Multimedia Enhanced Student Portfolios:
Providing Evidence of Competency in a Teacher Education Program

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Abstract:

Changing life and work environments have led to a decline in permanency of employment within industrialised societies. The new millennium calls for portfolio workers with transportable skills. Skills and work practices heavily bound to one context are no longer considered as currency; employers are calling for generic attributes to be identified.

This paper discusses the second stage of a learning and development project at Queensland University of Technology (QUT), Brisbane, Australia. One of the projects the Faculty of Education's Flexible Pedagogies research team are investigating is the use of digital images to aid reflection. The paper will focus on how the taking of still and video images whilst on practicum placement aided reflection with two cohorts of pre-service teachers.

1. Defining teacher practitioner attributes

Changing life and work environments have led to a decline in permanency of employment within industrialised societies. The new millennium calls for portfolio workers with transportable skills. Skills and work practices heavily bound to one context are no longer considered as currency; employers are calling for generic attributes to be identified.

This paper discusses the second stage of a learning and development project at Queensland University of Technology (QUT), Brisbane, Australia. The Faculty of Education's Flexible Pedagogy research team is investigating how digital images taken on practicum placement can aid reflection. It relies on the Faculty of Education allowing pre-service teachers to store files on a student server accessed through its intranet, and to allow the pre-service teacher web folders to be accessed through the Internet.

2. Background information

The first stage of the project was to establish what 'generic attributes' were to be targeted. QUT (2000) had identified a set of generic attributes for all of its graduates, regardless of discipline [1]. These 21 attributes were listed under three headings: Knowledge/problem-solving (9), Ethical/attitudinal (6) and Social/relational (6). The Faculty of Education, QUT (2000a) had identified an additional set of 20 attributes under the same headings [2]. The largest employer of Queensland teachers, Education Queensland (1999), had a draft set of twelve professional standards for its teachers [3]. On a national level, the Federal Government (National Project on the Quality of Teaching and Learning, 1996) had issued a set of generic capabilities for beginning teachers [4].

After cross matching these 'attributes', 'capabilities' and 'standards' (Greishaber, Healy, Hoepper, Irving, Stokes & Hobart, 2000) the decision was made that the number of attributes nominated in any of these lists was too large to be effectively tracked [5]. Six major attributes were isolated as being important for developing in the education course - Discipline knowledge, Ethics and responsibility, Communication, Designing and problem-solving, Literacies, and Interpersonal skills.

The project's debates were informed by a key research document, *Generic capabilities of Australian Technology Network university graduates* (Bowden, Hart, Kelly, Trigwell, & Watts, 1999), QUT being one of the five universities involved in the research [6]. In the report the Teaching and Learning Committee of the Australian Technology Network identified three reasons for the inclusion of generic attributes into higher education courses:

1. The historic role of universities to produce leaders of society who have a greater role in their community than mere discipline expertise;
2. The production of life-long learners with capabilities to face an unknown future; and
3. Employer expectations of a larger set of capabilities than discipline knowledge.

The report noted that an essential part of this was the need for tertiary students to be metacognitive in their approach to learning, aware of their strengths and areas that needed developing, and in determining how each aspect of course delivery contributed to their skill-set.

Within the research recorded in this paper the use of electronic portfolios provided pre-service teachers with an ongoing reflective device that allowed them to monitor

their development of latest version of the Teacher Practitioner Attributes over the course of their study [7]. In terms of Barrett's stages of electronic portfolio development (2001) pre-service teachers are given the portfolio template and told of the *goal and context* [8]. The use of the TPAs as the framework enables the pre-service teachers whilst *working* on the portfolio to gain an understanding of how attainment of the indicator is embedded in the activities and assessment items of their course. Their selection of evidence is ongoing. This selection allows the pre-service teacher to be *reflective,* not only with regards to their attainment of attributes, but also with what the artefact tells about their ability to "understand and act appropriately in a variety of contexts", the relating stage of Bowden et al's, (1999) scale of attainment [6]. The advantage of a *connected portfolio* is that pre-service teachers can invite administration teams in schools and employing bodies to view their evidence, thus serving as a *presentation portfolio* in the interview situation.

1.1 Using the TPAs as a reflective device

In 2001 the TPAs were used as the basis of digital portfolio for the first year Bachelor of Education (Primary) students (n=300). At the end of semester one they were advised to place in an evidence folder any tasks undertaken during the semester that demonstrated their current attainment of that attribute. For example, Figures 1 and 2 show the homepage and Individual TPAs of a student who has linked two items of evidence to the page (pages used with permission).

Figure 1. Student homepage (used with permission)

Figure 2. Individual TPAs with evidence linked (used with permission)

The portfolio is not assessed. One of its aims is to allow students to be metacognitive about their learning, and reference to the TPAs on the portfolio pages encouraged the students to become familiar with the range of teacher practitioner attributes the Faculty of Education had deemed important.

2.0 Multimedia-enhanced student portfolios

In semester 2 2001 the project was further enhanced by the use of video segments and images. Two tutorial groups were chosen to trial the project. One tutorial group was clustered for practicum placement in a geographic region where the liaison academic had established rapport with the administration teams in five schools. These schools were approached and an acceptable user policy was devised. It was a stipulation of the project that:

- No image/movie can be published that has not been viewed and passed by the authorised person in the Cluster School.
- No image/movie can be published in which any student can be identified.
- All images where students can be identified MUST be destroyed before you leave your prac school.
  http://education.qut.edu.au/stokes/mesp/web [9]

2.1 Logistics

Seven digital cameras were purchased for the project. The Sony Mavica MVC-FD92 camera was chosen because of the ability to capture 60 seconds of video and record onto a 3.5 cm disk. The Sony CD Mavica, that saves digital media to mini CDs, was trialed but proved more cumbersome to use. The mini CDs had to be formatted in the camera prior to images being taken and a caddy was needed to hold the mini CDs before the images could be

down-loaded onto the computer. Mini tripods that stood on desk-tops were also bought.

In recognition of the cooperation of the cluster school, equipment left at the school (camera, charger and tripod) could be used on days that the pre-service teachers were not attending practicum placement, on the proviso that the cameras would be ready for pre-service teacher use when needed.

3.0   Feedback

Feedback from pre-service teachers, supervising teachers and school administration teams was positive. Supervising teachers indicated that the process did not interfere with either student learning or pre-service teacher concentration on their teaching task. Whilst it was proposed that pre-service teachers cooperatively take the images of each other teaching often the supervising teacher was so enthralled by the project that they captured the images.

Administration teams indicated that they thought that the project was worthwhile, some lamenting the fact that their teachers were not as proficient as the pre-service teachers when it came to ICT use in constructing webpages.

Below are comments from pre-service teachers who responded to a survey sent at the end of their practice teaching placement:

- *I plan to add to it (my webpage) in the future;*
- *Good to reflect on my teaching strategies;*
- *This process provides a snapshot of the teacher's presence in the classroom and could prove beneficial to a prospective employer.*

4.0   Current state of project

In 2002 the project is being trialed again with a Master of Teaching cohort (n=41). These pre-service teachers are at a different stage of their teacher education from the previous cohort. The assessment for one of the units undertaken in their third semester is to prepare a portfolio that becomes the basis of their teaching portfolio for their employment interview with Education Queensland. Eleven of the cohort have elected to trial capturing multimedia elements whilst on practicum placement and to construct an electronic portfolio. The pre-service teachers have elected to use EQ's selection criteria as the basis of their portfolios (http://education.qld.gov.au/ corporate/hr/pdfs/teach.pdf) [10].

In 2002 the project team will distribute the cameras and tripods to pre-service teachers on practicum placement during their third semester practicum but access to the equipment in semester four will be pre-service teacher initiated. Surveys will capture pre-service teacher use of equipment, reflections on the project and the use of the portfolio in the interview situation. This data will be ready for dissemination at the time of the conference.

5.0   References

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