International Journal on New Trends in Education and Their Implications
April, May, June 2010 Volume: 1 Issue: 1 Article: 1 ISSN 1309-6249

e-PORTFOLIOS, CONVERGENCE, AND OPEN RESOURCES: Three New Trends in Education

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ABSTRACT

This paper shows the interconnection between the new trend in education of e-portfolios for learning communities, and the two recent trends of convergence and open education resources. e-Portfolios are particularly effective to promote the professional self-development of pre-service or in-service teachers. Pre-service teachers have not only used e-portfolios to develop their abilities in reflecting on given teaching principles in certain contexts, but have remarkably demonstrated their applying these skills to new contexts outside of the course. All the in-service teachers participating in a pilot study investigating the efficacy of e-portfolios showed significant benefit with 30% of them showing excellent development. One additional benefit not covered in their study was that the e-portfolio was carry-away.

Keywords: E-portfolios, learning communities, individualized e-portfolios.

This short Position Paper shows the interconnection between the new trend in education of e-portfolios for learning communities, and the two recent trends of convergence and open education resources. Convergence has recently been a leading new trend in education, away from the departmental design of schools and colleges towards the merging of whole disciplines. Several years ago convergence meant the blending of conventional universities with open distance education. Since the open and distance universities had the rich experience and skills and were open to change, so convergence started with them, and not with the conservative conventional establishments. Soon these conventional colleges realized the cost benefits and better quality learning achieved by open distance education and sought to emulate the methods for profits and expansionary dreams. One key reason for the failure of e-learning to deliver improved quality of learning across the board has been the inexperienced unskilled conventional teachers posting up courseware online hoping to simulate the successes of open distance education. So convergence started with open education and was then adopted by conventional education. In recent years convergence involves the blending of disciplines to offer unlimited choices to students. This is now possible through new learning technologies – learning management platforms which were once administrative platforms, then teaching management platforms and now hosting learning. Students can now build their individualized e-portfolios of their formal and informal learning in-school out-of-school and from wherever they choose. This new convergence trend offers all the promise of actually realizing lifelong learning, for everyone.

Such lifelong learning and e-learning convergence is not limited to individual persons. We now see whole universities transforming themselves from teaching departments into learning universities. Organizations are re-organizing themselves as learning organizations or e-organizations. Consortia of schools, universities and companies are uniting to converge resources and build learning communities (with
e-Asia University http://www.aeu.edu.my .
And cities are re-building themselves as learning cities. Regions and whole countries are moving towards becoming e-countries with:
e-Japan http://www.kantei.go.jp/foreign/it/network/0122full_e.html,
e-China http://www.ekorea.co.kr
e-Korea http://www.ekorea.co.kr

e-UK http://www.direct.gov.uk,
e-Malaysia http://www.malaysia.gov.my/en
e-Mongolia http://www.investmongolia.com/forum/projects/tusul77.pdf and
e-continents (with e-Asia http://www.e-asia.org
e-Europe http://www.epractice.eu

The overall trend is to become flexible and adaptive to any future scenario to better cope with future developments. The convergence to a learning organization brings agility and nimbleness with ubiquity across geographic place. In education we see interdisciplinary courses as well as the older multidisciplinary ones. Thirty years ago a joint degree in physics and chemistry was a rare phenomenon, now degrees are tailor-made, self-tailored, and designer courses with names to match (with Fashion Promotion and Marketing degrees).

The engine that has enabled this evolution is the new e-learning technologies, the integrations of social networking applications such as wiki, blog, micro-blog, twitter, podcasting, online-video-sharing, corporate adoptions of Facebook, Friendster and other proprietary platforms, and of shareware such as moodle, drupal and so on. This trend is only going to diversify. Convergence will blend most activities for daily life and support lifelong learning.

Another trend that seems to have evolved a lot from its initial role is the open education resources OER movement. The original purpose for OER was to provide shared resources for teachers in their job to help students learn. Teachers are incredibly busy and it was thought they would welcome these resources. However, the repositories had quite bare shelves of resources at the beginning and nothing fitting to the immediate needs. Teachers could borrow the OER and build a lesson around it, but most teachers already had their curriculum and detailed syllabus with very tight pacing. Why don't you share your own lessons? The OER repository owners asked them. But without any personal benefit on the horizon, and a busy schedule (and probably a healthy skepticism that the repositories would take all their contributions and sell them re-packaged for profit), teachers never embraced the movement in sufficient numbers to build up the critical mass for self-sustaining sharing among teachers.

The current 2010 usage of the MIT OERs shows that teachers comprise just 9% of users. Students comprise 48%-6% are registered at MIT, and the other 42% at another university. The other 43% are non-registered independent learners – from high-school students to grandmothers.

The situation at Yale is similar, where the 2010 usage of the Open Yale OERs shows that teachers comprise 6%, students (mostly Yale) comprise 25%, and the other 69% are non-registered learners.

These figures suggest that a surprising number of students either attend the lecture and want repeat video to understand the lecture material, or prefer to stay in bed and view the material at their convenience – both scenarios suggest students voting with their feet (and with their time and money) don't rank the live lecturer. The second area that these figures illuminate is the proportion of non-registered students. The usage figures, of 43-69% non-registered, mean that people are hungrily using these resources without teaching help, using the OERs for a purpose they were never intended to be used for, and likely involving poor (at least not optimum) educational experiences.

Overall OERs are not serving their original purpose for which they were designed. A lot of materials now posted up are merely bad video of a lecturer talking to a huge empty room; a few are bad video of a incomprehensible seminar of five or ten participants around a table. There are little or no two-way interactivity, weak multimedia choices, and generally bad instructional design. The poor quality OERs being dumped into repositories likely reflects the loss of purpose and aimlessness that prevails.

An exception to these figures, are the usage figures for the UK Open University OERs. These OERs are highly popular through iTunes U (university) freely. In particular it designs OERs for pre-registration use to allow the public to learn how they will learn if they do register – and 6000 subsequently have registered for paid courses. So we need to re-invent the purpose of OERs.

And re-design those that we have cluttering the shelves. The trend in OERs has therefore matured somewhat, the existing OERs have a changed audience, and the trend needs re-designing for the end-users. Carnegie-Mellon has just recently spent US$2.5million to re-design and repackage its OERs and has completed all of only ten OER to date (April 2010).

They are now working on another four OER. The new end-user is being profiled by Carnegie-Mellon as someone who has not yet any good experience of self-directed learning.

These two trends of convergence and of open resources combine to show how a new trend may be born. This new trend is the e-portfolio –replacing the compartmental university, classrooms, teachers and examinations, and replacing the curriculum and OER movement. In any case student-created OER are by far better for learning critical thinking skills, problem solving and cooperative and collaborative strategies. The e-portfolio should replace formal and informal education labels. Judging the quality of an e-portfolio is more time consuming, but such quality assessment becomes a shared responsibility –the owner of the e-portfolio chooses what quality and what achievements to put together, what references and letters or video reports to include, and so shares with the prospective judge the responsibility for assessing the quality.

The e-portfolio serves as a visualization of a student's engagement and participation, and this visualization further stimulates the student's transactional presence that directly is the first step in learning. A group of students could work together collaboratively on an e-portfolio. This has been termed a netfolio (Barbera, 2009). The netfolio involves students in peer evaluation and self-revision. Such reflective and collaborative investigation of for example course objectives and methodologies can greatly promote learning how to learn, in a shared community online in a virtual classroom. However, there are different learning styles, and visualization of actual participation can be expected to be unhelpful for field-independent analytic, serial and introvert learners. So some caution should be exercised.

Notwithstanding this likelihood, introverted learners could be encouraged to explore more extroverted mechanism for learning such as e-portfolio, despite their reluctance. Student-teachers have found (Johnson-Leslie, 2009) that a non-technical system allowed them to be more creative than a technical system. Many systems for e-portfolios are available and a free choice for individuals could be encouraged so they each find one that best suits their own style. Having a same e-portfolio system can facilitate students to help each other: a network of interlinked e-portfolios can promote accreditation, peer-assessment and reflection, and accountability (Barbera, 2009).

Junior-high-school students using a shared e-portfolio network showed improved learning, through reflection, self-assessment, continuous improvement, goal setting, problem solving, data gathering, work and peer interaction, but not for peer-assessment purposes (Chang & Tseng, 2009). This was likely due to their age and inexperience in assessing learning by others. Students of all ages learn distinct skills which help build character. These include sharing, empathy, application, diligence, rigour, accountability, and attribution (that success is attributable to one's own efforts, rather than aptitude - genetic brains – or difficulty/ease). This is particularly important in younger students who have not yet acquired these aspects. In a sense therefore, working on an e-portfolio nurtures desirable social qualities in the individual and communities.

Studying to augment an e-portfolio also helps build a good home environment for others at home. Rather than have a tired husband come home late after drinking with office co-workers only then to watch television – which is not that conducive or inspiring to a teenage son who may be struggling at school, a 'freeter' part-time worker, or unemployed – if the husband comes home and joins other members of the family studying together each in their own subject but supporting and mindful of each other, then surely the home community is better. For the older retired person living alone, then studying on an e-portfolio can maintain mental agility and health, show a role model to others, develop bonding to others and increased social capital, and not least build up an archive for future generations.

Older persons might be inspired to record their childhood, their memories and their insights. Their voices would last forever if recorded for sharing. Some parents too busy at work or uneducated might lay the burden for their children's education on the local school. A government policy of e-portfolio would re-create society as distributed responsibility and distributed teachers, taking pressure off schools and sharing the responsibilities for community learning.

e-Portfolios are particularly effective to promote the professional self-development of pre-service or in-service teachers. Pre-service teachers have not only used e-portfolios to develop their abilities in reflecting on given teaching principles in certain contexts, but have remarkably demonstrated their applying these skills to new contexts outside of the course (Sparks-Langer, 1991; Sparks-Langer, Simmons, Pasch, Colton, & Starko, 1990). All the in-service teachers participating in a pilot study investigating the efficacy of e-portfolios showed significant benefit (Sung, Chang, Yu, & Chang, 2009) with 30% of them showing excellent development. One additional benefit not covered in their study was that the e-portfolio was carry-away. The participating teachers can take away their work, reflect on it during later field teaching, develop it further, share with other teachers, and perhaps most importantly guide their own students explanatively in using e-portfolios. The imaginative use of e-portfolios by their students will further stimulate the teachers. Overall, the e-portfolio has been found (Swan, 2009) to bring about increased reflectivity in students, student-teachers and in-service teachers–and consequently increased learning achieved and professional development.

Future uses of e-portfolios can be wiki-based co-creation of courseware by the students themselves. It is well known that examinations have a strong backwash influence on classroom activities and learning (Heyneman, & Ransom, 1990), and also the contextual relevance of course textbooks and material too directly impact on the quality of achieved learning – especially in rural developing regions where work-related skills should be learnt (Lockheed, Vail, & Fuller, 1986). Student-created reusable learning objects are known to proactively promote critical thinking skills (Kawachi, 2008a; 2008b). These combined findings support the future trend for students to co-create their own courseware in reusable e-portfolios. Testing out their own courseware with new students will further stimulate reflection and more learning.

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