The implications of multi-literacies and multi-numeracies for TAFE NSW

This paper explores the implications of multi-literacies / numeracies, firstly looking at the broader global implication of these principal and then at the impact they will have on TAFE NSW. The concerns are genuine for TAFE NSW especially with the pressure it is experiencing from private RTOs in a globalised vocational education environment where industries are changing faster than ever before in history and the higher expectations from it students when it come to efficiency and flexibility.

What are the issues?

The issues involved with applying multi-literacies / numeracies principals are numerous and varied, this report will identify three key issues, firstly the what, why and how aspect of delivering multi-literacies / numeracies learning. It will then look at the contradictions and dilemmas (hazards) when trying to implement such a core change to a large organisation such as TAFE NSW with its somewhat entrenched practises and mindsets.

Multi-literacies and Multi-numeracies - The What

Multi-literacies are a concept that has gained support since the 1990s The New London Group "A Pedagogy of Multiliteracies: Designing Social Futures', where the "multi" refers to both the multiplicity of literacies (for different purposes in different contexts) and the multimodal (different methods/media) aspect of literacy.

Mode of Literacy is a key concept as during the last two centuries the advent and accessibility of new technologies has jolted this understanding to view literacy as a more flexible group of skills and strategies than just reading and writing, the

multimodal nature of literacy encompasses new communications practices including non-verbal, spoken, print, visual and multimodal communications practices (Kalantzis and Cope, 2009).

The context and purpose of literacy is the second key concept of multiliteracies, the multiplicity of literacy practices has led many educators to use the plural terms 'literate practices' and 'multiliteracies' to emphasise the phenomena of understanding that there are many different types of literacy such as being mechanical or computer literate, and there is critical thinking and linguistic and cultural diversity (Kalantzis and Cope, 2009).

This broader view of multi-literacy and multi-numeracy is evident in recent surveys such as in the 2006 Adult Literacy and Life Skills Survey (ALLS) which endeavoured to measure the level of literacy in five distinct categories; prose literacy, document literacy, numeracy, problem solving and health literacy (Australian Bureau of Statistics, 2006).

The concept of multi-literacies especially when associated with the use of information and communication technologies (ICT) and new literacy practices (multimodal, asynchronous learning) has immense implications for adult literacy education, with its ability to not only to accelerate and to some degree automate the education process but to offer greater flexibility through its multimodal (multimedia and multi-delivery) nature that is more malleable to different learning styles and its greater accessibility such as via a web based learning management system (LMS) like a Janison or Moodle LMS (Snyder, Jones and Lo Bianco, 2005).

Learning Paradigms - The Why

There are many benefits for using Multi-literacies principals in TAFE NSW, such as it lends itself well new learning pedagogies and paradigms, such as social constructivism and Learning 2.0.

The notion of lifelong learning is an important reality as it is accepted that jobs and industries can come, change and go in very short periods of time. With them the employees and their skill-sets need to be flexible and adaptive to either change or for new skills to be learnt (Schoenholtz-Read and Rudestam, 2009).

Learning 2.0 is about the flow of learning, primarily the change from supply-push to demand pull (Brown, and Adler, 2008). Traditional vocational education is often seen a slow to adapt and very restricted in its delivery methods which works in a supply-push methodology, in which; there is industry consultation, curriculum and resource creation, structuring courses, offering delivery locations, classes for students to attend, information provided to student (in a formal manner) to the conclusion where learning is accomplished. Its traditional Supply-Push mechanism lacks the nimbleness in this fast changing vocational environment. A new approach has evolved with the aid of Multi-literacies approach and ICT's WEB 2.0 capabilities of collaboration, social networks, blogs, forums and chat to name a few. It is characterised by a demand-pull rather than the traditional supply-push mode of learning. In demand-pull the flow has changed to; the student wants information, information is gathered (informal learning from the Web (Google), social networks (LinkedIn, Facebook), Forums and Chat) from a vast and usually virtual environment.

> The shift from a supply-push to more of a demand-pull basis of learning is a grand transition. The focus shifts from building up stocks of knowledge

(learning-about) to enabling participation in flows of action, where the focus is on both learning-to- be through enculturation into a practice and on collateral learning as well (Brown, 2005).

This means that the teacher's role is not just to provide the "correct" information (as in a traditional classroom environment) but to empower students with background knowledge to decipher the credibility and importance of information obtained from a vast array of online content. This online content can then be used by the student to accelerate and enhance their understanding (Brown and Adler, 2008).

The learning paradigm of social constructivism learning is ideally suited to multiliteracies principals and learning 2.0 with its environment of collaboration, sharing and vast repositories of content and learning (Bryant, 2006). According to Social constructivism effective learning is conversational in nature, and in that, it requires a social dimension, including collaboration, communication and immersion in a topic.

> *Social constructivism emphasizes individuals working together to construct and develop ideas through dialogue, building on prior knowledge and understandings. (*Vygotskiĭ, *1978)*

Taking this approach social constructivism reflects a paradigm shift from teacher to student based pedagogy, where the teaching is not about rote learning but rather empowers learners in the processes of gaining knowledge and providing them opportunities to reflect and test the knowledge they gain through real-world applications, discussions and critical thinking (Brown, B, 1998).

Role of ICT - The How

ICTs are critical in delivering multiliteracies principal; the multi-modal aspects translate well into multimedia capabilities of modern computer accessing them and the internet (WEB 2.0 services) in searching, sharing, storing and discussing topics based on the multiliteracies approach. Underwood, J., and Dillon, G. (2011) stated;

> *"The ICT revolution is a deep cultural revolution changing all modes and patterns of our lives and is hence bound to lead to dramatic changes in education."*

The education sector has been an early adopter of ICT, from early schooling to universities; ICT has been around education for decades. ICTs have been integrated into learning and transformed teaching. Since the evolution of the personal computer in the eighties ICT has accelerated in its adoption in becoming part of the teaching toolkit and in fact that it is so critical to current education practices, that there is a merger of ICT and education (Aviram and Talmi ,2005).

Student entering Vocational Education today have a much higher acceptance of ICT then in the past, most have grown up with it and use it often from their smart phones to home PCs, and as such have less apprehension in using ICT in VET environment, more likely it is the teacher/trainer that poses the greater risk, since using ICT may pose challenges to traditional pedagogy practises, this may move them outside their comfort zone and as such they have higher risk of rejection (Watson, 2001).

Hazards to be avoided

Multiliteracies by their multi-modal nature are best delivered via an ICT learning system such as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). These systems have been around now in one form or another

for decades. The problem with such systems is that they tend to do thing in a certain manner which may not benefit all the topics, teachers or students, this "one size fits all" approach is known as Industrial e-learning; it is highly-centralised and monolithic model of learning (Dron, 2006). The problem that can arise is that they simple become a repository like a Content Management System (CMS) rather than a true learning environment that aids to Learning 2.0 and Social constructivism.

Use of ICT learning systems are critical but selection of the system should focus on designs that enhance collaborative, networked communication and interaction (Rogers, et al, 2007).

Conclusion

These profound changes to the nature of literacy, communication, technology, work and training plus the rapidly changing nature of vocation means that old concept in literacy learning such as rote are no longer an effective method, the 2006 Adult Literacy and Life Skills Survey showed that only six per cent of the surveyed had a high level of problem solving literacy. Problem solving is generally regarded as the most important cognitive activity in everyday and professional contexts but in a classical educational setting, learning to solve problems is too seldom taught (Jonassen, 2000).

The future of literacy appears to be a very dynamic process and old methods of learning need to be rigorously investigated if effective and productive learning is going to be achieved. This is of even greater importance in vocational education and training since lifelong learning is crucial, in a future where most adults will have to be retrained multiple times through their professional lives for future jobs that may not even exist now.

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