

Integration of ICT in Education in Vietnam: from Policy to Practice

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Abstract

During the school year 2008-2009, the Ministry of Education and Training (MOET) of Vietnam launched the “Year of ICT” to produce a breakthrough in educational innovation. In light of this development the authors have carried out a policy analysis to study the national vision and mission on integrating Information and Communication Technology (ICT) in education in Vietnam. The policy analysis focuses on the most recent developments in guidelines on ICT and education, in the context of the movement on “Friendly Schools, Active Students”. Exploratory analysis at the level of 5 provincial teacher education institutions (TEIs) sheds light on the discourse adopted in these institutions and assesses the translation and implementation of the developed policy guidelines in Teacher Education in Vietnam.

Keywords: *Educational Technology, Policy analysis, Teacher Education, Vietnam*

1. Introduction

ICT is high on the education reform agenda of many countries in East Asia. New policies for educational reform are built around the premise and promise of effective ICT integration in teaching and learning (Richards, 2004). Yet in practice the use of ICT for teaching practice is limited at best. Analysis of integration of ICT in education cannot afford to decontextualize the computer from wider social and political variables that shape the larger context of schools (Selwyn, 1999). Strategic policies can provide a rationale, a set of goals, and a vision for how education systems might be with the introduction of ICT (Kozma, 2008). Pick and Azari (2008) remark that the results for a single nation seeking improved ICT depends on political will and leadership that appreciates how multidimensional factors need to be combined for development.

2. Research objectives

The research objective of this paper is to investigate the role of ICT in educational reform in Vietnam as stated in the policy guidelines; and the translation of this vision on integration of ICT in the operational components of TEIs’ technology plans. The investigation will focus on the dimensions and character of the national policy guidelines and the rationales behind the national vision and mission. At the same time, the question is how and to what extent this vision and mission is interpreted and implemented in the

practice of teacher education. The analysis aims to evaluate whether the vision and guidelines result in effective integration of ICT in teacher education.

3. Methodology

The policy analysis takes into account the most recent governmental policy guidelines on ICT and education. The analysis aims to illuminate rationales, vision and mission and the priorities put forward, by highlighting essential elements of the guidelines concerning integration of ICT in higher education in Vietnam. The government is the highest organ of state administration of the Socialist Republic of Vietnam. The MOET is the body responsible for education and training in the government, and is responsible for all levels of education (Tran, Vu, & Sloper, 1995).

To assess the impact of policy guidelines and to assess to what extent policies and guidelines are interpreted and implemented in practice, the technology plans of 5 TEIs in Vietnam are analysed. The 5 TEIs take part in a development cooperation programme of the Flemisch Association for Development Cooperation and Technical Assistance on integration of ICT in education and are located in Central and Northern Vietnam. At the start of the year of ICT (2008-2009), the five institutions were instructed to develop a technology plan, following the Planning Guide on ICT in Teacher Education (UNESCO, 2002). These Technology Plans were written by educational managers and ICT coordinators of the respective TEIs. Based on the developed plans, an analysis is made of the institutions' vision and mission and the operational components of the technology plans of these institutions. For the analysis, various 'operational components of ICT planning', as described by Kozma (2008), are used for categorization of planned activities (see table 1).

Table 1
Operational Components of ICT Policies (Kozma, 2008)

Infrastructure development	Provision and budget allocation for technical resources
Teacher training	Teacher professional development
Pedagogical and curricular change	ICT-related changes in curriculum, pedagogical practices, and assessment
Content development	Development of digital content
Technical support	Operational technical assistance

4. Findings

4.1. ICT Policy analysis

The focus on integration of ICT in education is on the enhancement of teaching, training and applying IT in education with Directive 55 of the MOET (MOET, 2008b). Access is still a priority. Provincial DOETs are requested to actively collaborate with Viettel Telecommunication Branches to locally implement the education network. An e-mail education management system has to be developed and all staff, teachers and students in each school have to be provided with an e-mail account in order to improve the exchange of information. IT facility investment will be boosted. But beyond those measures, Directive 55 is much in line with Directive 40 of the MOET with its introduction to the “Friendly School, Active Students” movement in secondary schools in the period 2008-2013, with the aim of building a safe, friendly and efficient education environment (MOET, 2008a). IT can play a role in building friendly schools and active students by supporting a rich, lively and attractive learning environment. IT is conceptualized as a tool that can effectively support the innovation of teaching, learning and education management, contribute to improve efficiency and quality of education. Educators are encouraged to reasonably implement ICT applications in new and innovative methods of teaching and learning at each grade. Educators are warned not to abuse IT and to reflect on added value of applying ICT in their daily teaching practice. Teachers and trainers are encouraged to design slideshow lessons, e-lectures and lesson plans on a computer. A database and e-learning library has to be developed including electronic curriculum and textbooks, tests, virtual experiments, multimedia materials, lectures, slideshows and teachers’ lesson plans.

In guidelines from the MOET to the DOET, these measures are more detailed and put in operation. In the school year 2008-2009, which is launched as the ‘Year of ICT’, The MOET starts a competition for ‘Creative Teachers’ with the slogan “Each Teacher to Build an Electronic Lecture”. DOETs are requested to organize the competition. The same measures on developing e-content, on promotion of ICT for educational management, on training and retraining of educators, on computing as a subject, and on investment in facilities are repeated in the school year 2009-2010.

4.2. Translation and implementation in higher education

The TEIs’ Technology Plans start with a vision statement. Educational managers and teacher educators were asked to express what educational goals their institution strives for with the implementation and integration of ICT. A mission statement should answer the question how this vision can be realised. The developed technology plans vary in comprehensiveness and quality.

4.2.1. Vision on added value of ICT

In all TEIs ICT is perceived as vital to all activities that take place. ICT reduces the workload and improves school administration procedures such as personnel management and accounting. It is valued as a tool to improve communication between teachers and learners, but also with parents and the broader community. ICT is moreover valued for its

contribution to monitoring and evaluation and to educational research, for example through possibilities to store data on student enrolment and graduation results. In most vision and mission statements educational managers also refer to the added value of ICT for teaching and learning. However, statements remain rather general and broad:

“Through ICT, teachers and learners keep pace with the most modern education, to meet the increasing demand on modernization and industrialization.” (ICT Technology Plan TEI #1, p.2)

“Our Teacher Training Institution considers ICT as one of the priorities for the breakthrough in improving educational quality.” (ICT Technology Plan TEI #5, p.1)

Only one TEI explicitly addresses the added value of ICT for teaching and learning in their mission statement:

“It is our mission to use ICT to support innovation in teaching and learning. ICT should be integrated in all subjects in an effective and creative way to improve student activity, self-study and exploration.” (ICT Technology Plan TEI #1, p.3)

Educational managers see a future where the school is no longer a knowledge centre “*in the traditional way*” and where different roles for teachers and learners apply.

“It (the school) becomes a learning center: the learner goes to school to learn how to learn. The teacher is the person behind the students, instructing the students how to learn. The teacher is the person who manages the student's study.” (ICT Technology Plan TEI #3, p.6)

The future classroom is envisioned as an open and friendly environment, where ICT is a tool to support creativity and exploration.

“The future classroom will be an ideal environment for the students to explore, experience and reflect on world knowledge. It will be sufficiently equipped with appropriate ICT, creating opportunities for students to collect knowledge. It is also an experimental environment for students to be creative. The classroom is an environment which provides access to unlimited knowledge. The classroom, teacher and learner are part of an environment which is friendly and offers equal opportunities for study and research. A school with the friendly ICT-supported classroom should be the place where updated technology offers a link to the society.” (ICT Technology Plan TEI #1, p.3)

4.2.2. Critical issues and operational action plans

Infrastructure development

Most educational managers stress the importance of access to ICT, but also the necessity to maximize the potentials of available equipment. To meet standards for integration of ICT in teaching and learning there needs to be sufficient equipment, installed in computer multimedia rooms. But also the classrooms have to be sufficiently equipped. Teachers and learners should all get access to ICT for their work and study. Managers and administrators need ICT for improved education management. Faculties and departments need to effectively manage and optimize the potential of available equipment by categorizing and allocating equipment appropriately. Favorable conditions have to be created for learners to be able “*to study in any place, at any time and to be able to access appropriate content*”.

Equipping the institutions is mostly planned in phases. Often the institutions plan to start with a basic package of equipment for each department consisting of some computers, a projector and a screen, a printer, a fax and a Local Area Network. After that classrooms will be equipped with fixed screens and eventually projectors. In the future most institutions plan to have access to the internet in more classrooms. Some institutions experiment with wireless internet access. In the first instance all institutions focus on improving access for managers, lecturers and administrative staff. Often computer rooms are not yet available for students or are only for instruction on ICT for the subject of technology and/or ICT. One institution plans to equip all lecturers with a personal laptop. Concerning software, most institutions can't provide hands-on solutions. Currently they use standard office applications and they are aware about the possibility of open source applications.

Professional development

ICT skills training is seen as compulsory for teacher educators and future teachers. All teacher educators should be required to actively study ICT and exchange knowledge and experience with colleagues. Training should be organised on the use of ICT for teaching practice, but also on skills like the use of equipment or searching information on the internet. Students have to be stimulated to use ICT. ICT is perceived as a duty. According to the educational managers, teaching staff should also be supported in using ICT for teaching and learning. Teachers and teacher educators should be encouraged to design presentations and lesson plans on a computer. Practical and up to date training programs have to be designed on ICT applications for teaching practice.

In all institutions skills training for lecturers is planned. This often starts from basic skills training and training on how to use and maintain equipment. Apart from that, lecturers will be trained, at the same time, on integration of ICT in their teaching practice. One school (ICT Technology Plan TEI #1, p.8) plans to organize training for two separate groups: older lecturers (graduated before 1975) and younger lecturers (graduated after 1975). The importance of creating favorable conditions for participants and offering

incentives for trainers is formulated, but concrete ideas are mostly lacking. Active self-study and sharing of knowledge and experience is a valued approach complementing the input from external experts and the training by school trainers. Model e-lessons will be developed, collected and shared. Some institutions plan to develop or re-design training materials. For students the solution seems to be the creation of an environment where they can self-study and do research on the internet. If training is provided for students, it is directly linked with their field of study.

Pedagogical and curricular change

In addition to incorporating ICT as a subject in the curriculum, possibilities for integration in other subjects also have to be explored. Teaching and learning methodologies have to be innovated and ICT should be promoted as a tool for constructivist, more student-centred teaching and learning methodologies. One of the important factors perceived by educational managers and ICT coordinators is reflection on added value of ICT. Research is put forward as an essential tool for monitoring and evaluation. Indicators on the use of ICT for teaching practice have to be set and regular evaluation of outcomes has to take place. Appropriate adjustments have to be carried out.

No concrete plans are formulated and practical ideas are missing. Pedagogical and curricular change seems to be in an explorative phase and no models, best practices or guidelines are available yet.

Content development

Applications to develop lessons are used for lesson design. Subject specific educational software is seen as the responsibility of subject teachers and criteria of appropriateness, user-friendliness, reliability and price are the only guidelines. There is a strong interest in software applications for administration and educational management as well as for student assessment. Most institutions have a school website or plan to set up one. Some institutions are thinking to set up an e-library and/or an online collection of e-lectures.

Even though the urge to develop content in the form of e-lectures is high, there is no clear understanding of what e-learning exactly is.

Technical support

ICT coordinators are often appointed to manage access to and the availability of equipment. Some institutions assign specific persons of specific departments, councils or boards, for example to develop an e-library (IT department) or to organize workshops on integration of ICT in teaching and learning (Training department). In most institutions a core group of teachers is formed for participation in training and workshops and as key members for sharing knowledge and experience with colleagues from their respective

subject departments. One school (TEI #1) assigns one student per class as the student ICT manager.

5. Conclusions and discussion

In Vietnam, ICT has been placed on the education reform agenda both as an object of education as well as an important pedagogical tool for innovating teaching methodology. Policy makers have strongly focused on renovating education, in the first place as a strategy to respond to the demand of the global knowledge society for qualified human resources. An economic growth rationale leads to a focus on ICT skills training and development of ICT infrastructure to enhance industrialization and modernization. In the context of the movement for friendly schools and active students (Directive 40) the role of ICT is to support education renovation towards a creative learning society. Guidelines from the MOET to provincial DOETs encourage educators to apply ICT in education practice. E-learning and the development and use of e-lessons is put forward as the ultimate outcome of integration of ICT in education. However, no clear definition is given of what e-learning is exactly about.

In most TEIs there are high expectations on the role of ICT for the activation of teachers and students. However, in the technology plans of most TEIs, concrete ideas concerning effective integration of ICT in teaching practice and pedagogic and curricular change are mostly missing. Most approaches of the TEIs addressing pedagogic change are rather abstract and do not trigger action.

Analysis of the vision statements of the TEIs shows that multiple, and rather general and broad rationales are behind their approaches to integrate ICT in education practice. Most TEIs refer to mostly vague standards and indicators of integration of ICT. Concrete actions still aim at more technical issues and ICT skills training. As suggested by Hussin and Ismail (2009), sufficient and high quality infrastructure is vital for higher education development and as such educational managers should ensure that ample and suitable learning and instructional resources are made available to staff and students. However, this is not what integration of ICT is about. As observed elsewhere, guidelines on ICT are too weak to spell out exactly how integration of ICT in teaching and learning should look like or what teachers needed to know or believe (Lee, Hung, & Cheah, 2008). Establishing change in pedagogic practices is difficult to accomplish, and it is equally difficult to be clear about what change is going on (Erstad, 2006). Previous research has demonstrated that the integration of ICT is a staged process (Tearle, 2003) and that several barriers or steps need to be taken, from improving access to improving basic and advanced ICT skills of teacher and trainers and including reflection on the possibilities of ICT for teaching and learning (Peeraer & Van Petegem, 2009). As observed elsewhere in the region, it remains underexplored how different operational components can be joined together in a holistic and integrated framework (Lee et al., 2008).

For some institutions this results in less comprehensible technology plans. By contrast, for some institutions, multiple rationales mutually reinforce each other.

Operational planning becomes a balancing act between technical and pedagogical issues and support (Bryderup & Kowalski, 2002). TEIs touch upon important operational components of the ICT integration process and reflect on issues, approaches and solutions. As stressed in all MOET guidelines, awareness of the role of ICT in education is crucial to effectively integrate ICT in education. But at the same time a clear answer on how exactly to use ICT for teaching and learning is not provided, resulting in a gap between rhetoric and educational practice. To avoid losing enthusiasm and momentum, it can be argued more clear guidelines, starting from a one dimensional educational reform rationale is needed in most TEIs. Educators need to know exactly how ICT can be used as a teaching tool (UNESCO, 2004).

The institutions were advised to revise their technology plans and define clear rationales for the integration of ICT in their institutions as well as to plan concrete activities to implement their vision and mission statements. Recently the scope of the technology plan has been broadened and different operational components are addressing education innovation in general and Active Teaching and Learning approaches in particular. The TEIs are still coping with limited ICT resources. As observed elsewhere, this could result in creative solutions and optimal use of existing resources (Bryderup & Kowalski, 2002). The Asia-Pacific region has moreover the advantage of a relative youthful population, which makes the education sector more receptive to harnessing newer (and cheaper) forms of educational IT (Lee et al., 2008). A clear, unambiguous vision and a concrete mission addressing integration of ICT as a synergy of components can make the rhetoric on ICT as a tool for teaching and learning become every day practice.

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