each participant offered the 'control' back to me via their body language when leaving the chair facing the computer display and keyboard vacant for me and choosing to sit at the side. I indicated my preference to sit at the side, reminding them to take a photograph using the camera in the desktop screen and thereby returned the 'seat of control' to them.

4.2 Confirming Confidence.

Using Mezirow's(2000:7) perspective transformation theory, we examined our unquestioning acceptance of the generational interpretation of 'the digital divide' and terms such as 'digital natives', 'digital immigrants', 'the Millenlials', 'Net Generation', 'Generation X' and 'Generation Y'. The energized online discussions amongst the podcasters provided a varied and multifaceted view of the 'digital divide', debating and examining contrasting views presented by researchers (Oblinger and Oblinger, 2005, Prensky, 2001, Jonassen and Grabowski, 1993, Bennet et al., 2008). These discussions assisted in alleviating many of the anxieties of 'not being able to bridge the gap'.

An increase in self-assurance and confidence could be traced in the online discussions, ranging from hesitant questions

"Can a podcast be interactive? Hope this is not a stupid question." (Dated 10 November 2009) and
'*Heard my voice on the Mac and made my own hello world podcast -- this was really exciting.*' 23 February 2010)
to pedagogical debates

"**….**_students don't get enough, if any opportunity to think about and engage with the material....Podcasts will allow them to leave the lecture and continue to engage with material and perhaps be prepared for the next lecture too...too hopeful??" (Dated 23 February 2010)_

and design features

"….. about including another voice. Perhaps, converting a ordinary lecture into an interview or debate type of format may make it a little more interesting....perhaps include some "willing" students into the creation of the podcasts to break the monotony." (Dated 20 October 2009)

Figure 2: confidence level of participants
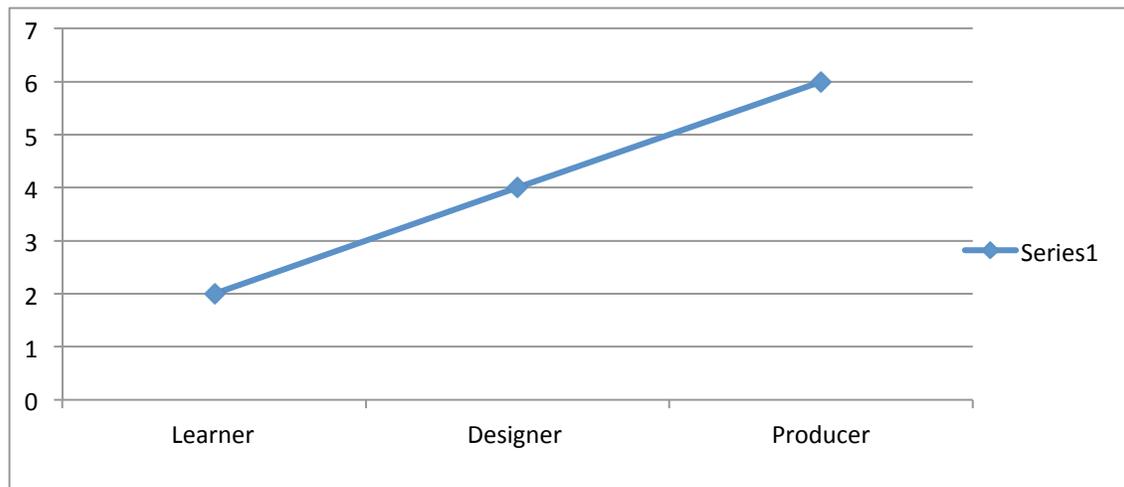
In the production phase, a different level of participation is evident. Candid and constructive comments during peer reviews of podcasts reaffirm the establishment of collegiality, openness and trust, confirming confidence and self esteem. Examining issues surrounding open source and proprietary software. Sharing newly discovered areas of learning and expertise (frequently interspersed with the faux pas) indicate high levels of collaboration, interaction and dialogue. The experience of recording, editing and uploading podcasts resulted in a marked change in level of confidence amongst the podcasters as it made concrete the learning in the two previous phases. Encouraging the podcasters to become 'authors' and contributors rather than receivers of information (Salmon, 2002, stage 4).

4.3 Relevance

I expected the podcasters to introduce and engage with relevance during the design phase, exploring the imaginative and creative applications of podcasting in their fields of interest and occupation. However, this was not evident.

Figure 3: Level of relevance indicated
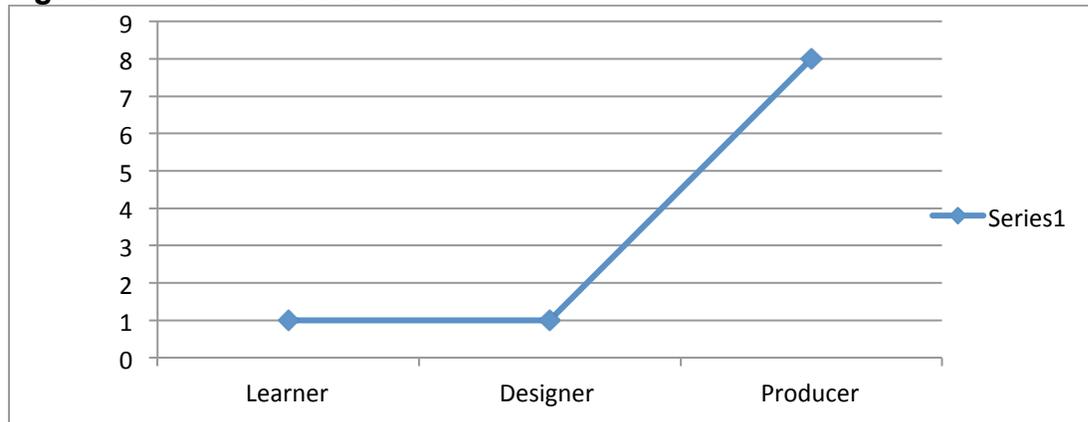
It was during the producer phase, after the practical experience of having produced their first 'Hello World' test podcast that discussions began to focus on the unique design and application of podcasting in their courses. The first recording, sharing and converting of the podcast made the learning experience meaningful and feasible in their learning and teaching environment. Exciting permutations began to emerge:

- Recording conversations with multiple participants on research epistemologies
- Audio feedback to academic staff engaged in development programmes
- Exploring audio visual content supplementation for radiography students
- Introducing new students to administrative procedures at the university.
- Student generated responses to poetry
- Introducing first year students to the library and information literacy
- Introducing first year students to computer programming procedures

4.4 Joy

Figure 4: Level of joy indicated
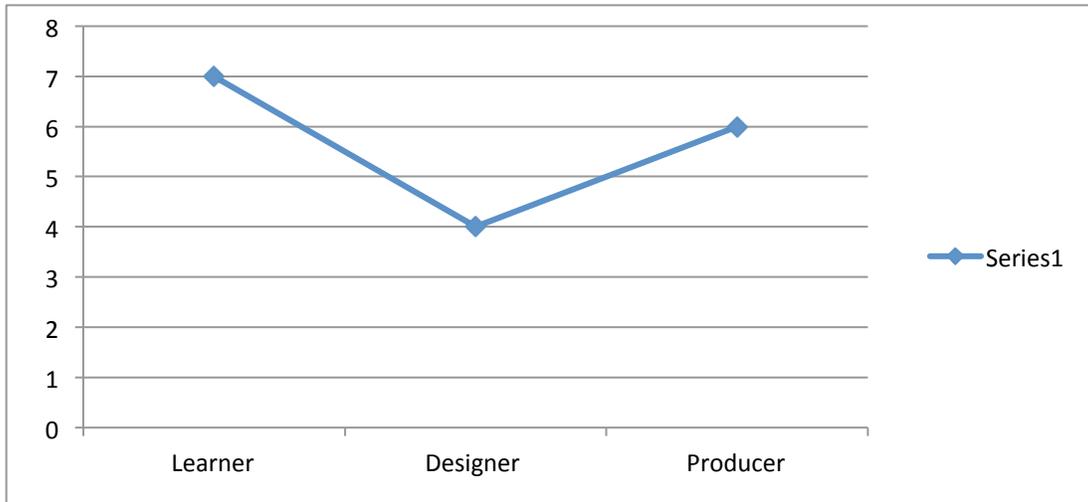
The first phase (learner podcaster) of the podcasting programme, following Salmon's (2002) first stage of access and motivation, is designed to imbue a spirit of adventure and collegialism. The participants expressed their pleasure at having a communal space for the generation and sharing of knowledge, '***designing for the joy of learning***' (the Podcasting programme logo), reaffirming their commitment to the community of podcasters. The monthly face-to-face meeting is a celebration of achievements and the momentum maintained by the weekly online meetings provides a platform to for the community of podcasters to sharing new knowledge and provide support.

During the second phase (designer podcaster) the podcasters frequently expressed their anxiety about scriptwriting. This uneasiness was exacerbated by infrastructural shortcomings (delayed arrival of necessary hardware and software) necessitating an extension of the design phase. In a critique of the designer phase, the podcasters suggested that the theory rich design segment be interspersed with the first two aspects of the production phase to introduce the '*reality element*' (a term used by one of the participants) in the design phase. This is confirmed by the relevance shift that emerged in the production phase which explored the imaginative and creative applications of podcasting.

The production phase is characterized by a sense of accomplishment and most participants are energized to proceed to the next level of enhanced podcasting. Additional Web 2.0. tools are introduced to supplement podcasting skills e.g., online chat tools, online calendar facilities, and online survey tools. The podcasters have enthusiastically responded to the invitation to join the DUT Podcasters social networking website (A Dynamic Learning Community at the Durban University of Technology - an adaptive complex learning ecology) offering them new opportunities as users to produce, publish, share, edit and co-create content.

Throughout the podcasting pilot, a constant stream of visually rich e-mail messages, announcements with cartoons and pictures as well as attachments with audio and visual material contribute to the sense of fun and enjoyment whilst learning, sharing with the academics the value of making learning fun.

5. Conclusion

Although it cannot be said that South African higher education students are 'growing up digital' (Brown and Adler, 2008) to align ourselves with global trends, academics in higher education have embraced technology enhanced learning with a view to 'transform', 'enhance' and 'improve'(Czerniewicz et al., 2007). Some may negate the value of exploring technological applications and argue that the existing infrastructural poverty accompanied by the rapid rate of change may render these efforts at exploring technological applications in higher education ineffectual. What is critically important in defense of such professional development endeavours, is the fact that new applications may be rhizomatic developments of, or mash ups of existing programmes. Recent research on the levels of comfort with and use of technology, identifies familiarity as a critical factor, in preference to the behavioural inclinations commonly ascribed to particular generations(Cartelli and Maillet, 2008).

The first three phases of the podcasting pilot have established a fundamental understanding and appreciation of the possible permutations of podcasting, permutations that are based on sound pedagogical strategies. As expressed by Newton & Middleton (2009)

> "*Podcasting's potential to education is in its adaptability, particularly in looking beyond its capacity to transmit information, in promoting discursive engagement and meaning making. It is not so much the technology that is emerging, but its application, with the technology gradually being redefined and becoming subservient to learning theory, practice and evidence*" (236-237).

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