Editorial on EAIT 2015, Issue 2 “Teaching and Technology”

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Beginning this issue is an article by Nikolaos Amanatidis from Arts and Human Sciences, London South Bank University, UK, titled: “Unveiling the teachers’ profiles through an INSET (in service training) course of Greek primary school teachers in the pedagogy of ICT (information and communications technology) in-classroom instruction”. The article notes that to meet the increasing demand for change in the infusion of ICT pedagogy in education in Greece, a nationwide project was launched in May 2008. The research described aimed to study teachers’ views about certain aspects of a course for primary school teachers in the pedagogy of ICT in classroom teaching. It looked at the training experience in terms of the teacher-trainees’ acquisition of ICT competencies as well as of any successful implementation of ICT pedagogic practices in classroom teaching. This was done through the identification of any actual observable changes in the teachers’ profiles during and after the training course.

The next article: “Exploring relationships among TPACK components and development of the TPACK instrument” was contributed by Sonmez Pamuk (Computer Education and Instructional Technology Department, Ondokuz Mayis University, Samsun, Turkey), Mustafa Ergun (Science Education Department, Ondokuz Mayis University, Samsun, Turkey), Recep Cakir (Computer Education and Instructional Technology Department, Amasya University, Amasya, Turkey), Bayram Yilmaz (Educational Measurement and Evaluation Department, Ondokuz Mayis University, Samsun, Turkey) and Cemalettin Ayas (Social Studies Department, Sinop University, Sinop, Turkey). They note that educators’ interest in technological pedagogical content knowledge (TPACK) has been increasing. Their study aimed to understanding the TPACK framework and its dynamics that contribute to effective TPACK development, and explored pre-service teachers’ experiences through the nature of relationships among the TPACK components.

“Introducing a twitter discussion board to support learning in online and blended learning environments” describes research performed by Brian Thoms, Farmingdale State College, USA and Evren Eryilmaz from Bloomsburg University, USA. Their article presents a new design component for online learning communities that integrates

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Twitter with an online discussion board. This was introduced across two sections of upper-division information systems courses at a university located within the US, the first of which consisted of full-time online learners, while the second met face-to-face twice a week. Using a working theoretical model of how individuals learn and interact within online learning communities, they measured student perceptions of learning, social interaction and course community before and after the intervention. They report that initial findings were largely positive and that students across both sections experienced high levels of learning, interaction and community.

Kleopatra Nikolopoulou and Vasilis Gialamas from the Department of Early Childhood Education, University of Athens, Greece next write on “Barriers to the integration of computers in early childhood settings: Teachers’ perceptions”. Their study investigated the perceptions of 134 early childhood teachers of barriers to using and integrating computers in early childhood settings. They found that lack of funding and lack of technical and administrative support, as well as inadequate training opportunities were among the major perceived barriers to the use of computers in these settings. The study extracted four barrier-factors: ‘lack of support’, ‘lack of confidence’, ‘lack of equipment’ and ‘class conditions’. Teachers’ confidence with technology had a direct significant effect on the factors ‘lack of support’ and ‘class conditions’. They found that teachers’ confidence with technology resulted in higher probability of computer use in class.

The article that follows: “Challenges facing school leadership in promoting ICT integration in instruction in the public schools of Bahrain” is by Nina Abdul Razzak from the Bahrain Teachers’ College, University of Bahrain, Kingdom of Bahrain. The author begins by pointing out that the future of Bahrain’s economy and the prosperity of its citizens are, like elsewhere in the world, strongly correlated with ICT integration in almost every life aspect, and that ICT integration depends heavily on digital literacy – the ability to make use of ICT in learning and work activities. The reported study describes, from the point of view of Bahraini assistant principals, the case and conditions of ICT integration in Bahrain’s public schools and exposes the main challenges faced by school leaders in the process.

Next is an article by R. K. Kavitha from Kumaraguru College of Technology, Coimbatore, India and M. S. Irfan Ahmed from Sri Krishna College of Engineering and Technology, Coimbatore, India and is about Agile software development. “Knowledge sharing through pair programming in learning environments: An empirical study” notes that Agile software development is an iterative and incremental methodology where solutions evolve from self-organizing, cross-functional teams and that Pair Programming is a development technique where two programmers work together with one computer for the development of software. Their paper reports the results of a pair programming exercise that was carried out among fifty-six postgraduate students of the Master of Computer Applications course, engaged in developing small applications as part of their Visual Programming laboratory course. The study investigated the possibilities of deploying purposeful pair programming modules to facilitate knowledge sharing in regular laboratory sessions, and findings suggest that this can be a useful approach to teaching computer programming in higher education to facilitate effective knowledge sharing among the students.

“Business school education and technology—a case study” by Sanjay Mohapatra from the Xavier Institute of Management, Bhubaneswar, India discusses a holistic

integration approach that a management school has to adopt for students to be equipped with skills and techniques to face the challenges of varying business dynamics and to tackle issues related to society, business and technology. The case study shows that this can be achieved by the students gaining knowledge through research, consulting and delivery through improved pedagogy using technology.

Although some schools are reluctant to allow their teachers to make use of mobile phones in the classroom, “Smart phones permitted: How teachers use text messaging to collaborate” by Meghan Cosier (Trinity Washington University, USA) and Audri Gomez, Aja McKee and Kimiya Sohrab Maghzi (Chapman University, Orange, USA) takes a different view. The use of smart phones by teachers in K-12 education has been contentious and teachers often have to put their phones away during teaching. This article describes how teachers and students can benefit in different ways by using smart phones in the classroom to support knowledge sharing and collaboration opportunities not otherwise available. This exploratory pilot study investigated how smart phones were used to collaborate and found that teachers used text messaging on a regular basis to work together to make modifications, communicate about student behaviour, share student work, and to review student progress regarding goals.

“Implementing distance teaching at a large scale in medical education: A struggle between dominant and non-dominant teaching activities” by Fanny Pettersson and Anders D. Olofsson from the Department of Education, Umeå University, Sweden examines possibilities and challenges when implementing distance teaching of theoretical content in a regionalized medical program. The article argues that Cultural-Historical Activity Theory and the concepts of dominant and non-dominant activities, including conflicts and transitional actions, can lead to an understanding of the distance teaching implementation process. The authors argue that understanding the implementation of a non-dominant teaching activity in medical education in terms of mere success or failure is not fruitful, but that instead striving for sensitivity by closely analysing the implementation process as interplay between dominant and non-dominant teaching activities provides a better approach. The concepts further provide a theoretical lens through which one can understand the complex relationship between the established and historically rooted face-to-face teaching activity and the new non-dominant distance teaching activity introduced in the educational setting.

Next, “Acceptance of ICT-mediated teaching/learning systems for elementary school teachers: Moderating effect of cognitive styles” by Chien Hsing Wu (National University of Kaohsiung, Taiwan, Republic of China) and Chia-Fang Liu (Subject Teacher in Anping Elementary School, Taiwan, Republic of China) looks at the preference of teachers to adopt an e-teaching/learning system by considering cognitive styles. Their study proposed a research model to describe the effects of technology acceptance and innovation diffusion behaviour one-teaching/learning adoption for elementary school teachers. The aim of the research was to explore the moderating effect of cognitive styles (analytical and intuitive) on the relationship between variables and adoption willingness.

The final article: “Digital badges in education” is by David Gibson, Nathaniel Ostashevski and Kim Flintoff (Curtin Teaching and Learning, Curtin University, Perth, Australia), Sheryl Grant (Duke University, Durham, USA) and Erin Knight (Mozilla Foundation, Mountain View, USA). In the article the authors argue that Digital Badges can provide new affordances for online educational activities and experiences, and that

when used with points and leader boards, a badge can become a gamification element allowing learners to compete with themselves or others, and to know how close they are to accomplishing a goal and acquiring its accompanying reputation. Their article traces the history of digital badges, defines what they are, gives examples of their use, and discusses their educational affordances.

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