E-Portfolios in Teacher Education

Abstract: This study looks at the use of educational e-portfolios in pre-service teacher education and how they have been implemented to allow students to share their resources, reflect on their teaching practice, providing evidence of best practice and show examples of work created in a Secondary Biology teaching course. Students were introduced to the 'myporfolio' software at the beginning of the course and were required to upload documents of their own as well as examples of work produced in their classrooms for part of the course assessment. Using the Change Theory and the characteristics of change, need, clarity, complexity and quality/practicality, I will discuss whether current students could be change agents from the 'bottom up' for e-portfolio introduction into New Zealand schools. Examples of types of artefacts will be examined including a possible way to use e-Portfolios specifically in secondary Science Education and how they can be used to meet and incorporate the values and key competencies of the New Zealand curriculum.

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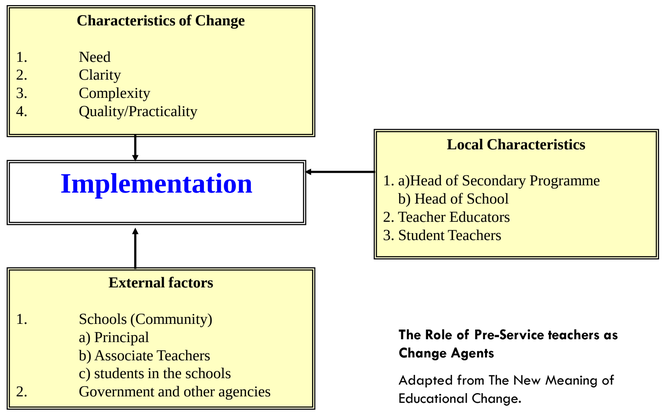
What are e-Portfolios?

They are a tool that allow both students and teachers to collect and organise artefacts that have been created in many different media types. For example audio, video, graphics, text, and the use of many web 2.0 tools. Material can be organised in a way that that can either showcase a students work, or show the development of their learning over time. (Barrett 2005)

Change Theory

Change theory embodies a number of theoretical frameworks or models that allow a researcher to analyse aspects of the 'change process' within an institution or educational context. Cobb (2001) defines a change agent as someone who possesses the skills, desire and motivation necessary to make schools more equitable. A teacher who is a change agent believes that schools must not simply perpetuate the present social order but seek to effect change by assuring that all students have the necessary skills for equal access to job opportunities. Each stakeholder identified within the Change agent model must work together to have a shared vision, and implement any new initiative so that its effects will be long lasting.

There are currently changes occurring with the NZ curriculum, and the realignment of the achievement standards. A very large change for teachers! If a new ICT innovation, in this case the introduction of e-portfolios, is to be managed and implemented successfully, both pre-service and current teachers can work with other stakeholders to ensure that introduction of e-portfolios has a positive impact on learning and assessment, and also will continue to be used long-term.

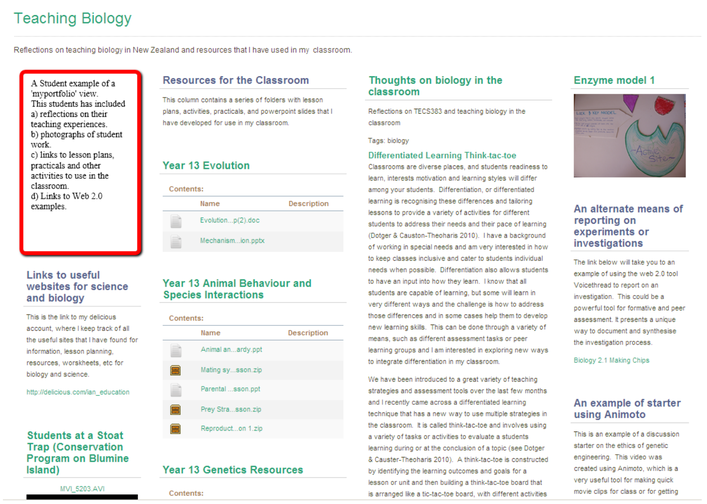


The Role of Pre-Service teachers as Change Agents

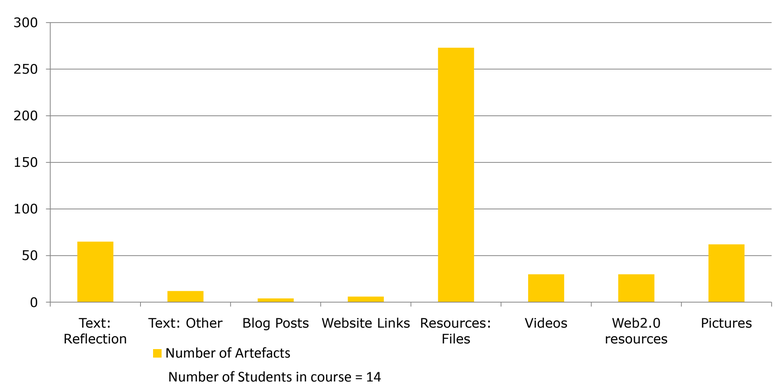
Adapted from The New Meaning of Educational Change.

Michael Fullan (2007)

Examples of a 'myportfolio' view, showcasing a variety of artefacts.



Number of Artefacts Shared in a Secondary Pre-Service Teacher Education Curriculum Course.



References

Barrett, H. (2005), "White Paper: Researching Electronic Portfolios and Learner Engagement". Retrieved September 9th, 2010, from: http://electronicportfolios.org

Cobb, J. (2001). Graduates of professional development school programs: Perceptions of the teacher as change agent. Teacher Education Quarterly, 28(4), 89.

Fullan, M. (2007) *The New Meaning of Educational Change*. (4th Ed.) Teachers College Press. New York, NY.

How are E-Portfolios being used in Teacher Education?

- As a reflective tool to be used to document students learning, and subsequent changes in their learning as the course progresses.
- As an assessment tool, to showcase examples of work the students have produced. This can include work done within a course, as well as examples which have been collected while out on teaching practice demonstrating that they have acquired skills in relation to ITE requirements.
- As a collaborative tool, to share resources with their peers, developing a learning community. This is apparent in the number of 'files' shared within the groups view (see graph)
- The chance to be 'bottom up' change agents. As current users of the technology they will be able to bring their own experiences of e-portfolio use, and begin to implement them into schools.

Implications For Schools.

- Embracing this as a new tool. Many of the features of an e-portfolio have links to the NZ curriculum, such as the key competencies, and e-learning and pedagogy.
- As a forward thinking tool in relation to implementing internal achievement standards.
- Greater connectivity between courses, and a learning journey in a subject can span multiple years. For example Science investigation skills which are transferable from Level 1 through to level 3.
- Associate teachers being aware and accommodating of e-Portfolio use by pre-service teachers while in their classrooms.
- New teachers have the skills to use an e-Portfolio, but do schools have the infrastructure to accommodate them?