

# **Innovation in practice: from consumption to creation**

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In this paper I focus on three aspects of innovation: its purpose of supporting lifelong learning during and after schooling, the ways that ICT supports learning and knowledge creation, and digital portfolios as an example of learning and innovation. Finally I suggest five learning challenges for this audience of teachers.

### **The purpose of innovation**

Innovation involves doing things differently, creating new connections and new knowledge products. I argue that the purpose of innovation in schools is to support lifelong learning for all, here and now. Lifelong learning means that students, teachers and the wider community have opportunities to continue their learning and development at any age.

Teachers can encourage lifelong learning through modelling and sharing their learning, and encouraging student involvement in decision-making about learning. Lifelong learners are generally said to be reflective and self-directed, active investigators and problem-solvers, and effective communicators. They are social and collaborative, acting interdependently with others. They gain deep understanding of the world. In short, they are socially competent.

### **ICT supports learning**

ICT supports learning activities that can be categorised as consumption, production or creation of knowledge (Hartnell-Young, forthcoming). Similarly, Cahn (2002) talks of viewers, players and creators, while Leafe (2001) refers to technology use as browsing, interacting or collaborating. Some authors (eg Heppell, 1993) suggest that, over time, the focus of activities moves from purely consumption (of other people's material) to production and publishing of material, and finally to shared creation of new connections

and knowledge. I argue that the choice of focus is not likely to be time-dependent, but based on views of teaching and learning.

An analysis of the uses of technology suggested in the Victorian Curriculum and Standard Frameworks (CSF II) shows activities from all three categories, and some examples are shown in Table 1.

**Table 1: Examples of activities using technology**

<b>consumption</b>	<b>production</b>	<b>creation</b>
<ul style="list-style-type: none"><li>• copying text</li><li>• browsing the Internet</li><li>• downloading images</li></ul>	<ul style="list-style-type: none"><li>• linking files</li><li>• sending email messages</li></ul>	<ul style="list-style-type: none"><li>• uploading material to share and collaborate</li><li>• designing video games programming</li></ul>

The frameworks in each Key Learning Area provide a relatively open structure that can be filled with purposeful learning activities, although some teachers clearly find the CSF constraining. Where the openness of the frameworks is emphasised, students are able to create and innovate. One primary student captured the potential of technology to support her learning activities:

Your computer can help you with anything you need. You can type up all your stories without them getting messy. You can load games if you have enough memory. But the thing I like best is that you can do anything you please.

### **Digital portfolios**

Digital portfolios — containers of multimedia forms of evidence of activities, achievements and reflections — are just one way in which technology can support lifelong learning and the creation and sharing of knowledge. They are currently used by students in various countries in kindergarten, school and university, and are becoming popular among teachers and other professionals who recognise the “power” of portfolios.

Students’ portfolios can be used to enhance their self-efficacy, share and create knowledge with peers, and communicate with parents. They can be containers for assessment tasks. Where teachers make time to view student portfolios at transition points such as between primary and secondary schooling, they provide evidence of skills

and achievements, and often allow the students' different personalities to shine through. Later, portfolios showing school achievements can support job and course applications.

Purpose is fundamental to learning, and likewise, to all portfolio development. Without a clear purpose, it is hard to identify the audience, and therefore the appropriate content and style for the portfolio. Purpose also influences the structure, such as professional standards or key selection criteria. In order to make purposeful portfolios, it is essential to maintain an up to date professional archive, from which material is selected for a particular portfolio. You cannot make one portfolio fit all purposes.

Portfolios for teachers provide opportunities to reflect on professional practice, to record and celebrate achievements, and to share professional wisdom. Through the process of creating a portfolio, many teachers gain greater self-knowledge and self-esteem, indicating that the process is as important as the product. Although the process of developing a portfolio takes time, beginning and experienced teachers who have submitted CD-ROM or web-based portfolios to support successful job applications believe they have provided the panel with a depth of evidence in a range of styles.

### **Portfolios for professional development**

A group of teachers — women@the cuttingedge — came together in the late 1990s to develop multimedia portfolios as a means of learning about and through technology, while reflecting on their teaching and their professional achievements. The group was successful in receiving funds from the US telecommunications company, AT&T, to create a professional development program that modelled females using technology for their own purposes.

This successful model was built on for a DE&T leadership-training program — Women at the Interface — where women are encouraged to take advantage of their lap top computers to create digital portfolios to support their leadership skills and aspirations.

One participant wrote:

Working with women in leadership positions provided role models that helped me visualise my position in the future. The development of my multimedia portfolio and all the necessary steps to put it together gave me the practical tools to achieve this.

Developing and celebrating with portfolios supports the attributes of lifelong learning. Through collecting and reflecting on material over time, portfolio developers — whether students or teachers — can take charge of their learning and development. By sharing their knowledge with a range of learning communities, both face-to-face and on line, they develop communication and technology skills and become more knowledgeable.

### **Learning challenges for teachers**

If portfolios are truly to enhance lifelong learning and innovation, teachers need to be involved with students in determining their purposes and their form at the local level. In the United States, Barrett has observed a trend towards portfolio development based on templates developed by software companies — with the purpose of assessment — often incorporating on-line database management to meet national accreditation standards (see her website <http://electronicportfolios.com> for further details). These systems, with their strict structures and parameters for content, are likely to ignore the “soul” of the portfolio process and constrain innovation. In contrast, where teachers and students devise their own forms and encourage wide-ranging content, portfolios can be the basis for cross-generational community projects, where stories and technology skills are shared. Barrett is currently working on local projects of family support for electronic portfolio development in early childhood education, and using digital storytelling to create rich artefacts for family digital scrapbooks (eventually on DVD).

The imperative for innovation in schools is frequently emphasised and the important role of teachers is acknowledged. The learning challenges that flow from this paper for teachers — in conjunction with students — are these:

- Reflect on your lifelong learning practices: particularly with others.
- Analyse the purposes and current uses of technology in your school in terms of consumption, production and creation of knowledge.
- Know the curriculum frameworks so well that you can be confident to consider them as open structures to be filled with good practices.
- Identify opportunities for innovation through making new connections and new products: thus supporting lifelong learning here and now.
- Be proactive, rather than reactive.

## References

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