

Sustaining and transferring curriculum and pedagogical innovation through establishing communities of practice

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The lack of a sharing and collaborative culture within schools was identified as a key barrier to the successful implementation and scaling up of innovative practices using technology in education in Hong Kong, according to a government report (EMB, 2004). The report identified a need to develop more supportive structures and mechanisms to foster a shared culture and to establish communities of practices between teachers to encourage the sharing and the exchange of classroom experiences as well as to collaborate in curriculum and pedagogical innovation in and across schools. This paper outlines how a supportive structure was built by establishing the environments and infrastructure, focusing on building communities and partnerships. The paper presents the framework which guides the establishment of the communities and identifies mechanisms to foster a sharing and collaborative culture.

Keywords: building communities, sharing practices, teacher education

Introduction

Law's (in press) analysis of The Second International Information Technology in Education Study (SITES) M2 case study noted that pedagogical innovations in using technology in education are not difficult to find around the world but are hard to sustain and transfer. The lack of a sharing and collaborative culture within and between schools was identified as one of the key barriers to the successful implementation of innovative uses of technology in education. In alignment with the EMB strategies outlined in the 2004 document, Law (ibid) further stated that there is a need for the establishment of an implementation model for professional development and school change to build on the innovation and reform initiatives that have already started and are recorded in the SITES M2 cases. In Hong Kong, the government identified empowering "teachers with IT" (EMB, ibid) as one of the seven strategic targeted goals. To achieve this strategic goal so that teachers can take advantage of ICT to effectively bring about the kinds of curriculum and pedagogical changes advocated by the curriculum reform currently underway, there is a need to develop more effective support structures and mechanisms to foster the establishment of communities of practice in curriculum innovation for teachers. The experiences gained from running professional development activities based on the SITES M2 case studies (Yuen, Fox & Law, 2004), highlighted the need for a more extensive set of support mechanisms to increase the potential of sustaining and transferring innovative developments in schools.

In order to set up supporting structures and mechanisms that allow teachers to share and exchange experiences as well as to collaborate in curriculum and pedagogical innovation, during the period 2004–2005, EMB commissioned the Centre for Information Technology in Education (CITE) of the University of Hong Kong to establish a database to support the sharing of case studies of good practices in IT-supported teaching and learning in schools. The brief was that this database should also highlight the key dimensions of innovation as well as the features and contextual factors involved in each of the examples given. The objective of setting up this website (<http://goodpractices.cite.hku.hk/>) was to encourage teachers to share their own pedagogical uses of information and communication technology (ICT) with other interested education professionals, to establish networks of practitioners to reflect on practices and to support the formation of communities amongst teachers and principals.

This paper outlines a brief framework in designing this website, followed by the building of teacher communities and their support mechanisms.

Framework for the design of the Good Practices website

Research conducted on the use of the SITES M2 case studies (Law, 2004) identified a key strategy to establish a culture of ongoing professional sharing and collaboration was to provide a common environment where teachers can disseminate and share good practices to promote the use of IT in learning and teaching and to gain feedback from users to improve and consolidate their practices as well as to build up a community of interested practitioners. The following framework was used to guide the design and development of the Good Practices website. The main purpose for the Good Practices website was to create an innovation community, a mechanism for teachers to explore, share and reflect on their own pedagogic uses of ICT with others. The Good Practices website was not a database that would enable searching information ready-made packaged cases but rather an interactive and constructive professional development environment that would encourage teachers to learn about and share the tacit aspects associated with the complexities of implementing innovative pedagogical practices in schools. The Good Practices website was not therefore solely designed by and for the researchers but was designed and co-constructed with teachers involved in developing and reviewing case studies of good practices. Teachers were invited to share their ideas and comments on the structure, the content, activities and questions as well as technical issues during the design and production stages. The Good Practices environment was therefore conceptualized and co-constructed with the central involvement of the teachers who were to develop cases as well as use the cases to stimulate debate about good practices.

Nonaka and Takeuchi (1995) stated that knowledge can be transferred from an individual to a collective dimension and from the tacit to explicit form. Tacit knowledge here, refers to individual beliefs, ideas, mental models and 'know how' and forms part of the teacher's intuition about teaching and learning gained through experience. Through discussion, reflection and debate this tacit knowledge can be transferred to explicit knowledge by participating in a socialization process, enabling this knowledge to be transmitted and exchanged in a shared community of practice. In developing a professional development environment a critical issue was to highlight teachers' tacit knowledge. In designing the narrative template therefore, due emphasis was placed on eliciting teachers' tacit knowledge of good practices. Questions concerning the implementation stages and procedures, difficulties encountered, ways to solve problems encountered as well as smart tips for implementation were included in each case. In addition, resources such as lesson plans, students' authentic work, videos, photos, action plans and other learning and teaching materials that help readers to understand, empathise and interpret the case were included in the website. To facilitate the exchange and inquiry, a discussion forum was included for each case in the website.

Kubitskey, Fishman and Marx (2004) state that teachers in general are satisfied with practices which have served them well over time and often do not see any need for professional development to help them change their practices or to do things differently and that their own beliefs affects their teaching effectiveness (Meltzer et al. 2004; Stronge, 2002). In order to stimulate an examination of their own practices and to review others, Fullan (1991) argues that practitioners should always question their own ways of doing things and experiment with new ways. He suggests that it is only through trying out new ways that we really get to understand our own and others' practices. Establishing professional development communities that encourage this questioning, reflection and trialing of new ideas is important. Shulman (1987) argues that this questioning is best done in situations that support collaboration, experimentation and a challenging discourse between practitioners. According to Darling-Hammond and McLaughlin (1995), effective professional development requires teachers to be provided with opportunities to reflect critically on their practice and to construct new knowledge and beliefs about content, pedagogy and learners. The Good Practices website was therefore designed to enable participating teachers to engage in a learning cycle of reflecting, thinking, doing, and evaluating. Teachers involved in developing and writing up the cases were asked to reflect on their own practices, and the role of the teacher, of students and the impact of the practices on student learning and were encouraged to evaluate and modify their practices as they interacted with fellow education professionals, exchanging ideas, experimenting and trialing new ideas. This 'productive tinkering' where teachers try out ideas and discuss levels of success with other teachers in a 'conversation on practice' (Yinger, 1987) was considered an essential part of the professional development process.

Building the communities

Twenty pilot schools in Hong Kong have been identified as Centres of Excellence – schools that have taken a leading role in integrating technology into the curriculum. These schools have been provided with extra support and funding from the government and in return are expected to take a leading role in cross-school activities and in leading and participating in seminars and workshops on technology integration. As part of the Good Practices initiative, two or three teachers from each of these schools were seconded out of normal school duties for one day per week for one year to work on IT-related matters. During this time, the teachers were required to take part in professional development activities, collect information on cases of good practices in IT from their own and others schools and attend workshops led by the Centre for IT in Education (CITE), the University of Hong Kong. Through its involvement in the SITES M2 study CITE has analysed in detail 130 innovative IT-supported pedagogical practices from 28 countries around the world. On the basis of their analysis, they have constructed a database of these innovative case studies to highlight the key dimensions of innovation as well as the features and contextual factors involved in each case study. CITE has also created an innovation community database, a sharing system for teachers to explore and reflect on their own pedagogical uses of IT with other interested educational professionals. Participation in the innovation community database provided teachers with a metacognitive experience through which they reflected on various aspects of their practice, including students' learning outcomes and school factors such as the amount and type of support from school leadership and colleagues, and the technological infrastructure involved.

The 70 teachers seconded from the Centres of Excellence schools who completed the CITE-led workshops then visited schools to introduce and discuss cases uploaded in the website, and to encourage debate and interaction with case teachers both online and face-to-face in schools and in seminars. The seconded teachers also helped the schools visited to identify their own examples of good practice for submission to the website. At the same time the government continued to encourage schools to participate in the good practices initiative by promoting good practices through various means. These include general dissemination of information and publicity, through running information seminars and through encouraging partnerships with commerce, for example with Microsoft, who have run technology and leadership short courses and offered technical support and resources. The government has also offered staffing support to enable teachers to develop and write up their own cases. Teacher training institutions and especially the University of Hong Kong's CITE have also been involved in the project and have engaged in discussions about initial and continuous teacher training opportunities as well as running a series of related leadership courses for principals, in which the Good Practices initiative was discussed and reviewed. Through and because of these initiatives the number of schools involved in the project has grown substantially over the course of its development. To increase the involvement of schools and in order further to advance lateral capacity building (Fullan, Hill & Crévola 2006) ongoing good practice initiatives have been organized, including government sponsored and university-led conferences with good practices as a major theme.

Conclusion

Based on the framework of knowledge as a socializing process from tacit to explicit, communities of practice and teachers as reflective practitioners, the Good Practices initiative is a collective effort of the teachers, principals, government, university and teacher training staff and others. Teachers have commented that the Good Practices website provides an important environment for them to share, exchange, discuss, reflect, and develop new practices. In order to scale up good practices, additional sub-communities need to be established and in each sub-community, teachers need to engage in action research in a collaborative effort. In this sense, teachers new role as action researchers will become not just professional development activities with a life span of one or two days, but a part of their role and vision of what they do as a professional.

The Good Practices project has encouraged not only a more sharing culture in schools and across schools but a greater willingness to share examples of good practice and to participate in discussions about how best various exemplar cases can be adopted across schools. What has become very clear is that straight forward replication of cases across schools is not a satisfactory way of scaling up innovations. As Fullan (2000) pointed out pedagogical innovation is complex and requires not only major structural changes in

schools to support it but reculturing – the process where schools change ‘from a situation of limited attention to assessment and pedagogy to a situation in which teachers and others routinely focus on these matters and make associated improvements’ (ibid. p. 582).

A major challenge is how to sustain and scale up the work already started. All those involved agree that concerted effort and energy is needed from multiple levels within schools, from principals, panel heads and teachers, between schools and from government, teacher training institutions, universities and through links with the community and commerce. Multilevel leadership is essential for this initiative to succeed. The reculturing process that is needed, where attention is given to making continuous improvements and changes to the assessment and pedagogy will take time and much effort.

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Bionotes

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