Self-Reflective Frameworks and Portfolios: Promoting Empowerment Models of Learning: A New Zealand Case Study

Abstract

The concept of reflection as a tool to improve professional practice has been widely debated in educational circles for a number of decades. Reflective-frameworks enable individuals to make connections and comparisons between their existing experiences and accepted standards. In essence individuals make meaning from their experiences in relation to accepted practice. Building on the experiences of investigations into the compulsory sectors "information and communication technology professional development (ICT PD) cluster model" this case study explores the use of reflective-frameworks. It will illustrate how the use of a competency assessment tool (The CAT) helps individuals generate personal learning plans to suit their time-frames and location. The paper concludes by arguing self-reflective frameworks encourage empowerment models of learning.

1. New Zealand Context

The rapid advancement of Information and Communication Technologies (ICT) has been referred to as the third revolution in the public dissemination of knowledge and in the enhancement of teaching and learning. The first revolution being the creation of a written language and readable records and the second the development of movable type and the publication of books (UNESCO, 2008). To participate successfully in this new "knowledge age", supported by increasingly globally-connected learning environments, individual New Zealand educational institutions, and successive Governments have increased their investments in ICTs (Ham, Gilmore, Kachelhoffer, Morrow, Moeau, & Wenmoth, 2002). This investment in infrastructure, hardware and applications has been matched by a corresponding increase in the funding for professional development provision for staff in ICT. This increased provision of professional development acknowledges that the level of competence and confidence of staff in the educational use of ICT directly impacts upon the capacity and capability of institutions to positively engage their learners in ICT-supported learning environments (Clayton, Elliott & Saravani, 2009a).

2. Provision of Professional Development

In the provision of professional development there appears to be a natural association between staff acquiring skills (are competent), deploying these skills in their professional practice (are confident) and believing the use of ICT is beneficial to themselves as professionals and to their students as learners (are capable) (Clayton, et al, 2009). This suggests that, in structuring a balanced ICT PD programme, three key elements need to addressed:

1. *Competencies (How):* Practical sessions should be offered on 'how' to competently operate various ICTs both for administrative and academic purposes and for learners to utilise them in their learning activities.
2. *Confidence (When):* Sessions, enhanced by authentic examples, should be designed to show 'when' ICTs can be successfully integrated into learning activities and administrative tasks.
3. *Capability (Why)*: Sessions, supported by applied research, should be structured to illustrate 'why' using ICT in classrooms and for administrative purposes is beneficial to teachers, students and schools.

In the New Zealand compulsory education sector (providing education for learners aged 5 – 17), the initial ICT professional development offered to New Zealand teachers followed the conventional models and modes of provision. In essence, a nationally perceived need (i.e. teachers' lack of personal ICT skills (competencies), knowledge of when to use ICT in learning events (confidence), and the associated theoretical understanding to effectively use ICT in the learning environments they created (capability), was centrally addressed. This was achieved by either the creation of a range of structured professional development activities, provided within a defined timeframe, at specified locations and facilitated by external experts or, by the funding of a central advisory service that employed IT specialists to provide guidance to individual schools on the integration of ICT in the curriculum (Ham, et al, 2002).

3. Deficit Models of Professional Development

External experts provided the initial teacher professional development. They delivered preconceived learning events to specifically address their understanding of the identified deficiencies in knowledge. This approach did not fully acknowledge the views held by teachers of teaching and learning and ICT, that would be resilient and resistant to change (Gilbert, 1993). This centrally controlled broadcasting of learning events followed what could be considered a 'deficit' model of professional development (Clayton, et al, 2009a). This deficit model is illustrated in Figure 1 below.

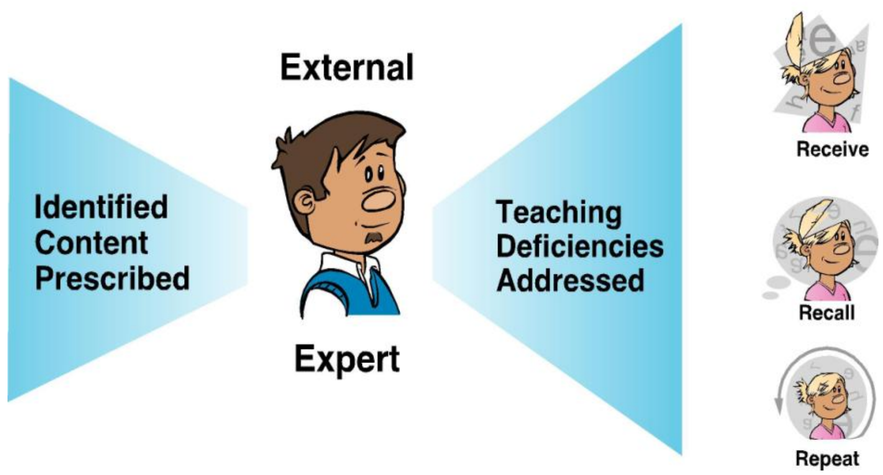

Figure 1: Deficit Professional Development Model

This Deficit Model fails to acknowledge that over the last five decades the views held by constructivists have significantly influenced the way professional development is conceptualised, designed and delivered. The separation between knowing and doing, described by the folk categories of 'know what' and 'know how' (Brown, Collins, & Duguid, 1989) or more cynically “all-knowing” and “know-nothing” (Florida and Kenney, 1990) can no longer be sustained, A foundational premise of constructivism is the concept that knowledge is actively constructed by the participant, not passively received from the environment within which they are placed (Clayton, 2009, Driver, 1989). To put it simply it appears impossible to transfer competencies and concepts of ICT in education wholesale into teachers' heads and expect these to remain intact or unaltered. In short, the presentation of pre-packaged ICT learning events to treat teacher deficiencies does not necessarily mean changes in practice will occur.

4. Empowerment Models of Professional Development

Influenced by the school reforms of the early 1980s (Dept of Education, 1989) and the devolvement of some operational responsibilities from central agencies to self-governing Boards of Trustees, a school-focused model of professional development was introduced in 1996. This was the Information Technology Professional Development (ICT PD) initiative (ICT Strategy Reference Group, 1998). The ICT PD model encouraged groups of schools (clusters) to reflect upon the potential impact and influence of ICTs on their learning communities and stakeholders. This reflection aimed to assist schools in identifying why, when and how ICTs would be integrated within their current practice (Ham, Toubat, & Williamson-Leadley, 2005): Clayton, et al, 2009a). In essence, the introduction of the ICT PD initiative saw a shift in the investment in professional development by the government and schools from funding a ‘deficit’ approach to an ‘empowerment’ approach (i.e. schools’ internal reflection and decision making on how, when and why ICTs could be integrated was used to drive the creation, provision, timing and content of school-focused professional development) (Clayton et al, 2009a). This ‘empowerment’ approach is illustrated in Figure 3 below.

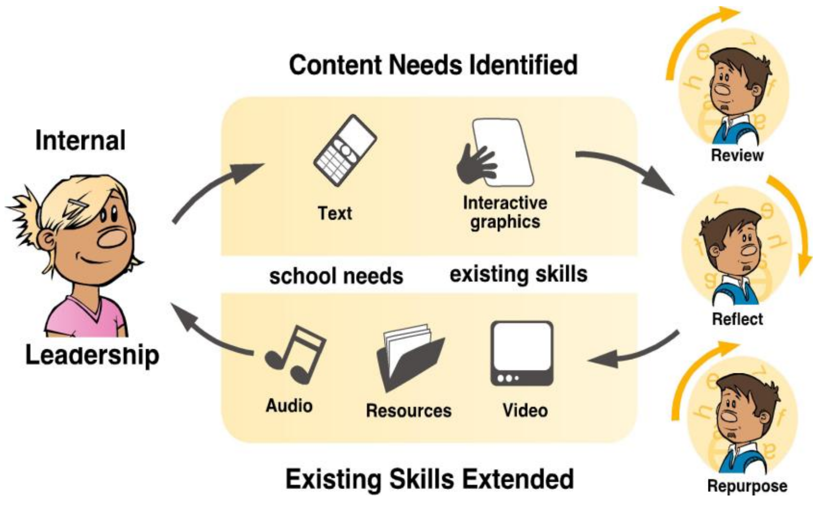

Figure 3: Empowerment Professional Development Model

5. Inherent risks

The innovative shift from a deficit to an empowerment approach places extra demands both upon institutional leaders and individual teachers. For example as well as undertaking normal operational tasks, leaders are now responsible for the effective design and efficient delivery of institutionally-focused professional development. Individual teachers, as well as performing normal duties, are now responsible for the identification of professional development activities relevant to their specific needs. These tasks were generally unanticipated when they were originally appointed to their roles. An identified risk inherent in this shift of approach is the ability of the existing leaders and individual teachers to undertake the complex tasks of reflection, identification, design and delivery of relevant professional development activities to meet the specific needs of the institution or themselves. One way of mitigating this inherent risk is to identify best-practice standards in ICT PD for leaders and individuals to use as a framework when reflecting on institutional or individual existing capabilities and as an indicator for future development.

The Emerging Technologies Centre at the Waikato Institute of Technology has used a reflective-framework approach in the development of a Certificate in Open, Flexible and Networked Learning (COFNL). COFNL consists of 5 modules based on identifiable Unit Standards registered with the New Zealand Qualification Authority (NZQA, 2011). Basing the modules on these registered standards ensured firstly, teachers would be following best national practice and secondly, it aligned their professional development activities with national goals.

6. The Reflective-Practice Framework

The concept of reflection has been widely debated in educational circles for a number of decades (Kreber , 2004: Brockbank, & McGill, 2007). To advocates of reflective practice, deep-learning is dependent on individuals making meaning from their experiences through reflection (Sugerman et al, 2000). To engage participants in reflective practice and to aid them in making connections between identified pedagogical standards in ICT and their previous experiences, a self-reflective Competency Assessment Tool (The CAT) was created for COFNL participants. The CAT was designed to enable learners to assess their current competencies against nationally defined standards.

The CAT interface provides the learner with a series of statements relating to each of the five modules within the COFNL. The statements within each module are classified within three categories;

- <u>Understanding:</u> This category prompts the learner to reflect on their personal knowledge of the aspect being investigated
- <u>Evidence:</u> This category asks the learner if they can provide evidence of their understanding
- <u>Moderation:</u> This category asks the learner how the evidence provided has been evaluated.

Learners are asked to reflect upon and then respond to individual statements using a 'drop-down' menu. Categories, statements and example responses are illustrated in figure 4 below,

Examine the relationships between participants in OFNL.	
Understanding	
I have a good understanding of the relationships (such as direct, indirect, active, passive, interactive, independent, and interdependent) that exist in open, flexible and networked learning environments.	Partially agree
I have evaluated the impact different relationships between participants in OFNL (such as direct, indirect, active, passive, interactive, independent, and interdependent) have on student learning in different contexts.	Strongly agree
Evidence	
I can provide digital evidence of my understanding of the relationships (such as direct, indirect, active, passive, interactive, independent, and interdependent) in open, flexible and networked learning environments.	Partially agree
I can provide digital evidence of how my understanding of the relationships between participants in OFNL (such as direct, indirect, active, passive, interactive, independent, and interdependent) has been used in my practice in different contexts.	Agree
Moderation	
My understanding of the relationships (such as direct, indirect, active, passive, interactive, independent, and interdependent) in open, flexible and networked learning environments has been peer reviewed.	Select
Practical application of my understanding of the relationships between participants in OFNL (such as direct, indirect, active, passive, interactive, independent, and interdependent) has been peer reviewed and assessed.	Select

Figure 4 Categories, statements and responses

As learners progress through the CAT their answers affect the indicator colour on the index page. The indicator colours are based on the familiar "traffic light" theme;

- Red: This indicates to the learner they have limited knowledge and/or experience of the identified standards. It also indicates how these limitations can be addressed.
- Yellow: This indicates the learner has some knowledge and/or experience of the identified standard. It also indicates how this existing knowledge/experience can be built upon.
- Green: This indicates to the learner they meet the requirements of the identified standard. It also indicates to the learner they can now build knowledge and experience in other areas.

As the learner progress through the modules, categories and statements, their responses provide a pictorial reflective framework carpet. This reflective process and visual carpet enables individuals to select which module(s) they need to review, which competencies they need to develop, what evidence they need to provide and how they should evaluate their practice. The visual carpet produced from learner engagement provides the learner with:

- an initial assessment of their current knowledge, experience and understanding of individual aspects of a specified domain,
- a range of potential starting points to begin a learning journey,
- the ability to map a learning route from starting points to intended achievements.

This reflective framework and visual carpet is illustrated in figure 5 below.

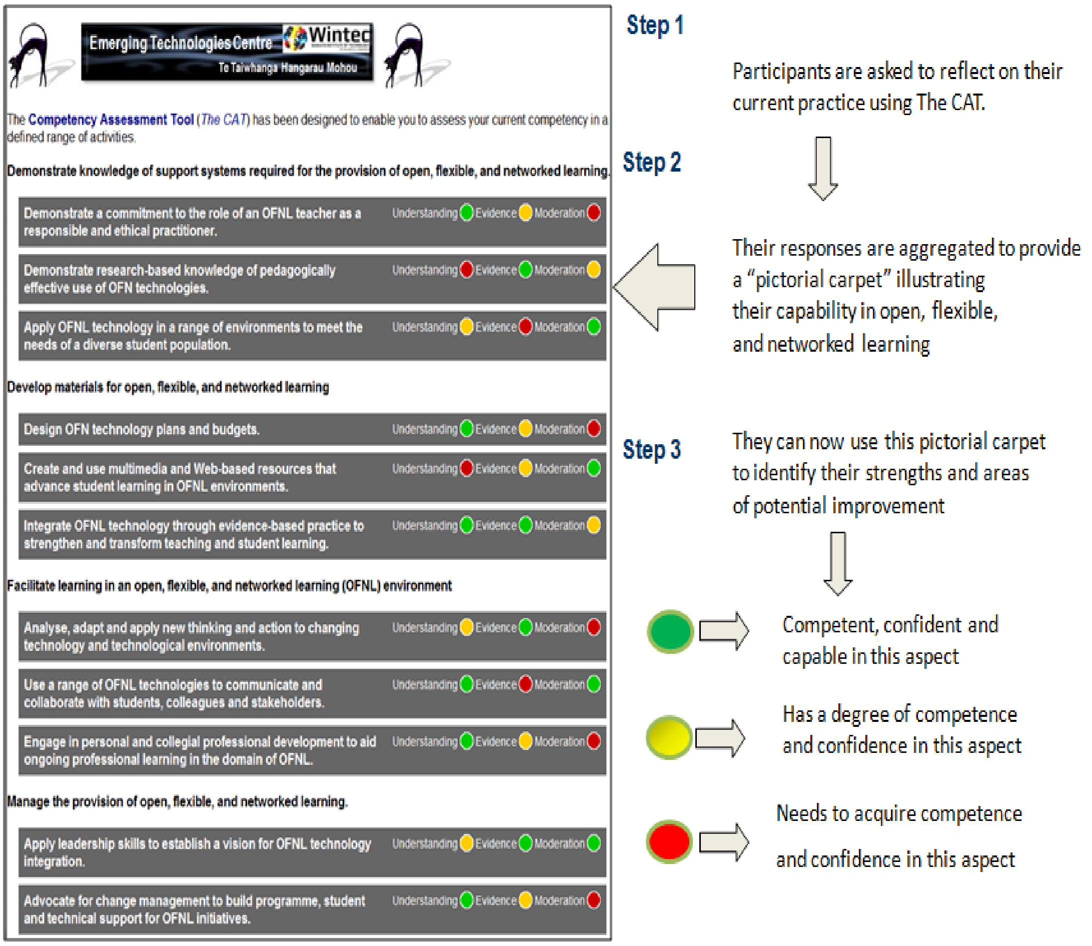

Figure 5 The reflective framework

In essence engaging with The CAT assists the learner in the creation of a personalised learning plan (Ward, & Richardson, 2007) enabling them to become self-regulated learners (Zimmerman, 1990).

7. The Mentor Relationship

Whilst designing individualised personal learning plans are focused on the individual taking ownership of the learning process, the regulations of the certificate recognise individuals cannot achieve their intended goals on their own. When the learner enrols in the certificate they are allocated a mentor. The mentor will use the results of the CAT and learners personalised learning plan to guide learners by providing appropriate links to educational theory and practical demonstrations. Through ongoing feedback and follow-through, the mentors will create an environment that encourages greater autonomy, personal transformation and deeper self-reflection (Galbraith, M. 2003: Basile, Olson, & Nathenson-Mejia, 2003). However, mentorship is not a one-way process. COFNL identifies both the responsibilities of the mentor and learner. The responsibilities of the mentor include:

- Being available at predetermined times throughout the duration of the learners' enrolment in the course.

- Providing ongoing guidance, encouragement and support, and assist students to achieve their identified learning outcomes.
- Ensuring learners' receive timely and appropriate feedback on course progress and on outcomes of specific requests.
- Monitoring the individual learner to ensure completion of a comprehensive record of achievement in a personal online e-portfolio

The responsibilities of the learner include

- Acting in an ethical and responsible way in all communications associated with the course.
- Submitting evidence of achievement of individual outcomes on a regular basis.
- Submitting evidence of achievement of learning outcomes in the format outlined by their mentor.
- Abiding by any response timeframe set by mentors to ensure appropriate and timely feedback is received.

8. Digital Portfolios

A portfolio can be regarded as the purposeful collection of a learner's work that can be structured to exhibit the learners' efforts and achievements over time (Kim, Ng, & Lim, 2010). Portfolios are increasingly seen to be a valuable tool for assessment of competencies and are used in many professions such as nursing, medicine, and teaching (McColgan, & Blackwood, 2009). In accreditation environments like COFNL, digital portfolios can provide a protected space where learner evidence of competencies can be rigorously controlled and systematically evaluated (Fiedler, Mullen, & Finnegan, 2009).

In the COFNL environment learners are shown how to structure their portfolio around the assessment rubric created for each of the five modules. The assessment rubric provides a measure of quality of performance based on established practice in open, flexible and networked learning environments as identified by the New Zealand National Qualifications Authority (NZQA, 2011). In essence the rubric is based upon what the participant can demonstrate they have learnt, rather than what has been taught. As such it should be regarded as an authentic competency assessment tool. An example of this structure is illustrated in Table 1 below.

Main Category	Sub-category
Demonstrate knowledge of theoretical models of adult learning	Apply sound knowledge and understanding of adult learning theories and epistemological principles to the effective design of learning objectives, curriculum and application of OFNL technologies in learning and teaching.
	Contribute to the development of the knowledge base of the OFNL community.

Table 1: Portfolio Structure

9. Discussion and Conclusions

This paper has argued investment in the central provision of professional development, where teachers' identified deficiencies are treated by external experts, does not encourage a change in teaching practice. The approach fails to acknowledge the influence of the learners' prior experiences and is a deficit model of provision. A more effective model of provision is where teachers take ownership of their own professional development learning plans. They need to be encouraged to reflect on their current practice and engage in the design of professional development to meeting their identified needs. This approach acknowledges the influence of learners' prior experiences and is an empowerment model of provision.

However, it is recognised a shift from deficit to empowerment models of provision will place extra demands upon individual teachers. An identified risk inherent in the shift in models is the existing abilities of teachers to effectively reflect upon their current practice and have the depth of knowledge to then identify the relevant professional development required. To mitigate this risk it is argued a self-reflective framework approach, where teachers are able to make meaningful connections between their current practice and recognised standards, is required. This approach enables learners to work independently, manage time effectively, and think self-critically. It actively engages teachers in the design of personal learning plans, enabling them to be self-regulated practitioners'.

This paper has argued the effects of empowerment models of PD, driven by a reflective-framework approach, will be positive. This approach will enable teachers to both make meaning from their experiences and learn from engaging in the reflective experience. In essence, empowerment models provide educational institutions with the required competent, confident, empowered staff to increase institutional capacity and capability in ICT enabled learning environments and improves not only their professional practice but also the experiences of their learners.

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