



ePIC 2013

ePortfolio & Identity Conference

8-9-10 JULY **LONDON**

EMPLOYMENT

LEARNING

ASSESSMENT

**OPEN
BADGES!**

ACCREDITATION



Proceedings

Proceedings of ePIC 2013, the 11th
International ePortfolio and Identity
Conference, London, 8-9-10 July 2013.
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Foreword



We have great pleasure in publishing the proceedings of the 11th International ePortfolio and Identity Conference in London, where we had the pleasure to welcome practitioners from 23 countries.

This year's conference witnessed some groundbreaking changes in the field of ePortfolios, in particular, the emergence of Mozilla Open Badges. Hundreds of Open Badge initiatives are spawning across the world aimed at recognising and celebrating learning achievements. This was reflected within the conference with the organisation of an all day Open Badge workshop and a series of presentations.

The keynote addresses of *Kirstie Donnelly*, *Philipp S. Mueller*, *Alan Davis* and *Darren Cambridge*, as well as the active contributions of *Doug Belshaw* and *Helen Barrett* in their workshops contributed towards helping us not only to reflect, but also to project our thinking into the future, fuelling many discussions and debates during the breaks — and beyond! The proceedings cannot do justice to what makes this conference a very special event with great atmosphere!

The success of the launch of the [Europortfolio](#) initiative at the end of the conference was another very encouraging sign of the desire of ePortfolio practitioners to work closely together, towards creating a place for the recognition of more authentic learning and the value of a broader recognition of learning.

You will find that these proceedings reflect the diversity and richness of ePortfolio initiatives happening at local, regional and national levels across all sectors of initial and continuing education.

The proceedings are organised in two main parts:

- the short/long papers accepted for publication
- the abstracts of the contributions submitted to the conference

We hope that you will find in the proceedings the information you need to support your actual and future projects.

We would like to thank again all the authors and presenters who came to London from across the globe, to share their enthusiasm and experience and make the ePortfolio and Open Badges a truly international movement!

Serge Ravet and the ePIC Team

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Professional conversations and reflective critique helps teachers and school leaders establish meaning and authenticate purpose. The Ariki Project provides both a context and a set of protocols, supported by appropriate resources for ensuring that high quality thinking is applied to the work that educators do. A reworked Quality Learning Circles methodology both within schools and across schools is the means of progressing this goal. The prime focus for the ensuing reflective critique is evidence of their practice.

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Conference Programme

Monday 08 July 2013		
8:30	Registration and welcome coffee Riverside Room	
9:30	S1.1A: Using "Free" Online Tools for ePortfolio Development Mounbatten Room - Chair: Helen Barrett	S1.1B: Create your Open Badge Thompson Room - Chair: Doug Belshaw
11:00	Coffee Break Riverside Room	
11:30	P1: Opening Plenary Session <ul style="list-style-type: none"> • Welcome Address: Serge Ravet, ADPIOS, Europortfolio • Kirstie Donnelly MBE, City & Guilds Group Director of Product Development • Philipp S. Mueller, Dean of the Business School (SMBs) of University of Salzburg, Austria, author of "machaveill.net" 	
12:45	Lunch Riverside Room	
2:00	S1.2A: mPortfolios: Supporting Reflection using Mobile Devices Mounbatten Room - Chair: Helen Barrett	S1.2B: Design your Open Badge System Thompson Room - Chair: Doug Belshaw
3:30	Coffee Break Riverside Room	
4:00	S1.3A: ePortfolios for second language learning Mounbatten Room - Chair: Helen Barrett	S1.3B: Create your Open Badge Infrastructure Thompson Room - Chair: Doug Belshaw
5:00	Close	



Posters

Riverside Room

The posters are presented all day Tuesday and Wednesday.

Nursing student s' perspectives of the pedagogical values of e-portfolios : do students value?

Eman Zidan Ghallab
University of Nottingham, United Kingdom

PERFLECT: Your Personal Online Self-Directed Learning Coach
Jorrick Beekers, Diana Dolmans, Jeroen van Merriënboer
Maastricht University, Netherlands, The

Designing Courses based on SECI model with Mahara as an e-Portfolio

Yoichi Tanaka¹, Toshifumi Sawazaki¹, Osamu Yamakawa²
1: Jin-ai Women's College, Japan; 2: Fukui Prefectural University

Lessons from an ePortfolio Learning Programme with the ZMET Approach --- A Partnership Project between Vocational Colleges and Job Bank Company in Taiwan

I-Chin Hsiao
Cheng Shiu University, Taiwan

Growing roots : an ePortfolio pilot spreads its wings

Nadine Christina Scholz, Angela Karl, Regina Bruder
Technische Universität Darmstadt, Germany

Tuesday 09 July 2013			
Registration and welcome coffee Riverside Room			
8:00			
9:00	S21A: Open Badges Track Council Chamber - Chair: Serge Ravet Using Open Badges to Motivate and Recognise Patient Education and Achievements in Long Term Chronic Condition Self-Management Rob Arntsen MyKnowledgeMap, United Kingdom Connecting Open Badges and the European guidelines for validating non-formal and informal learning: a critical perspective on accreditation procedures Petra Muckel, Birte Heidkamp, Stefanie Bruner, Sebastian Hartong Oldenburg University, Germany The Open Badge Factory project: issue Open Badges anywhere, manage them in one place Eric Rousselle Discendum Oy, Finland	S21B: Parallel Session Thompson Room - Chair: Simon Grant Researching construction of knowledge using blogs: an in-depth analysis Alfredo Gaitan, Joseph Adonu, Maja Janowska University of Bedfordshire, United Kingdom How Open Educational Practices Improve Evaluation and Assessment: Making Learning Meaningful through ePortfolios Penny Finley Florida Gulf Coast University Practice Case about Information Literacy Class with ePortfolio System Mahara:A Case Study of Kumamoto University Shin-ichiro Kubota, Ryuichi Matsuba Kumamoto University, Japan	S21C: Parallel Session Mountbatten Room - Chair: Dominique-Alain Jan The usage of ePortfolio as assessment and application instrument in Germany - First results of the (era.net.rus project "ePortfolio for Human Resources") Anja Kirberg¹, Anna Schwickerath², Heiner Barz³ ¹ : Heinrich Heine University Duesseldorf, Germany; ² : Heinrich Heine University Duesseldorf, Germany; ³ : Heinrich Heine University Duesseldorf, Germany ePortfolios in France: from e-identity to an assessment and application instrument - First results of the (era.net.rus project "ePortfolio for Human Resources") Samuel Nowakowski¹, Nathalie Issemmann², Isabelle Houot³ ¹ : Université de Lorraine, LORIA - KIW Team, France; ² : Université de Lorraine - SS Direction des Usages du numérique; ³ : Université de Lorraine E-portfolio in Transition from Formal Education to Working Life Kairi Tammets, Mart Laanpere Tallinn University, Estonia Education and Employability in Russia: State of the Art Olga Smolyaninova, Elena Nazarenko Siberian Federal University, Russian Federation
10:30	Coffee Break Riverside Room		
11:00	P2: Plenary Session - Council Chamber		
12:30	<ul style="list-style-type: none"> What would Marcel Proust have done with an e-Portfolio?, Alan Davis, President and Vice-Chancellor, Kwantlen Polytechnic University, Canada Virtual worlds as expanded spaces of self-authoring: a dialogical perspective, Russell Francis, University of Gothenburg, Sweden Lunch Riverside Room		

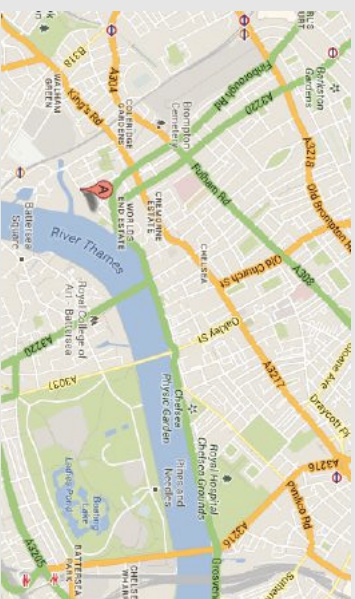
Social Dinner Tuesday 9



Tuesday 9 July 2013, join us at the 606 Club for a fabulous evening with Victoria Newton a Booth at the seahorse and it will set the stage right with the standards, beguiling bossa no



90 Lots Rd, London SW10 0QD



2:00	<p>S22A: Open Badges Track Council Chamber - Chair: Helen Barrett</p> <p>Integration of Third-Party Issuers into Open Badge Infrastructure - Case: BadgeBridge.net integrating FourSquare.com badges Jakub Šlegl Navreme Boheme, s.r.o., Czech Republic</p> <p>The Process of Creating and Validating an Open Badge: The Impact of Metadata, Quality, and Endorsement Procedures Stefanie Brunner, Birte Heldkamp, Petra Muckel, Sebastian Hartong Oldenburg University, Germany</p> <p>Blogging in the ePortfolio environment to enhance reflective practice: the Operating Department Practitioners' experience Barbara Anne Nicolls, Shane Roadnight, James Ellis Buckinghamshire New University, United Kingdom</p> <p>Using Moodle and Open Badges' infrastructure to document students' knowledge and skills Danko Grabar, Igor Balaban Faculty of Organization and Informatics Varazdin, University of Zagreb, Croatia</p>	<p>S22B: Parallel Session Thompson Room - Chair: Patrick Craven</p> <p>Blogs and Web 2.0 tools to open student teachers' eportfolios: student teachers' perceptions on portfolio openness Gemma Tur, Santos Urbina University of the Balearic Islands, Spain</p> <p>Support of students' higher level of conscious awareness of self-regulation of research activity in laboratory with ePortfolio and pattern language Tomohiro Nabeta, Taisuke Ogawa, Mitsuru Ikeda Japan Advanced Institute of Science and Technology, Japan</p> <p>Exploring the Roles of Digital Teaching Portfolio in Higher Education Cher Ping Lim, John Chai-Kin Lee, Lixun Wang, Yeung Chung Lee, Ricci Wai-Tsz Fong The Hong Kong Institute of Education, Hong Kong S.A.R. (China)</p>	<p>S22C: Policies and institutional deployments Mountbatten Room - Chair: Lise Agerbaek</p> <p>Open practice in support of wide-scale institutional e-Portfolio adoption Gordon Jones, Kirstie Coolin, Judith Wayte University of Nottingham, United Kingdom</p> <p>Opening up Large Scale Change Initiatives: Calling on Faculty Perspectives to Develop a Framework for Organization-Wide ePortfolio Implementation Jennifer M. Brill Virginia Tech, United States of America</p> <p>The Required Functions and Implementation Principles of the University-wide ePortfolio System linked to the Curriculum Map Hiroshi Nakano¹, Riken Homma², Ryuichi Matsuda³, Shin-ichiro Kubota¹, Takayuki Nagai¹, Toshinori Kita³, Tsuyoshi Usagawa⁴ 1: Center for Multimedia and Information Technologies, Kumamoto University, Japan; 2: Research Center for Higher Education, Kumamoto University; 3: Institute for eLearning Development, Kumamoto University; 4: Graduate School of Science and Technology, Kumamoto University</p>	<p>S22D: Parallel Session Nuffield Room - Chair: Don Present</p> <p>Joining the dots and colouring in the spaces: Facilitating the acquisition of a social work professional identity with e-portfolio Jo Mensinga, Tracey Dickinson James Cook University, Australia</p> <p>Achieving "High-Po" Know-How: The Role of ePortfolios and Analytics in the Employee Lifecycle Management of Sales Executives Bryan Donald Eldridge Desire2Learn, United States of America</p> <p>E-Portfolio models using Sakai: the experience in the University of Murcia. Paz Prendes Espinosa, Ana Sabina Del Rey Carrón University of Murcia, Spain</p>
3:30	Coffee Break			
4:00	<p>S23A: Parallel Session Council Chamber - Chair: Lise Agerbaek</p> <p>How to get ready for E-Portfolios at HEIs – strategy and process model Hans Pomratz, Stephan Graf Technische Universität München (TUM)</p> <p>Case studies of using ePortfolios: from classroom to career development planning Ana Coric Samardžija, Igor Balaban Faculty of Organization and Informatics Varazdin, University of Zagreb, Croatia</p>	<p>S23B: Workshop Thompson Room</p> <p>Te Aotahi - Collaborative Critique using evidence of practice Garv Punler Te ARIKI Trust, New Zealand</p>	<p>S23C: Parallel Session Mountbatten Room - Chair: Serge Ravet</p> <p>Competence structure standard to inject new motivation for portfolios Simon Grant CETIS, University of Bolton, United Kingdom</p> <p>ePOP: electronic, personality orientated portfolio – using mobile apps to develop eportfolios & competence maps based upon educational standards Andreas Riepl Center for COoperative Open Learning - Federal Ministry of Education of Austria, Austria</p>	
5:00	Close			

Wednesday, 10 July 2013			
Registration and welcome coffee Riverside Room			
8:30			
9:30	S31A: Parallel Session Council Chamber - Chair: Don Present Looking Forward: Moving from Capstone to Springboard with ePortfolios <u>Joseph Ugoretz</u> Macaulay Honors College--CUNY, United States of America Wanted: Well Organised ePortfolio to Manage an Unruly MOOC. Skills Required. <u>Kirstie Collin</u> University of Nottingham, United Kingdom TRANSit: Training teachers in competence based education: Using ePortfolios to support key competency acquisition <u>Katerina Riviou¹</u> , <u>Serge Ravet²</u> 1: Ellinogermaniki Agogi; 2: ADPIOS, France	S31B: Parallel Session Thompson Room - Chair: Esther Linley Constructive ePortfolios: Fostering Deep Learning through User Open Source, Pro-Interactive Environments, and Learning as Assessment <u>Peter Edison Dozittle</u> Virginia Tech, United States of America ePortfolio for assessment of informal learning in web design and computer animation (in the frame of CREATE project) <u>Elitsa Veselinova Licheva</u> , <u>Rosen Kirchev Petkov</u> Student Computer Art Society, Bulgaria e-portfolio based onVideo for indigenous people: the case of Mapuches communities in southern Chile <u>Isabel M. Solano Fernandez²</u> , <u>Rodrigo Garrido Maldonado¹</u> 1: University of Murcia, Spain; 2: University of La Frontera, Chile	S31C: Parallel Session Mountbatten Room - Chair: Gemma Tur ePortfolios: From Masters Project to Student Notebook <u>Andrew Micheal Olson</u> Shawmigan Lake School, Canada MAGICC and EPOS – ePortfolio Systems for Self-directed Language Learning in Higher Education <u>Juergen Friedrich</u> University of Bremen, Germany Using ePortfolio to Improve Teacher Professionalism <u>Rosie Sage^{1,2}</u> 1: The College of Teachers, United Kingdom; 2: PEEP Project
11:00	Coffee Break Riverside Room		
11:30	P3: Plenary Session - Council Chamber <ul style="list-style-type: none"> Linking up Innovations in Assessment: Eportfolios, Open Badges, and Learning analytics. Darren Cambridge, American Institutes for Research, USA OpenMe and GOD: a story of Open ePortfolios Open Badges and Open Trust, Serge Ravet, ADPIOS, Europortfolio. 		
12:30	Lunch Riverside Room		
2:00	P4: Plenary Session Council Chamber - Chair: Dominique-Alain Jan <ul style="list-style-type: none"> Round table on ePortfolio and human resources management 		
2:45	Coffee Break Riverside Room		
3:00	Europortfolio Open Meeting Thompson Room - Chair: Igor Balaban - Chair: Serge Ravet During this closing session organised with the support of Europortfolio, you will have the opportunity to have your say on the creation of Europortfolio as a not-for-profit association. Documents are accessible at www.eportfolio.eu .		
4:30	Closing Cocktail offered by Europortfolio Riverside Room		
5:30	End		

ePIC 2013

The 11th International Conference on ePortfolio & Identity

London
8-9-10 July 2013

Open Badges

Using Open Badges to Motivate and Recognise Patient Education and Achievements in Long Term Chronic Condition Self-Management

Rob Arntsen, MyKnowledgeMap, UK

Background

Long term chronic diseases such as diabetes are proving to be the most expensive areas of healthcare provision in most countries, and diabetes in particular seems to be rising steadily in many countries. The National Paediatric Diabetes Audit (NPDA) published in the UK in 2012 found that in 2010-2011, for England and Wales combined, there were a total of 23,516 infants, children and young people under the age of 25 years registered with diabetes. An indication of the problems they face in support and management of their condition is the fact that only 5.8% of infants, versus 54% of adults were recorded as receiving the nine relevant care processes.

There is now recognition, as stated in the NPDA, of the need for “continuous structured education programmes starting at diagnosis and continuing throughout childhood, adolescence and transition into adult services.” In 2012 the Department of Health in England has introduced a Best Practice Tariff to fund the service, with the aim of driving up the quality of care and improving outcomes for infants, children and young people with diabetes.

If patients and their carers can be educated and supported such that they improve their own self management of their diabetes then the outcome can be significant both for the patient in terms of life expectancy and quality of life and for the national healthcare organisation.

The cost saving opportunity for the NHS is very high. Diabetes is one of the highest cost health conditions facing the NHS today, and it is growing. Because it is a chronic disease, this means that it is a lifetime condition. Poor self-management can result in frequent hospital admissions and various severe complications

Upbete

Some years ago a pilot programme called Upbete was started in Yorkshire and Humberside to trial new online education and condition support services for young people with Type 1 diabetes, and this programme took the unusual approach of involving the young people patients in the design of the online delivery service including its name and branding. UpBete provides mutual support and advice in promoting self-management of diabetes, community knowledge-sharing, learning and public outreach. Families can share recipes with other families and access online social tools. A blood glucose tracker tool engenders effective management from an early age with a motivating game-like aspect. The website was found to have contributed to a significant improvement in the percentage of children with good control over their diabetes, while the percentage with poor control more than halved.

The online patient education platform was created by MyKnowledgeMap with families in the Leeds area, the Leeds Children's Diabetes Team and Leeds Institute of Medical Education, and with funding from the Strategic Health Authority. In 2012, the UpBete site won the BUPA Foundation's 'Patients as Partners' Prize and the recent Medipex NHS Innovation Award.

The site offers tools designed to help children and their families to manage the condition, making it easier for them to identify risks themselves. The graphics used in early versions of the site already pointed to the “gamification” of aspects of controlling diabetes, for example allowing children to track their blood glucose levels using a set of online charts that encourage them to spot patterns in their condition.

The launch of the website followed a series of consultation workshops with children who are diabetes patients at Leeds Children's Hospital and their families: the site itself and the tools inside were shaped by their input. In the UK, only around 14 per cent of children with Type 1 diabetes have good control of their condition, but in Leeds, this figure has been significantly improved by the introduction of Upbete.

After the first year of trials the results were so encouraging in terms of improvements in personal self management profiles that the trial has been extended to cover all childrens in Yorkshire and Humber (some 22 clinics) and this extension is now underway. Initial evaluation of results of improved self management in the first childrens clinic using Upebet indicated a potential annual saving to the NHS of approximately

£400k per year. Further and more detailed evaluation is now underway with the new clinics coming onboard.

Originally available to patients, parents/carers and as a resource for local schools at Leeds Children's Hospital Paediatric Diabetes Unit, the system has now been adopted by the Diabetes Centres at both Diana, Princess of Wales Hospital, Grimsby as well as Scunthorpe General Hospital under the Northern Lincolnshire and Goole Hospitals NHS Foundation Trust. As a result of this expansion and with the anticipated new membership at Leeds, the community of users should increase by more than 60% and it's hoped that more regions will be added in the coming months, enabling more young people to benefit from the system, as well as reducing clinical visits and associated costs for the NHS Trusts involved, through improved patient self-help.

Open Badges

It is against this background that the clinical team decided to test various new enhancements to the Upbete service, including the adoption of Open Badges to motivate and recognise improvements in knowledge and actual practice in self management of the patients self management of their diabetes.

Awarding badges for achievement and recognition of skills is no new innovation. Cast your mind back to childhood when swimming 25 metres, or carving a tent peg with a pen knife would gain you a sew-on badge.

Each badge could be used as demonstrable proof that a skill had been learnt and proven, and the badge itself would be evidence of the authority that issued the award. What's more, these badges would be collected and displayed in a single place (a shirt sleeve, a neckerchief, a swimming towel) allowing the owner to show their achievements to all.

The Open Badge Initiative, from Mozilla, aims to provide a platform where this approach to the recognition of skills and achievements can be replicated, albeit in a digital way. Mozilla describe Open Badges through their website as follows:

Learning today happens everywhere but it's often difficult to get recognition for skills and achievements gained outside of school. Mozilla's Open Badges project is working to solve that problem, making it easy for any organisation or learning community to issue, earn and display badges across the web. The result: recognising 21st century skills, unlocking career and educational opportunities, and helping learners everywhere level up in their life and work.

It's not just achievement of skills or milestones that can be rewarded by issuing Open Badges. They can also be used to reward and reinforce positive behaviours. As the administrator of an issuing application, it's possible distribute badges to learners who, for example, regularly log their blood sugar levels, or members who continue to dedicate time to supporting others or even administrators who regularly meet their SLAs.

The dynamic nature of Open Badges, and the data they can contain, means that it's possible to award badges for almost any system achievement, behaviour or action.

The Mozilla Open Badge project provides a technical definition for how Open Badges can be created, stored and shared - providing an approach to interoperability, not for the systems using Open Badges, but for the badges themselves.

The model is intentionally straight forward and employs three key stakeholders:

- Issuers create and award badges for the completion of tasks and activities as well as the demonstration of skills and competence.
- Earners are individuals who complete tasks, demonstrate skills and earn badges.
- Displayers provide a platform for earners to show their badges, or selections of badges, within different contexts.

Mozilla Open Badges have been designed to be totally portable and make use of the ability to embed additional information into a PNG image (a standardised and non proprietary image format). By incorporating a reference to a badge description, hosted by the badge issuer, along with information about the individual a generic badge image can be re-encoded to provide a personalised badge for an individual - a portable badge that can be owned and used by the individual however they may require.

The Open Badge specification dictates that the information encoded within the PNG image is minimal (a single assertion URL) and that the information that validates the badge be hosted and maintained by the

issuer. This means that there's very little within a badge that can be tampered with, and validation of the badge can be achieved by quickly and simply reading the information held in the assertion.

The assertion itself is again simple in its construction and provides details of the individual the badge was issued to (hashed using SHA encryption or similar) as well as details of the issuing body. The assertion also references the criteria for the badge which is also hosted by the issuer. In fact, the only thing not held by the issuing body is the badge itself. Security and validation of the badge is therefore maintained by the provision of a valid assertion served by the issuing body.

Applying Open Badges to Upbete

So how would this apply to the Upbete platform? To support the project we have built a badge designer tool that can be used with the young people to empower them with support from the clinical professionals, to design the badges that they think would improve their understanding of their condition, encourage them to manage it, and inspire them to keep using the Upbete site.

The target age group for UpBete is from 4 to 19. This presents many interesting challenges including the diversity of maturity and capability with age, the varying degree of family/carers involvement as the young person matures, and the particular challenges of potential complications associated with adolescent activity and the disengagement from direct family support.

So will one method of support and motivation may work better in some than others? Will different reward strategies or presentations be needed with different groups?

Also if we are to motivate and recognise progress in self management with Open Badges, what are the things we should recognise with Badges? Eg. first use/regular use of the system?; reading of specific resources? ;quizzes to test knowledge?; actual use of the systems tools for recording and tracking blood glucose levels? ;participation in forums or contributions to shared resources?

Other ideas have included:

- Possible gamification to show people who have earned most Badges in the last month
- Some form of peer assessments and Badge award for "likes" of shared contributions
- Patient/carers group awards of Badges to clinic teams for their superior quality of care
- Schools could be awarded badges for demonstrable ability to holistically support children with diabetes, ranging from proven teacher knowledge, proven relevant school nurse / dinner staff/ PE staff knowledge, peer assessment of good practice, and school governance oversight best practice,
- Recognising local restaurants for their support of diabetes (eg. showing carb counts on menus) with the Upbete App maintain a list of local restaurants that are recognised as being "diabetes friendly" by their Badge award.
- Family members and carers could earn Badges for being good cooks for diabetes, etc

This presentation will outline the decisions taken to implement Open badges in this context and the reasoning, including the process used to involve the actual target community in the design process, and will also provide an update on early results emerging from practical use.

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MyKnowledgeMap

www.myknowledgemap.com

www.upbete.co.uk

The Process of Creating and Validating an Open Badge: The Impact of Metadata, Quality and Endorsement Procedures

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Abstract

Creating a badge poses challenges. The philosophy behind the Mozilla Open Badge initiative is the development of an open and flexible system that offers everyone the possibility of demonstrating his or her own competencies, which otherwise might have remained invisible, and getting them recognised by others. To reduce the danger of inflation, developers suggest implementing an endorsement process for the validation of the badges.

This paper questions this approach and presents research concerning the development and the validation process of a badge. We created different badges for different achievements and different learning settings (formal, non-formal, informal), and reflected on the process and the consequences. We then presented each badge to two experts of educational sciences with an emphasis on educational management and transfer of knowledge and conducted interviews to investigate if they would consider providing endorsement and to what extent an open badge system could contribute and add benefit in educational contexts.

Background and relevance

In the last few years, the Mozilla Foundation and the MacArthur Foundation started to develop and implement a so-called Open Badge ecosystem. The idea behind this effort is to offer everyone the possibility of demonstrating his or her own competencies, which otherwise might have remained invisible, and getting them recognised by others through the means of a visible badge, displayed on a website (e.g. the personal ePortfolio).

The first question to be answered is: What exactly is a badge in this context? A badge is, in its essence, a picture connected with data. The picture looks similar to the well-known scout badges (round shape). The connected data, the so-called “metadata”, contain information about the badge content, issuer, recipient, issuing date, verification, expiration date (optional) and evidence (i.e. a website with information about the skills that have to be acquired by anyone who wants to earn the badge).

The badge serves as “a symbol or indicator of an accomplishment, skill, quality or interest” (Mozilla OpenBadges).

When someone receives a badge, he or she can push it, i.e. store it in the so-called badge backpack (<http://backpack.openbadges.org/>). The Open Badge Backpack is a website for the collection, documentation and exchange of badges. A user creates his or her personal account and can push any badges into it, either online or by manual upload. Every user can create categories for grouping his or her badges or delete his or her own badges. Beyond this, every badge can be exchanged within social groups such as Facebook, Twitter, LinkedIn, WordPress etc. (cf. Hartong, 2012, 42).

The following aspects are the core characteristics of the Open Badges approach:

- Openness: Everybody can issue, and everybody can get/earn badges.
- Focus on outcome and competencies: “Which competencies and skills has somebody acquired?” and not “Which facts has somebody learned by heart?”
- Badges are awarded primarily for informal and non-formal learning, but formal learning settings are also included.
- What are the possibilities, where are the challenges and where are the limits of developing a badge system? Our paper focuses rather on generating questions while investigating the Open Badges approach than on presenting answers. While researching the idea and process of creating a badge and implementing an award system, many questions appeared that demonstrate the complexity of this emerging field. Parallel to the evolving technical system, the corresponding implementation scenarios have to be developed. We decided to develop our own badges to document the process and the steps we had to take, because, while researching the web and existing literature, we observed many questions emerging that could not be answered by the provided sources. Therefore, our paper documents the experiences and observations we made concerning the concrete technical and content-related tasks, as well as the organisational and structural conditions and impacts. We identify the challenges associated with the process of issuing a badge, in technical and didactic regards. We reflect on the consequences

concerning didactic approaches and implementation scenarios, as well as chances and limits. We conducted interviews with experts in the fields of educational sciences and management to gain deeper insight regarding a prospective validation/endorsement process for badges.

Our aim is not to present answers but, quite the contrary, to generate questions connected with the emerging field of the Open Badges movement.

The process of creating a badge

To understand what it means to create a badge – which steps have to be worked through, which decisions have to be made and which consequences might follow – we decided to create our own badge and investigate which hurdles, pitfalls and challenges we would meet.

Step 1: Technical issues

As a first step, we researched how to create a badge technically. Many websites give information, ranking from vague buzzwords up to detailed technical descriptions of how to program the metadata file. Several questions remained: Can really everybody issue a badge or are there any restrictions, determined by Mozilla or the technical circumstances? Can everybody design and create a badge even without technical skills or is it necessary to engage a software engineer, and could it really be that everyone could create a badge with any favoured content? These questions led us to consider whether every badge has to be sent to Mozilla and be approved before the badge can be awarded. We did not find an answer to this specific question by searching the websites and wikis, so we kept it in mind while creating a badge. We had email contact with a helpful Mozilla member and received several links about badge creation, among them a detailed description about how to generate the metadata file and a blog contribution that describes the creation of a badge via a WordPress plugin (WPBadger) (Belshaw, 2012). Another possibility to create a badge is to write the metadata in a text file with a json extension (this is the specially required file format; see Fig. 1). A template is provided by Mozilla (GitHub, 2013). This file can be verified online by a small programme provided by Mozilla, the Assertion Validator. As a next step, you have to send in the json file (metadata) and an image file to Mozilla, where it will be “baked together” in one; this is the final badge. Our first attempt to create and assert the json file produced an error message because the programme was out of order. After a report to Mozilla, it was very quickly repaired, but we again produced errors with our “self-made” version. So we decided to test the WordPress application.

```
{
  "uid": "f2c20",
  "recipient": {
    "type": "email",
    "hashed": true,
    "salt": "deadsea",
    "identity": "sha256$c7ef86405ba71b85acd8e2e95166c4b111448089f2e1599f42fe1bba46e865c5"
  },
  "image": "https://example.org/beths-robot-badge.png",
  "evidence": "https://example.org/beths-robot-work.html",
  "issuedOn": 1359217910,
  "badge": "https://example.org/robotics-badge.json",
  "verify": {
    "type": "hosted",
    "url": "https://example.org/beths-robotics-badge.json"
  }
}
```

Figure 1: json file

Step 2: Process of development

Using the WordPress plugin, as a second step, we created a badge following the abovementioned blogged description: 1) We set up a WordPress installation on an existing website account of a common web space provider that offers an easy installation package (no own administration and programming skills needed). 2) We installed the WPBadger plugin. 3) We created our first badge, which meant a) creating an image with Photoshop, b) uploading the image (png.file), c) within the plugin area, clicking on “create a new badge” and filling in the text field with the required description of the badge, d) clicking on “create new award” and filling in the text that will be displayed when someone receives the award and accepts it.

In principle, the technical procedure was comprehensible, although some issues did not function the way we expected, for the procedure is not documented (at least not in a central place – we could not find one). Some examples: 1) You need a special format for the image file (i.e. a png. file; a jpg does not work). So, expert knowledge concerning this issue is required. 2) At a certain point, you have to describe the badge,

and you must use only 120 words and not more, otherwise the badge cannot be displayed and pushed into the badge backpack. However, this information is not given in advance. So we wrote a description, got an error message and then searched the web to find out where we missed something. Fortunately, we benefited from the fact that already somebody else had reported the same problem in a forum and received the answer. 3) If you want to generate badges for different issuers, you seem to need different WordPress accounts to do so, otherwise always the same issuer will be displayed on the badges' metadata (see Figure 2, "Issuer Details: Organization"). 4) It can be a technical problem if you award somebody a badge who has no badge backpack account yet. So it must be communicated in advance that every recipient has to create a badge backpack account *before* being awarded.

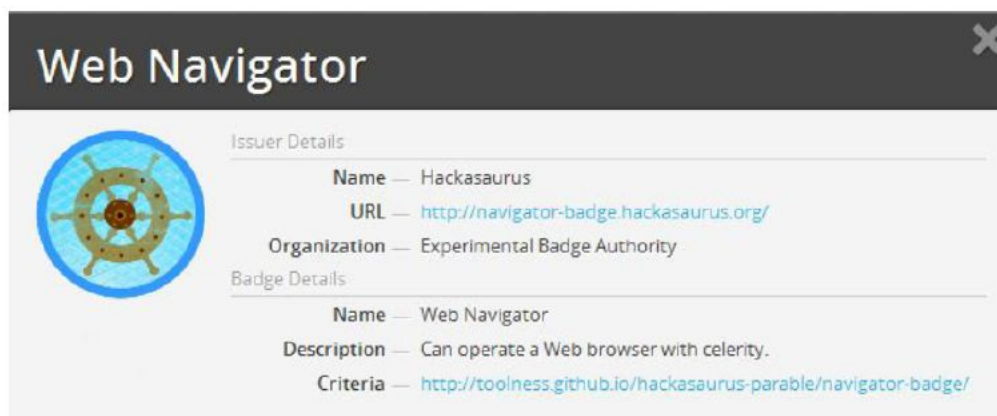


Figure 2: Badge metadata

After this procedure we could answer our questions concerning step one – Can everyone issue and award a badge? Yes. Using the WordPress plugin, you even do not need a software engineer, though the means and possibilities are limited so far, because you need at least to know how to set up a WordPress installation, install the WPBadger plugin and have to manage emerging technical difficulties because documentation is missing and no instruction manual is available.

The complex of problems that might emerge because everyone can issue a badge with any favoured content will be discussed later in this paper.

Step 3: Awarding the badge

Third step: We investigated the procedure of awarding a badge. The recipient receives an email with a link in it. He or she clicks on it, and has to log in at the personal backpack account. Then the badge is pushed into it. This is the path if everything is working. As already mentioned, there seem to be problems when the recipient has no backpack account before receiving and, in the next step, requesting the badge.

Reflection of the creation process

While creating the badge, we observed that we concentrated a lot on the technical possibilities and challenges while at the same time neglecting questions concerning the competencies, which indeed are required to be awarded with the special badge and the core of each badge. The same phenomenon is to be found in an email correspondence of the open badges mailing list (openbadges@googlegroups.com). One user overcame several technical issues with help from the mailing list support, and he wrote, after the technical problems were fixed: "Now I just need to figure out how to create online quizzes or games for users to complete in order to prove they've done what is required for that badge". He noticed, indeed, "[t]hat's the tricky part" (Mozilla Open Badges Community space, 2013).

The impact of endorsement

Mozilla provides several examples for situations and settings where badges could be used; especially, these are informal learning settings. This leads to some of the most important questions concerning the Open Badges idea and research, already shortly mentioned in the reflections above: In which context and for what reason should a badge be awarded and make a difference and to what regard? What effect does an issuer want a badge to have? How much is a badge worth, if everyone can create a badge with any given content and requirements? How can it be guaranteed that something *meaningful* and *with substance* is being demonstrated by a badge and not something as superficial and ephemeral as a Facebook like? How can someone who wants to use badges as information about a person's competencies and skills distinguish a "plain" badge from a "serious" badge?

An excerpt of a working paper describes the Open Badges vision the following way:

“A robust badge system developed with intelligence, sensitivity and finesse has the power to alter the course of individuals’ lives. It provides an environment in which important concepts are recognised, feedback is welcomed and incorporated, individuality is respected, people are encouraged to express themselves freely and creatively, expand their potential, attempt difficult but rewarding experiences, interact with and aid others, seek and find opportunities, learn, experience, make, scaffold, share and grow” (Mozilla Foundation & Community 2013, 10).

To solve the problem of validation, an endorsement approach was suggested. Endorsement in this context means “allowing third parties [to] endorse or sign badges to indicate their support and vetting of those badges, and that additional information can be carried with the badge. For example, the Department of Education may endorse a series of badges from informal learning providers, giving those badges some extra weight and perceived value” (Mozilla Foundation et al., 2013). This led us to the question how these third parties might evaluate the badges’ value and which criteria they would apply. The following example clarifies this problem even more precisely: “(I) imagine that MIT reviewed MOUSE’s technology skill badges and if they felt that the badges were high quality, MIT could sign the MOUSE badges, and thus endorse them” (Knight, 2013, 6). Indeed, when does a company “feel” that badges are of high quality? And at which point would an employer decide that a badge is worth being supported and how could this procedure progress?

To investigate these questions, we conducted interviews with two experts of the field of educational sciences and management.

Expert interviews

Method

Our aim was to identify if the experts could imagine contexts in which badges could be used in practice and how. In addition, we questioned critically if the Open Badge idea of Mozilla could be reflected upon and inspected concerning an implementation in a formal institutional setting in Germany.

We conducted two interviews: Expert 1 is a professor for continuing education, with the main focus on educational management and economics; expert 2 is a professor for knowledge transfer and learning with new media. This combination allows not only the exploration of quality and respectability of the idea of badges and the connected metadata, but also the aspects of educational technology and media components of the Mozilla Open Badges philosophy. We conducted partly standardised guided interviews, which allowed for an open and exploratory view on the field of Open Badges as well as implementation possibilities in Germany. Both interviews were transcribed with illustrative quality.

Procedure

We showed the experts our test ePortfolio (“Steffi’s ePortfolio”; see Fig. 3 below) we had designed and created before. We decided to present five completely different badges to show the scope of possible contexts where badges could be used. We explained the badges and the general idea of badges to the experts. Each expert received a printed overview of the badges, the connected metadata and the learning outcomes (criteria). Each interview took approximately 30 minutes.

Steffi's ePortfolio

Have a look and find out!

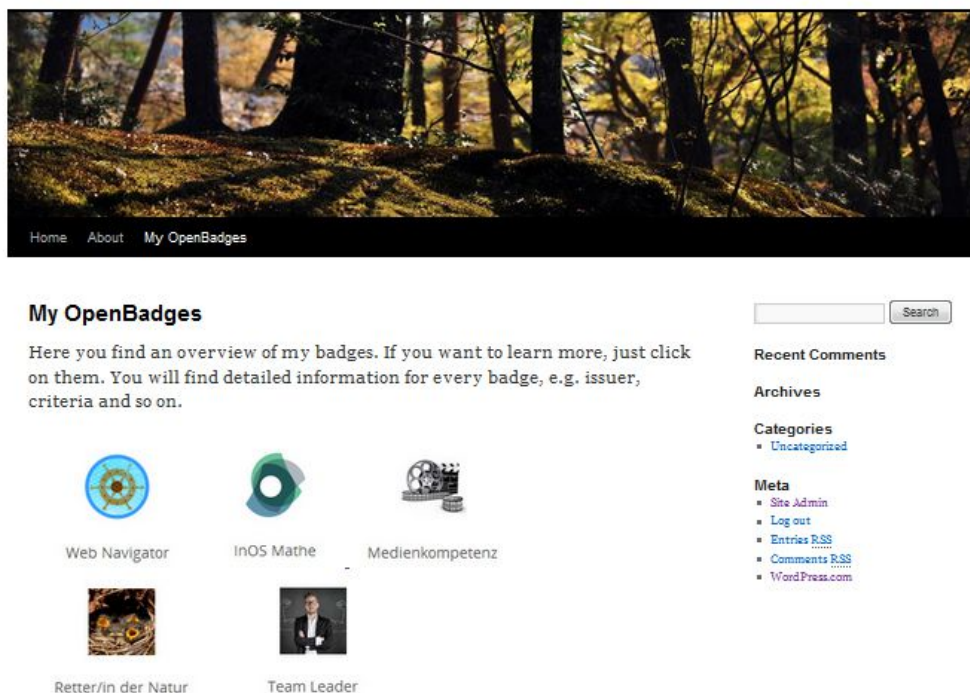


Figure 3: Example of an ePortfolio with embedded badges

The presented badges

We presented the following five badges, springing from different learning settings (formal, non-formal, informal):

1. Web Navigator: badge for completing simple web-related tasks like copying some text in a special text field.
2. InOS Mathematics: badge for completing a nine-week university online course, developed and implemented within a project of the University of Oldenburg for prospective students; an official certificate of the university could be gained by completing a final exam. The abbreviation InOS means the project "Individualisiertes Online-Studienvorbereitungsprogramm für beruflich Qualifizierte".¹
3. Media expertise: badge for participating in a media-related project including writing a storyboard and developing a short movie.
4. Saviour of nature: badge for helping animals to survive, e.g. building a bird box in winter.
5. Team Leader: badge for showing leading competencies in daily working life.

Results/ Findings

Central statements and results concerning the abovementioned criteria of quality, content and reflection are presented in the following.

One of our questions was how an expert would estimate the impact of endorsement. One central statement of expert 1 (educational sciences and management) concerning this was: "This idea could create another kind of certification". The idea of an open system seems to be inextricably linked with the question of how its value can be assessed and assured. As an expert in the field of educational management, she also mentioned the possibility of business ideas behind it: "At one point, the question of certificate and quality will appear. [...] Thinking further, it could happen that everybody wants to gain as many badges as possible, and they will get them only if these are certified". And this certification "will be with costs". At least "one could think vaguely in that direction".

A possible benefit could be the implementation as an instrument for self-reflection: "What are my skills, who am I and what do I want to make visible for the outside [...] That could be a useful starting point". Another consideration concerning this could be: "Does this instrument have effects on learning itself? Do reflecting,

¹ "Individualised Online Study preparation programme for prospective students with professional qualifications"; <http://www.uni-oldenburg.de/inos>, retrieved <09-06-2013>

writing, illustrating and presenting have effects on my competencies and increase them?"

One of our ideas from an education sciences' perspective concerning the use of badges was to underlay, e.g. graduation certificates with the acquired competencies during one's study. Expert 1 advised against the wide implementation: "I think it is terrible if I had a certificate underlaid with such a badge to go deeper in all sorts of categories. I would wonder immediately: Who gets all this information?"

From her view as an employer, she would *not* be interested in getting told the "whole story" by badges from job applicants: "I want to get the relevant information prepared and filtered; I do not want information overflow".

Discussion

Chances

One of the obvious chances of the badge idea seems to be at the same time a limit in some regards: Who wants to hear so many "whole stories" from somebody? One advantage of standardised certificates is the manageability of underlying data. Then, the question arises: In which contexts could "the whole story" be relevant? Maybe not from an employer's point of view, because employers do not want to invest much time in advance for the detailed exploration of competencies. They rather need standardised information of a job applicant for fast judgments. But the open badges idea could be very useful in other contexts like personal development, human resource development and development of competencies, motivation and self-confidence. It is obvious that in social and educational settings other goals than official appraisal are important, so here the Open Badges idea could be a useful instrument.

Limits

A basic idea of Open Badges is openness: everybody should be enabled to issue badges and earn them, for every kind of learning context. Quickly, limitations concerning the value of the badges appear: If everybody can issue a badge for every kind of achievement, how can the other party estimate what is the worth of a certain badge? This led to the suggestion of an endorsement procedure. But this, in the next step, again leads to established authorities who give weight and value to badges, which again leads in the direction of certification.

If badges are used as a tool for personal development linked with the fields of social media, the earning of badges could drift towards a competitive direction in our achievement-oriented society: It could put pressure on users to acquire as many badges as possible instead of using the tool purposefully for self-development and self-motivation.

Furthermore, we wonder about the consequences for the learning process itself when learners know that they can earn badges by completing tasks, especially in regards to the concepts of intrinsic and extrinsic learning motivation. The effect of external rewards is impressively demonstrated by a well-known study by Deci, already conducted in 1985, which discovered that intrinsic motivation is reduced by offering monetary rewards. In addition to this effect, extrinsic motivation often corresponds with surface learning strategies like learning by heart (cf. Killus, 2007, referring to Schiefele/Schreyer, 1994, 7). Does the badge ecosystem "just add another" new evaluation tool and risk becoming a necessity for everyone to earn to be able to compete, be it in the labour market, in private or school context?

Technically speaking, really everybody who wants to issue a badge can do so. If everybody can issue a badge, and if no common agreed standards for awarding such badges exist – how can the worth of a special badge be decided? We think that this is a core question of the further development of the badge system, because this means that several consequences are possible: standards could be needed and set up again (the business idea approach, as mentioned in the expert interviews). Or the issuer's reputation might be of importance for rating the value of a certain badge. This could be a field of conflict regarding the idea of openness and the intended focus on informal and non-formal learning.

Prospects

As a following consequence, the Open Badges idea discloses many challenges, possibilities and also many unresolved questions.

In Germany, against the background of a distinctive culture of certification, the approach could quietly herald a paradigm change and shift the focus of our output- and achievement-oriented society towards an emphasis on competencies.

Interesting approaches for further research could be, e.g. a comprehensive investigation into how enterprises and employers evaluate the use of badges within their fields, and whether badges are able to increase learning motivation.

To spread the usage of badges, it would be of great benefit if a desktop program for the creation of badges

was provided, including easy and user-friendly creation, management and awarding. At the moment, the process of creating a badge still requires too many resources of time and special knowledge to become an everyday tool for everyone who would possibly consider using it.

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¹ This work became possible because the projects "Forschungsbasiertes Lernen im Focus (FLiF)", founding-number 01PL11056, and "Individualisiertes Online-Studienvorbereitungsprogramm für beruflich Qualifizierte" were founded by the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung BMBF).

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Connecting Open Badges and European Guidelines for validating non-formal and informal Learning – a critical perspective on accreditation procedures

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"Try to see it my way...
While you see it your way...
We can work it out,
We can work it out"
(The Beatles 1966)

Abstract

Inspired by Foucault's thoughts of the power/knowledge complex (Foucault 1977), we explore the promise and possibilities of Open Badges to provide a significant contribution to efforts in the field of recognition and accreditation of prior (experiential) learning (AP(E)L) undertaken to date. Based on the premise that power and knowledge dependent on one another, we attempt to widen up the discourse of recognition and accreditation by introducing two questions: 'who uses power/knowledge in this discourse and to what ends?' We analyse the idea of validation as rational underlying *metadata* through connecting Open Badges and Open Badges Infrastructure (OBI) with the *European guidelines for validating non-formal and informal learning* (Cedefop 2009). Promising about the idea of Open Badges seems the possibility to start a new discourse, wherein the learners gain control about the visibility of their competencies instead of being controlled by examinations, so that innovative competencies can be considered, and standards will be replaced by in-depth-stories.

Background

Open Badges are seen as an innovative way of valuing lifelong learning. We view Open Badges as another way of validating competencies, as they tell "a much more in depth story given that we can use badges to capture more granular learning and each badge is evidence-based" (Anonymous 2013). As an intentionally open and flexible system "top down, authority driven decisions will not work for badges" (Knight & The Mozilla Foundation 2012) and would probably hinder innovation, as it would fall back on the conventional hierarchy of values for recognition. In this sense Open Badges have the revolutionary potential to overcome what Foucault called the "micro-physics of power": The recognition of competencies through Open Badges puts the power of validation back in the hands of the people. This poses great opportunity and risk at the time, because power to every badge includes the risk of inflation.

We explore the kind of content and structure that is needed for Open Badges to demonstrate and prove the earner's competencies represented by a badge (or by a badge backpack), in other words: "ensuring that at any point in time someone can understand that badge and assess its value" (Knight & The Mozilla Foundation 2012). In our reading, Open Badges should act as a "gateway or conversation starter" (Mozilla Foundation 2013): Similar to ePortfolios, as they are folders of authentic and reflected artefacts, Open Badges can tell much more about a person's competencies than marks, abstract certificates, or other conventional credentials (see also Jeffrey 2012).

Recognition of competencies according to the European Guidelines

The starting point is to connect the Open Badge rationale of validation and the process of learning certification as proposed in the European guidelines. Figure 1 is part of the *European guidelines for validating non-formal and informal learning* (Cedefop 2009) and explains the process of learning certification. Against the background of Foucault and Open Badges, two interesting aspects become obvious in this figure: First (a) an accreditation procedure is a complex process, where no agents (institutions, experts) are named. Recognition and accreditation are shown as relational processes without any agents – so who acts?

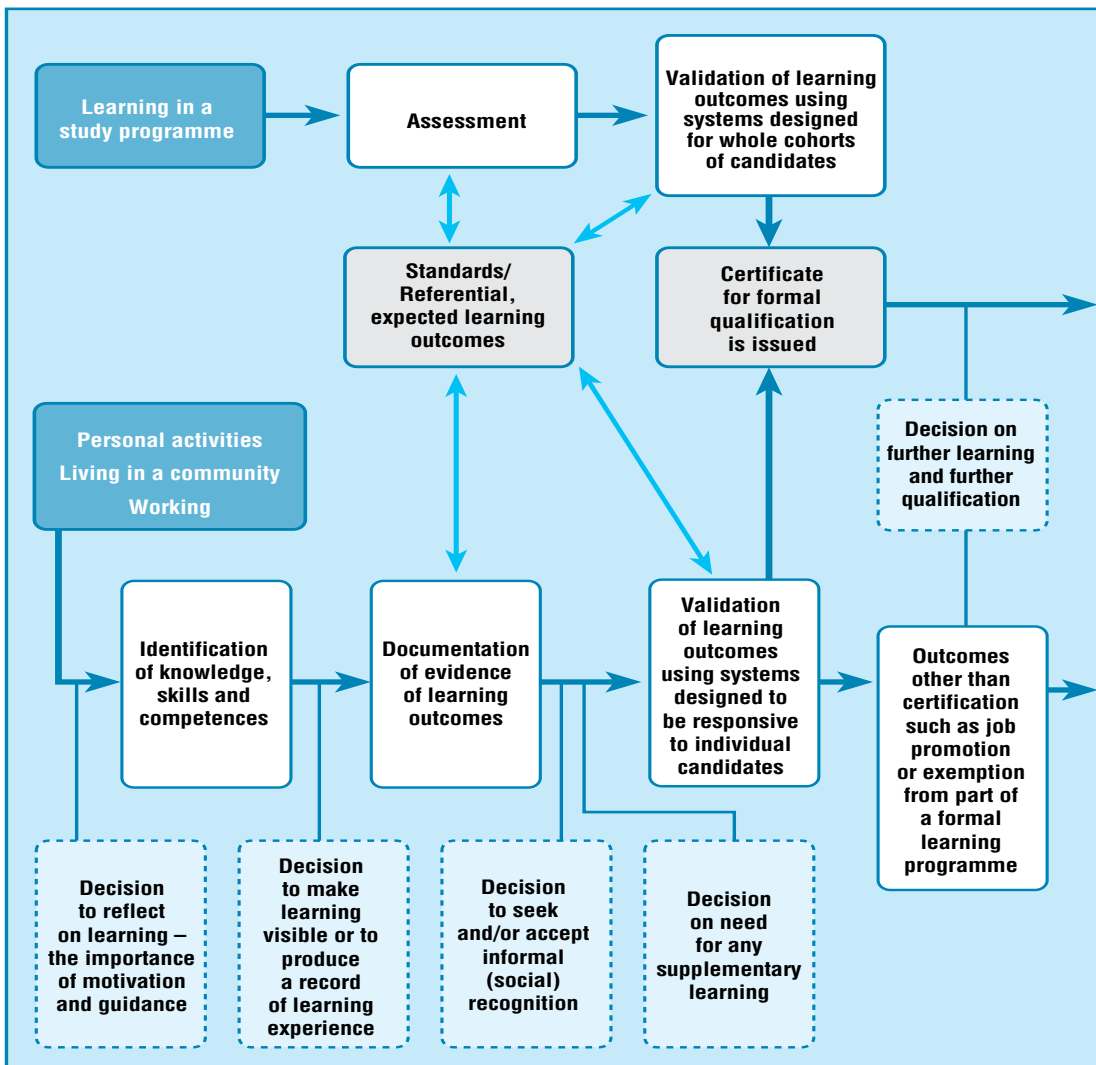


Figure 1: Scheme of accreditation according to European Guidelines, cf p.18

Second (b), according to the model of formal learning, informal competencies on the lines of formal certification-procedures are sooner or later submitted to standards/referential, because the validation of learning outcomes is realized by a recourse of standards/referential. Who sets these standards and which are they in case of informal/non-formal learning? Defining standards for highly innovative competencies is more or less impossible, because the long lasting procedures of standardisation expel from innovation. To sum up: The validation of non-formal and informal learning according to European Guidelines follows the accreditation model of formal learning, so non-formal and informal competencies should be recognised and accredited formally – a contradiction in itself? Every accreditation procedure requires standards or referential, at least expected learning outcomes. But there is a lack of standards/referential for competencies based on informal learning and for highly innovative competencies.

Foucault's analysis of the micro-physics of power within the discourse of recognition and accreditation

Speaking about discourse, Foucault does not refer to a linguistic point of view but to the connection of language acts, practise and knowledge about a certain theme within a historical context. Discourse creates knowledge. Outside of discourse there is no meaning possible. In this perspective, badges are a *process of knowledge-creation within discourses*. Knowledge always represents a form of power. Foucault recognises power as a productive network, which creates knowledge, discourse and things. The condition to consider knowledge in a meaningful way is to locate power within discourse.

The discourse of education, respectively the European guidelines is "lodged within a modernist worldview, where rationality and objective realities are presumed" (Gergen 1999, 151). The social constructionism exposes both the rational and the real as "byproducts of communal relations" (Gergen 1999, 151).

According to Foucault and Gergen, the validation of non-formal and informal learning is part of a social discourse. Analysing this discourse with the eyes of these two theorists, every accreditation procedure is an example for an exam/examination. The familiar method of examination in the discourse of education "implement, within a single mechanism, power relations that make it possible to extract and constitute knowledge" (Gergen 1999, 185). Power determines when/where this knowledge is used for. Every examination consists of permanent comparisons, which are measurement and sanction at the same time (see Foucault 1977, 240).

Individuals are subjected to a normalising and standardising look (see Foucault 1977, 238). But one of Foucault's most important features – the idea of the *panopticon* and the constant possibility of observation, so that people believe they are being watched, even if they are not – raises new questions in the age of ePortfolio, online self-disclosure and recognition of visible competencies. Is the decision to make learning visible and to seek validation/recognition/accreditation a further step in the idea of panopticon in a way that individuals voluntarily surrender privacy? Instead of this scenario we think of individuals, who are able to anticipate the risks of self-disclosure and act digital responsibly.

These thoughts point to two competing discourses and a need for development within the discourse. Within the interplay of forces – the social pressure for equalisation (as a condition of measurement and standardisation) on the one hand and for being innovative, flexible, achievement-oriented... on the other hand – a social change is looming. This evokes parallels to the 1960s as a period of students' protests and Cultural Revolution (see King 2013). At this point the Beatles jump into our text. Their music is an example for a radical change of discourses. We ask ourselves, if Open Badges bear the potential of changing the discourse of recognition and accreditation of informal competencies.

Open Badges and the diminishing relevance of proficiency

When validation and recognition of competencies become part of an institutional accreditation procedure, all the processes are to be seen, according to Foucault, as a kind of disciplining. Disciplining includes processes of taming, controlling and reducing: Discipline "could reduce the inefficiency of mass phenomena: reduce what, in a multiplicity, makes it much less manageable than a unity; reduce what is opposed to the use of each of its elements and of their sum; reduce everything that may counter the advantages of number. That is why discipline fixes; it arrests or regulates movements; it clears up confusion; it dissipates compact groupings of individuals wandering about the country in unpredictable ways; it establishes calculated distributions. It must also master all the forces that are formed from the very constitution of an organized multiplicity; it must neutralize the effects of counter-power that spring from them and which form a resistance to the power that wishes to dominate it: agitations, revolts, spontaneous organizations, coalitions – anything that may establish horizontal conjunctions" (Foucault 1977, 219).

In the process of accreditation and recognition, competencies would be treated as 'things to be measured', and this reduces and fixes the diversity of competencies and the high variety of individual competencies. Because of the power of institutions of higher education the accreditation of competencies is in a way an example for a successful control of individuals by institutions. Regimes of knowledge like the higher education system generate discourse and practises; it invites students into their realities: "And as we unwittingly accept these invitations to reality or truth, so we subjugated" (Gergen 1999, 208).

"(A)ny fixed standard or requirement will always remove the privilege of meaningful participation from some person or group. Further, by solidifying such standards or requirements, we diminish the possibility of new alternatives" like Open Badges (Gergen 1999, 151). Instead of standards, Open Badges search for a new discourse, wherein knowledge about competencies is given back to the learners, who decide on their own which competencies they will make visible to whom and under which conditions. Thus, the micro-physics of power of standards is replaced by detailed descriptions and by the *whole story of learning and development*. This reduces the relevance of proficiency.

Validating competencies with Open Badges

The validation underlying Open Badges is shown in figure 2. In this figure, metadata prove to be crucial for the act/topic of recognition, because these data include the documentation and validation of competencies. Metadata include information such as the origin, stakeholders/issuer, issue date, criteria for earning the badge, expiration, the earner's work or evidence behind the badge... In this sense, metadata can act as an "informal validation system itself" (Jeffrey 2012).

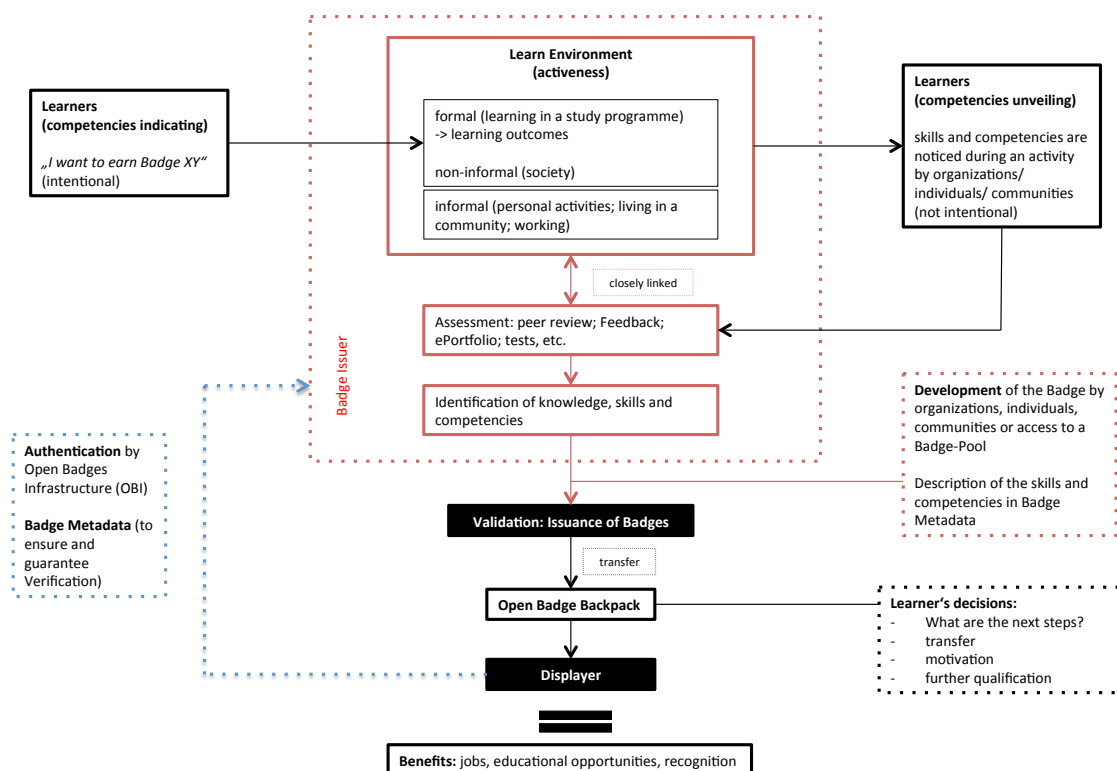


Figure 2: European Guidelines and Open Badges (own figure)

As a "record of certification" (Brandon 2013) metadata "makes the badges more reliable than résumés and more granular than degrees" (Brandon 2013). Open Badge Infrastructure (OBI) conveys when the badge is issued and thereby guarantees that the competencies have been acquired. Understanding the badge and the underlying infrastructure as a complex net of relationships, the metadata is more or less 'baked'/burned-in the badge. Thus a badge is more than just an image file; in contrast to an image file where what you see is what you get, an Open Badge includes metadata with value and an authentication.

Conclusion: Open Badges between standards and openness/flexibility

As mentioned above, Open Badges are to be seen as an innovative way of making visible and valuing learning and supporting lifelong and lifewide learning. Based on the assumption that there is a contradiction between the *needed standard* in accreditation on the one hand and the idea of Open Badges as *irrepressible* power on the other hand, the complex relationships between badge-recipients, badge-providers and badge-readers, whether they are institutions, non-experts, or friends, need to be cleared up. The meaning of a badge is not determined by one of the agents but is – as all meanings – "prepared by a history of relationship" (Gergen 1999, 146). "(T)his continuous refashioning of meaning is not under any one person's control. Even within a dyad the voices of other relationships continuously intrude. And as we enter directly into dialogue with others, so can the emerging patterns of coordination change all that once seemed clear and apparent" (Gergen 1999, 146f.).

In this sense Open Badges diminishes the power of proficiency. For this will provoke resistance you will need very good arguments for an implementation of Open Badges.

Whenever badge-providers attribute qualities/competencies to a person, institutions e.g. universities may decide on the basis of all the information given in metadata if they are willing to recognise these competencies or not. Facing the lack of referential/standards for informal and innovative competencies the additional benefit of Open Badges requires to be understood. In our view, Open Badges are the starting point of a new discourse, which focuses on competencies and takes seriously the philosophy of competence-orientation/competence-based learning. Open Badges metadata can serve as a proposal for a prototype of an in-depth story of competencies. Aspects of badge backpacks – may they are linked as a journey or clustered as a group or in a master-detail or dynamic structure (Anonymous 2012) – seem to be promising for aspects of validity and reliability of badges.

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11. ¹This work became possible because the projects "Forschungsbasiertes Lernen im Focus (FLiF)", founding-number 01PL11056, and "Individualisiertes Online-Studienvorbereitungsprogramm für beruflich Qualifizierte" were founded by the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung BMBF).

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Other tracks

Blogging in the ePortfolio environment to enhance reflective practice: the Bucks Operating Department Practice student experience

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Introduction

Reflective practice is emerging as an important component of practice in the health professions such as nursing, medicine, the allied health including the Operating Department Practice where care to patients undergoing surgery. The professional as well as the educational organizations together with regulatory bodies all have a role in developing the capacity of the health professionals to be reflective practitioners. "Reflective practice is more than thoughtful practice; it is a form of practice which seeks to problematise many situations of professional performance so that they can become potential learning situations and so the practitioners can continue to learn, grow and develop in and through their practice" (Jarvis 1992: 174 -181). One of the important reasons for reflective practice is that it can make a difference (Kofoed (2011) in delivering patient care especially when the primary focus is on patient choice and improving the financial efficiency of the services (Department of Health White Paper 2010). It is an important skill to develop because it enables the practitioners to become self-aware in providing the best possible patient care (Jindal-Snape and Holmes 2009, Mann et al. 2009). Integrating reflective practice into the curriculum and "developing a reflective curriculum" (Esterhuizen et al. 2008) are some examples that promote such development.

A review of academic literature reveals a growing emphasis on reflective learning and practice in HE where reflection is enabled in a "safe, organized and structured" (Esterhuizen et al. 2008:181) environment by integrating portfolios into the curriculum for the collection, selection, reflection and direction of learning (Danielson and Abrutyn 1997). However, to accommodate the changing needs of present day students on professional programmes (e.g. the ODP course) which are predominately practice based, electronic or digital portfolios have been introduced into the curriculum adding value to the paper portfolio some of which include the real-time and simultaneous sharing of user-generated content via online communities and social networks including peers and tutors with the added possibility of formative and summative assessments. The sharing and social aspects of user-centered technologies such as blogs and wikis provide useful means for creative expression and offer great potential for learning and teaching (The New Media Consortium and the EDUCAUSE Learning Initiative 2007) provided they are effectively linked with the pedagogy and learning objectives of a particular course or discipline.

Educators who design this type of curriculum believe that each student will construct, obtain, and interpret their own knowledge differently through constructivist learning, an active process which allows the students to make sense of their world (Adams, 2006) by actively engaging in a learning process that involves discovery, questioning, discussion, reasoning, judgment making and idea and opinion formation (Buzzetto-More, 2006). Moreover, as constructivists, they perceive learning as a social activity (Brooks and Brooks 1997). Such a curriculum is therefore considered, student centred underpinned by social constructivism (Vygotsky 1978) as reflected in the Bucks Diploma in HE in Operating Department Practice (ODP) Curriculum (Nicolls and Roadnight 2012).

This paper reports on the empirical evidence of the operating department practice trainees' experiences, perceptions and expectations in the 3-week blog task to examine the extent to which "writing to learn" through blogging compared with the "learning to write" through prescribed reflective writing on course specified topics in an ePortfolio environment contributed to developing reflective practitioners using learning theories of constructivism, connectivism, critical reflection and community of practice as a curriculum renewal strategy in order to meet the needs of future and larger cohorts of trainees. As it was within the scope of the academic department to redesign assessment practices based on student feedback, accreditation requirements and Bucks learning and teaching strategy, no formal consent process was implemented. The context of the course, the usage of the blog concept, the pedagogical underpinnings and the rationale for this technology, the intended learning outcomes, the role of technology in achieving them, the social, usability and pedagogical factors that influenced the trainees' learning experience will be discussed.

The Bucks Diploma in HE In Operating Department Practice Course

Year 1 (Level 4) focuses on the introduction of principles and concepts that underpin perioperative practice, in particular around anaesthetics and surgery and the integration of theory and practice in these fields.

Trainees explore the biological, sociological, psychological and behavioural concepts to enable the development and understanding of the needs of a patient throughout the perioperative pathway. Year 2 (Level 5) builds on trainees' prior learning and extends their perioperative knowledge and practice skills through participation in the perioperative care of the patient including recovery and specialist surgery and anaesthetics as well as obstetrics (elective and non-elective). The 2-year purposefully designed curriculum is work integrated learning allowing the trainees to apply and practise knowledge and skills developed through their campus based studies in a professional setting with supervision and feedback from the Health Care professionals and academic supervisors. Therefore, the curriculum is based on the constructivist theory; it enables the trainees to make meaning by contextualizing the content within the learning environment in the clinical areas (Delahaye & Choy 2007:3). Moreover, incorporating reflection through a range of learning activities including debriefing sessions and assessment tools not only allows the trainees to identify connections between theory and practice reflecting on their own skills and capabilities as "professionals in training" but also encourages them to develop and demonstrate the capabilities and attributes of a registered operating department practitioner (Green et al. 2009).

Learning to write

Documenting their learning in the institution independent, student owned and controlled Google Sites eportfolios as reflective essays for formative assessment is viewed as the process of "Learning to write" for the enhancement of reflective practice. This assessment for learning takes place during learning, working with the trainees to determine what is being learned and identifying what the 'next steps' should be. It is based on day to day clinical practice both on campus and in placement, where both the tutors and the trainees use feedback to improve learning and is the scaffold for promoting reflective practice in clinical placement.

Learning to write tasks require students to "review an experience of practice in order to describe, analyze, evaluate and inform learning about practice (Reid 1993) and be involved in strategic planning, acquisition and analysis of information, processing and connection making and synthesis as they bring ideas and artefacts together (Lorenzo and Ittelson 2005) - skills which are recognised as essential to the development of personal development planning, reflective practitioners and lifelong learners (JISC 2008). Documenting clinical practice experiences and reflecting on them in the ePortfolio or writing reflective journals, diaries and logs are common tools to promote active learning and professional practice that is reflective rather than routine (Thorpe 2004) giving the trainees the opportunity to think through arguments possibly leading to cultivating and enabling higher order thinking skills (Resnick 1987).

The recursive and reflective nature of the writing process is believed to contribute to student learning (Applebee 1984, Ackerman 1993) especially learning to write reflectively within the disciplines that requires deeper analytical thinking (Langer and Applebee 1987) which in turn is closely aligned with critical thinking. However, although this prescriptive nature of the construction and development of the reflective practitioner allows the trainees to familiarise themselves with the technology and become confident in maintaining the ePortfolio space as required by the course, it limits the use of critical thinking, sharing and collaboration - aspects that promote reflective practice in a student-owned ePortfolio environment. In other words, it is believed that "learning to write" reflectively within the boundaries of academic writing can be enhanced through the sharing and discussion of clinical practice issues with peers.

Reflective assignments related to module learning outcomes and clinical experiences aim to enable reflection on practice and have been an effective way of structuring reflective activities. The concept of scaffolding has been applied for reflection which fosters lifelong learning because it encourages the ODP trainees to recognize gaps in their own knowledge and attend to their own learning needs (Westberg & Hilliard 2001). This practice is based on the work of Vygotsky and then Bruner who postulated that with an adult's assistance, children could perform tasks too complex for them to perform independently (Vygotsky 1978). A scaffolding experience allows the trainees to move away from assistance, to become independent learners able to transfer the acquired understanding to new contexts

Writing to learn: the use of blogs

A review of literature demonstrates an increasing interest in applying blogs in education in recent years (Godwin-Jones, 2003) and they are a growing part of the public face of the health professions because of their potential to be used as supplementary communication means, collaborative tools, and instructional resources in educational environments (Achteman 2006, Godwin-Jones 2003, Ray 2006). Integrating blogging as a medium of asynchronous communication and reflection in the CL505 module gave the trainees the opportunity to interact virtually with their peers and share narratives about aspects of perioperative care they were undertaking in placement thus, developing "dialogical writing" (Jasper 2003: 158): question and answer sessions or developmental dialogues usually used at the "learning to write"

stage. The social connectivity among the peers geographically dispersed during placement as well as the exploration of ideas (Graham and Scarborough 1999) improving communication and collaboration without barriers regarding time, place and culture boundaries (Olasina 2011) acknowledging peer-assisted learning in a community of practice.

The collaborative learning approach is underpinned by social cultural and social constructivist learning theories: the ODP trainees can learn more through collaborating with their peers and active participation in the construction of knowledge (Dillenbourg et al. 1996) as it enables them to adapt to new situations and solve problems via those situations which require identifying knowledge gaps and applying prior knowledge (Dillenbourg 1999, Weinberger 2003) within a community of learners. The implication is that, the use of technology enables the trainees to construct knowledge but instead of internalising it, they externalize and distribute it within their community of practice (Siemens 2004). In addition, blogs can be used to improve students' writing skills (Godwin-Jones 2003, Hernández-Ramos 2004, Johnson 2004, Huffaker 2005, Tekinarsland 2008). Writing, with the added benefit of reflection is a crucial part of this learning process. Figure 1 illustrates the writing to learn or blogging in the ePortfolio process.

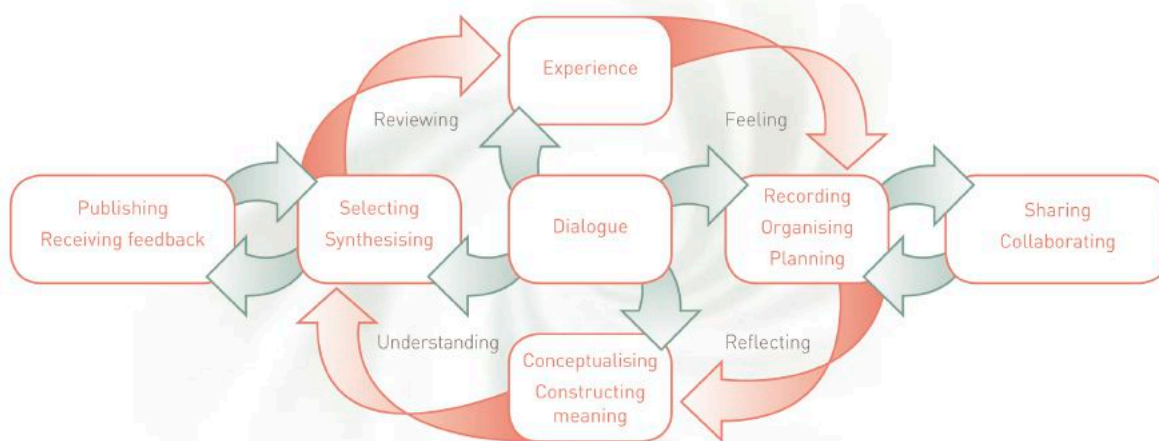


Figure 1: A model of e-portfolio-based learning, adapted from Kolb (1984) in JISC (2007)

The course team created a CL505 Specialising in Perioperative Care Blog assignment page in the Bucks ODP ePortfolio template using the Announcement style which gives a blog like page: it shows the most recent entries at the top of the page allowing readers to see the latest blog entry first as well as enabling blog entries to incorporate hyperlinks to other blogs or web sites, so readers to easily click on and read the primary sources for themselves. Since the trainees were already familiar with this style when Learning to Write in their Google Sites ePortfolios, they could then concentrate on the task of blogging rather than on learning new technology: a constructivist's view that students approach tasks with prior knowledge and expectations based on their knowledge of the real world (Cox 2009). This demonstrates how the assignment design was not only underpinned by social constructivism as the trainees were given a tool to construct their own knowledge but also pedagogically led as opposed to being technologically driven. However, the course team was aware that the CL505 blog page within the ePortfolio lacked an important structural characteristic that distinguished it from traditional personal "home pages": a sidebar which may feature links to other bloggers or favorite sites, allowing bloggers to elaborate on their interests was needed in order that the students could display links to other sites or the actual content of recent blog entries in a scrollable column, thus demonstrating that they know where to locate knowledge they require – a premise of connectivism (Siemens 2004).

In order to prevent the risk of trainees revealing confidential information or, in their tone or content, risk reflecting poorly on them as blog authors and their professions, the blog was contained in the trainees' individual ePortfolios which were shared with selected members of the ODP course. This demonstrated awareness of the standards set by the Health and Care Professions Council (HCPC 2013).

The Blog assignment and assessment

The trainees were informed of the nature of the assignment and the requirements. Over 3 weeks, they

- familiarized themselves with the Blog Assessment Rubric (Table 1)
- as blog authors, created 3 initial entries on a particular topic related to perioperative care
- invited and shared their initial posts with a selected audience
- posted 3 follow up posts to maintain a dialogue analyzing, synthesizing and evaluating information
- follow the HCPC guidelines on social networking practice

- worked independently of the course team throughout the 2 weeks, i.e. self moderated, peer assisted

Findings

Trainee operating department practitioners' perception of the blog task

An online survey created in Google Forms and distributed immediately at the end of the 3-week task, showed that the majority of the ODP trainees saw the positive aspects of the exercise including its potential to develop reflective practitioners and lifelong learners as shown below.

They enjoyed

- the social connectedness with peers in geographically diverse placements similar to using Facebook for information seeking and sharing – communication
- sharing and comparing experiences on placements as they felt they could broaden the understanding of perioperative care information, practices in various placement areas through the knowledge base of a collective whole (e.g. hyperlinks to other sources such as journal articles, documents etc.) – collaboration connection
 - "I have become more thoughtful and mindful of my work"*
 - "I enjoy exchanging personal practice experiences with peers and responding to their reflective posts"*
 - "I have become more aware of my learning needs"*
- Reading follow up responses or comments from their peers appears to have helped them in their own understanding of perioperative care in diverse situations as well as providing some emotional and academic support as learners
 - "Comments on my blog posts have contributed to new knowledge"*
 - "I realised I had more knowledge on subjects than I had thought"*
 - "keeps me up to date with my peers' practice experiences"*
- blogging to teach and learn at the same time while engaging with reflective practice in a community of practice (Hibbert 2008), in other words helping peers
- *"I feel I now have a better understanding of the evaluative skills I need for my skills. "Unknowingly, I had used them when choosing the topic for initial posting, deciding who to invite to my blog and selecting evidence to support my claims in the follow up blogs"*
- the trainees expressed the view that they intend to continue to use a blog for their CPD when they graduate as operating department practitioners and make it public

What they found challenging was

- technical - the difficulty of sharing the Blog page in their ePortfolio with peers which then caused them to delay the follow up postings affecting frequency of posting
 - "Poor page permission settings did not allow peers to comment on my blogs for over a week, despite being allowed to edit"*
 - "there were a few issues with being allowed to comment on my peers' blogs but this got resolved with help from others"*

This indicates how the group sought help from one another to resolve even technical issues
- the suggested group size of 3 – small to enable co-construction of knowledge
- limited time for learning effectiveness making the blog task another prescribed time constrained assessment –e.g. finding and evaluating sources of information prior to sharing with peers, follow up responses which lacked analysis or extension of the discussion in new directions relating comments to previous online discussion. This may have affected their follow up postings and their content contribution as well as using References and Support and making Connections.
 - "Frequency of uploads irritating, feeling as if I have to add something daily despite some days having nothing of note to comment on"*
 - Time was a limiting factor when they came across topics which were unfamiliar to them
 - "Commenting on some people's questions from experiences that I hadn't come across myself"*
- The perceived lack of clearer guidelines on "how to blog on the course" with a feeling of the need for "a guide on the side" to prevent being misinformed.

Assessment findings

The assessment using the CL505 Blog Assessment Rubric (Table 1) indicated challenges in the criteria ‘References and Support’ and ‘Connections’ as only one trainee used references to literature, readings, personal experience, experts, etc. in ways that strongly supported the main position while the remaining posts appealed to personal experience, but not to the work/experiences of others. Similarly, the majority of the cohort established no or few connections with other blogs or websites demonstrating limited knowledge of the potential of blogging to connect with communities of practice via the virtual environment. This affected the quality of the follow up posts: though the initial posts drew directly upon perioperative care material lack of connections limited the creative and substantive points that extended beyond the material.

The trainees limited analytical skills were also noted: only 37.5% analysed the posts of others or extended the discussion in new directions relating comments to previous online discussions. On the other hand, the majority of the follow up blog content focused on the issue with some hyperlinked suggestions for further reading and discussion.

The limited time of 3 weeks could have prevented the trainees from developing the dialogues further through the synthesis and evaluation of ideas.

Criteria	Unacceptable (0-69 pts)	Acceptable (70-79 pts)	Good (80-89 pts)	Excellent (90-100 pts)
Frequency	No or infrequent participation	Participates once a week	Participates 1-2 a week, but postings are not distributed (2 = 25%)	Participates frequently and consistently (6 = 75%)
Initial Posting	No or few postings	Posts are adequate, but reflect superficial engagement with the material (1 = 12.5%)	Posts are well developed and engaged with the material; lacks conceptual clarity (1 = 12.5%)	Posts are conceptually sophisticated, engaged in a substantive way with the material (6 = 75%)
Follow-up Postings	No or few comments on blogs of others	Comments are shallow contributions to the discussion; does not enrich discussion (3 = 37.5%)	Elaborates on existing posts with further comment/ observation (2 = 25%)	Analyses the posts of others, extends the discussion in new directions, relates comments to previous online discussion (3 = 37.5%)
Content Contribution	Posts irrelevant information, tangential to discussion	Repeats some previous content, does not add substantively to the discussion (1 = 12.5%)	Content is factually accurate, but does not include much conceptual nuance or development (1 = 12.5%)	Posts draw directly upon the material to make a creative and substantive point that extends beyond the material (6 = 75%)
Clarity & Mechanics	Unclear, disorganized, unedited	Open and respectful tone, some typos, some organization (2 = 25%)	Organized, well-edited and thoughtfully composed (2 = 25%)	Organized around a central point/argument, concise, even striking formulations, clear, easy to read style (4 = 50%)
Reference & Support	No or few references or support for position (1 = 12.5%)	Appeals to personal experience, but not to the work/experiences of others (4 = 50%)	Incorporates the work/ experiences of other students, scholars and experts (2 = 25%)	Uses references to literature, readings, personal experience, experts, etc. in ways that strongly support the main position (1 = 12.5%)
Connections	Establishes no or few connections with other blogs, websites, articles, etc. (4 = 50%)	Infrequently establishes connections to other blogs, websites, articles, etc. (2 = 25%)	Regularly establishes connections to internet resources and other sources of contemporary culture, news and politics (1 = 12.5%)	Consistently draws course material into connection with issues of the day by integrating references to blogs, websites, articles (1 = 12.5%)

Table 1: Blog Assessment Rubric

Discussion

The blog assignment evaluation has highlighted the potential of the read-write Web 2.0 technology to be an effective learning and teaching tool to develop reflective practitioners and lifelong learners in line with Health & Care Professions Council requirements for CPD through communication and collaboration within a CoP, a mechanism that is widely employed in healthcare practice (Andersen and Matkins 2011 and Yang 2009). It proves that the blog concept although applied within the Google Sites ePortfolio was the appropriate strategy for reflective learning as the trainees engaged in discussions, helped each other make meaning from their experiences and shared information consolidating relationships while pursuing their interest in perioperative care (Wenger 1998). It is evident that blogging increased the trainees’ awareness of the role of technology in communication and peer assisted learning (Hernandez-Ramos 2004) and has

noticeably altered how the trainees learn. It also alerted the trainees of their ownership of the blog content and therefore, their sole responsibility: what to write and how to engage their audience was entirely in their control (Bartlett-Bragg 2003) making them accountable professionals which is a requirement of any healthcare professional. It also emphasized the increased reflective nature of blogging whilst engaging the pedagogical principles of constructivism in developing the trainees' ability to create knowledge albeit in a limited way. During the 2 weeks, the trainees demonstrated the characteristics of a true CoP (Wenger 1998) and as Wenger explains, in time, continuing this practice as intended by the trainees, can facilitate the development of a shared repertoire of resources, experiences, tools, solutions to recurring issues, i.e shared practice.

Fortunately, for this cohort, English was the native language for the majority, therefore, reading blog posts as well as extended readings were not a challenge; however, analysis of the initial and follow up blog posts revealed that there was limited critical reflection to impart meaning to what has been described and therefore, lacked depth and breadth to the meanings in their written posts. Questions were asked about issues raised in the initial blogs and meanings made of them but perhaps because of the time constrained nature of the assignment the follow up blog posts limited the potential of blogging to promote critical reflection. Nonetheless, the trainees realized that blogs provide new opportunities and incentives for personal writing (Godwin-Jones 2008) as they could exchange information regardless of time and space constraints to broaden their knowledge and simultaneously meet personal needs and interests.

The perioperative care learning could have been enhanced if the blogging concept was used to develop reflective skills through learning to write at Level 4. In other words, sharing reflections with peers and course teams could help dialoguing by making comments reinforcing the interaction atmosphere which could then lead to critical reflection and learning (Figure 1) in a collaborative environment. Collaborative activities could result in outcomes such as a "useful resources" list which could then be added to their ePortfolios. However, reflecting in a public space is different from reflecting in a personal space; the trainees would need to be more vigilant and be more in control of the content of the dialogues requiring them to connect with the professional world to be able to help peers. Guidelines in the form of Assignment Guide or Tutors monitoring the blog content of the students are essential. This may also eliminate the trainees' anxiety of being misinformed by their peers. Asking questions that require critical reflection is one strategy for providing the guidance the trainees expected. On the other hand, this could pose a logistical challenge if the cohort is six times the current cohort which is the case in the foreseeable future.

Now what

The course team to re consider the timing of the blog task to develop competency in blogging and in reflective writing and practice

12. Explore Google Blogger to benefit from sharing blog posts, archiving, and accessibility
13. Increase participants in each group, e.g. 5 groups of 6 participants each
14. Recruit student Blog facilitators managing each group, provide training, clear guidelines to support them in the blogging environment to optimize learning outcomes
15. Review the ODP Google Sites ePortfolio template to move away from a repository type to a reflective portfolio to emphasise the reflective nature of the course and to enhance the development of reflective practitioners and lifelong learners

Conclusion

This exercise has demonstrated the potential of blogging to promote reflective practice during clinical placement through and operating department practice CoPs, more specifically through peer- assisted learning. Constructivism and connectivism learning theories underpinned the strategy which also contributed to learning through the read- write Web 2.0 technology. It also alerted the trainees of the value of blogging to their CPD one of the requirements of the HCPC once they become registered professionals in the field. The course team have also learnt that they need to be more specific about their expectations from the blog task and build in time to analyse the content to identify gaps in the curriculum.

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Open practice in support of wide-scale institutional e-Portfolio adoption

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Introduction

This paper presents some aspects of the case study research of the University of Nottingham e-portfolio implementation strategy that was informed by the guidance provided within the JISC e-Portfolio Implementation Toolkit (JISC, 2012). Key features of the strategy are the carefully staged 'middle through' community of practice (CoP) approach and endorsement by senior management that uses further development of the open Toolkit itself to showcase the e-portfolio use that is developing across the 11 instances of practice within the pilot stage of the implementation process. This research also surveyed the student and tutor experience of using e-portfolios and this has revealed the diversity of engagement by students. In addition the nature of the implementation process has been researched through interviews with those leading these changes. This has revealed issues related to the identities of the practitioners who are initiating the use of e-portfolios within courses and of those who are supporting them. This data was not captured when the Toolkit was initially developed and this adds importantly to our understanding of the ways our practitioners are influencing practice locally and their potential role as change agents or champions to support wider engagement across the University – critical to the embedding stage of implementation.

Background

The e-Portfolio Implementation Toolkit study

The benefits surrounding e-Portfolio use are well documented (JISC, 2008). However implementation can present challenges particularly across whole programmes or institutions (Joyes, Gray, & Hartnell-Young, 2010). This is in part because of the varied contexts and purposes of use which means that any expertise in practice that is developed in one context is likely to only be relevant to those who are considering use in similar contexts and for similar purposes. In spite of this there are various instances of wide-scale institutional implementations of e-portfolios within Further and Higher Education in particular within those that were early adopters (for example, Queensland University of Technology, Australia; The University of Wolverhampton and Dumfries and Galloway College, UK; and Bowling Green State University and La Guardia Community College, North America). However institutional knowledge about implementation issues and strategies that support successful wide-scale cross institution implementation has remained unshared. It is for this reason that the Joint Information Systems Committee (JISC) funded from 2010 -11 the e-Portfolio Implementations (ePI) study that worked with key stakeholders involved in large-scale e-portfolio implementations within higher and further education to identify, document, analyse and understand the processes involved. The outcome was the open resource e-Portfolio Implementation Toolkit (JISC, 2012) which was developed using a pbworks wiki.

A multi-site case study research design (Bishop, 2010) was chosen to illuminate the 'why' and 'how' of implementation to understand similarities and differences (Stake, 1995) and to share this with a wider community. The unit of analysis (Yin, 2003) were the institutions themselves and in order to comprehend practice within the institution exemplars of e-portfolio practice were collected as well as the implementation journeys. The approach needed to be participatory (Reilly, 2010) as the toolkit to be developed needed to have at its centre the institutional stories of implementation rather than an outsider researcher version of these and also the research process itself was intended to be of benefit to those involved by providing an opportunity for participants to share, discuss and reflect upon practice with each other. Institutions were invited to participate through established JISC and HE and FE networks, mailing lists and direct contact. Participation was dependent upon the meeting of selection criteria, e.g., that e-portfolio use was established (not just in the planning stage), there was evidence of a breadth of successful use, there was a willingness to share practice and documentation as well as participate in developing a case study in an online wiki that would be made public at the end of the study. Informed consent was gained and BERA (2004) ethical guidelines were followed within the study.

Eighteen participants contributed: 11 from the UK, 4 from Australia and 3 from New Zealand. The four Australian cases were chosen as representative of practice and the three New Zealand cases were selected by the New Zealand Ministry of Education who conducted a parallel study – as a result they included a 14–18 community college. Templates were developed for three wiki pages for each case study in collaboration with three pilot sites: participants were asked to complete an overview page, an 'exemplars of use' page

and an implementation journey page. Small group Skype conferences, emails and phone calls were used to discuss the developing cases within the wiki to explore similarities and differences in implementation practice and journeys. From this process emerged three broad themes, i.e., drivers, tools and implementation processes, which proved useful in understanding the implementations in the case studies and for structuring the guidance the study has developed within the Toolkit in the form of answers to questions about e-portfolio implementation. These questions were:

- Why should we use e-portfolios now? (the drivers theme)
- How do we decide upon which e-portfolio tool to use? (the tools theme)
- What does good implementation look like? (the implementation process theme)

The case study analysis within this final theme led to the description of an implementation model.

The implementation model

The study captured 14 higher and further education case studies where there was evidence of wide-scale adoption. Three broad approaches were found in relation to the initiation of wide-scale e-portfolio implementation: top-down (N=7), middle-out (N=6), and bottom-up (N=1). According to Cummings et al (2005) the middle-out approach is 'one led by middle managers, responding to demands from innovative members of the teaching staff but operating in the absence of strong and consistent leadership from either the senior executive or the academic policy-making body.'

While each implementation was a response to the particular context within that institution, all implementations followed similar stages in an experiential journey that typically took 3 or more years. The e-portfolio implementation model shown in figure 1 illustrates the process and the key implementation principles that have been found that need to be considered by practitioners and managers across each implementation stage (Joyes, Gray, & Hartnell-Young, 2010).

Figure 1: The e-portfolio implementation model - the key implementation principles applied across the five stages

This process was typically supported by both internal and external funding and demonstrated the importance of comprehensive stakeholder engagement from the start that includes senior management endorsement and is illustrative of the need to consider strategy for subsequent stages at the planning stage – strategies for embedding and sustaining do not suddenly appear at stages 3 and 4. Organisational change process models in the literature, for example the ones covering change in schools by Miles et al (1987) and Fullan (1991) cited in Hopkins et al (2001), typically show overlapping phases of the change process from initiation, through implementation to institutionalisation for this reason. However as Hopkins et al (2001) point out it is important to consider individual phases in the change process as the strategies involved are different. It is for this reason that the project based terminology of planning, early adoption, embedding and sustaining, for example see Gunn (2010), JISC (2011), Young (2009), is adopted within the Toolkit.

Early adoption through pilot projects provides evidence of benefits and key information that needs to be acted upon if wide-scale use beyond the pilots is going to be successful. Embedding needs to address scalability issues, for example, technical issues such as single sign on, integration with the institutional VLE and student management systems, provision of centralised technical support and support for practitioners and students in the next waves of adoption through sharing effective practice. Sustaining involves further refinement to ensure benefits are available to meet the needs of users for as long as this is useful. In one case study this meant a university wide re-organisation of the curriculum, in others there was a requirement that course review and specifications needed to address the ways e-portfolios were to be integrated to support learning (JISC, 2012).

Method

The Toolkit was the outcome of a retrospective study and the implementation model is a generalised representation of the process that emerged from the research. The question remained as to how useful this model and the Toolkit would be for an institution beginning their own implementation journey. For example, the model alerts those involved in wide-scale implementation to the need to gain endorsement of senior managers, the importance of a central unit and a manager of the process, and of using pilots and champions and engaging with a wider range of stakeholders from the start (JISC, 2012). How would awareness of these issues benefit implementation? What would be the challenges faced? What might be learned from a study of implementation in progress? Fortunately the University of Nottingham in 2011-12 was moving to the planning stage of what was to grow into University wide-scale implementation strategy. It is some of the findings from this ongoing single case study that are outlined in the rest of this paper.

The methodology adopted was a participatory case study research design in which the unit of analysis (Yin, 2003) was the implementation project at the University of Nottingham consisting of nested cases, i.e., the individual stories of e-portfolio implementation. A key informant was also to be the Head of the Centre for International ePortfolio Development (ClePD) that managed the implementation process. A private area of the public e-Portfolio Implementation Toolkit wiki (that could only be seen and edited by the project participants) was used to document the implementation and develop the cases and this was sourced from individual interviews with the practitioner champions and project artefacts and documents, such as the planning documents, the project blog, CoP meetings, examples of e-portfolio use, examples of support materials etc.

Results

The University of Nottingham, UK is a research led university with a large Medical School and campuses in Malaysia and China. It has 42 schools within 5 faculties with over 43,000 students across its campuses. There are nine professional services one of which Libraries, Research and Learning Resources (LRLR, since 2013, prior to that, a part of Information Services) provides support for e-learning through its Learning Technologies Section (LTS). However expertise in e-portfolio use resided with the ClePD, a distinct Centre within LRLR that has managed the e-portfolio implementation. The initiation of the implementation process was middle-out and emergent (Cummings et al, 2005) led by the ClePD through their own interests in e-portfolio use stemming from HEFCE-funded work and in response to increasing interest in use within the University. The ClePD engaged with senior managers through the LRLR Director via the University Teaching and Learning Coordinating Group.

Stage 0: Prior developments

The ways implementation was influenced by the prior context was evidenced within all the case studies within the toolkit and Table 1 outlines the prior developments and the consequences at the University of Nottingham.

Table 1: Prior developments within the University of Nottingham and consequences

Prior developments	Consequences
Technical developments <ul style="list-style-type: none"> Moodle VLE was gradually introduced by the LTS in 2011-12 for full uptake 2012-13. The Centre for International E-Portfolio Development (ClePD) had Mahara in use for externally funded projects. Early pilots using iWebfolio, PebblePad, WebCT and testing of other tools by Integrative Learning CETL and ClePD. 	<ul style="list-style-type: none"> The ClePD had the expertise to install and support pilot e-portfolio use 2012-13. The LTS was positioned to support use longer term.
University strategy <ul style="list-style-type: none"> University Grand Challenges on effective tutorial practice and enhancing assessment/feedback. Employability. The Learning Technology Section have engagement with the open source and open educational resources community through UNoW and Xerte. 	<ul style="list-style-type: none"> e-portfolios supported the Grand Challenges. Teaching and Learning Board in favour of supporting an open source e-portfolio.

<p>Institutional capability to lead change</p> <ul style="list-style-type: none"> • The ClePD was centrally involved in the Integrative Learning CETL based at the University of Nottingham. • The ClePD led JISC/HEFCE-funded national ePortfolio-related projects from 2004. The ClePD Director and an Associate Professor from Education led the development of the e-Portfolio Implementation Toolkit for JISC 2010-12. • A researcher and an Associate Professor from Education were appointed JISC e-portfolio consultants 2008-10. • Biosciences had been involved in the JISC funded project SAMSON with the ClePD started to pilot Mahara for placements. 	<ul style="list-style-type: none"> • There was considerable expertise within the ClePD to make the business case to the University for centralised support. • There was considerable expertise within the University to lead wide-scale e-portfolio implementation.
<p>Legacy</p> <ul style="list-style-type: none"> • ePARs (electronic Personal and Academic Records) to support personal tutorials in use in some schools. • Established paper based Portfolio use in Nursing, Medicine, Pharmacy, Education etc. • Use of Mahara was on three separate servers/different versions 	<ul style="list-style-type: none"> • Current use indicated that there might be the need for more than one e-portfolio tool to be used. • Negative experiences with ePARs might discourage any wide-scale uptake. • Mahara if used would need a central installation and central support.
<p>Bottom-up driven interest in use</p> <ul style="list-style-type: none"> • For vocational courses to support placements replacing paper-based systems and as part of the move to support the development of employability skills for undergraduates on academic courses. • In relation to student-centred and reflective pedagogical approaches. • PebblePad established within the VET School and Nursing planning to use this in 2012-13. • Localised use of Mahara on a few courses and interest in use of an e-portfolio across a number of schools. 	<ul style="list-style-type: none"> • There was a readiness for e-portfolios use in a range of contexts and schools were exploring tools and inquiring if there would be central University support from within Information Services .

The Centre for International E-Portfolio Development (ClePD), primarily funded through external projects, but integrated within Information Services from 2011 (and LRLR from 2013) were well placed to manage the implementation process due to their experience of leading similar projects and their established links within and outside the University. The Learning Technologies Section were fully occupied in supporting the roll out of the Moodle VLE and had the capability to support open source and open educational resource developments, hence any pilot implementation could be led by the ClePD and potentially scaled up and integrated fully with the new VLE Moodle and other information systems.

Stage 1: Planning

The following were the key actions undertaken during this stage:

- A Business Case was developed by the ClePD that was presented to the senior managers in the Teaching and Learning Coordinating Group which led to phase 1 internal funding being secured January 2012. The phase 1 project was incorporated into the Information Services Connected Campus Project Management programme to support Excellence in Education.
- Active recruiting of pilots including hosting a ClePD stand at Assessment in a Digital Age conference, University of Nottingham, April 2012 (although pilots were not hard to recruit as interest was largely forthcoming from ClePD contacts and 'word of mouth').
- Technical integration occurred during the summer break 2012. There were 3 separate instances of Mahara to combine. Secured support from University of London Computing Centre to work with ClePD to migrate these.
- The ClePD liaised with IT Systems to set up server infrastructure, help desk integration, Supportworks access and procedure, decision tree and 'on-call' status.
- Ongoing training of key staff, including learning technologists and staff on pilot.

- The ClePD assisted the group of new pilots with set-up ready for the new academic year. Degree of involvement varied according to wishes of practitioner. This involved support with training materials and video, face to face student sessions, technical and user support.

The Business Case written by the ClePD set out the argument for a centrally supported implementation of Mahara (PebblePad could continue to be used if supported by individual Schools) and this secured initial pilot project finance for engagement of the ClePD and an academic researcher within the Learning Sciences Research Institute, School of Education – this academic had led the development of the e-Portfolio Implementation Toolkit for JISC.

Stage 2: Early adoption Sept 2012 – Aug 2013

The following were the key actions undertaken during this stage:

- A continuation Business Case and plan was developed by the ClePD that was presented to the senior managers leading to phase 2 internal funding to support the ClePD in working with the pilot projects and for conference dissemination /networking - February 2013
- Ongoing training of key staff, including learning technologies and staff on pilots.
- Pilots flyer developed and distributed.
- Implementation of pilot projects - continue to set-up and train pilot groups.
- University of Nottingham case studies began to be developed in the Toolkit November 2012.
- CoP workshops held December 2012 and June 2013.
- Interviews with pilot project staff to review progress, identify needs and support roles as change agents/ champions. Toolkit case studies developed.
- Capturing lessons learned through a user survey.
- Closer working with core Learning Technologies team to exchange specialist knowledge.
- Key stakeholders continued to be targeted.

The project started with 15 potential pilots that showed initial interest, 4 of these did not start and 1 did not complete and a further pilot joined late. The 11 pilot projects that completed or are ongoing are outlined in Table 2.

Table 2: The pilot projects and the personnel involved

Context	Type of Use and Purpose	Personnel involved (<i>Bold = the local champion, Italics = some initial reluctance</i>)
English Studies: Contemporary Performance module. An 11 week year 3 undergraduate optional module in which students have 10 weekly visits to employers combined with some visits by employers to the University. Assessment is by portfolio and essay developed from the portfolio of digital reflections on 4 of the visits. Students can choose to use an e-portfolio and can receive feedback on work in progress. 8 out of 16 students used an e-portfolio in the pilot.	Intra course - localised use Feedback and Assessment	The English Studies Co-ordinator of Teaching and Learning (Associate Professor) <i>A collaborating academic.</i> <i>An administrator - who organised the visits and supported the e-portfolio use</i>
Centre for English Language Education (CELE). CELE runs 4 terms of pre-session English for Academic Purposes courses taking students from level 1 to 4. Students are a mixture of undergraduates and postgraduates. By the end of the pilot all 400+ students will be using an e-portfolio. The e-portfolio enables the sharing of coursework and PDP with academic and language tutors within separate weekly face-to-face tutorials that can monitor progress, support Personal Development Planning (PDP) and improve feedback.	Course wide use PDP, Feedback, Assessment	An academic (designated by a Centre manager to lead the introduction of Mahara) <i>A team of academic and language tutors</i>

<p>Medical and Health Sciences. This replaces a paper based system used to support the portfolio appraisal meeting that is a pastoral element of the course occurring in the first two and half years. The student meets their tutor twice a semester to present evidence of their progress that prompts a professional conversation. The pilot involves 20 of the 150 students and 10 of the 70 tutors.</p>	<p>Course wide use Feedback and Assessment</p>	<p>The academic lead on the course (Professor) <i>10 tutors</i> Administrator</p>
<p>Education- Masters in Learning, Technology and Education. There is an online and a face to face version of this course which is for professionals involved with learning technologies. Students engage with a range of activities including PDP, keeping a journal, preparing individual assessed assignments, collaborative activities online as well as in face-to-face sessions. As part of the course they are expected to evaluate the e-portfolio tool.</p>	<p>Course wide use PDP, Feedback, Assessment, Collaboration</p>	<p>The two academics leading the course (Professor and Associate Professor)</p>
<p>Graduate School - Biotechnology and Biological Sciences Research Council (BBSRC) Doctoral Training Centre. To support induction and progression through a 4 year doctoral programme for 33 students. Providing a central place for students to assess their competences, receive feedback and communicate with peers and supervisors. Blog/reflective journal entries are shared with the DTC administrators and their supervisor from the start of the course.</p>	<p>Course wide use PDP, Feedback, Assessment</p>	<p>The DTC administrator The administrator's line manager <i>The research supervisors</i></p>
<p>Pharmacy undergraduate course at the University of Nottingham in the UK and Malaysia. An e-portfolio has replaced a paper based portfolio as a professional accreditation requirement. 160 Nottingham and up to 80 Malaysia students were involved together with 10 tutors.</p>	<p>Course wide use PDP, Feedback, Assessment</p>	<p>Clinical Course Director (Associate Professor) Teaching and Learning co-ordinator 40 tutors</p>
<p>The University of Nottingham Advantage Award- Public Engagement, Volunteering and Citizenship. The Advantage Award provides extra-curricular modules designed to promote employability. This particular module ran four sessions with guest expert speakers. Students used the e-portfolio to reflect on each session and were assessed on a 1000 word article and presentation drawn from their reflections and research interests. They could choose whether to share their reflections (8 out of 18 shared with the whole group).</p>	<p>Extra-curricular Reflection Assessment Community</p>	<p>Course Lead from the Head of Community Partnerships ePortfolio/eLearning support from Head of ClePD</p>
<p>Embedding Employability in English : English Studies. This pilot was part of a Higher Education Academy (HEA) funded Embedding Employability in English project to run extra-curricular placements for undergraduates in the Autumn Semester that utilised the benefits of studying an English degree. 30 year 3 students were accepted out of 60 applicants for the pilot module. 25% chose to use an e-portfolio for their assessment.</p>	<p>Extra-curricular use Developing and evidencing employability skills, Feedback, Assessment</p>	<p>The English Studies Co-ordinator of Teaching and Learning (Associate Professor) An administrator who supported the organisation of the placements</p>

Biosciences - Using e-portfolios to support industrial placements on Undergraduate and Masters programmes. 100 + students (mainly non-UK) complete a two month placement and use the e-portfolio to support the development of employability skills through an initial audit and reflection on their experience. Feedback is provided mainly by the placement administrator. The e-portfolio is shared with the academic tutor and the work placement mentor as part of a learning conversation/ assessment.	Extra-curricular use Developing and evidencing employability skills, Feedback, Assessment	The placement administrator The academic tutors The work placement mentors
Centre for Social Work : University Teaching Development Grant funded project. This replaces a paper based placement learning process to develop and evidence professional capabilities and will involve the 80 students per year in the 3 year BA, 2 year BA and 2 year MA in Social Work. Each student is assigned an academic tutor and practice educator. The students negotiate their placement activities with the practice educator at the start and key documents / reports are completed during and at end of placement and submitted to the placement administrator.	Extra-curricular use PDP, Feedback, Assessment	Director of the Centre (Professor) Senior Tutor Placement administrator Practice educators
Professional Development programme for staff. Mahara was offered for use by a cohort of 8 Information Services administrative staff levels 1 to 3 (3 Library/library support and 5 IT staff). Each participant had a mentor with whom they engaged in learning conversations during the programme.	Extra-curricular use PDP, Feedback	Senior Librarian Volunteer Mentors (Level 4 and above)

Key issues and implications

The e-portfolio purposes and implications for sharing practice

There are evident commonalities in the purposes within the 11 pilots, see table 2, with Personal Development Planning being a part of many of the pilots as is some form of assessment. 4 of the pilots, i.e., the Graduate School, Pharmacy, Medicine and Social Work, are concerned with gathering evidence related to competences and 4 others, i.e., the 2 English Studies courses, the Advantage Award module and Biosciences are involved with developing and evidencing employability skills through placements. However the contexts are quite different as are the planned activities and the ways these are organised. This provides one indication of why implementation can be problematic as even similar practice elsewhere within the University or another institution is likely to need considerable adaptation as the same courses offered within different institutions differ greatly. The Toolkit cases therefore can only be a starting point in providing ideas of approaches used. This points out the importance of the central unit, in this case the ClePD, in supporting understanding of how best to implement e-portfolios in each context and of the CoP in providing a forum for exploring issues and supporting problem solving. However the Mahara processes used that underpin the many different activities are identical, for example, creating a profile, a page, a journal etc. and a set of generic resources are now being developed for the embedding stage of the implementation process. These will be shared within the e-Portfolio Implementation Toolkit.

Interestingly provision of feedback is common to all pilots and many involve learning or professional conversations as part of this process. This is something that seems little researched within the e-portfolio context and we would suggest this would be a fruitful new area to explore, for example, what are effective approaches to the learning conversation? What are the purposes of the learning conversation, is it to simply enhance performance or is it intended to be developmental (Brockbank and McGill, 2012)? Is the process a mentoring or coaching one? Who owns this process?

Student engagement

A survey of students and practitioner use was carried out mid-way through the pilot (116 responses) and this revealed that although students were engaging with the e-portfolio they were tending to only carry out the activities expected on their courses even though there was potential for them to use the e-portfolio in other ways. This also revealed a significant minority of students (19%) who perceived themselves as enthusiastic users and engaging well with the activities. This was supported by the interviews with some of the practitioners who could point to exemplary use and this has been captured within the case studies within the Toolkit. In fact on one course students created screencasts to share with their peers how they were using the e-portfolio, on another, students were encouraged to share exemplar pages with their peers. There was a tendency for practitioners to be anxious about this lack of initial enthusiastic engagement, but there was evidence in this and the original Toolkit study that use becomes more valued over time by students where e-portfolio activities were well designed, effective pedagogic support was provided, regular use was an expectation and importantly exemplars of effective engagement were shared. Students themselves can champion e-portfolio use and their voice is more authentic than that of an administrator, academic or tutor. In effect the real value of e-portfolio use for learning can only be understood by someone who has used one effectively over a reasonable period of time. Showcase exemplars of e-portfolio use, video narratives explaining the benefits, screencasts of students explaining how to use the e-portfolio, buddying experienced users with new or less experienced ones are strategies that are being considered by practitioners to support engagement.

Stakeholder engagement:

The intention was to reflect the wide-ranging uses of e-portfolio and to cover key strategic aspects in the pilots. These were: tutoring; Advantage Award; assessment and feedback; career-related / employability; professional development. This range of use touches on many areas of the University and the team (including practitioner champions) has met with or presented to representatives from the Careers and Employability Service, Alumni Relations, Senior Tutor Network, Student Operations, Community Partnerships, Widening Participation, Students Union, VLE Board, Information Services as well as participating in University teaching and learning events. This is supported by articles published on the University's Talking of Teaching and Learning Technologies blogs. On-going dissemination of e-portfolio use is a key factor in maintaining the momentum of the implementation and also in ensuring that the wide-ranging potential benefits of institutional e-portfolio use are communicated.

The role of champions

The ClePD team had the critical role of the 'management' champion for the e-portfolio implementation (Cummings, 2005). The local practitioner champions were a diverse group of practitioners, i.e., administrators, academics and tutors, and in some case whole teams became the champions. In spite of their role successful champions had responsibility for a course or aspects of this, tended to have an interest in the use of technologies to support learning and in some instances held or had held a leadership role in teaching and learning in their schools. Two of the champions had secured funding for their pilots (one internally and one externally). It is important to note that the local practitioner champions within each pilot could make progress with the implementation incrementally because e-portfolio practice was emergent and perceived as first order or incremental (Ackerman, 1997), e.g., a move from paper based to digital or to more authentic assessment, rather than second order or transformational change. However all pilots involved some changes in practice for all participants and the implementation needed carefully managing at the local level, this involved working with both students and staff some of whom became 'new champions'. For example, the Biosciences champion, an administrator, found that approaching staff individually to 'sell the benefits' as part of a discussion of their role in providing feedback in Mahara was successful in gaining their engagement and in affecting their perceptions of the value of Mahara, i.e., experience of actual use revealed the efficiency gains as well as learning benefits. In fact a move to using Mahara to support the tutorial system across the school has started as a consequence of this positive reaction to Mahara by key academics who now understand the wider potential of the tool.

Conclusions

The intention in applying the implementation model and guidance within the e-Portfolio Implementation Toolkit was to try to ensure the implementation process was effective but also to research the implementation in process. Interestingly being informed by the outcomes of a JISC project added credibility for senior managers to the implementation strategy as presented in the Business Case by the ClePD. The Toolkit guidance points to the key issues for effective implementation and this study has provided some further insights into the complexities within the early adoption stage in which pilot use is supported and

during which the capacity to embed e-portfolio use more widely needs to be developed. These are now discussed.

Engagement with a wide range of stakeholders is an ongoing process and opportunities for conversation with Careers, Alumni, Student Union, senior managers, can occur sometimes in quite unplanned ways. For example, Careers became more engaged through approaches made by one of our practitioner champions in relation to their development of e-portfolios for placements in industry. Senior managers' awareness of the e-portfolio pilots has been raised in a variety of ways some directly through approval of the two business cases to ensure implementation was suitably resourced, but others less directly, for example, through the Talking of Teaching blog which has three examples of e-portfolio use authored by our practitioner champions, an application for internal Teaching and Learning funding by a School, interest shown by Heads of School and awareness of conference presentations by some of the champions and the ClePD - two of these conferences HEA and ALT-C were held at the University of Nottingham where senior and middle managers were present. The University of Nottingham case study of implementation in the Toolkit made public in Sept 2013 serves as another reminder to Senior Managers of the important work they have endorsed.

The early adoption process has revealed the importance of our practitioner champions and the need to support them in developing their understanding of themselves as not only change agents locally, but of the value they have in supporting change more widely across the University. There are two key issues here, one relates to the 'status' of our practitioner champions in a research led University many of whom are administrators or academics/tutors who have a focus on Teaching and Learning. The CoP events have been central to raising awareness of the valuable contribution to practice each champion has made within the University and how this can be shared. These have been lively and discursive events: a chance to exchange practice, showcase exemplar student work and to work through challenges. The CoP has been supported by a group within the Mahara e-portfolio containing a growing bank of training resources and links to e-portfolio work and research outside of the University. The contributions to the University of Nottingham case study in the Toolkit have also served to raise perceptions of the importance of sharing their developing practice and of their value to the wider community. Notably one of our champions is a co-author of this paper and at least one other has presented at a national conference. Supporting applications for our Dearing Award for excellence in teaching and learning by our champions is a planned future action. The second issue relates to the multiple purposes and contexts for use that e-portfolios have. An e-portfolio CoP though essential for the pilot projects to support the champions is not going to be useful during the embedding stage to support the chosen purposes for e-portfolio use by the wider community. It seems professional development events need to focus on key teaching and learning issues such as effective practice in assessment, feedback, tutorial support, supporting placements etc. Our e-portfolio champions can then share their experiences alongside others in contexts where the teaching and learning purpose is the focus, not the e-portfolio tool. This is the approach being planned for the embedding stage at the University of Nottingham.

Finally the research has raised some issues related to evaluation and the value of the CoP. There is a tendency to want to judge performance in any implementation, i.e., how many users, how engaged they are, but this can be quite disappointing early on in implementation. Appreciative Inquiry might be potentially a more useful approach to evaluation of practice where strengths are revealed and built on, i.e., a focus on those students and staff who are engaging and showcasing this. Note that benefits are only experienced by engagers – hence the need for a level of compulsion and ongoing use, support and feedback. Staff may be resistant and it is students and practitioners as champions that tip the balance. 'Change involves learning to do something new, and interaction is the primary basis for social learning' (Fullan 2007:97). It seems the potential value of the CoP during the early adoption stage is that it provides mutual support and raises the status of each other's efforts, part of the Appreciative Inquiry process.

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How To Get Ready For E-Portfolios At HEIs – Strategy And Process Model

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Abstract

E-Portfolios are the logical consequence of the digitalization of our life. They are human-centered and work outcome-based. In theory they offer great opportunities for learners and for institutions, e.g. to integrate formal and informal learning experiences or to collect all learning achievements in the context of lifelong learning. Yet, E-Portfolios are not ubiquitously used and present lots of challenges for learners and organizations. Over the past years E-Portfolio maturity models were presented, but lasting E-Portfolio strategy and process models for higher education institutions (HEIs) were neglected.

This paper discusses the preconditions and requirements for a sustainable implementation and procession of E-Portfolios at HEIs based on a process model approach. The approach is adaptable to organizations and companies.

E-Portfolios: Definition & Standards

In general E-Portfolios are collections of digital artifacts in various media types. The exact definition of E-Portfolios varies widely and depends on the operational scenario and purpose, e.g. used as [1]

- learning portfolio for students for reflection, documentation and collaboration on learning;
- institutional / department / faculty portfolio as teaching showcase;
- course / teaching portfolio to pass teaching information from lecturer to lecturer and to document learning outcomes and skills;
- lifelong learning portfolio as collection and documentation of learning artifacts;
- career / CV / resume portfolio to store and illustrate learning credentials, career achievements, and to support advisement and career planning.

Another classification possibility is the so-called “Faces of E-Portfolios” [2]: On the one hand the portfolio is used as workspace with a focus on reflection and learning and on the other hand the portfolio is used as showcase-tool with a focus on accountability and display. As you can see, there are different perspectives on E-Portfolios.

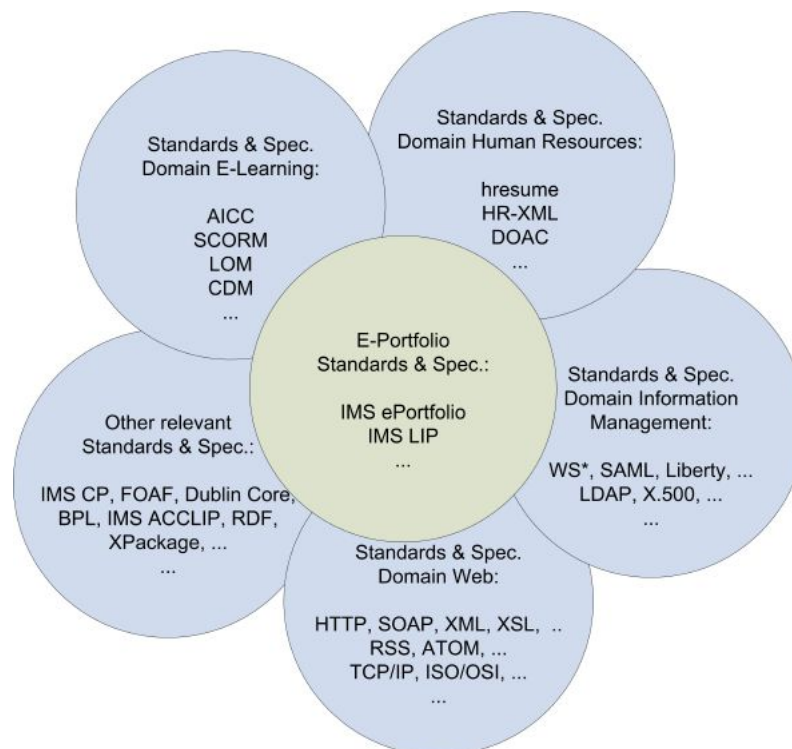


Figure 1: Overview of E-Portfolio standards and specifications

Therefore various standards and specifications in the field of E-Portfolios are to be considered; Figure 1 gives a very brief overview. It is important to understand the complexity and the high effort for an integrated

and long lasting E-Portfolio solution. For further details see [3].

E-Portfolios at Higher Education Institutions

A fairly long time ago E-Learning approaches as well as the digitalization of business processes were pushed at a number of HEIs. Hence only integrated approaches appear to persist. The idea of E-Portfolios seems to be an aging beauty, indeed many European HEIs have not even started to implement an E-Portfolio system. It is likely that only integrated and process-based approaches will be successful on the long run. This leads directly to the conclusion that a central campus management system, which digitally anticipates the complete student lifecycle, must be the fundament. At least this is the result of the former E-Learning projects at HEIs, where different models where installed. Only the student lifecycle integrated ones are still in use.

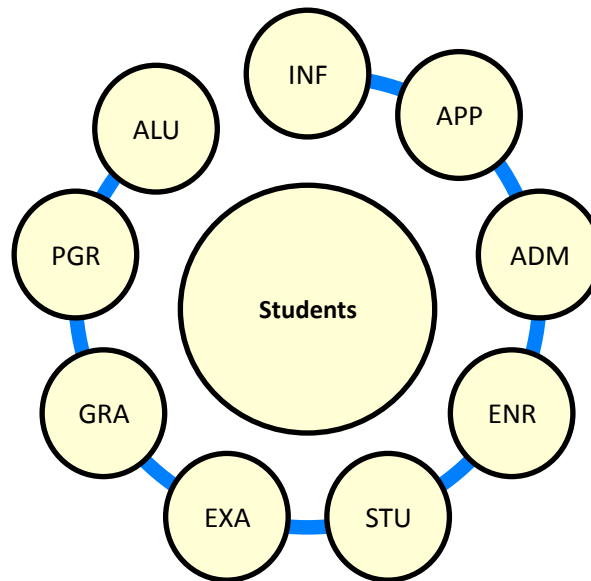


Figure 2: Student lifecycle

Figure 2 shows the so called student lifecycle. It starts with the information about degree programs (INF), continues with the application (APP), admission (ADM) and enrollment (ENR) processes and is followed by study (STU) and exam (EXA) management. It ends with the graduation (GRA) and alumni management (ALU), as the case may be with a postgraduate research (PGR) phase in between.

Thus a digitalized organization needs a clear and in every phase supported IT strategy. E-Portfolios as well as E-Learning and newer forms (like MOOCs) need to be integrated into the strategy and play an essential role. This means, that not “the” tool itself is important, but the strategy and the process around it. That is why there are several aspects, which have to be taken into consideration.

E-Portfolios: Preconditions & Requirements

This paragraph describes preconditions and requirements for the successful implementation of an organization-wide, sustainable E-Portfolio system and process.

From the technical point of view an analysis of the so-called business objects and related processes within the organization is crucial. One responsible source per business object is needed. If there is more than one source a consolidation is needed. For example only one source for the organizational structure of an organization or one record for student or course data is recommended. An organization-wide identity and access management with automatic provisioning of user data is a further example. After implementation the responsible staff for data maintenance should get trainings. If paper-based workflows are digitalized a strong effort on data quality is advisable. Another important technical aspect are interfaces to import and export data. Moreover the best practices for IT services described in ITIL help to get the people quicker up to speed. A central help desk can advise students and the teaching stuff when there are problems and furthermore incidents will be solved centrally. This can be part of a knowledge management for the HEI itself. Bringing up E-Portfolios in the daily business of HEI processes means to establish the necessary IT service around it.

From a non-technical view organization-wide harmonized and standardized processes are necessary, e.g. for student lifecycle: from information and application over admission and enrollment to study, examination

and graduation processes. This covers from deadlines, course and exam management to automatic processing of application, registrations and test results. Identity management and the implementation and enforcement of institutional policies and rules play another important role, e.g. in case of access for alumni, exchange students or visiting scientists. A further example for a needed precondition is the ICT-modeled triad of modules, courses and tests. At Technische Universität München (TUM) an obligatory standardized form for describing modules and the supposed learning outcome was released. This form contains e.g. details about the workload, achievements and assessments, person responsible, descriptive information, courses, and assignment of module to program(s). Module compendiums for each study course and faculty are provided by TUMonline. This process was constructed after a wide research and discussion with the faculties. A consulting staff unit was founded to support the faculties on the job of creating and keeping the module descriptions up to date. Guidelines for describing the learning outcome with concrete dos and don'ts, taxonomies, and keywords help the lecturers with the goal of a "constructive alignment" between learning outcome, learning activities, and assessment methods. An elaborate system has been established for the interaction of modules, courses, and tests, which had a long maturation time.

Further, important aspects are questions like: access policy to the E-Portfolio system for former students and alumni, continuous technical support, and guidance for students and staff and the definition of the wanted level of interchangeability with other systems.

Strategy and process model

To transfer the mentioned requirements into a process model, an ongoing process must be established which reflects the student lifecycle on the IT side and moreover brings the necessary flexibility to adjust and change the model.

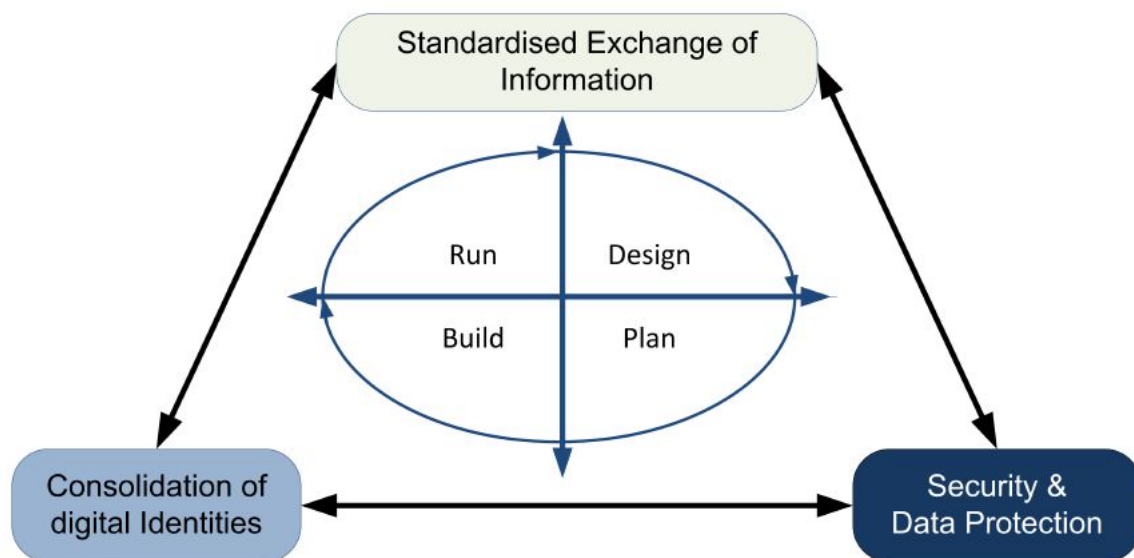


Figure 3: Process model and dimensions of E-Portfolios

Figure 3 describes such a process. The most important dimensions of E-Portfolios (standardized exchange, the live-long access through consolidated identities, and the security as well as the protection of the data) are shown in the context of an ongoing tuning mechanism.

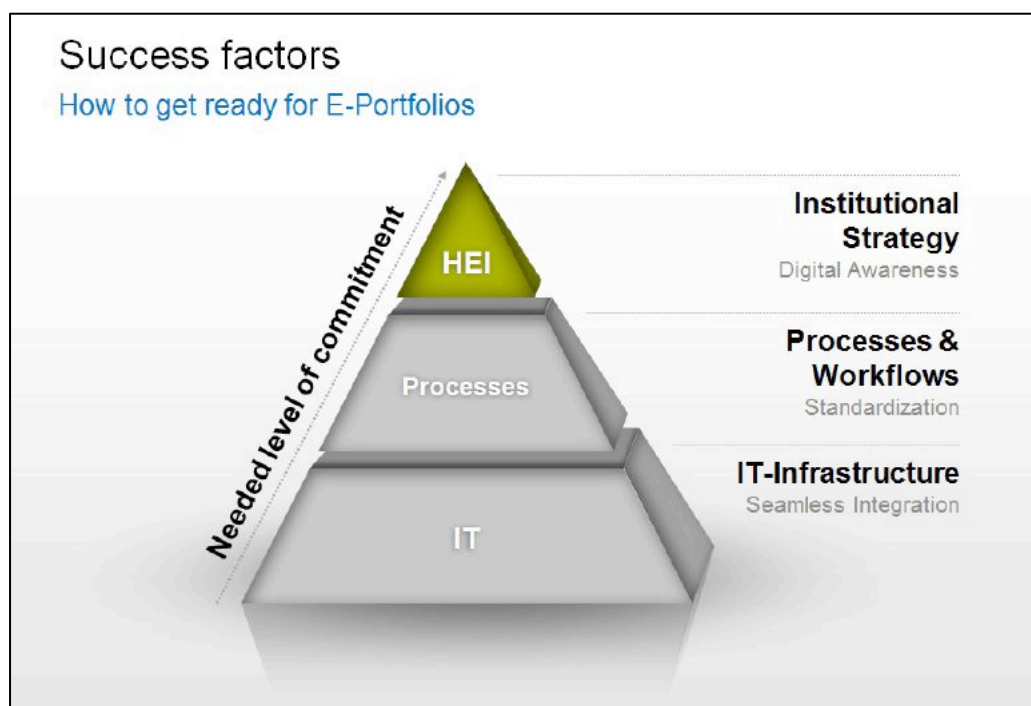


Figure 4: Success factors for E-Portfolios

Figure 4 points out success factors for the sustainable implementation of E-Portfolios as a three-layered pyramid. The institutional long-term strategy has to consider E-Portfolios with a strong linkage to a step-wise rollout. A strong commitment of the board of management of the organization is crucial. To be successful faculties and central administration need to be involved. The definition and communication of the purpose is crucial. Responsible persons per subunit, a central support unit and clearly defined responsibilities are needed. As discussed in the previous sections processes and workflows should be optimized, standardized and documented. A less important factor is the selection of the software tool, but the seamless and purposeful integration into the processes and software systems of the institution is essential.

E-Learning, Campus Management and E-Portfolios at TUM

The process model was developed on the basis of a case study at TUM, where in 2005 a central E-Learning platform was implemented and got 2010 changed from CLIX to Moodle. In the following Moodle got step-wise integrated to the central campus management system (CMS) TUMonline. Lecturers can choose e.g. if their course data and participants should be transferred from the CMS to Moodle automatically. A pilot project to implement Mahara as central E-Portfolio system at TUM was stopped due to a missing holistic approach and prerequisite conditions after a short time period. Two of the main points of criticism were the lack of concept for the overall rollout at the TUM and the consideration and integration of the CMS. The CMS provides e.g. the Transcript of Records (ToR), which is a record of the student performance to date, based on a Europe-wide standard. The ToR includes a list of courses and modules attended, ECTS credits and grades.

Conclusion

E-Portfolios seem to have a great potential to help learners, lecturers and organizations to support learning and teaching as well as reflecting and probably publishing sustainably. But why isn't there any pressure from students or lecturers around the world to implement and operate E-Portfolio systems? Maybe modern CMS already provide all needed services and thus E-Portfolio systems are obsolete? EIfEL launched Europortfolio as a consortium with the goal that every European citizen gets an E-Portfolio by 2010 [5]. Is there a need for one EU-wide E-Portfolio system or just interfaces to import and export data from organizational systems? These are only some questions, which should be addressed and clarified before an E-Portfolio project is started at all. We are still working on that topics and so this paper provides also an overview about the current situation at TUM. We already figured out a strategy and a process model with preconditions & requirements for a successful implementation and operation of an E-Portfolio system based on the knowledge of the former E-Learning studies.

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Opening up Large Scale Change Initiatives: Calling on Faculty Perspectives to Develop a Framework for Organization-Wide ePortfolio Implementation

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Background and Objectives

The use of electronic portfolios (ePortfolios) to support learning, assessment, and professional development across the university has increased in recent years. However, those who are instrumental to successful adoption and implementation, higher education faculty, are not often invited in as active participants in an open innovation process (C. E. Watson, personal communication, January 19, 2012). In addition, while student perspectives of ePortfolio adoption are well represented in the literature, faculty perspectives are not (Ruiz, Quadri, & Karides, 2009; Wang & Turner, 2007). The goal of this research study was to investigate faculty (and, to a lesser extent, administrator) perspectives regarding the university-wide implementation of an ePortfolio initiative in order to develop a framework for implementation that integrates the voice of faculty as well as diffusion of innovation (DOI) theory.

Three research questions supported this work:

- What strategies and resources are used by a large research university to assist faculty with ePortfolio implementation? And, to what extent do these strategies/resources reflect DOI theory?
- How do faculty perceive the current ePortfolio adoption support process? What about the process is successful?; lacking and requires improvement?; reflects DOI theory?
- What features of DOI theory should be included in an ePortfolio adoption framework?

The focus of this study, a large research university in the United States, began a university-wide initiative to implement ePortfolios in 2002. Several credible strategies and resources were considered to support the initiative's success including: strategic alignment of the initiative to department, college, and institutional goals; partnerships with key stakeholders; pilot-testing; faculty development opportunities; and the use of the Concerns-Based Adoption Model (CBAM) for change and Ely's Eight Conditions of Change for implementation (Hord, Rutherford, Huling-Austin, & Hall, 2006). However, it was unknown the extent to which these elements were systematically and successfully woven throughout the initiative. Anecdotal data suggested a myriad of challenges with long-term implementation, yet empirical evidence to guide improvements was not available.

Assessment is central to the current dialogue regarding educational reform and will continue to gain importance (Baker, 2001). As a vital measure and driver of learning and performance improvement, assessments must continue to evolve to better gauge individual student progress in complex and multifaceted ways. While traditional assessments are often considered easier to grade and more efficient to administer, these types of assessments typically only focus on "drill and practice" skills and are unable to assess higher-level knowledge and skills (Linn, 1993). However, performance assessments, which require observable activity and artifacts (Linn, 1993), enable a learner to demonstrate new knowledge and skills with depth and sophistication (Airasian, 1996). Portfolio-based assessments, which are a type of performance assessment, have increased in adoption at the university level (Mitchelson & Mandell, 2004; Watson & Doolittle, 2001). ePortfolios meet a growing institutional need for technology-enabled assessments (Bass & Eynon, 2009; Scheider, 2009).

As higher education institutions are increasing their use of instructional technologies to support teaching and learning, barriers to their adoption, integration, and sustainment arise (Surry, 2002). Similar to any other innovation, ePortfolios are subject to the conditions and stages of the innovation diffusion process.

Applying what is known about technology adoption and diffusion to the introduction of ePortfolios into an institutional system can support successful use (Surry, 2002) while still honoring the perspectives of faculty.

Diffusion of innovation theory (DOI), which seeks to understand the social process that community members engage in to adopt or reject an innovation (Rogers, 2003; Surry & Farquhar, 1997), was relied on as the broad conceptual framework for guiding all aspects of the study's design including instrument development, data collection and analysis, framework development, and framework review and revision. Specifically, this study drew from two DOI theoretical perspectives. Rogers (2003) identified five Stages of Adoption of an innovation: knowledge, persuasion, decision, implementation, and confirmation. Similarly, Ely (1976) described Eight Conditions for Change: dissatisfaction with the status quo; sufficient knowledge and skills; availability of resources; availability of time; rewards or incentives; participation; commitment; and leadership. Drawing from Rogers and Ely, Surry and Farquhar (1997) argued that the study of an

instructional technology in light of DOI theory can help instructional technologists have a better understanding of the adoption or rejection of an innovation, work more effectively with clients, and even “lead to the development of a systematic model of adoption and diffusion” (p. 2). Surry developed the RIPPLES survey as a means for studying the adoption of an instructional technology across seven dimensions of DOI: resources, infrastructure, people, policies, learning, evaluation, and support. This study employed a modified RIPPLES survey, along with selected follow-up interviews, to explore the perspectives of faculty and administrators experienced with the adoption of ePortfolios at a large university to inform a user-grounded framework for implementation.

Methodology

This study employed a design and development research methodology, which is defined by Richey and Klein (2007) as the “systematic study of design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development” (p. 1). More specifically, this effort used what was previously known as Type 2 developmental research and recently renamed to model research, in which the research “pertains to the [study] of the development, validation, and use of design and development models.” (Richey & Klein, 2007, p. 10).

Three phases were employed in order to develop a framework for supporting electronic portfolio implementation. These phases were analysis, development and evaluation, and revision. In the analysis phase, faculty and administrator perspectives regarding the ePortfolio implementation process were investigated in light of DOI theory. In the development and evaluation phase, study findings were used to develop a six-component framework currently under evaluation by three external systemic change experts. In the revision phase, expert recommendations will guide framework revision and finalization.

The focus of this study, a large United States research university with approximately 30,000 students, began a university-wide initiative to implement ePortfolios in 2002. As discussed previously, several credible DOI strategies were identified and pursued by the university in enacting the initiative. However, it was unknown the extent to which these strategies were integrated and had an impact on success. While anecdotal data suggested challenges with long-term sustainability of the initiative, empirical evidence to guide improvements was not available. Thus, the perspectives of 144 members of the university community, primarily faculty members who had used or were currently using electronic portfolios, were sought through a survey and selected follow-up interviews.

The survey instrument used was a modified RIPPLES survey. This survey is based, in part, in DOI theory and specifically designed to explore instructional technology integration in higher education. The 55 question survey was divided into four sections: participant demographics; background; ePortfolios at the university; and, experience. The ePortfolios at the university section, which was modified to more directly reflect Ely’s Eight Conditions for Change, contained seven subsections that comprise the RIPPLES survey acronym: resources (defined as time and money); infrastructure; people (communication and shared decision-making); policies; learning (specific instructional outcomes for user training); evaluation; and (user) support. Fifty-two out of 144 individuals (36%) responded to the survey.

After the survey was administered, a ten-question interview protocol was designed, taking into account survey findings. These questions probed each participant to speak in greater depth about their experiences implementing ePortfolios at the university. A small interview sample of 12 survey participants was selected to represent a diverse cross-section of ePortfolio users at the university. Selection criteria included: discipline, gender, years at the university, years teaching, role (faculty or administrator), time using ePortfolios, and current usage status (continued user or abandoner).

Summary of Results

The age range of survey respondents was between 20 and 70 years, with 62% of respondents identifying as female and 38% as male. Regarding years of teaching experience, 35% of respondents had 0-10 years of experience; 40% of respondents had 11-25 years; and 25% had 25 years or more. Regarding years using ePortfolios, 23% had less than one year of experience, 35% had one to three years, and 42% had four or more years. In terms of purpose(s) for using ePortfolios, 46% specified to track learning, 60% indicated to assess learning, and 40% responded to support professional development. In addition, 42% of survey respondents had used but abandoned ePortfolios.

For each RIPPLES component, survey participants were queried through a set of questions whether or not that individual element was important to successful ePortfolio adoption and use. Ninety-four percent agreed or strongly agreed that infrastructure was important while 92% agreed/strongly agreed that resources (time and money) were important. Participants were also asked to rank each of the seven RIPPLES elements against each other. From most to least important, the top four elements were as follows: resources,

support, people, and infrastructure. When asked about the greatest barriers to ePortfolio implementation, participants identified ePortfolio system design and time as the two most impactful elements. These findings, while highly informative to the setting under study in regards to future direction, were also instructive in developing the framework.

Study findings have resulted in an understanding of faculty and administrator perspectives as participants in an ongoing university-wide ePortfolio implementation that, in light of DOI theory, has been used to construct a framework that can be called upon by higher education community members engaged in such an initiative. The summary framework itself, shown in Figure 1, consists of six essential elements: awareness, defined as when faculty become aware of ePortfolios through varied avenues; motivation, when faculty understand and appreciate the intrinsic and extrinsic incentives for using ePortfolios; commitment, when faculty make the decision to integrate ePortfolios; resources, when faculty seek out resources needed for ePortfolio implementation; leadership, when faculty gain leadership support for sustained ePortfolio use; and evaluation, when faculty participate in ePortfolio evaluation to inform the next iteration.

The full framework (not included here for space reasons) was built with the intention to enable anyone considering implementing portfolios or already in the process of implementation to use it to assess the organization's current status in the implementation process, as well as critical next steps. The framework is intended as modular, meaning that the components can be considered in any order as needed. In addition to a definition of each component, a non-comprehensive list of strategies to enact each component, as well as key stakeholders that can influence the progress on that component are provided (see Figure 2 for an example in the Awareness component). A scale is also provided for users to gage the current status of the organization in regards to each component and identify next steps to focus on in the implementation process. For example, a rating of one would identify a component as a major priority in planning efforts, whereas a rating of three would indicate the component is of low priority and can be afforded less attention and resources. Through such a quick check, action planning (Figure 3) can then be based in top priorities.



Figure 1: ePortfolio Implementation Framework Components


Component	Selected Strategies to Support Component	Key Player Involvement	Assessment of Current Implementation Status	Next Steps for Implementation
 Professional knowledge of pedagogical benefits of electronic portfolios	<ul style="list-style-type: none"> • Web sites • Newsletters • Articles • Presentations • Professional development 	<ul style="list-style-type: none"> • Academic leaders on campus (e.g. provost, teaching and learning directors) • Leading electronic portfolio scholars and practitioners • Local faculty innovators • Other high-level, respected opinion leaders 	1. Faculty are <i>unaware</i> of the pedagogical value of electronic portfolios. 2. Faculty are <i>somewhat aware</i> of the pedagogical value of electronic portfolios. 3. Faculty are <i>very aware</i> of the pedagogical value of electronic portfolios.	<u>Rating of 1 or 2</u> <ul style="list-style-type: none"> • Identify multiple avenues for electronic portfolio awareness building. • Plan a 3-6 month awareness building campaign. • Reassess awareness status after one to two academic years. <u>Rating of 3</u> <ul style="list-style-type: none"> • Reassess awareness status at next formal, systemic evaluation of electronic portfolio implementation. (A systemic evaluation is recommended every 3-5 years.)

Figure 2: ePortfolio Implementation Framework Awareness Component

Component	Current Implementation Rating	Next Steps	Key Players to Involve	Target Completion Date(s)	Additional Notes
	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3				
	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3				
	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3				
...etc...					

Figure 3: ePortfolio Implementation Framework Action Plan

Each of the framework components reflects DOI theory in one or more ways. Awareness reflects Rogers' knowledge of innovation element and Ely's requirement for dissatisfaction with the status quo. Motivation reflects Rogers' element of persuasion and Ely's requirements for dissatisfaction with status quo as well as rewards and/or incentives. Commitment reflects Rogers' element of decision and Ely's requirements of participation and commitment. Resources reflects Rogers' element of implementation and Ely's requirements for sufficient knowledge and skills, availability of time, and availability of resources. Leadership reflects Rogers' element of implementation and Ely's requirement for leadership. Evaluation reflects Rogers' element of confirmation.

To ensure the framework is appropriately aligned with DOI theory in addition to practitioner experiences, it is currently undergoing expert review by three systemic change scholars. Review feedback will be incorporated into a final version of the framework by September 2013. The final framework will then be pilot-tested at a mid-size university beginning an ePortfolio initiative in Fall 2013.

Conclusion

A university-wide implementation of ePortfolios is a large, complex process requiring the long-term and thoughtful coordination of infrastructure, resources, and people. This study offers insight into faculty and administrator perspectives regarding the process as well as a framework for enhancing it. An organization choosing to use the framework to guide implementation can benefit in a number of ways. The framework opens up the innovation process, making it transparent to all stakeholders, thus guiding open

communication and decision-making across the organization. Rather than feeling isolated and guessing at next steps, faculty remain vested in and connected to the initiative and are better prepared to identify and call on the most important support resources at critical and appropriate times. By working within an open implementation process, faculty are less distracted by unexpected innovation stumbling blocks and better able to focus on ePortfolio as a vital means for supporting student learning, assessment, and professional development.

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Blogs And Web 2.0 Tools To Open Student Teachers' Eportfolios: Student Teachers' Perceptions On Eportfolio Openness

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Abstract

At the University of the Balearic Islands, Ibiza local centre, an eportfolio project has been implemented since the school year 2009-2010. This article is based on the research of the first two school years (2009-20 and 2010-11) of experimental implementation of blogs and Web 2.0 tools as electronic portfolios. The results reported are those related to student teachers' perceptions on openness in eportfolios. Openness is an important characteristic of the system used in this eportfolio implementation. Both the project and research are based on the theoretical idea that open eportfolios empower the collaboration process, thus the networked selves of student teachers. However, data collected during the two-year period of research reveal some unexpected issues of open eportfolios.

Keywords: eportfolio, open eportfolios, openness, blogs, Web 2.0, teacher education

Context

Couros (2010, 111) defines the open movement as follows:

The open movement is an informal, worldwide phenomenon characterized by the tendency of individuals and groups to work, collaborate and publish in ways that favour accessibility, sharing, transparency and interoperability. Advocates of openness value the democratization of knowledge construction and dissemination, and are critical of knowledge controlling structures.

For Conole (2012) openness has some principles: it means opening education as much as possible; it fosters dialogue; it supports digital scholarship; it is beneficial for both learners and teachers and it can enhance lateral thinking and creativity.

It is generally understood that Web 2.0 was first coined by O'Reilly who considers it as "the platform" with online services that allow user creation, "harnessing collective intelligence" (O'Reilly, 2005). Some authors have observed that Web 2.0 may be the driver for university change in order to evolve towards more collaborative and innovative methodologies (Conole and Alevizou, 2010; Buchem and Hamelmann, 2011). Among all social media services, blogs are one of the best known tools of Web 2.0 (O'Reilly, 2005). Cabero, Meneses and Regaña (2009) have also stated they value for the transformation of education. Deng and Yuen (2010) have stated the usefulness of blogs for reflection and student collaboration and other authors have observed their potential for writing skills (Arslan and Sahin-Kizil, 2010; Baturay and Daloglu, 2010).

Personal Learning Environments (PLE) have been enhanced by the introduction of Web 2.0 and ICT for learning. The PLE concept has put the focus on student-centred practices enriched by technology, overcoming teacher-centred practices and traditional pedagogies introduced by Learning Management Systems (LMS) (Attwell 2007; Schaffert and Hilzensauer, 2008). The PLE has been defined as the activity, the resources and the people that one has for learning (Adell and Castañeda, 2010; Castañeda and Adell, 2013). The resources are divided into three kinds of tools: for accessing information, creating knowledge and sharing it with others and networking.

Blogs and Web 2.0 tools for the construction of eportfolios

Attwell (2012) has considered the new processes introduced by social media on eportfolios, such as networking. We have now been talking about social media for a long time. For instance, Tosh and Werdmuller (2004b) maintain that closing eportfolios on one isolated platform can lead to missing the deep approach of social interaction facilitated by blogs and the Web 2.0, which can become the new "learning landscape" (Tosh and Werdmuller, 2004a, 7). Ivanova (2008) argued that social media have already been a new driving force for eportfolios and Crichton and Kopp (2008) also predicted the deep impact of social media on eportfolios and the way in which students will address their portfolio task. As for blogs, many authors have also sustained the optimal conditions of this tool for the construction of eportfolio processes. Chuang (2008) has demonstrated the enhancement of collaboration and students' motivation through blog-based eportfolios.

Our eportfolio framework based on open eportfolios

There is a wide variety of conceptual interpretations of eportfolios (Shroff, Trent and Ng, 2013) but our eportfolio project is based on the learning portfolio (Zubizarreta, 2009) though electronically based.

Zubizarreta (2009, 20) defines the learning portfolio as “a flexible, evidence-based tool that engages students in a process of continuous reflection and collaborative analysis of learning” that focuses on collaborative reflection.

There are three fundamental eportfolio frameworks from which we construct our own eportfolio framework where openness is a basic condition. Firstly, Zubizarreta’s portfolio model (2009) includes the processes that have become classical in eportfolio scientific literature: reflection, documentation and collaboration. We argue that the more open the eportfolio, the better the collaboration process can become.

Secondly, Cambridge (2009, 2010) has argued the construction of two selves on eportfolios: the networked self and the symphonic self. The first one is about connecting artefacts and gadgets, quickly collecting evidence of learning and a brief reflection during the learner’s daily life as well as connecting with others. The second one reorganizes all this daily and distributed activity into thematic topics so that learners can have a general overview of their own learning process. This self needs time and calmness for deep reflection that can help to connect artefacts and evidence among themselves and give a global vision of one’s own identity.

Therefore, Cambridge’s selves need a selection of tools that can empower both eportfolio processes. We posit that blogs and Web 2.0 tools can empower the construction of the networked selves, which is the one about making connections. Also, openness is a necessary condition of the eportfolio system if we pursue the construction of the networked self. It would have no sense to close eportfolios if the networked self is an aim of the eportfolio construction. Moreover, openness can also be important for the symphonic self, since collaborating with others can empower the presentation of eportfolios (Attwell, 2012).

Thirdly, Barrett’s eportfolio model (2009, 2010, 2011) consists of three steps in the construction of eportfolios: creation of artefacts, selection and collection of learning evidence based on a chronological basis, and presentation based on a thematic basis. Again, the first two steps of Barrett’s model can be enhanced by Web 2.0 tools. The wide range of social media tools can extend the opportunities of developing the students’ Personal Learning Environment (Tur and Urbina, 2012; Tur, 2013) for which openness is an important condition.

The study

Research question and objectives

At the University of the Balearic Islands, Ibiza local centre, an eportfolio project has been implemented since the school year 2009-2010. The implementation of electronic portfolios has two main aims: documenting the student teachers’ learning during their time at University and introducing ICT into all our Teacher Education programme.

The eportfolio platform is based on blogs and Web 2.0 tools for many reasons, one of which is openness. Open eportfolios were chosen to foster networked self (Cambridge, 2009, 2010) for the first two steps of the construction of eportfolios (Barrett, 2009, 2010, 2011), which can be understood as the construction of the networked self (Cambridge, 2009, 2010) as Tur and Urbina have stated (2012). Also networking would be a way of empowering the classical collaboration portfolio process defined by Zubizarreta (2009).

The framework of the research is based on a qualitative methodology with the aim of understanding and interpreting the participants’ perceptions of eportfolio openness. Therefore, the main research question is: what are the perceptions of student teachers on eportfolio openness? The research on the first two school years (2009-2011) of the experimental implementation has highlighted various key issues. Beyond the affordances of openness on eportfolios, interviews with student teachers have also revealed some disadvantages that had not been predicted.

The group of participants

The group of participants consists of 31 student teachers, two male and 29 female. Only 8 students were born before the 80 and the remaining 23 afterwards. Students had never heard of eportfolio and had never had a blog either. The netfolio created, following Barbera (2009), of students’ eportfolios can be found on a Netvibes site.²

The instruments

Two instruments are developed for this two-year research on the perceptions of student teachers towards blog-based and other Web 2.0 tools for eportfolios. One instrument is the interview that is carried out in discussion group. Afterwards, a system of categories is also developed to analyse their answers and beliefs. Both of these instruments include items on openness, collaboration and sharing through open

² URL: http://www.netvibes.com/eportafoliodestudis#Eivissa%2C_A-Gal

eportfolios. The instrument is applied twice during the research, to assess if there is a positive evolution of attitude towards openness during their education at University as Infant Education teachers.

Interview questions to student teachers on openness were the following:

- What do you think about having used an open blog as an eportfolio platform?
- What advantages and disadvantages have you experienced?
- The system of categories built from analysing the interviews and from previous study of scientific literature, consists of four families of categories, with between ten and fifteen categories each. Openness is the first category of the third family of dimensions that describes the process of constructing an eportfolio. Due to space limitation, this family can be seen in the following section of this paper, when introducing the results obtained.

Results

The categories directly related to our topic of research are limited to the first and ninth category (DPR1 and DPR9). However, here we present all data collected of this family of categories, as there is a strong relationship among those related to openness and all the rest. We also present the number of times each topic has been debated in group discussions so to be able to see if there is an evolution over the two-year period.

Processual dimension (advantages and disadvantages, personal strategies, project organisation...)	Code	Number of repetitions 2009-10	Number of repetitions 2010-11	Total number of repetitions 2009-11
Eportfolio advantage: openness and sharing	DPR1	4	12	16
Eportfolio advantage: learning history	DPR2	1	7	8
Eportfolio advantage: technical learning	DPR3	0	15	15
Eportfolio advantage: language awareness	DPR4	5	7	12
Eportfolio advantage: learning empowerment	DPR5	0	23	23
Eportfolio advantage: useful for their programme	DPR6	1	10	11
Eportfolio advantage: design and identity	DPR7	2	2	4
Eportfolio advantage: methodological change and innovation	DPR8	6	0	6
Eportfolio disadvantage: conditioned process (assessment)	DPR9	6	19	25
Eportfolio disadvantage: compulsory	DPR10	5	11	16
Eportfolio disadvantage: time needed	DPR11	5	10	15
Eportfolio disadvantage: workload	DPR12	1	5	6
Positive scaffolding during the process (coordination, colleagues)	DPR13	14	13	27
Project organisation	DPR14	7	20	27
Personal strategies (personal characteristics, and strategies, attitude, personal resources, personal development, personal assessment of achievements)	DPR15	28	36	64
		85	190	275

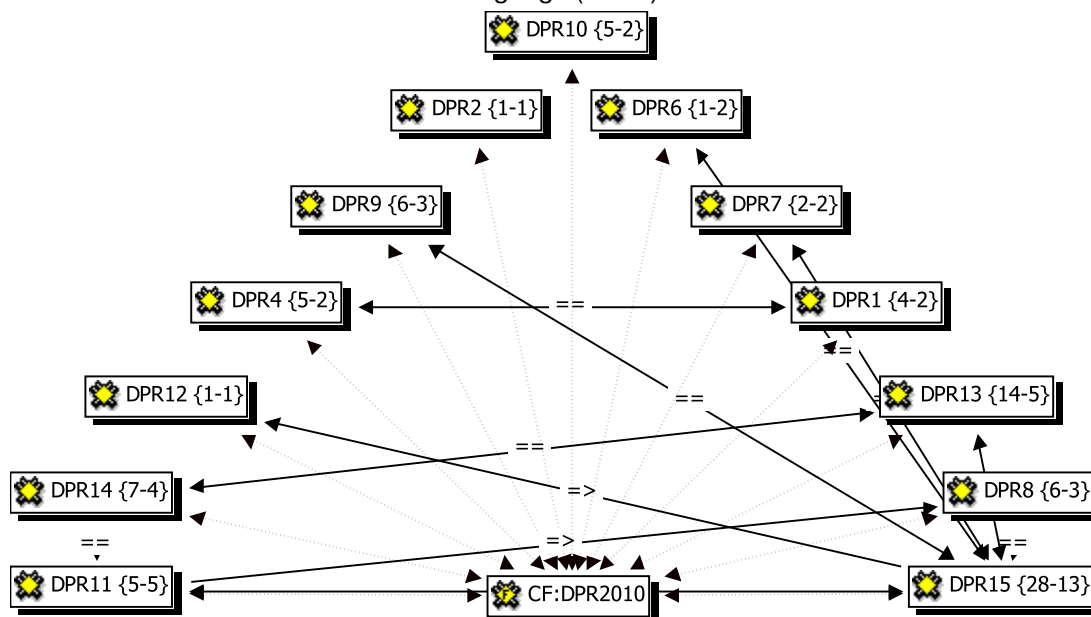
Table 1. Processual dimension. Number of references.

Most categories of this dimension have more repetitions in the second school year, after having worked with their eportfolios the previous year. Therefore, the times that openness is debated, whether as an advantage or as a disadvantage, also increase in the second school year. However, general results from the period show much more repetition of the topic of openness as a disadvantage rather than as an advantage. In the following section, we can see the relationship of openness to other categories, which allows us to see what are the concrete advantages and disadvantages that students see in openness.

Graphical representation

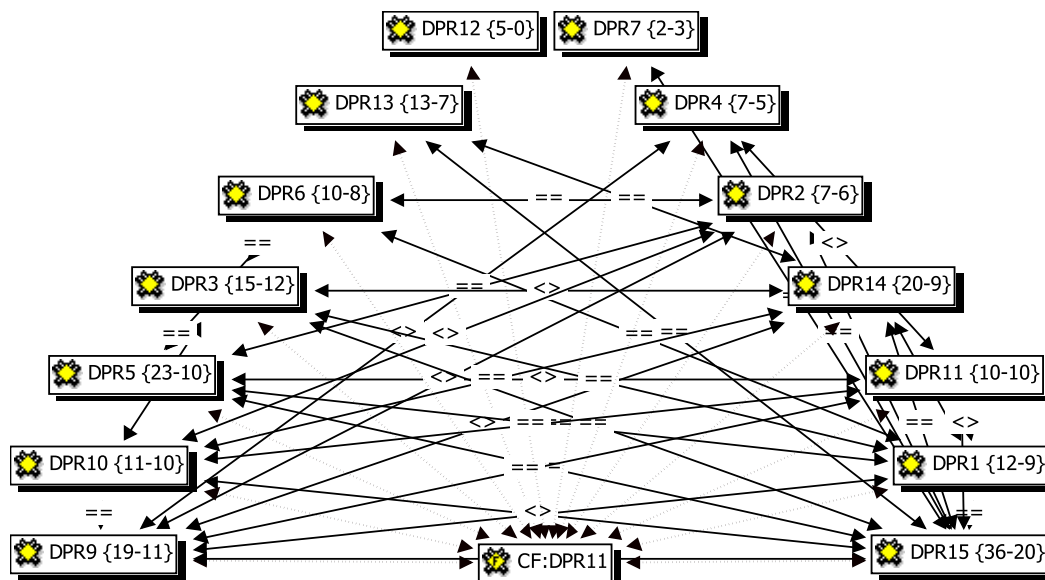
Scientific software is used to graphically represent the relationship between categories. The following figures, which built with Atlas.ti software, represent the connections in the same family of categories (figures 2 and 3), and the connections of DPR1 and DPR9 with categories through all families in both school years.

Graphic 1 shows the only connection of DPR1 in its family, which shows the positive idea that openness makes students aware of their use of language (DPR4).



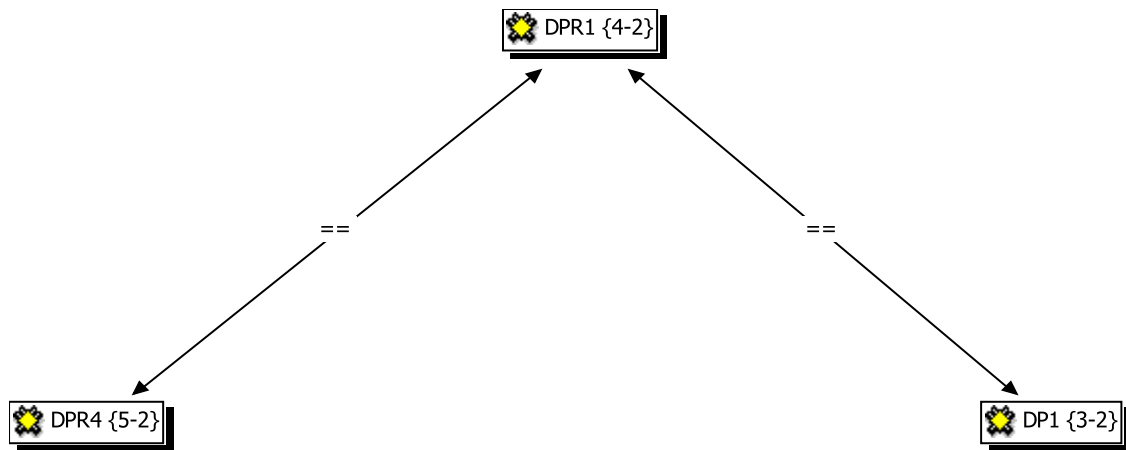
Graphic 1. Eportfolio process dimension. School year 2009-10

The following school year (graphic 2), DPR1 is related to four other categories: technical learning (DPR3), learning empowerment (DPR5), assessment as a disadvantage or barrier for openness (DPR9) and the scaffolding process (DPR13). Thus, openness as a topic is more debated with more connections during the second school year, which allows us to observe the progressive concern of student teachers about the topic.



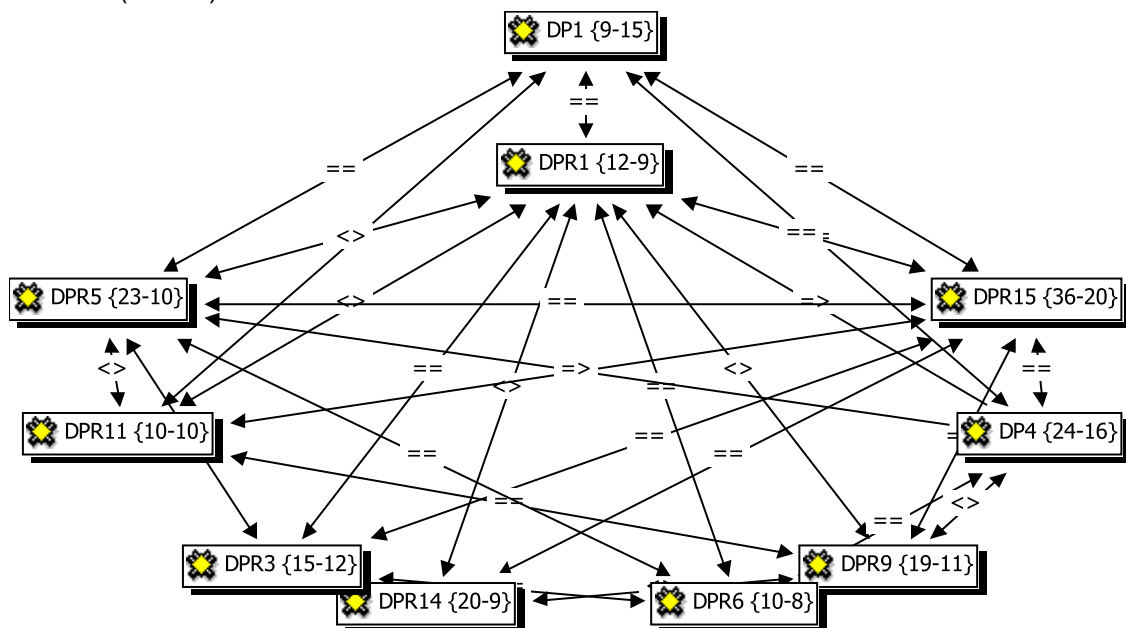
Graphic 2. Eportfolio process dimension. School year 2010-11

Graphic 3 shows the connections of DPR1 with other categories beyond its own dimension. Therefore, as we have said, the first school year, DPR1 shows connection with the use of language (DPR4), and also with positive feelings of the personal dimension (DP), such as the admission of having liked the tools used for the eportfolio construction (DP1).



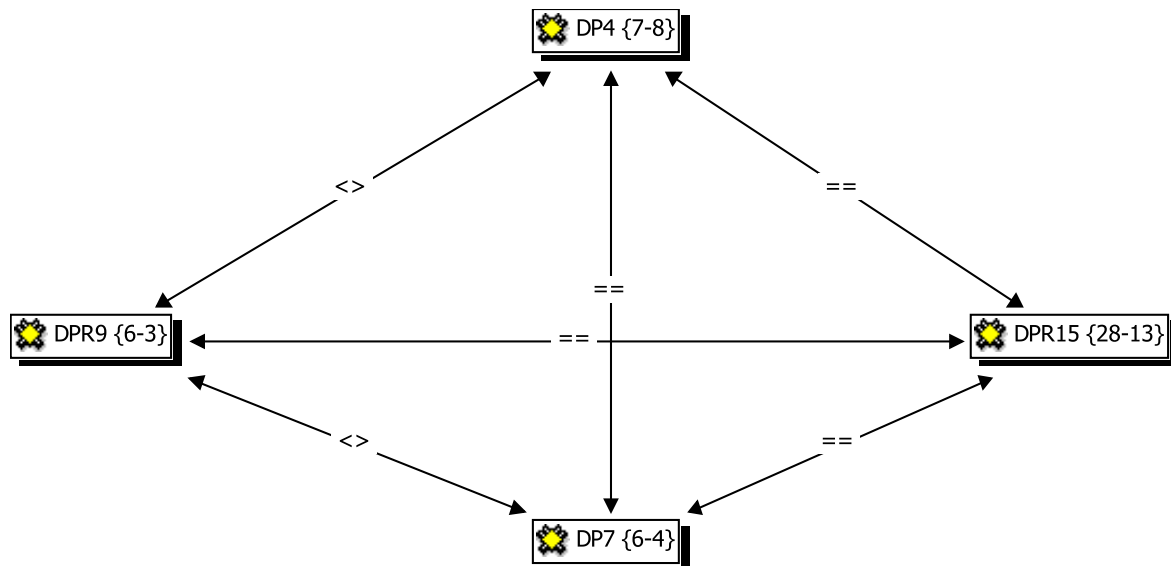
Graphic 3. Category of openness as an advantage (DPR1). School year 2009-10

During the second school year there is much more debate on openness, and contradictory opinions emerge in the discussion groups, as can be observed in graphic 4. As in the first school year, positive emotions of the personal dimension appear again, and as well as the expression of liking (DP1), student teachers express their motivation and satisfaction (DP4) towards their open eportfolios. They also admit that it is being useful for learning throughout the whole programme (DPR6). However, this contradicts the emergence of another rather negative category of the processual dimension (DPR) like the one referred to the time devoted to an open eportfolio (DPR11). Some other categories (DPR 14 and 15) appear from the processual dimension that had not appeared the previous year. These categories appear because of their connection with the expression of appreciation (DP1) and of motivation (DP4) and show their personal strategies towards the task (DPR15) together with some criticism of the organisation of the project implementation (DPR14).



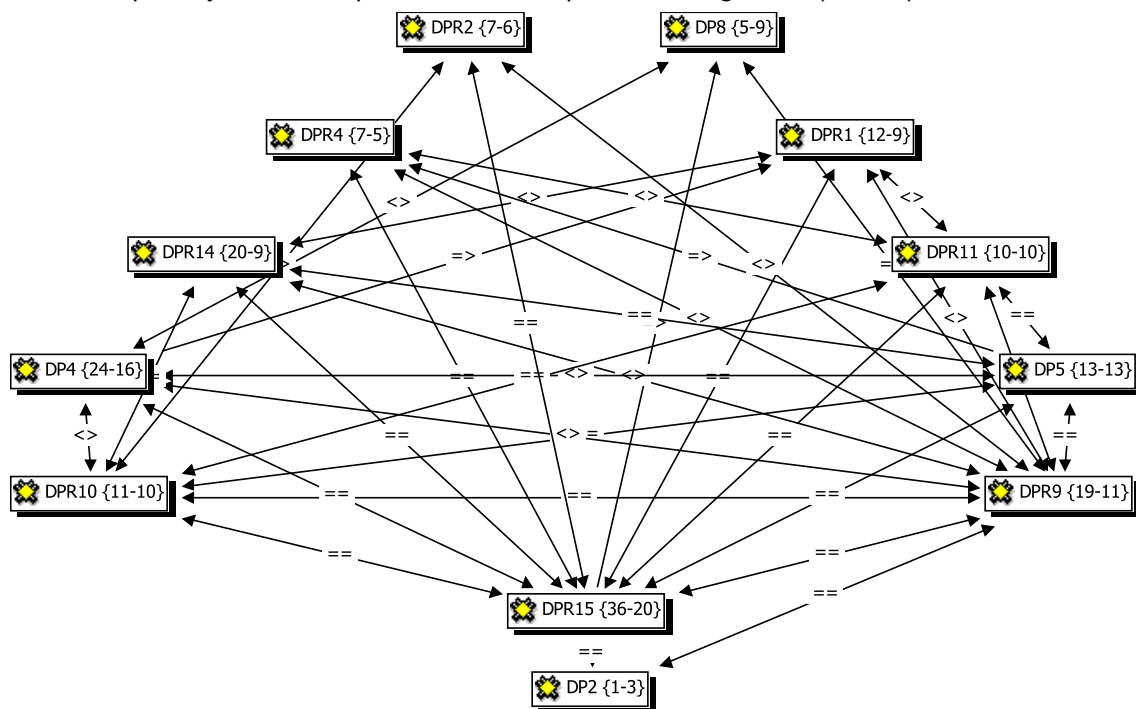
Graphic 4. Category of openness as an advantage (DPR1). School year 2010-11

Finally, graphics 5 and 6 show the evolution of the most negative category about openness, that which relates openness to the conditioning of the assessment process. In the first school year (graphic 5) the problems of openness as a conditioning element of assessment (DPR9) is related for the first time, to a personal position to devote more effort to improve their eportfolios (DP7) for which personal strategies are developed (DPR15) in spite of the lack of motivation (DP4). The few connexions could illustrate the lack of concern about openness.



Graphic 5. Category of openness as a disadvantage (DPR9). School year 2009-10

The second school year (graphic 6) connexions of DPR9 are very similar to connexions of DPR1 (graphic 4). The complex figure shows a more complex narrative by students which can indicate a major concern about openness. Although there is willingness for the task (DP7), there is greater resistance as shown by negative attitudes (DP5), such as anxiety towards the openness of their eportfolios. Some other complaints arise such as the compulsory nature of openness in their eportfolio assignment (DPR10).



Graphic 6. Category of openness as a disadvantage (DPR9). School year 2010-11

Discussion

The research began positioning openness as a positive characteristic of blog-based eportfolios. Scientific revision led us to think about openness as a facilitator for networking (Cambridge, 2009, 2010) or collaboration (Zubizarreta, 2009). However, the research has allowed us to consider that openness apart from being positive, can also have some negative effects, and can be viewed as a disadvantage by students. Figure 1 represents a summary of the two faces of openness that this research has observed:

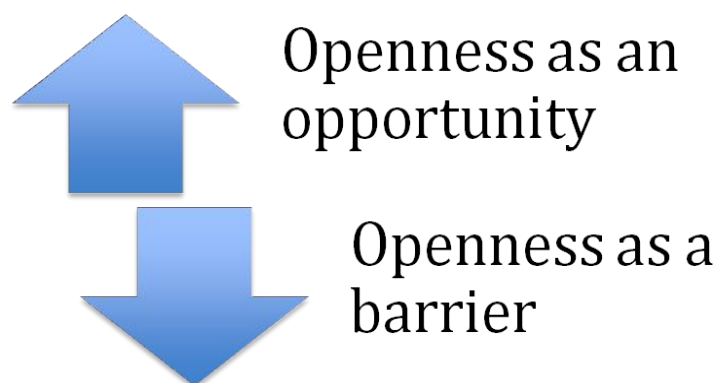


Figure 1. The two faces of openness on eportfolios

Data collected show a general positive attitude towards open eportfolios as student teachers value the opportunity for sharing: they admit having learnt from each other by accessing and reading colleagues' eportfolios. They have drawn attention to their major worry about the use of language, spelling and the global coherence of their texts. Nonetheless, data collected have also highlighted some negative effects of open eportfolios. Student teachers have admitted having lived with anxiety the process of open documentation of their learning process. They have also pointed out the problems of not balancing traditional assessment at University and open collaboration processes. Figure 2 summarizes conclusions achieved from students' perceptions:

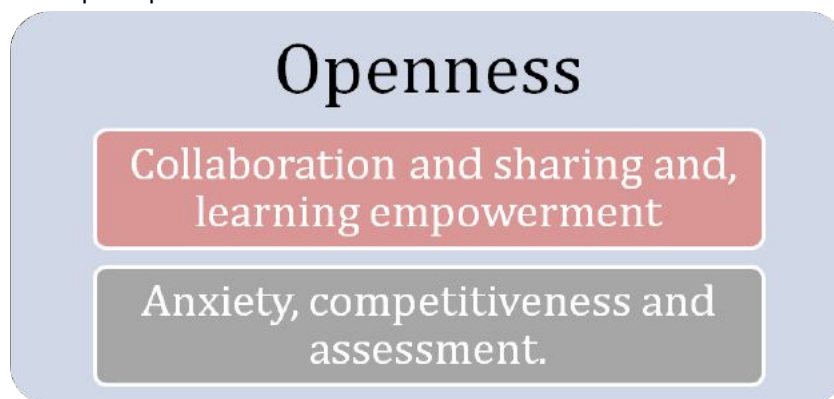


Figure 2. Opportunities and barriers of openness on eportfolios

Conclusions

The European Commission (2013) has envisioned openness as an aim to achieve by 2030³. With this eportfolio project, students have been asked to start open learning practices with the hope that this learning experience will help them to take part in the open movement as future teachers. Blogs and Web 2.0 tools have been introduced as the platform both because of their affordances for the construction of learning eportfolios and because of their openness. The literature review allowed us to think that these social media would enhance the eportfolio construction. Openness was also an element that the theoretical framework allowed considering it as an affordance.

However, lots of disadvantages have arisen from our data collected about openness of eportfolios. Based on our profound belief that using social software as open eportfolios empowers eportfolio processes, instead of responding by closing eportfolios, we have to respond by controlling their negative effects. We have learnt a great deal from these first steps of the eportfolio implementation and its research. The lessons learnt will have to help us in the following: balancing what is shared and what is assessed, avoiding the contradictions arisen by having to share and being assessed at the same time; scaffolding portfolio processes that are open on pre-service teachers' eportfolios to reduce anxiety; enhancing students' collaboration and finally networking through their eportfolios so that students feel the empowerment of their own learning by sharing. Finally, further research will have to observe the influence of tool ownership on psychological ownership and thus, learning improvement.

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³ <http://blogs.ec.europa.eu/openeducation2030/>

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Achieving “High-Po” Know-How: The Role of ePortfolio’s and Analytics in the Employee Lifecycle Management of Sales Executives

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Introduction

This paper will discuss how a well-strategized ePortfolio approach utilized in tandem with a sound analytics strategy can be an effective means to evaluate and refine the key competencies associated with high-performing sales executives. Such an approach allows organizations to utilize the artifacts within high-performers’ ePortfolio’s to predict the success of early-tenure sales executives, provide tailored support and remediation for existing sub-par performers, and better select future candidates in corporate sales organizations. Furthermore, it will illuminate how the systematic evaluation of the ePortfolio collections of high-performers yields potentially valuable contributions to both an organization’s IP and its support of the entirety of the sales executive employee lifecycle.

Background

The Challenges of an Ineffective Salesforce

Most pundits would likely concur that a successful sales force is the key to growing a business. The challenge over the last several years has been finding qualified sales executives floating about the “talent drain” and combatting the growing cost of turnover. According to some in the industry, including Accenture, this is a product that has gone mostly unsolved (Sam Tepper & Richard J. Bakosh 2010).

According to a study completed by Accenture in tandem with CSO Insights, increasing sales force effectiveness was the single most important objective for Chief Sales Officers (CSO), beating out such traditional stalwarts as increasing revenue, building market share, and increasing margins. Tepper and Bakosh suggest that the ineffectiveness that is demonstrated by the huge gaps that exist in between organization’s sales goals and actual achievements is predicated by the following:

- *One, many sales people aren’t pulling their weight: On average, the top 20 percent of the sales force generates 62 percent of a company’s revenue, and 51 percent of sales people failed to meet their quotas in 2009.*
- *Two, salesforce turnover is too high, with nearly one in four sales people having left their employers last year either voluntarily or involuntarily. This level of attrition is enormously expensive to companies: The total cost of turnover averages between three and four times the fully loaded headcount cost, so the cost of turnover for a rep making \$250,000 per year is \$750,000-\$1,000,000. Making matters worse is that, on average, it takes more than eight months for that person to become proficient—during which time revenue from affected accounts can dip to just 30 percent of their overall potential, with associated impacts to customer satisfaction and loyalty.*

Accounting for the variability between high-performing sales executives and those who are not performing well has been very challenging for organizations. This mystery has made the specter of turnover even that much more daunting given the apparent helplessness in selecting the right individuals for the job. The following diagram dramatically illustrates the distribution of production across the high-performing sales executives and their colleagues.:

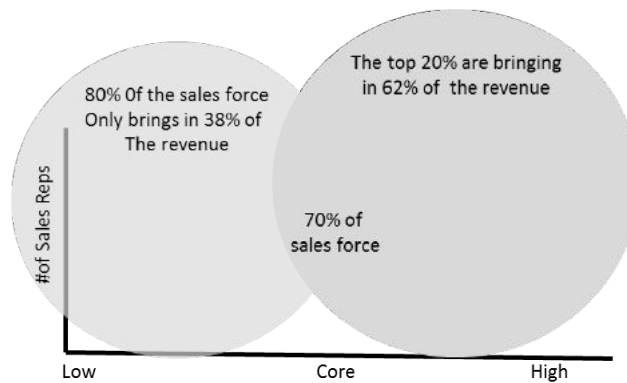


figure 1 - Applying a Competency-Based Approach to Address Salesforce Effectiveness

To address the sales force ineffectiveness issue and bridge the talent gap between high-performers and their colleagues, several top organizations have transitioned to a competency-framework approach for selecting, managing, and evaluating sales executive candidates and hires with more (assumed) confidence in their success. To date, this approach has had little impact on addressing the issue of sales ineffectiveness. The obstacles do not tend to lie in the decision to employ a competency-based framework to achieve such things; it lies primarily in the underlying assumptions often made when applying such an approach.

A good place for organizations to start is in understanding what competence in performing a given role means and what the difference is between competence and competencies. Competence can be defined as demonstrable performance outputs (something easily identifiable via crude metrics, e.g. units sold, total revenue of deals closed, etc..) while competencies are the behaviors that allow individuals to be “competent” in a role. In sales, the emphasis tends to be on competence rather than competencies which in the end allow organizations to see who is successful but often fall short of knowing why.

The key to understanding the essential competencies that support being a competent sales executive not only lie in supporting behaviors, but in behaviors that are typically only observable “in the moment” – at the time of execution. The Forum’s 2012 survey of over 1,000 advisors identifies the behavioral competencies shared by high performers. The Forum found that two high-performing advisor profiles emerged from advisors’ answers to questions about their sales, service, and advisory strategies. And while these two high-performing groups take very different approaches to working with clients, the key to their success lies in three shared competencies that define their “in the moment” client interactions:

Key behavioral competencies of high-performing sales executives (from executiveboard.com):

- **Adaptability** - High performers modify their meeting approach based on clients’ response as opposed to sticking to a prepared agenda. Some traditional application of a competency framework have diluted this ability by putting focus on rote-memorization of sales processes and thereby minimizing creativity.
- **Needs Orientation** - High performers broaden discussions to uncover clients’ full needs as opposed to addressing only the immediate issue at hand.
- **EQ (Emotional Quotient)** - High performers emphasize personal connections in the sales process over technical expertise

Not only do these behavioral competencies indicate the potential quality of execution in common areas of sales, service, and advisory strategies but strong behavioral competencies have also been shown to strongly benefit in other areas such as customer and brand loyalty.

Methods

Utilization and Classification Considerations for ePortfolio’s

According to Lorenzo and Nelson (2005), an ePortfolio is “a digitized collection of artifacts including demonstrations, resources, and accomplishments that represent an individual, group, or institution.” Although this perspective of ePortfolio’s comes from a culture steeped in the culture of traditional education, ePortfolio’s have been used in this manner in a number of diverse applications for the evaluation and assessment of employees over the last few decades. Some of the more common applications include:

- **Authentic assessment** – as an alternative to traditional assessment techniques, demonstrate how you are achieving your competencies and KPI’s via on-the-job performance evidence

- **Reflection** – developing metacognitive and critical thinking skills around how you learn and perform
- **Accountability** – self-report job and role execution via evidence of knowledge acquisition, business execution, and growth
- **Critical incident report** – This type of evidence is typically in the form of after-action reports, project post-mortems, and win-loss scorecard analysis

To date, ePortfolio collections were primarily focused on the didactic presentation of data for a given purpose (Barker, 2006). In corporate environments where measuring longitudinal improvements over a broad range of interventions over time is becoming more common, the more rigorous analysis of the effectiveness of interventions and the importance of individual attributes has been converging more toward the domain of ePortfolio utilization. This movement transitions the use of ePortfolio's from the static realm of presenting evidence to the strategic role of impacting decisions around hiring criteria, learning and development initiatives, employee evaluations, and personalized employee development paths.

The first step of constructing the strategy is selecting the appropriate classification taxonomies for organizing artifacts within the sales executives' ePortfolio collections. Two common taxonomies to consider at the beginning of this exercise are the proficiency levels across the targeted behavioral competencies and the second taxonomy to consider should mirror the individual employees broader KPIs measured for their periodic evaluation.

Sample artifact types indexed within these structures typically include structured client success case studies, successful sales strategies based on client-profiling strategies, audio and video captures of client interactions and other evidential artifacts of behavioral proficiency in the targeted areas.

Further analysis of artifacts within the ePortfolio collections of high-performing sales executives should influence the constructs and contents within the enterprise's competency-based role definitions and contribute to the continuous improvement processes around employee selection processes. This technique is easily extensible into the utilization of ePortfolio's to a cadre of other key roles within the enterprise. The missing link at this point is to understand who the high-performers are and what the highest-confidence predictors of success are. This is where a comprehensive analytics strategy comes into importance.

Transitioning Learning Analytics Ideology from Education-Centric to Corporate-Focused

The overwhelming majority of research and publications to date on learning analytics has been in the domain of applications within traditional educational settings, e.g. higher education, K12, etc. Within this context, the metrics used to account for success were primarily grades used to measure course performance or learning outcome in nature.

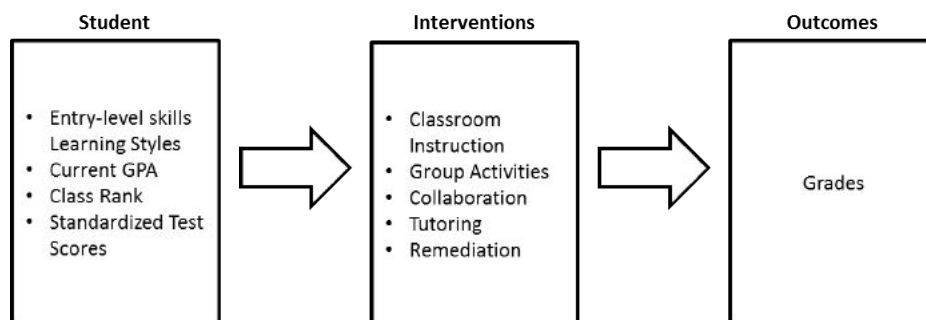


figure 2: Application workflow of analytics in education

In the corporate world, several early implementations of analytics have also focused on learner performance on exams and assignments as the measure of the success of learning and performance interventions as well. However, mature organizations are quickly coming to realize that the only true measure of success for such interventions is in their business impact relative to the on-the-job performance of the learner.

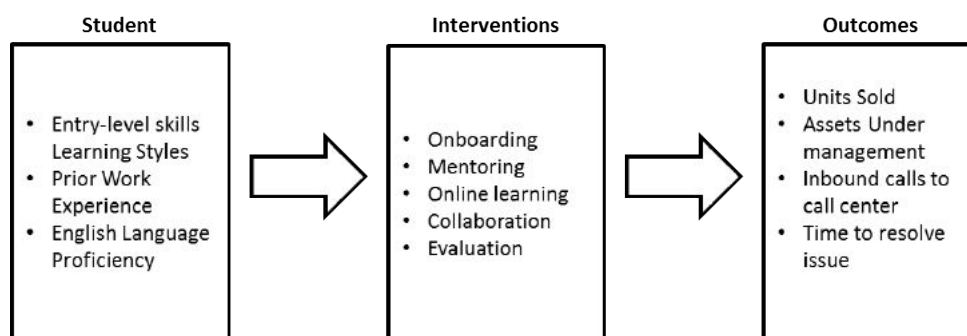


figure 3: Proposed application workflow of analytics in corporate setting

For sales executives, the outcomes are there and typically fairly accessible through HRIS, sales tracking, talent management tools, and other typical ERP systems. Common examples of sales executive outcomes include: sales by product type, number of units sold, profitability of good sold, sales numbers vs. previous time period, and win-loss analysis. Once the appropriate outcome metrics have been selected for a given population of sales executives, the analytics approach will begin predicting which combination of learner types and profiles paired with which interventions are indicators of desirable outcomes.

Combining Analytics and ePortfolio Strategies

Once the learning analytics strategy has enough historical data to start identifying potential predictive models, two types of data extracted from the analytics reports can be utilized to identify initial areas of focus for contributions within ePortfolio collections: 1.) sales executives' entry-level attributes that are key indicators of success independent of interventions and 2.) interventions shown to have significant impact in performance improvement across one or more learner attributes.

Entry-level sales executive attributes that show strong predictive power for successful outcomes that prove to be independent of intervention indicates areas to require reflection points and case study evidence across all sales executives and stored in individual ePortfolio collections. The periodic analysis of this data within ePortfolio's helps organizations build models of behavior to distribute to the rest of the sales force and will also provide valuable input on new hire selection criteria for sales executives over time as well. (note to self – is it worth it to incorporate a critical thinking reference here?)

Sales executive attribute and intervention combinations that prove effective in improvement of outcomes also indicate areas of focus for ePortfolio contributions. Additional commentary on interventions in the form of both free-form reflections of how and why the interventions assisted the sales executive in the execution of sales activities and completion of questionnaires that provide a more structured and systematic account for how the intervention translated into improved outcomes will both be stored in the individual ePortfolio collections.

Conclusions and Extensions

To achieve a true transformation within the corporate enterprise, it is critical to understand how to select, evaluate, and remediate employees within a given role. Understanding why existing high-performers within a role are successful via the analysis of their behavioral competencies is paramount to this effort. Through the careful inspection of how this was achieved in the evaluation of high-performing sales executives, lessons can be learned to apply the same techniques to any number of job families and roles across the corporate enterprise.

The type and depth of knowledge to be gained from a combined ePortfolio -analytics approach can provide significant intelligence and improvements to several key junctures along an employee's lifecycle:

- Pre-boarding of employees - leveraging known individual attributes of potential high-performers, leverage social networking tools and other marketing and recruitment activities to build and nurture pools of future potential employees
- Employee selection – hire new employees with increasingly higher degrees of confidence by the continuous improvement of selection criteria that is driven by the cycle of analytics and ePortfolio utilization and analysis
- Onboarding new employees – utilize the data and evidence from the analytics and ePortfolio strategy to both minimize the time to productivity against desired outcomes and to maximize employee retention

- Employee support and development – by understanding what entry attributes are most important and what interventions work best for given attributes, employee enablement and support can be delivered efficiently and in as personalized manner as possible

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Support of students' higher level of conscious awareness of self-regulation of research activity in laboratory with ePortfolio and pattern language

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Goal of the study

The laboratories in graduate school have a commonality with several social environments (such as company and medical setting) while there are differences in various types of practice. The persons in these environments should conduct two kinds of activities, the practice and the learning. Students in graduate school should progress two kinds of activities in the laboratory; the research activity and the learning process. For example, the students progress the research activity (e.g., developing software) as well as they progress their learning process (e.g., acquiring new programming skill). Although students are required to progress the both of the activities in the laboratories by their own initiative, students who can progress their activity by themselves sometimes have difficulty to consciously regulate their research activity and learning process. This difficulty may come from lack of conscious awareness of students' cognitive process of research and learning activities in laboratory (e.g., Dunlosky and Metcalfe, 2008). The present study aimed at giving the students support to improve their conscious awareness of self-regulation with ePortfolio and pattern language.

ePortfolio and pattern language

The authors developed ePortfolio and pattern language on basis of the self-regulation theory (SRT) assuming that the self-regulation of activities involves practice and knowledge. The SRT posits that self-regulated practice functions if three components are in effects, namely planning of activity, processing of activity and evaluation of activity (Azevedo and Witherspoon, 2009; Zimmerman and Shunk, 2001). The goal of the eportfolio is to improve the students' self-regulated practice. To this end, the ePortfolio was designed to make students consciously aware of their self-regulation of the practice by displaying the objectives about self-regulation practice such as outcome, learning goal and so on via ePortfolio. The ePortfolio shows students these objectives by the component of the self-regulated practice, that is planning, processing and evaluation.

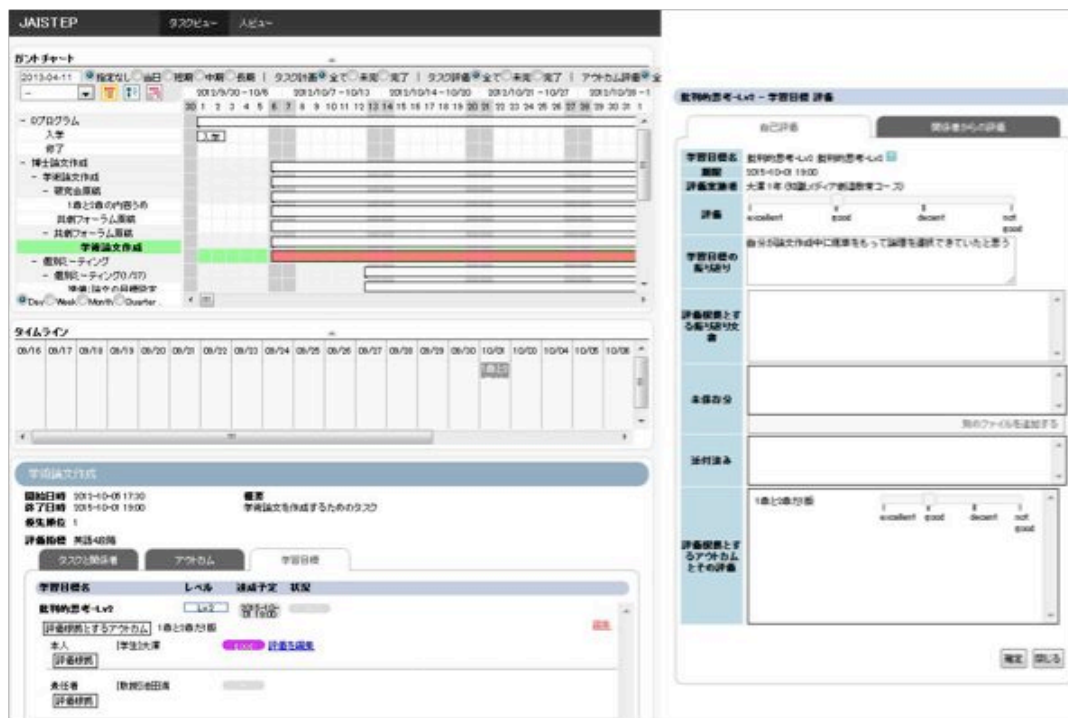


Figure 1 Gantt chart (left) and learning goal view (right)

ePortfolio support

The ePortfolio helped planning by showing Gantt chart and by view of learning goals. As seen in Figure 1

(left), it shows Gantt chart in this ePortfolio. The students can grasp their schedule in this chart that represents time line horizontally and represents tasks vertically. Thus, the students can overview their task schedule (e.g., when task starts and the task ends), this view is designed to be familiar to the students who uses web tool for the project management.

As Figure 1 (right) shows, the ePortfolio helped students to evaluate their learning process with the view, in which the students can easily see and manipulate the objective related with the evaluation of learning process such as learning goal and outcome. The students rate their achievement level of learning goal and write reflective comment in the blank square. The students are required to rate or evaluate the learning goal by evidence. The students are allowed to select the evidence for the evaluation of learning goal from learning outcome. In this example, the student selects learning outcome “presentation slide” as the evidence for evaluation of learning goal “creativity”. The student rating as “good” in the “creativity”, writing comment such as “I reflected on value of web technology in higher education when making slide presentation for laboratory seminar. I intended to choose slide expressing more important value than other slides and made the logic of my presentation clearly”.

It is well known that students’ reflection of self-regulated practice will be more consciously if the students see the evaluation in different perspective from the student’s one (e.g., Sawyer, 2006). Furthermore, the students’ reflection will be more consciously when the students can concern their own evaluation process such as “why was my evaluation of this learning goal based on slide presentation?” Although the students cannot attend to the reflective thinking on their own evaluation process by themselves, communication with others often drives the students to reflect on their own self-evaluation process. With this ePortfolio, the students can view the others evaluation of their learning goal and they can communicate with others on their evaluation process. Importantly, the present ePortfolio gives opportunities that the students can discuss on self-evaluation process of learning with others as well as on outcome or performance as seen in typical ePortfolio. We believe the communication process promotes reflection on their self-evaluation process and lead to conscious awareness of self-regulated practices.

Pattern language support

While the SRT indicates students’ conscious awareness of self-regulation enhances as experience of self-regulated practice increases, the theory emphasized critical role of knowledge of self-regulation on its conscious awareness. This is because knowledge of self-regulation leads reflection on their self-regulated practice, such as “this program skill is too complex to acquire in two weeks. In this case, to my knowledge... I search for easier skill or knowledge but I cannot decide which one is basic for acquiring the target skill”. Namely, this student conducted self-regulated practice and then s/he refers to the knowledge on self-regulation of learning process (e.g., you should begin with basic skills again if you cannot progress learning). Owing to the reference to the knowledge in their reflection, the students can plan next practice (e.g., discuss with supervisors). The pattern language is designed to give knowledge on self-regulation in some case of laboratory activity. The authors aimed at letting the students combine knowledge on self-regulation with self-regulated practice by showing pattern language to the students who conduct self-regulated practice with ePortfolio.

Pattern language is a method for organization of knowledge with fragmented knowledge called as pattern. A lot of patterns are got together for organizing knowledge. For example, Alexander who proposed the pattern language collected many patterns (such as “house cluster”, “health center” and “carnival”) for organizing knowledge of “town” (Alexander, 1977). The present study applied the pattern language to the domain of learning of self-regulation and designed how to organize the pattern of knowledge of self-regulation of learning.

Design intention of pattern language for self-regulation

Before constructing each pattern of self-regulation (see figure 2 as an example), authors designed pattern language in this domain. In specific, the authors determined five concepts that students should learn if they consciously aware of self-regulated practices.

- Goal of self-regulation

The column of goal of self-regulation represents goal of self-regulation and describes the goals of self-regulation of practices that designer (authors) intend for the students to aware consciously of. For example, “students can set learning goal from panoramic view of the student’s whole learning process”.

	Goal of self-regulation	Factor of interference	Role of ePortfolio on goal of self-regulation	Awareness of self-regulation for decontextualization	Patterns related to the goal of self-regulation
Planning	Students set learning goal from panoramic view of the student's whole learning process	Students who attend to manage research project are prone to be unaware of implicit learning resources in the research project. Accordingly they cannot attend to set of learning goal or to evaluate the learning goal	By showing learning goal to the students, ePortfolio supports the students to consciously aware of their learning goal in the research projects	Students should consciously aware that the function of ePortfolio to show the learning goals to the students is intended to support for students to aware of their learning goal in their research projects	<ul style="list-style-type: none"> • Definition of learning goal • Relationship between learning process and research project • Awareness of self-regulation of learning
Processing	Students organize environment that they can concentrate on project and learning	If students do not take account of property of task and learning, they cannot organize environment or select appropriate strategy	ePortfolio support student to organize their environment and select strategy by showing self- and other's- evaluation	Students should consciously aware that environment and strategy that are set based on vague understanding of task and students' learning potential. ePortfolio support students' understanding of task and their learning potentials	<ul style="list-style-type: none"> • Definition of learning goal • Self-management for learning • Definition and property of tasks • Awareness of learning when progressing research projects
Evaluation	Students understand importance of self-evaluation	Student who regard others' evaluation as "grade" cannot understand why self-evaluation is important	ePortfolio shows self- and others-evaluation and lets students understand gap between them	ePortfolio let students evaluate themselves by evidence as to aware how evaluation is influenced by implicit process	<ul style="list-style-type: none"> • Definition of learning goal • How to evaluate own learning process • Evaluating other's performance

Table 1 design of pattern language

- **Factor of interference**

The column of Factor of interference describes factors that the students who can conduct self-regulated learning process without conscious awareness are prone to be interfered with. For example, "students who attend to manage research project are prone to be unaware of implicit learning resources in the research project. Accordingly they cannot attend to set of learning goal or to evaluate the learning goal".

Role of ePortfolio on goal of self-regulation

The column describes the role that the ePortfolio plays on students' being apt to aware of goal of self-regulation. For example, "By showing learning goal to the students, ePortfolio supports the students to consciously aware of their learning goal in the research projects."

- **Awareness of self-regulation for decontextualization**

The column describes what the students need to aware of self-regulation to apply their practice of self-regulation to domain departing from domain that the students learned the practice of the self-regulation. For example, "Students should consciously aware that the function of ePortfolio to show the learning goals to the students is intended to support for students to aware of their learning goal in their research projects".

Patterns related to the goal of self-regulation

The column describes patterns related to the goal of the self-regulation. For example, "Definition of self-regulation", "Definition of learning goal", "Relationship between learning process and research project", and "Awareness of self-regulation of learning" are patterns that related with the goal of self-regulation that "students can set learning goal from panoramic view of the student's whole learning process".

Pattern of self-regulation

Based on the design intention, authors developed each pattern. The pattern comprise of four types of fields of knowledge.

- **Contents and meaning of the pattern**

In this field, the contents and meaning of each pattern was described. Namely, the field contains "title of the pattern", "meaning of pattern" and "essence of the pattern".

- **Problem and possible answers**

The field describes the problems that the students may confront and the possible behaviors that the students can do to manage to this problem. Namely, "problems students confront" and "what students can do to the problem" are contained.

- **Understanding for decontextualization**

The field describes what the students need to understand to apply the practice of the self-regulation in

the ePortfolio to the context without ePortfolio, containing “Trials students can do”, “Where you are in the cycle of self-regulation model” and “goal of the self-regulation”.

- ePortfolio activities

In this field image and activities that drive to imagine the activities of the ePortfolio are described, showing “situation in ePortfolio” and “image of ePortfolio”.

Experiment and results

The present experiment designed to investigate the effect of ePortfolio and pattern language on students’ awareness of self-regulation in the laboratory. Five graduate students participated to the experiment for two weeks. Four participants were in master course and one participant was in doctor course.

In the experiment participants referred to the patterns on self-regulation as they actually conducting self-regulation practice with ePortfolio in the laboratory. Two kinds of questionnaires the participants answered in this experiment. The first type asked the participants to estimate if they experience difficulty of self-regulation. For example, the questionnaire asking “Will you experience the following difficulties in two weeks?” and “You cannot find the adequate evidence for your evaluation of learning goal”. The second type asks the participants to describe what the participants do when they confronted with problem of self-regulation. The first type of questionnaire was conducted twice, before and after the participants used ePortfolio for two weeks. The second type of questionnaire was conducted after the participants used the ePortfolio.

The results of first type of questionnaire clearly showed that our experiment that participants conducted self-regulated practices with ePortfolio and pattern enhanced awareness of self-regulation of practice and knowledge. The four participants estimated to experience more difficulties after they used ePortfolio and patterns than before they used them. This result indicates that participants can anticipate difficulties in learning and research projects more correctly. Thus, participants’ awareness on what they need to plan for regulating their learning and research project enhanced. The results of second type of questionnaire indicated that practice and reference to the knowledge of self-regulation boosted up the level of understanding of self-regulation of learning and research project. For example, two participants were able to answer “I have to regulate learning process depending on possibility of research project”. The comment suggests that they consciously aware of relationship between research project and learning process in the laboratory activity. Together with these results, the students enhanced conscious awareness of self-regulation by the experience of self-regulated activity in laboratory with ePortfolio and pattern language.

Conclusion

The present study aimed at supporting the students to consciously aware of students’ own self-regulation process with ePortfolio and pattern language. ePortfolio facilitates the students’ understanding of self-regulated practice in laboratory. This presented the students the objectives of self-regulation of learning process and research projects. Thus, students can reflect on how they should regulate their learning and their research projects in the laboratory consciously with our ePortfolio. Pattern improves students’ acquiring the self-regulation of learning and research projects with ePortfolio. The pattern is designed by some important concept such as goal of self-regulation, interference and decontextualization. The pattern gave the opportunities for reflection on self-regulation while they do practice in laboratory with ePortfolio. The results of experiments indicated that these findings are the case. Furthermore, the results indicated that some students understand what self-regulation is in the laboratory activities as well as they reflected on their self-regulation of learning and research projects, suggesting that ePortfolio and pattern can enhance decontextualization of self-regulation.

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ePortfolio for assessment of informal learning in web design and computer animation (in the frame of CREATE project)

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Introduction

“Validation of self-acquired learning and credits transfer in web design and computer animation” (CREATE), www.create-validate.org, is an international project supported by “Leonardo da Vinci” programme of the EC. Its main aim is to **propose innovative methods and tools (including ePortfolio) for validating the results of informal learning in two creative professions** - web design and computer animation. It is implemented by a coordinating organization SCAS, Bulgaria and partners from Germany, Ireland and Bulgaria.

In this short paper we would like to present CREATE project by focusing especially on the use of the ePortfolio method for assessment and recognition of informal learning in web design and computer animation. Organization SCAS (www.scas.acad.bg) has experience in ePortfolio usage for assessment, personal development and career development for more than ten years. SCAS has participated in MOSEP project (“More self-esteem with my ePortfolio”) in 2006 and then in 2007 developed “ePortfolio for Your Future” project (www.my-eportfolio.org) including a Mahara-based ePortfolio system and manual for using the ePortfolio for career counseling of students and young people.

Context

More and more young people nowadays (especially those interested in arts and creative, contemporary subjects) start experimenting and learning while they are at home in front of the computer or while they are working somewhere, during internships, for example. This is called informal learning and its assessment, validation and recognition have become an EU priority during last few years.

The question remains – how to assess the results of this informal learning, how all those young people can prove that they have some knowledge, skills and competences in those fields?

One of the methods for assessment and recognition is the ePortfolio. ePortfolios are known as alternative assessment tools. In contrary to classical assessment concepts, ePortfolios provide a possibility for the learners to present their individual knowledge in their own preferred way. Using ePortfolios for assessment purposes is more than “handing in a presentation and getting a mark”. When working with ePortfolios in the assessment context, it is necessary to look at the portfolio from a wider perspective. Moreover, with an ePortfolio, learners get the possibility to lead the assessment process and to present their skills, knowledge and competences from a pro-active perspective.

The ePortfolio method addresses the questions of validity, reliability and authenticity by combining a variety of methods as well as “internal” self-assessment with external assessment which reduces the subjectivity of the assessment.

Summary of results

As a first project step **units of learning outcomes** in web design and computer animation were developed. Then, appropriate **methods for the assessment of informal learning** were assigned to each unit. Finally, according to the methods assigned to the units the respective **online tools for assessment of informal learning** were developed. In order to ensure credits transferability and informal learning recognition each unit was assigned **ECVET points**.

1. Units of learning outcomes in web design and computer animation

First units of learning outcomes were developed – description of knowledge, skills and competences that a web designer and a computer animator should possess. **The units of learning outcomes were developed for the sole purpose of assigning to them the respective methods for assessment** of the results of informal learning. The units are divided in two parts – some more basic units and others that are more advanced. Units of learning

outcomes in computer animation and web design were developed on the basis of researched training courses, curricula and job advertisements in those two fields in Bulgaria, Germany and Ireland.

Units of learning outcomes in computer animation	Units of learning outcomes in web design
More basic units: Unit 1: Principles of traditional animation Unit 2: Idea and scenario Unit 3: Environment and object design Unit 4: Human character design Unit 5: Rigging Unit 6: Animation Unit 7: Texturing and lighting Unit 8: Rendering	More basic units: Unit 1: Planning Unit 2: Design Unit 3: Development Unit 4: Management (web sites management/maintenance) Unit 5: Optimization
More advanced units: Unit 9: Advanced character design Unit 10: Advanced animation techniques Unit 11: Advanced texturing and lighting techniques Unit 12: Advanced rendering	More advanced units: Unit 6: Interactivity and animation Unit 7: Introduction to database systems

2. ePortfolio and other methods for assessment of the results of informal learning in creative professions

Validation is the process of verifying or giving confirmation or approval to the worth or value attached to something (in this case to the results of informal learning). The purpose of validation of informal learning is to make visible the entire scope of knowledge and experience held by an individual, irrespective of the context where the learning originally took place. For an employer it is a question of human resource management, for individuals a question of having the full range of skills and competences valued and for society a question of making full use of existing knowledge and experience, thus avoiding waste and duplication.

Although the medium for web development and computer animation is information technology, some would say the success of those seeking a career in these areas depends on their creativity and autonomy. Often people who engage in such creative fields do so independently and acquire their knowledge, skills and competence through a kind of informal learning. In the absence of a system for recognizing and validating this type of learning, these self-taught or informally trained people will continue to have their competency and talent ignored and dismissed by education providers and potential employers.

In order to achieve recognition of non-formal and informal learning, a number of methods of validation of have been identified. Each examines one or more pedagogical aspects of the learning involved. The validation methods in question are as follows:

- **Tests and examinations:** This is the validation method most frequently utilized in formal educational settings. Where it is being used as a tool for validating informal learning, the individual undertakes the exam and if the minimum requirement is met or exceeded the learner is awarded with formal recognition of their competency (gained through informal or non-formal learning) in their specified area. The formal recognition generally takes the form of a diploma, certificate or degree. Eligibility to take the exams usually requires the individual to demonstrate some standard of experience or knowledge in the field, for example a minimum period of work experience in the area. The type of examination can be a mix of written and practical tests. This type of validation is the most popular in terms of assessing the existence and level of prior learning.
- **Declarative methods:** This method is based on the self-reporting of the competencies and ability of the individual which is generally corroborated by a third

party by means of counter-signature of declaration. This is an evidently simple method of validation in terms of execution and administration. However it can be said that it only identifies the learner's skills and does not in fact prove that they possess them.

- **The portfolio method:** A portfolio is a collection of documents showing an individual's skills in different ways. They can include artistic or creative pieces, written documents or online or virtual tools or programmes. An ePortfolio is usually online-based portfolio using all the benefits of multimedia and the net. An electronic portfolio, also known as an ePortfolio or digital portfolio, is a collection of electronic evidence assembled and managed by a user, usually on the Web. The ePortfolio method tends to be a tool for obtaining access or entry to further academic or for the career development of an individual. The ePortfolio method addresses the questions of validity, reliability and authenticity by combining a variety of methods as well as "internal" self-assessment with external assessment. This reduces the subjectivity of the assessment.
- **Observation:** Observation involves the overseeing of a specific task or piece of work being carried out by the learner. The observation is being undertaken by a qualified or formally recognized third party who passes judgment on the learner's competency or ability.
- **Simulation:** This is the undertaking of a task in a controlled and simulated environment. It is used when, for practical reasons, the learner cannot do the actual task in real life. Again this is overseen by a qualified third party.
- **Evidences extracted from work practices:** a candidate collects physical or intellectual evidence of learning outcomes as derived from various scenarios, for example work situations, voluntary activities, family or other settings. This evidence then forms the basis of a validation of competences by a qualified third party.

The steps that can be followed when **assigning methods for validation of informal learning to the units** can be:

Step 1: Exploring the required knowledge, skills and competences, estimating which dominates in each unit - more knowledge or more skills?

Step 2: Selecting a proper tool or a combination of tools which clearly relate(s) to the mentioned knowledge, skills and competences. The selection could be made on the basis of the above mentioned ways.

Step 3: Testing and adjusting the selected tools to ensure they cover the mentioned knowledge, skills and competences.

In the frame of CREATE project, the team have decided to follow the steps above and debate each unit with the respective stakeholders proposing some example methods which could be applicable in the developed units in web design and computer animation.

3. ECVET for recognition of informal learning in creative professions

ECVET (the European Credit System for Vocational Education and Training) is a common instrument of the whole strategic European framework for cooperation in the field of vocational education and training (VET).

ECVET is a system for **recognition, accumulation and transfer of learning outcomes** aimed at acquiring vocational qualification. In this context the qualification is an official result of assessment and validation of the achieved individual learning outcomes, carried out by a competent institution and in compliance with definite standards.

ECVET points provide complementary information about qualifications and units in numerical form. They have no value independent of the acquired learning outcomes for the particular qualification to which they refer and they reflect the achievement and accumulation of units. To enable a common approach for the use of ECVET points, a convention is used according to which 60 points are allocated to the learning outcomes expected to be achieved in a year of formal full time VET.

In ECVET the allocation of points usually has two phases: ECVET points are allocated first to a qualification as a whole and then to its units.

For a given qualification, one formal learning context is taken as a reference and, on the basis of the convention (60 points for one year) the total number of points is assigned for that qualification. From this total, ECVET points are then allocated to each unit according to their relative weight within the qualification.

Partners in CREATE project have researched the existing programmes and courses in web design and computer animation in the formal education where the research showed that formal education courses in web design and computer animation are normally 3 years long. So, 180 total ECVET points were assigned to web design and 180 total ECVET points – to computer animation.

The relative weight of a unit of learning outcomes, with regard to the qualification, should be established according to the following criteria or to a combination thereof:

- the relative importance of the learning outcomes which constitute the unit for labour market participation, for progression to other qualification levels or for social integration;
- the complexity, scope and volume of learning outcomes in the unit;
- the effort necessary for a learner to acquire the knowledge, skills and competence required for the unit.

The units of learning outcomes in web design and computer animation were discussed by expert groups comprising teachers, employers and VET experts. Those expert groups decided on the units weights following a specific methodology proposed in advance by the National Agency for VET in Bulgaria. The number of the ECVET points for each unit can be seen in the “Tools” section on the web site www.create-validate.org.

4. ePortfolio and other online tools for assessment of the results of informal learning in web design and computer animation

The toolkit consists of ePortfolio, online interactive games and online interactive tests. Each one of those tools is assigned to one of the units of learning outcomes in web design and computer animation and aims to assess the knowledge, skills and competences described in it. Stakeholders have taken part in all the tools development (VET teachers, managers of VET schools and centres, employers, VET policy makers etc.) All the tools are available online at www.create-validate.org in English, Bulgarian and German. All the tools, including the ePortfolio, are designed for assessment prior to the exams taken before an accredited body. The certificate received after assessment with the toolkit can then be shown to the committee which decides whether to recognize it or not. Here we will focus on explaining the ePortfolio tool for assessment of informal learning in web design and computer animation.

In the Self-acquired learning validation toolkit we have developed two ePortfolios – one for computer animation (Unit 9: Advanced character design) and one for web design (Unit 2: Design). The first one in Unit 9 is developed under ePortfolio system “Mahara”. The second one is developed using the ePortfolio system “Behance”. The idea is to provide different examples of ePortfolios in different online systems and networks. The example ePortfolios also give some guidance to the test-takers on how their ePortfolios should look. There are other systems and social networks which have some of the options necessary for the development of an ePortfolio, such as LinkedIn, Facebook, Ning and others. All those emphasize on the different aspects of a person’s development. For example, LinkedIn is more “business” oriented while Behance is appropriate for creative professions, such as computer animation and web design (the reason why we chose it as an example in this project). Facebook, on the other hand, is more appropriate for the entertainment and advertising industry.

An ePortfolio cannot be assessed automatically. There should be a human evaluator experienced in the subject to which the ePortfolio is devoted who should examine the ePortfolio and assess it. However, assessing an ePortfolio shouldn’t be subjective, but should be rather based on certain criteria. That is why for the purposes of this project we have provided an online questionnaire (like a test) for each of the example ePortfolios developed. The questions in it follow the contents of the respective unit. These online questionnaires can be applied to the assessment of any ePortfolio developed to show the skills and competences gained through informal learning in Computer animation – Unit9: Advanced character design or Web design – Unit 2: Design.

The assessment works as follows: the ePortfolio evaluator has to examine the ePortfolio and then answer the online questionnaire. For each answer a certain number of points are given.

After answering this questionnaire the evaluator has to enter the username of the ePortfolio's owner (the one with which he/she has registered in CREATE toolkit). This way the score for the ePortfolio will be automatically calculated and transferred to the profile of the respective user. Depending on the total score the author of the ePortfolio gets the respective amount of ECVET points for the unit. After the questionnaire there is an empty field where the evaluator of the ePortfolio can leave some feedback for the test-taker. This facilitates reflection so that the ePortfolio owner can further improve it. The evaluator is not involved in the ePortfolio development process from the beginning because the purpose here is not training but only examination; he/she is only an evaluator, not a tutor.

Here is a screenshot of the example ePortfolio developed with "Mahara" in Computer animation – Unit9: Advanced character design:

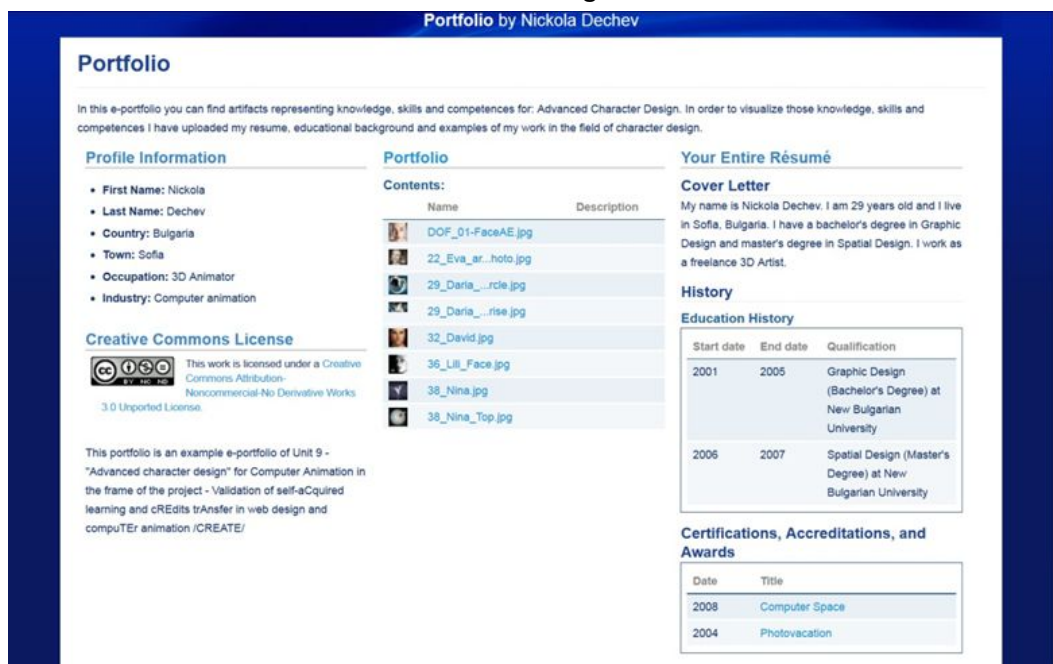


Figure 1- ePortfolio screenshot

Conclusion

CREATE project provides a model that could be followed by organizations who want to assess and validate informal learning. This model strives to be comprehensive – starting from units of learning outcomes, then methods and tools for assessment and finishing with recognition and accreditation through ECVET.

In this comprehensive model the ePortfolio has its place as a powerful tool to assess one's skills and practical knowledge in the fields of computer animation and web design. It is extremely useful for creative professions where visual representation of knowledge, skills and competences is essential.

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Joining the dots and colouring in the spaces: Facilitating the acquisition of a social work professional identity with e-portfolio

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Introduction

Field placements in social work education are considered pivotal in providing students with the opportunity to integrate what they have learnt in the classroom with that which can be achieved in practice (Cleak & Wilson, 2007; Parker, 2007), but maybe more importantly, they also create a liminal space in which the student can explore, acquire and demonstrate a professionally recognized identity (Bowles, 2010; Hawkins and Shohet, 2000). While much attention is placed by Universities on ensuring that particular professional and educational standards are met so that their graduates can meet qualifying requirements, they also recognise the need to provide appropriate guidelines and tools which can facilitate and support a learning process by which the students can move towards performing and recognising themselves as beginning practitioners (Bowles, 2010). However, developing a tool that can both facilitate and best assess a student's capacity to meet the goals of the field placement experience can be challenging - especially when students are placed in diverse practice settings that are also facilitated by individual supervisors who have different levels of experience and understandings of what a pass grade may entail.

Up until recently, James Cook University (JCU) social work program relied on paper based assessments to undertake this task. However following largely negative feedback from key stakeholders about the cumbersomeness and linear nature of these assessments, we decided to explore e-portfolio assessment tools with the aim of creating an instrument that would include both formative and summative evaluation of the students learning (Taylor, Thomas & Sage, 1999). Rather than provide a linear experience, it was hoped that the e-portfolio would: (1) help students 'join the dots' between what they had learnt in the academy, the AASW professional standards and what they experience in practice, and (2) an opportunity to 'colour in the emerging spaces' with their own individually developed learning goals towards becoming a social worker. With the support of a teaching and learning grant received in 2012 and with continuing consultation with key stakeholders, an e-portfolio tool was developed and is in the process of being trialled and evaluated in 2013. This paper briefly describes the background and context in which the tool has been developed; the tool itself and the artefacts it includes; and an overview of how it meets the accreditation requirements of the Australian Association of Social Workers (AASW).

Background:

In the Australian context, students wishing to become social workers are required to complete two field placements totalling 140 days during the final 2 years of their degree program. Each placement experience is given the status of a full academic subject (AASW, 2010) and must have:

10. Clear expectations for learning goals and performance outcomes, based on the AASW *Practice Standards for Social Workers* (2003) (and pending Practice Standards 2013) and the AASW *Code of Ethics* (2010) are established through a consultative process between the SWAOU (social work academic organisational units), the field educator and the student, and are documented in a learning plan. (AASW, 2012(b), p.4)

As stated above, until 2013 JCU's Social Work Field Education programme had used a number of different paper-based tools to engage students, field educators and university personnel in developing a learning plan that identified individual learning goals, activities and assessment for each student that also satisfied the AASW requirements. However while some stakeholders were able to use the tools effectively, most felt that they not only failed to capture the learning experience and outcomes achieved during placement, they also failed to provide a platform for students to demonstrate skills learnt to the workplace once they had graduated. We felt that the use of a portfolio approach would help address these issues.

The benefits of using portfolios to enhance student learning by linking theory to practice and as a tool for self-reflection are well documented (Fitch, Peet, Glover Reed & Tolman, 2008). They have been used within a range of professional education settings including Social Work (Heron, 2011) and are well established for collecting evidence of competence in Tertiary education (Taylor, Thomas & Sage, 1999). However, physical portfolios are "cumbersome to store, transport, present or display" (Swigonski, Ward, Mama, Rodgers & Belicose, 2006, p814). By contrast e-portfolios provide a more manageable digital space for students to engage with collected artefacts in diverse ways that not only allows the creation of a product, but also facilitates a process for learning (Fitch et al, 2008, p38). As a part of this process, social work students can

reflect on artefacts to “build a theory or narrative to understand ‘self’ in context” (Cambridge, 2010, p49), or a professional identity, something required by the AASW Standards (2003) and encouraged in the JCU Learning, Teaching and Assessment Policy (2011).

The JCU Social Work e-portfolio tool

With the support of the teaching and learning grant and drawing on the expected professional and practice standards defined by the AASW and university, we invited key stakeholders (students, field educators and liaison and university staff) to advise on, trial and evaluate an e-portfolio assessment tool for JCU’s field education programme. The e-portfolio tool was developed in Pebble Pad and is currently in the process of being trialled and evaluated.

The e-portfolio tool consists of:

1. **A webfolio** consisting of six learning goal templates named according to areas that are typically accounted for in a professional practice framework (Chenoweth & McAuliffe, 2012): (a) the practice settings’ context, history and philosophy; (b) the theoretical and practice knowledge needed to work as a social worker in the setting; (c) the values and ethics that guide practice; (d) the methods and processes of social work practice drawn upon; (e) the specific skills needed to work within the setting, and finally; (f) the impact that the student’s own personality and characteristics could have on the setting and the influence of the setting and the development of their personal and professional identity.
2. **Six templates** (described above) in which students: (a) develop their learning goals in conjunction with their field educators and university staff; (b) link their learning goals to the appropriate AASW Practice Standard (AASW, 2003); (c) collect evidence to demonstrate their achievement of learning goals while in the practice setting, and; (d) reflection, feedback and grading by the student and field educator on the student’s progress at mid-placement and at the end of the placement.
3. **Journal template** in which student’s reflect weekly on their learning ; identify links to their course work; explore any ethical dilemmas they may encounter, and; highlight their awareness of a developing professional identity.

At this stage of the project, evaluation has been focussed on the participation of stakeholders in the design and development of the e-portfolio. Using York and Itzhaky’s (1991) evaluation framework for stakeholder participation, the project design has been effective in facilitating key stakeholders active engagement in a diverse range of activities to inform the e-portfolio design. Engagement activities have included focus groups, education workshops, surveys distributed by email and student workshops. Staff members, Field educators and students have demonstrated their support and engagement by consenting to participate in the proposed stages of this project. Initial feedback from stakeholders has been positive about both the approach and proposed content of the portfolio.

Conclusion

Although still a work in progress, the e-portfolio tool has provided students with an opportunity to think in a less linear fashion and brought with it the recognition of the ‘messiness’ that can accompany the formation of a professional identity while in the practice setting. It is becoming clear that because of the inherent flexibility of the tool that there may be a need for future training for all stakeholders to better understand the ways in which the tool can be used to facilitate learning and the assessment process. Moreover, we as developers have also recognised the need to introduce the model earlier in the students’ education so that they are more than just familiar with the foundational areas identified in the e-portfolio. While students in the first year of the degree are introduced to the visual diagram that underpins the e-portfolio model, familiarity with the templates could scaffold their understanding and future use of the tool in the practice setting.

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Using E-Portfolios To Improve The Professionalism Of Educators

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Abstract

This article reflects the work of a European Partnership⁴ aiming to improve the professionalism of educators through the adoption of an e-portfolio recording system that tracks career experiences. The rationale argues for the inclusion of formal, non-formal and informal evidence in order to provide a more complete picture of professional knowledge, skills and attitudes that is needed to judge a range of purposes such as annual appraisal, revalidation, job interviews and information to share with colleagues for reflection and learning. Evidence collected suggests that such a professional tool assists career planning, monitors progress and enables feedback from colleagues. It is envisaged with the present progress in technology that personal/professional evidence will be available on smart phones over the next decade with buttons to press for producing the requisite evidence for a particular purpose. Careful preparation for such a situation is necessary and a major outcome of the project is a policy for e-portfolio development that can drive this initiative further.

Key terms: educator e-portfolios; formal, non-formal, informal evidence; professional principles; tracking grid; recording purposes; recording fields; key competencies; career passports

The Context

Teaching, in any context, is a complex profession, coping with increasing student diversity and struggling to raise educational standards for global competitiveness. In large cities, around 350 spoken languages are becoming a norm. Communicating across many cultures and languages requires great skill, empathy and judgement. So, the environment of an educator (teacher/trainer)⁵, at any level, is immensely challenging and member states are reviewing how they prepare and support them for the vital tasks they perform on behalf of European society.

Educators play a core role in supporting the learning experiences of both child and adult learners. They influence evolving education systems and implement reforms which can make the European Union a high-performing knowledge-driven economy. They recognize that quality education provides learners with personal fulfillment, effective communication, social competencies and greater employment opportunities. Their profession, inspired by values of inclusiveness and development of individuals, has a major influence on society by advancing human potential and shaping future generations. So, to achieve objectives, the European Union views the role of educators and their career development as key priorities.

The quality of teaching determines Europe's competitiveness in the world and is positively correlated with student achievement (Darling Hammond, 2005). The Commission Report (2004) on progress towards the Lisbon education and training objectives, as the route out of poverty and means of social inclusion, emphasises the development of key competencies⁶ (2006). As well as imparting knowledge and understanding, educators must help students become autonomous learners by targeting transferable abilities rather than just memorising facts to pass tests. This calls for common European competencies and qualification principles for both teachers and trainers. Directive 2005/36/EC provides the legal framework for the *professional mobility* of teachers with *common principles* and *recognised qualifications* to support

⁴Project Reference: 521454-LLP-1-UK-KA1-KA1ECETB: POLICY FOR EDUCATOR EVIDENCE IN PORTFOLIOS

Partners:

- The College of Teachers at the Institute of Education, London, U.K. (Coordinators)
- The University of Economics and Innovation, Lublin, Poland
- The Intercultural Cooperation Foundation, Sophia, Bulgaria
- TEETCH for Corporate Education, London and New York
- Latvian Culture College, Riga, Latvia
- Ellinogermaniki Agogi, Athens, Greece
- The General Teaching Council for Wales, Cardiff, South Wales

⁵ In this document an *educator* is someone acknowledged as having the status of a teacher (or equivalent) at any level and with any activity requiring instruction, guidance and support within the legislation and practice of a particular country. The word "equivalent" acknowledges that in some countries educators have different titles but hold the same status. A teacher could also be a trainer who works with school-aged pupils and young adults following vocational programmes in schools, colleges, companies or training organizations. *Education* commonly refers to imparting knowledge and *training* defines the skills and practice needed for its application. Thus, *educator* encompasses both these roles and activities

⁶ Key competences: communication (mother tongue & foreign languages); mathematical, science, technology, digital skills; learning to learn; social & civic competences; initiation & entrepreneurship; cultural awareness.

this. Educators must prepare students to enter society and achieve personal and economic independence by:

- Identifying & responding to learner needs with a range of educational strategies
- Supporting student development as life-long learners through key competencies
- Understanding diversity, respecting difference & upholding moral integrity

Common European Principles for Teacher Competencies (2010)

These were devised in response to the challenges laid down in the Joint Interim Report by the European Council and European Commission on progress towards Education & Training 2010.2. Criteria for educators are defined and recommended to evaluate evidence of experience and achievement because arbitrary *standards* change over time unlike *principles* which tend to remain constant. These are:

1. **Well-qualified:** requiring extensive subject and pedagogic knowledge to guide students - understanding their physical, mental, emotional, social and cultural needs.
2. **Life-long learners:** needing continual knowledge and skill updating to cope with a rapidly changing world.
3. **Mobility:** working/studying in other EU states to enhance professional development, share and increase knowledge, skills and attitudes to raise educational standards.
4. **Partnership:** working collaboratively with all stakeholders for maximum results.

1. Well-qualified

Educators, in top-quality education systems, must be graduates from recognized higher education institutions. Qualifications should reflect the *European Qualifications Framework*, which embraces pre and post-graduate levels 2-8. Those working in initial vocational education are required to be fully qualified and greatly experienced in a professional field with a relevant teaching qualification. All educators need opportunities to continue study to the highest level in order to develop their teaching competencies and prepare for progression within the profession. Since education is multidisciplinary, they must have extensive subject knowledge, an excellent grasp of pedagogy and its application, to guide and support learners within the social, cultural and political dimensions of education.

2. Life-long learners

Educators need supporting to continue professional development throughout their careers. Lifelong learning can be *formal*, *non-formal* and *informal*. It includes education, training, retraining and updating of new knowledge, skills and attitudes that reflect current thinking about learning at all levels and within all contexts. Education and training can occur in all aspects of an individual's learning process, such as subject knowledge, pedagogy, psychology, sociology, philosophy, communication sciences, organizational methods, theories and practices as well as that obtained from life experience. Educators and employers should recognize the importance of acquiring new knowledge to inform work. Institutions must value lifelong learning so educators can evolve and adapt by reviewing effective practice and engaging with research and development to keep abreast of progress. They must be encouraged to engage in professional development, including time spent outside the education sector, which needs to be recognized and rewarded.

3. Mobility

Mobility must be a core component of initial and continuing educational experience as today's world shows regular movement of people across national boundaries. Professional preparation and development programmes should give opportunities to study European languages, including subject-related vocabulary, so that educators can communicate easily internationally. They need knowledge and experience of European co-operation so they can value and respect cultural diversity and help learners to become responsible EU citizens. Participation can be encouraged in European projects, with time spent working or studying in other countries for professional development purposes. Those doing so must have their status in the host country and their participation recognized and valued by all stakeholders. Also, there should be mobility between different levels of education and the professions working within these.

4. Partnerships

Teaching and education add to the cultural and economic aspects of the knowledge society and this broader context needs to be understood. Educators work with others, based on values of social inclusion and nurturing learner potential. They require knowledge of human growth and development and must demonstrate effective communication and self-confidence when engaging with learners, supporting them to

become active members of society. They should also work to increase the collective intelligence of learners and co-operate and collaborate with colleagues to enhance their own learning and development. To fulfill these aims, institutions providing education and training for educators, should work in partnership with schools, colleges, universities, work places, job-based training providers and other stakeholders. All education institutions must ensure that their teaching benefits from current knowledge and practice. Partnerships, focusing on practical skills, rooted in theory and research, provide educators with the competence and confidence to reflect, review and refine activities. The education of all who educate needs support and should be a subject of research and advanced study.

So, the EU is prioritizing the improvement of teaching quality for a direct effect upon levels of human performance to increase our global economic position (COM, 2007). Demands on educators are evolving with a significant change in remit. They are now expected to take part in lifelong learning and play a major role in developing transferable abilities of learners along with building knowledge and understanding in diverse populations. A more complete picture of personal, academic and practical experience, spanning a career, is now required which endorses professionalism, with a consistent approach to collecting and evaluating evidence of an educator's knowledge and experience, to assist mobility and the spread of higher educational standards.

After initial training, life-long professional development starts with induction, along with guidance and mentoring by experienced colleagues, according to personal and institutional goals. So, educators are encouraged to extend and develop competencies; have access to continual professional development (CPD); study for further qualifications and promote creative partnerships to support their practice.

A professional recording system

New policies and practices must be researched, developed and implemented to meet changing needs. Europe comprises a rising number of diverse cultures and ethnic groups with values and attitudes exhibited in different conventions of thinking, communication and action. A more comprehensive, flexible mode of educating, training and assessing educators meets these demands. A common EU e-portfolio of professional development encourages educators to plan and participate in life-long learning to validate this process. It addresses on-going monitoring of knowledge, attitudes and pedagogic skills and their effectiveness in practice within a career dossier. This provides a coordinated, coherent, continuous, cooperative approach to personal-professional development, promoting a culture of reflective practice and research; supporting professionalism and assisting the status, recognition and mobility of educators.

Portfolios are used in professions outside education such as architecture, journalism and medicine (GMC 2003). They enable the inclusion of **formal**, **non-formal** and **informal** evidence for a richer, more complete picture of individual learning and experience.

Formal evidence would include a relevant qualification, such as an under-graduate B.A. or B.Sc. degree or equivalent, a post-graduate qualification like a Higher Education Certificate or Diploma, an M.A., M.Sc. or M. Philosophy and at a higher level a Doctorate in a subject with ultimately a PhD. These can be measured against the European Qualifications Framework from levels 2-6.

Non-formal evidence would be an organized activity, such as a teaching plan and implementation of this with personal analysis, reflection and review of what has been learnt.

Informal evidence has many possibilities. It could record student, colleague or parent comments on something a professional has been involved in, such as a concert, field trip, community or other event with a response to this. Another possibility is a conference review, article or book with reflection on how knowledge and its application have been enhanced. It can also encompass skills acquired through life experience, as in running a sports/drama club.

Choice of evidence reflects agreed principles, as just described. At pre-qualification stage, this will be reviewed by a tutor with assessment in line with qualifications. In a post-qualification work-role, it will be the annual appraiser. How a portfolio is reviewed is a challenge requiring assessor training to ensure a consistent approach to its use.

Support for portfolio recording

There has been strong support for continuous portfolio-logging, to record continuing professional development (CPD) as well as initial education/training for tracking progress, in line with work requirements and career planning. This is envisaged for **assessment, appraisal, work-place interviews or revalidation** purposes and sharing practice with colleagues.

- **Assessment** defines the evaluation of competencies against professional principles.

- **Appraisal** is review of performance in relation to job requirements.
- **Work interview** is the method used to select for career progression or change
- **Revalidation** checks life-long learning experiences for annual registration.

The potential of portfolios for supporting on-going personal/professional development has been well described (Challis 2001). The largest body of evidence regarding portfolio assessment comes from American educators, suggesting that reliability is enhanced with defined criteria, uniform content and adequate training of assessors (Herman 1994). Launched in May 2003, the Folio Minnesota had more than 27,000 registered users by 2005 of three types - students, educators and career (Lorenzo and Ittelson, 2005). In the UK, the Welsh Assembly advocated the portfolio approach for all teachers (2004), mapping standards and milestones in their careers as a mandatory requirement for assessment, appraisal and re-validation purposes. This is now being implemented for the induction period of a teaching career.

There has been an on-going debate amongst educators highlighting the need for a more robust method of logging continuous development of educator knowledge and skills to monitor suitability for particular job roles. Effective professional assessment, appraisal and revalidation are common issues across professions and nations. A formal tick-box approach, adopted in present prescriptive education and training approaches, at all levels, does not acknowledge the expected range of competencies for the work-place and is considered to be an unreliable technique. Birenbaum et al (2006) point out the need for educational reforms with the *current* assessment of learning being one dimensional, summative, inauthentic, context independent and inflexible with teaching directed towards tests. An e-portfolio allows an assessment for learning that is multi-dimensional, formative, authentic, context embedded, flexible and integrated in reality.

Beetham (2006) reports on e-portfolios for post-16 development in the UK, noting that the history of collaborative development has ensured a degree of convergence across the different sectors. There remain, however, considerable differences in terms of policy, practice and systems in use. Beyond the UK, the Europortfolio consortium has launched a manifesto committed to ***E-portfolio for All by 2010***. Founding members include the European Institute for E-Learning (EifEL), the UK's CETIS and IMS Europe. In December 2004, the European Commission announced the launch of a EuroPass e-portfolio service, based in Maastricht. The US has a collaboration of HE institutions and commercial players forming the Eport Consortium to achieve interoperability across e-portfolio systems, against the trend of divergent developments. Attwell (2005), in *Rethinking e-portfolios*, has highlighted important issues of support, maintenance, control, ownership and protection of data which will need to be addressed for all users.

The organisation of the portfolio

An e-portfolio has been developed on a Web platform and is being piloted across the partnerships after a training session in Sofia, Bulgaria. The portfolio has been created from 5 main fields and employs a grid to plot the user's career stage against the four EU principles for qualification and experience. As explained, principles rather than standards are applied to evaluate evidence because they are fundamental, core values which are unlikely to change. Standards tend to alter over time, reflecting changes in philosophy and practice. An examination of teaching standards across Europe suggests that the four core, EU principles (*knowledge, continuing personal & professional development, mobility & partnerships*), underpin these and so can be used alongside the specific standards of individual countries. The five fields are:

The role of the creator

This section contains a brief resume of the creator's present role, responsibilities and experiences, reviewing what has been gained from these and presenting a plan for future development in line with personal, professional and workplace goals.

A grid defining principles at early, mid & specialist career levels

This enables individuals to map their career stage to the four EU principles for evaluation of the formal, non-formal and informal evidence that has been selected.

Evidence of formal, non-formal & informal evidence

Portfolios are *representative* not *comprehensive*, so evidence should reflect significant aspects of a professional and their teaching. Firstly, focus is on goals and growth towards these and later achievements. Secondly, it is self and collaborative evaluation, meaningful for the teacher and others involved. Finally, it is dynamic assessment with items added or deleted to fit development. Four classes of evidence are chosen with the portfolio creator having ownership of all material and deciding who can have access, at what point and for what purpose which can be comprised of text-based, graphic or multimedia elements archived on a Web site or on other electronic media such as CD-ROM or DVD.

Documents: such as a lesson plan, reflective log, conference/journal article or review.

Recordings: visual/audio recording of a lesson, meeting, discussion with colleague.

Testimonials: evaluations from colleagues or letters from parents/students

Information links: statement of beliefs, goals, rationale and captions that enable evidence to be cohered and developed as a narrative of an individual's personal and professional experience

At the pilot stage, it may only be possible to achieve 1-3 pieces of evidence for each section (*formal, non-formal, informal*) but further on in development the portfolio should allow for any possible evidence to be stored and catalogued with a facility for retrieval to suit the purpose required for assessment, appraisal, interview or re-validation. Experts consider that a career passport could soon be available on smart phones with button facilities to quickly select the evidence required for a particular purpose.

Witness statements of evidence selected

It is important for validity and reliability to have a witness statement for evidence selected for assessment or evaluation purposes. So, portfolio creators need to get into the habit of securing this for any evidence they wish to store. Although this may seem laborious it is easily and quickly achieved with a format provided for this on the Web platform.

Summary of previous learning and experience

Those presenting portfolios for various purposes, well into their career, will only select what is relevant for current requirements but will need to summarize and review previous learning and experience as a context for the present evidence. This is also important for educators who have changed careers, detailing relevant previous experience that will enhance their present roles.

Conclusion

Educators work with a variety of knowledge types, information and technology. Their education and professional development has to equip them to access, analyze, validate, review and transmit knowledge, making effective use of technology when relevant. They are required to create and manage learning environments and must retain intellectual freedom to make choices over curriculum delivery. Confident use of ICT is necessary to enable effective integration into learning and recording, as educators guide and support others in the networks where information can be found and built. In this context, a web platform is the natural repository for their own career evidence.

So, an e-portfolio is an efficient, modern way of tracking the complex career roles and progress of educators, enabling them to easily show case achievements and direct and reflect on their personal and professional development throughout a lifelong journey. Their practical and theoretical skills should allow them to learn from their own experiences and match a wide range of learning and teaching strategies for both themselves and their learners. A continuous record of experience assists them with such goals, encouraging cooperation and collaboration with other stakeholders in a career log, which includes initial education, induction and ongoing professional development.

Adopting a common approach across the EU for an educator's career tracking helps to develop greater trust and transparency of qualifications and experience, allowing for mutual recognition and increased mobility. This assists the development of networks of innovation at local, regional, national and international levels and enables Europe to compete in our competitive world.

Main points regarding a portfolio

1. It records *goals, achievements & growth* over time with **formal, non-formal & informal** evidence of *personal, professional attributes, status, expertise, subject knowledge & understanding of learning*.
2. It has **INPUT>OUTPUT>OUTCOME** charting learning development & growth; showcasing achievements, communicating & marketing them for assessment/evaluation/self-awareness; inspiring/influencing future goal choices & self fulfillment; reviewing collaboratively for feedback, support & sharing experience.
3. It is a **process & product**, with the *whole* greater than the sum of parts. Merging *self* & collaborative evaluation with products (*evidence*) is more than processes or products alone.
 - **Process** – self-examining, reflective, decision-making, goal-setting actions over time in real contexts
 - **Product** – the portfolio, itself, preserves & shares work to reflect on teaching activities.
4. It gives consistency and transparency of educator qualifications and experience to enable mobility and successfully build the knowledge society for cultural, economic and political viability.

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Collaborative Critique Based On Evidence Of Practice. The Ariki Project

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(Ko tōna mana i hōkai i runga i te nuinga noa atu o nga hapū.)⁷

Background

Principal professional learning projects have been sponsored by the Ministry of Education for over a decade. They have, in the main, encouraged small groups of principals regularly to spent time debating and examining the way in which they work. This has provided opportunities to problem solve together, to consider emerging ideas from the literature, and to help and assist each other as they engage in a very demanding professional life. That this has been a successful strategy can be attested by the large numbers of groups which continue to function long after their particular contract period has expired. The Ariki Project aims to further expand and strengthen this process.

Introduction

It has become customary to cite a predominantly overseas body of research suggesting the genesis of the planned approach to a new development model. This Ariki Project which is constructed around a focus on interactions while occasionally travelling in tandem with some of the notions which have been reported in the literature, had its beginnings in an essentially New Zealand context and has been developed to meet the idiosyncratic NZ system of school governance and principalship. Nothing, of course in this field can be entirely novel and this brief preamble will cite links, where appropriate, to existing literature as the various elements of the project are discussed. What is thought to be unique is the manner in which these various elements are assembled and operationalised in this particular project. Here the internal and external Focus on Interactions can also be used by the participating schools as an alternative to the more traditional Principal Appraisal for a calendar year. By exchanging the obligation to engage in the usual Principal Appraisal procedures for a year schools are able to devote the recovered space and energy to the Ariki project. It doesn't become yet another demand on their time.

Why focus on interactions?

If we were able to lift the roof of a school and watch the activity as it happened, it is likely that we would be struck with the predominance of interactive talk amongst the occupants. Teachers talk with students, with each other, students talk and from time to time visitors talk with various groups. Obviously there are times when students study independently and individually and teachers prepare and mark but the dominant activity is likely to be interactions amongst the people. Thus it makes sense to use these actions and reactions as the raw data for our study and development activity. In so doing we will extend the kinds of interactions considered to include those occurring in the Quality Learning Circles² within each participating school and the QLC activity that takes place within the regular meetings of the principals' reflective groups.

There is support for this kind of reasoning by Elmore (2006) for example:

"We have known explicitly for at least thirty years, and probably implicitly for a good deal longer, that it is not the policy, or the program, that directly produces the effect."... "interaction effects dominate main effects. The effects most worth knowing about ... are interaction effects." (p4);

and by Spillane (2006, p84):

"Interactions, as distinct from actions, are critical."

The Reflective Groups

At the heart of this programme of development is the concept of the reflective group. The particular form that we propose to use is Quality Learning Circles. This is a concept already in wide use around the country and has been employed as an interactive and process guide in a number of New Zealand school research studies. (See for example Lovett 2002, 2003, 2004).

⁷ See resource at <http://www.learningmedia.co.nz/nz/online/ngata/e2mdictionary> where the meaning is one of mana extending over many hapu.

Quality Learning Circles are focussed interactions with colleagues where shared professional narratives are illustrated with evidence of practice. Each circle is a small heterogeneous group whose members take turns to recount their selected interaction. This is supported with shared evidence. They then ask critical reflective questions of each other. Before separation they may confirm the summary that has been kept and make arrangements to visit each other for further learning. Groups may extend their discussion through the introduction of virtual visitors and reference to appropriate literature. This process underlines the search for meaning that characterises professional behaviour. Throughout the year this activity becomes a substantive part of principal appraisal and the each leader's search for correlations between their intentions and their work and what happens in classrooms.

The pilot studies to date suggest that prime focus needs to be on the individual school before principals join groups to talk about the pedagogical implications of their work. The underlying assumption here is that principals need to understand fully and be able to talk about the correlations of their own interactions with staff, with what their teachers actually do in the classroom before they can integrate new knowledge from research articles or from their peers in meaningful ways. What this project attempts to do is to firstly engage principals in their own schools gathering evidence of their practice to support their descriptions. Only when this is done can the across school reflective groups really get up to speed. To this end, there is a new taxonomy for critical/reflective discussions which seem to facilitate this and principals then use when engaging in follow up classroom visits. The Ariki Project concept proposes that the gathering evidence of practice methodology, the reflective group process, and follow up visits focus can follow the same design for both the internal school practice and the across school principal groups. This gives a level of consistency to the practices and facilitates the possible growth of higher order thinking across all the groups.

In relation to creating reflective questions most of the studies perused presumed that these questions would be posed by the group facilitator, the academic leading the study or the teacher of a student group. There is little evidence in the literature search which has been conducted to date to parallel the direction taken by many of the principal groups who have worked in the various Ministry contracts so far. Our intention has been to provide a simple taxonomy with some examples from which groups can generate their own questions which best fit the local context. Furthermore we have endeavoured to provide a template which was soundly based around group activity as different from personal study or direct supervision. The latest version of this categorisation uses just four sets; questions about meaning, questions about lateral links, questions about existing data, and questions about validation. These notions are detailed in an Edex tutorial <http://www.edex.net.nz/files/Asking%20Reflective%20Questions.swf> and in a separate resource entitled 'The Reflective Group Process' <http://www.edex.net.nz/files/The%20Reflective%20Group%20Process.pdf>

Another of the areas where the reflective group dynamic differs from other critiquing methodologies, such as peer coaching for example, is in group audience behaviour. As one group member presents their narrative and engages with the others in discussion there is always at least one other person just listening. Anecdotal evidence suggests that this listener often engages in internal debate comparing and contrasting what is being presented with their own practice. We believe this often results in the listener altering their own subsequent behaviour. Perhaps as the Ariki Project gets underway we will be able to collect some more data around this issue.

A further specific difference from much of the reflective discussions reported in the literature is that prime facts for discussion come from selected interactions that participants have identified in their own work as being important (See also Spillane 2006, p4).⁹ As groups critique these interactions, which form the bulk of what they do, they are seeking to determine whether these behaviours are worthwhile¹⁰ and whether they are achieving the goals they have set for themselves and their students. Indeed, a central element becomes the search for correlations between what they do, what they planned to do, and classroom and student consequences.

⁸ Trace the development of this concept over the last few years through: Stewart, David, *Tomorrow's Principals Today*, Massey University, Palmerston North, Kanuka Grove Press, 2000, Chapter 3
Stevens, Ken and David Stewart. *Cybercells: Learning in Actual and Virtual Groups*, Melbourne, Thompson/Dunmore Press, 2005, Chapter 7; and
EDEX Tutorials (<http://www.edex.net.nz>) 2007/8 3 See tutorial at http://www.edex.net.nz/files/djs_qlc.swf

⁹ Spillane's definition of distributive leadership as "the collective interactions amongst leaders"

¹⁰ worthwhile: sufficiently important, rewarding, or valuable to justify time or effort spent. Collins English Dictionary. 1984
worthwhile also implies the notion of being 'transformed' by what you know. - not just knowledgeable. See R.S.Peters. 'What is an educational process' in *The concept of education* Routledge and Kegan Paul Ltd London, 1967.

A Process Instrument

Having selected a *focus on interactions* as the major dimension of the project it becomes vital to then provide a means of thinking about the range of possible options. To this end the writer has developed a **concept map (first page shown)** which performs a number of functions. Firstly, it provides an overview of the possible range and shape of the interactions that may become the focus of study and critique. Secondly, it arranges these possibilities in a construct which attempts to mimic the manner in which a practising educator might approach them. Thirdly, these templates are then presented in an interactive web based design which facilitates simple recording and diary entries. Over time these diary entries come to constitute a personal portfolio. It is examples of these diary entries which are taken to the quality learning circle discussions and used as evidence of practice. (See also Doig. Accessed 2007)

Leadership Interactions

Concept- Facilitate learning amongst staff

Key Activities	Expected Consequences	Evidence			
		RTC	PPS	DP/AP	TP S
Learning Mentoring Conversations	Teachers will seek learning success for all students. All teachers will continue to learn new skills, new approaches and widen their curriculum knowledge.	5 9 7	C1 C2 P3 P6 S5 P & N3 P & N5	RM PPM PL	CC SC SC C TTA
Facilitate individual and group reflection.	Teachers will work collaboratively and develop in expertise through creative use of the 'variety pool'.	5 3	P & N3 P & N5 C1 C2 P3 P6 S5	RM PL	CC SC SC C TTA
Discussions regarding evidence of practice and introducing new practice ideas.	Teachers will modify their practice to best suit their current students. Curriculum resources will grow and expand. Cumulative records will demonstrate effective programmes through growing student mastery.	5 10	C1 C2 P6 S5 S6 P & N3 P & N5	SM PL	CC SC SC C TTA
Interpreting research studies.	Teaching techniques will include and incorporate recent research based developments.	5 3	C1 C4 C5	PL FA	CC SC SC C

Why appraisal?

Having assembled a suitable process we need an application to enable the model to be operationalised. The assumption here is that these reflective and critiquing concepts need to become part of routine professional behaviour if they are to have an impact on professional practice. In a real sense choosing to apply this focus on interactions through an appraisal application answers one of the serious questions that Elmore posed to the OECD Conference:

"What the present conception of accountability lacks is a practice of school improvement to go with the policy of accountability." (2006, p7).

The Ariki Project offers contiguously, a practice of accountability and a network for school development and improvement. New applications desirably, should replace some existing work in schools, should offer multiple means of application, and place choice in the hands of the participants. This project does that and enables principals and teachers to use examples from their daily work in regular scheduled discussions

where these data are validated and critiqued, and perhaps modified or changed where necessary. This particular application of principal appraisal will replace more traditional models for each school opting into the project for one year. The pilot studies would suggest that such an exchange moves the thinking around these concepts from perceiving them as predominately a function of control to acknowledging that the processes enhance meaning and promote higher level practice. Accountability or responsibility is still a central notion.

Six assumptions lie behind the thinking from which this project is created:

1. Current Principal Appraisal processes have a bias towards compliance and have limited ability to focus on the principal's influence on learning and teaching.
2. Effective schools encourage reflective thinking and critique at every level.
3. We should be looking for correlations between what teachers do and leadership interactions.
4. Teachers should be expected to critique their practice on a regular basis and principals should be guiding this critique.
5. Summaries from these teacher reflective sessions should provide evidence of the school's strategy in action.
6. Pedagogical leadership can be ascertained to be present when principals are able to assemble evidence of their own practice which can be shown to have a positive effect on what happens in classrooms.

This proposal also acknowledges that many educational professionals appreciate a group focus to their work. Furthermore, the initiative for deciding what is important is in the hands of the participants rather than being directed by some external authority. It should be an attractive proposition for schools as it is not something additional to do but rather substituting reflective group activity based on evidence of current practice, for a number of currently mandated but often time intensive procedures which often divert energy from the ongoing teaching and learning focus.

Metaphor

"metaphors not only make our thoughts more vivid and interesting but they actually structure our perceptions and understandings" and ... "We live our lives on the basis of inferences we derive via metaphor."

(Larkoff et al 1980, p273)

The predominate metaphors in this field have been variations of *organisation* – learning organisation for example – which conjures up a kind of coat hanger diagram emphasising responsibilities or *community* concepts usually implying a flattened hierarchy based around relationships. Both of these notions are about the structure of the school. In this project where *function* has priority, we need other ways of constructing our thinking. If the function of schooling is to grow and develop human citizens for example then we might facilitate thinking and discussion by introducing a metaphor based around an *incubator*. The writer has developed this idea elsewhere (Stewart 2008:4-6) but by focusing thinking around a metaphor which values interactions not only can stated goals be pursued but the educative process is open to the extraordinary power of unexpected outcomes.

Outline of the Ariki Project¹¹

Objective

To trial the concept of emphasising a focus on interactions as an alternative to the more traditional notion of principal appraisal.

Process

The principal will construct a personal e portfolio based broadly around the concept map on KnowledgeNet.

Teachers will use the same concept map – through individually pass-worded copies – to prepare and record the data about their interactions which form the base material for the Quality Learning Circle discussions.

Data Recording for Project

Student data comprises:

¹¹ This outline is based on a trial project currently under way in the Wellington region

- Principal portfolio entries
- Volunteer sample web diary entries from a range of staff
- Agreed sample summaries from QLC meetings (Template with example supplied)
- Description of training, use of resources, problem solving etc.

Expectations

The principal will complete an entry on most pages of the concept map but will concentrate predominately on page 2 'Classroom Interactions'.

Similarly teachers will concentrate on page 2 'Classroom Interactions' and all will complete at least one entry prior to each QLC meeting. (6 entries over three terms.)

The project will seek to find correlations between the principal's interactions and classroom teaching and learning.

Confidentiality

The material from this study may be used for publication and for further research but the identity of all persons and school will remain confidential to the researcher. All staff will have access to the final draft of any publication prior to its release.

Report to Board of Trustees

The group (or a named facilitator) will present a written report to the Board describing the process and broad conclusions. This will include some analysis of the Principal's Portfolio and the relationship of this work to the draft principal standards.

Links to Kiwi Leadership for Principals

When the major elements from the **Ariki Project** are superimposed on the Kiwi Leadership for Principals Diagram (2008, p12) the links are self-evident. There is a strong challenge recognition and problem solving dimension within the Ariki Project and this is also cited in Key Principal Leadership Activities section of the KLP (2008:17). In a real sense this project provides 'way of working' for those principals committed to putting the notions of the KLP into practice.

Strong links can also be traced to the new Draft Professional Standards for Primary Principals. In particular many of the standards in the Pedagogy section are expressed in similar terms throughout the Ariki Project outline.

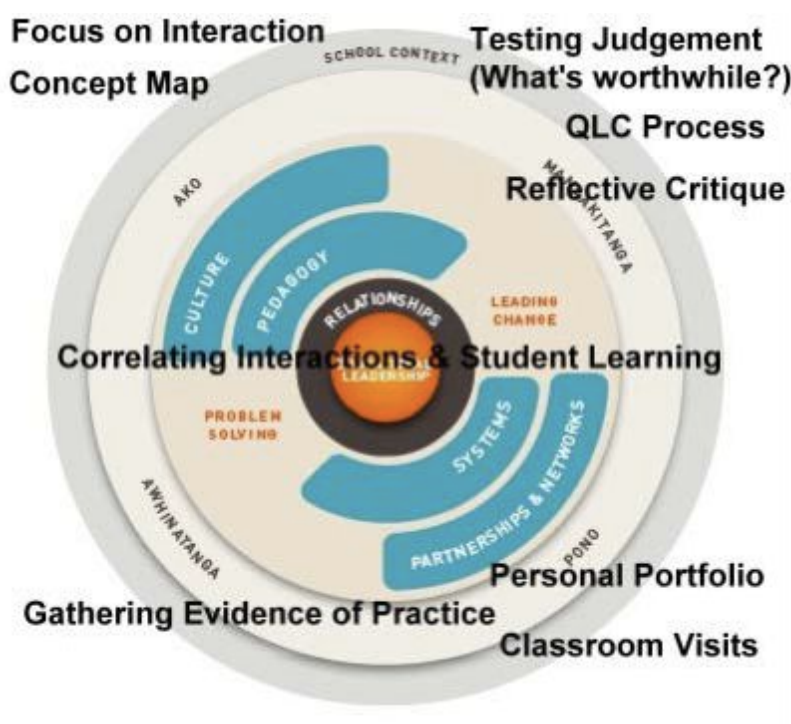


Figure 1 - Competency framework for primary principals (draft)

In Conclusion

The **Ariki Project** is an unashamedly New Zealand grown development. The *Reflective Principal* courses which led originally to this particular group dynamic amongst school leaders and were revived again under Liz Millar's recent direction of the NZ Principal and Leadership Centre, contribute a necessary stage of thinking and renewal for many. Behind this programme are many years of partnership with NZ principals and a strong desire by all the participants to improve the quality of teaching and learning in NZ schools. As this overview has demonstrated, elements of the notion are strongly supported in the contemporary literature but it is local experience and the uniqueness of the context that has resulted in the particular mix presented here. By building on experience to date and adapting current processes as our knowledge widened we have reached a very exciting place. Now we need to walk on.

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Gary Punler, on behalf of **Te Ariki Trust**

EPortfolios In France: From E-identity To An Assessment And Application Instrument - First Results Of The (era.net.rus Project “ePortfolio For Human Resources“)

Samuel Nowakowski, Nathalie Issenmann, Isabelle Houot, University of Lorraine, France

General presentation of the special session: project "ePortfolio for Human Resources"(eHR)

The aim of the project “ePortfolio for Human Resources” initiated by Prof. Dr. Heiner Barz (Heinrich Heine University Duesseldorf, Germany) is to extend the EU strategy by developing a media-oriented ePortfolio as the europass framework instruments are so far largely based on formal educational inputs. The project is carried out with Prof. Dr. Olga Smolyaninova (Siberian Federal University, Russia), Dr. Samuel Nowakowski (University of Lorraine, France) and Dr. Kai Pata, (Tallinn University, Estonia).

The focus of the project is to investigate the perception of ePortfolios as part of assessment processes within educational and vocational systems. The identification of critical success factors in the acceptance of ePortfolios should enhance the development of the ePortfolio-Strategy for Europe.

The research design includes qualitative and quantitative methods targeting persons who are currently using or might use ePortfolios in the future in secondary and higher education as well as in human resources.

Introduction

The French Ministries of Education and Higher Education and Research lead a proactive policy to promote the use of information technology and communication in the school and higher education. Many actions have been carried out with two main objectives: one hand, the control by the pupil and the student of the environment in which these technologies are increasingly present, other hand, the diversification of forms of teaching and learning in conjunction with the reforms in the education system.

In this context, the use of digital learning environments and Web 2.0 tools (blogs, wikis, social networks) in schools and universities has been increasing steadily. Although during recent years the users' interest in e-portfolio system has increased and many initiatives (at local and national levels) are initiated. Moreover, many official reports and studies are pointed out the importance of the development of the digital competencies in education¹².

We first give the national context of the ICT development in the Higher Education systems. We detail national level recommendations and requirements of the French ministry of Education and Higher Education. Thus, in France, new regulatory texts refer more or less to the ePortfolio approach. We then detailed the whole national process involved in the deployment of such methodologies and tools (national working group, white papers, ...).

From e-identity to ePortfolio

Knowing this national context, we focus our work on the concept of e-identity. Thus, the ePortfolio could not be seen as data and documents collectors but as a reflexive tool or an image of someone's e-identity. The following figure shows the moving frontier between education, learning and personal and professional experiences. This frontier is seen as one possible representation of this e-identity used in the assessment and application process.

¹² Technology for education – rapport Fourgous
<http://www.missionfourgous-tice.fr/missionfourgous2/>

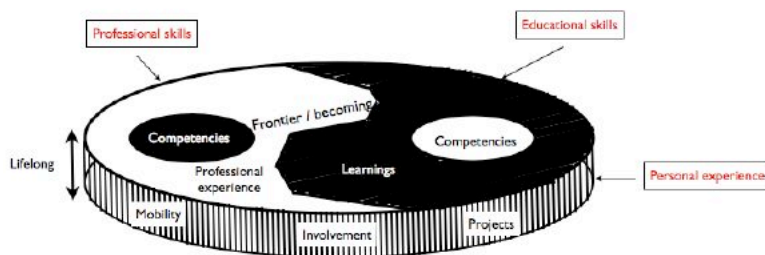


Figure 1. The moving frontier of the competencies (from Heutte, Jan, Nowakowski & Ravet, 2012)

Detailed results will show that the ePortfolio, its consequences on the educational process and its link with e-identity, has a major role in the reconstruction of the social sense of the multiple experiences.

ePortfolio and professional insertion

All these studies have brought many results concerning the impact of the ePortfolio on professional insertion. We then present a review of the situation in France in terms of ePortfolio deployments (projects types, tools, conclusions, ...). We derive some important results coming from the different studies concerning the impact from ePortfolio on professional insertion.

Acknowledgment. This project is linked to the project AND (Learning and e-identity) funded by the Maison des Sciences de l'Homme de Lorraine

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Eportfolio Implementation for Education and Employability in Russia: State of the Art

Olga Smolyaninova, Elena Nazarenko, Siberian Federal University, Russian Federation

Introduction

The second decade of 21st century is characterized by the rise of interest of different target groups and institutions in Russia toward using Portfolio as a tool of personal professional electronic identification. Portfolio is used at all educational levels, in the employment system, in the system of medical services and in business. ePortfolio becomes more popular. 10 July 2013 Minister of Education and Science of Russia Dmitry Livanov said that Portfolio will become part of entrance requirement for enrolling a university in future and will contain the results of the final state examinations, average grade of school diploma and other achievements of a graduate. Though many European electronic identity initiatives such as Europass, European Language Portfolio, Mahara Open Badge are still not well-known in Russia [5].

ePortfolio in Russia was studied by Pinskaya M.A., Novikova T.G., Pisarev S.A., Polilova T.A., Korshunova V.V., Imanova O.A., Naumov A.L., Bezukladnikov K.E. and other scientists as a unique modern electronic technology which may help to start storing information on personal achievements, skills, competencies starting from elementary school level, and further on at college, university, use it for job application and life-long learning and development and career planning.

In our work we describe the state of the art in using ePortfolio in secondary education, higher education and for HR development in Russia. This work was carried out within the international ERA.Net project "ePortfolio for Human Resources" supported by the 7th Framework Program and Russian Humanitarian Scientific Fund.

Educational system of Russia

Educational system in Russia is divided into pre-school training, secondary and higher education levels. Secondary school education in Russia consists of obligatory secondary education (elementary school plus 5-9 grades) and general secondary education or junior high school (elementary school plus 5-11 grades). After finishing 9 or 11 grades a school-leaver may enter a non-higher secondary vocational institution – a college or vocational training school.

Portfolio/ePortfolio is used in secondary and higher education. In our research we do not touch upon pre-school education. We studied web-sites of 150 secondary schools, 124 secondary professional institutions and 141 higher educational institutions.

Portfolio/ePortfolio in Secondary Education

Portfolio was implemented in secondary education within the experiment in profile training in 2005. Special attention was given to teaching and assessing the students' learning outcomes on the non-grading basis beginning from elementary school level [1]. The legislation was worked out on the regional and local level, the recommendations for implementing Portfolio were offered by Higher School of Economics and the NTF – National Training Foundation in 2004. In this document ePortfolio is described as a modern innovative type of a portfolio. The analysis of the web-sites of secondary educational institutions showed that portfolio is being used in many Russian schools: schools from Kemerovsk region, Sakha republic (Yakutiya), Kaliningrad region, Tatarstan republic, Baltiyskiy district [3].

In accordance with T.G.Novikova, M.A.Pinskaya, and A.S.Prutchenkov there should be defined the following weak points for using ePortfolio for assessment:

- differences in the assessment scales and certificates in individual learning outcomes and the divergence of grades in municipal educational networks is comparatively large;
- no continuity in work with portfolios on different levels of education (school level-professional institution level);
- lack of common profile portfolio model for a secondary school leaver. Practically portfolio today is the only document on the profile education of the school leaver [3, 8].

Tatyana Polilova described ePortfolio for school level [4]. At school document ePortfolio (containing certified documents proving educational achievements), ePortfolio of works (collection of student's creative, research and project works), ePortfolio of opinions (reflection, self-assessment, planning, external assessment, mutual assessment) are used. We may also speak about a complex ePortfolio combining different functions.

Now portfolio is used practically in all the schools in Russia and many of them use electronic form. The schools themselves regulate ePortfolio implementation, work out the documents and start school portfolio associations (e.g. www.portshkolio.ru) [7]. The site <http://www.portshkolio.ru/myport/make/> is one of the most systematic examples of implementing a portfolio at school. It offers registered users the opportunity to start an ePortfolio. The presented ePortfolios duplicate some of the traditional school materials which were previously not accessible for parents (school register and pupil's personal file). At the same time it unites efforts of the pupil himself, teacher and parents, especially in junior classes. We should also admit that at the initial stage the pupil plays a more passive role as he/she needs help from the side of an adult to work with his/her ePortfolio. An ePortfolio is a tool to help a pupil to form a responsible attitude toward learning.

In junior high school a portfolio is the means of increasing learning activity of a pupil, it helps a better understanding of the pupil's goals and storing materials in profile education [3]. Schools which use ePortfolio work out their own regulations, i.e. Moscow state secondary schools №1234 (<http://sch1234.ru/norm/regulations/prt.pdf>) and №1228 (<http://1228.msk.ru/pilot.html>). St.-Petersburg school №385 offers the students to work out an ePortfolio in the form of presentations in MS PowerPoint or Google; in the form of electronic folders containing electronic documents in MS Word, MS Excel, MS Publisher; or a Google web-site (<https://sites.google.com/site/school385krs/ucebnaa-deatelnost/portfolio>). Most of the ePortfolios presented at the school web-sites worked out in Microsoft Power Point or Microsoft Word employing navigation tools for searching information or documents.

The functions of a school ePortfolio include:

- integration with the "Electronic Workbook";
- organizing storage of files for pupils;
- elaborating user profile;
- opportunity to create a CV;
- social network elements;
- opportunity to create separate pages or mini-sites [7].

A portfolio as a means of non-grading system is used at all stages of school education. At elementary school as a rule a portfolio of works is developed. It usually demonstrates pupils' development, his/her universal and specific subject-related learning skills. Portfolio is used to collect information on the student's learning progress, to prepare the documents on transition to the second level of education. At Nizhegorodskaya Authentic Academic School №186 (<http://naash.ru/proj/portfolio.php>) an electronic variant of portfolio is used for self-presentation in grade 4 - elementary pupils tell about their interests. Web-site "Portshkolio.ru" (<http://www.portshkolio.ru/myport/make/>) offers its registered users the opportunity to develop an elementary pupils' ePortfolio. Further on a pupil's ePortfolio helps to intensify learning activity, increase the level of awareness of the goals and opportunities, to collect information on educational outcomes of the pupil in profile education [10].

Using ePortfolio for assessment and self-assessment of learning outcomes, creative and personal secondary school pupil's achievements becomes traditional. Moscow and Moscow region are the leaders in using ePortfolio in secondary education. IT department of Moscow City planned to give access to the Electronic Pupils' Dairy at www.dnevnik.mos.ru to every Moscow secondary school in 2013.

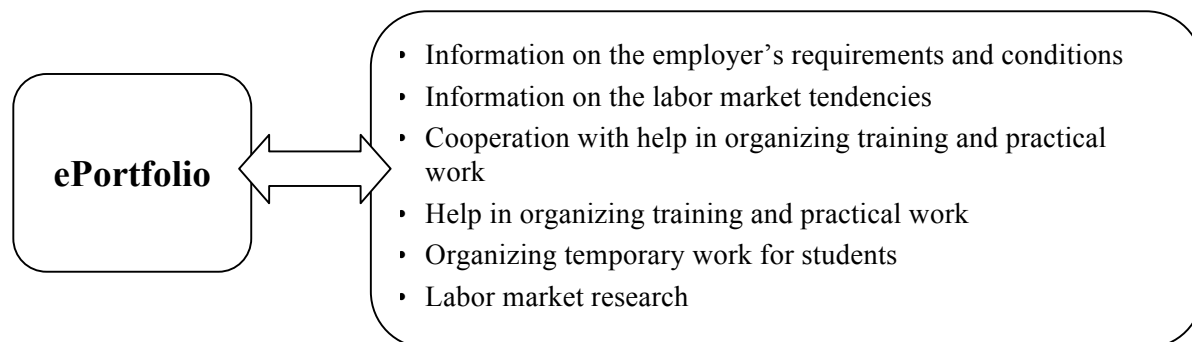
Unfortunately the results presented by the school leavers in their ePortfolios cannot substitute the results of the Final State Examination and cannot be used in the process of enrolling the university. ePortfolio needs from the Ministry of Education and Science of the RF a political decision regulating usage of ePortfolio and precise criteria of assessing the artifacts presented in the applicants' ePortfolios.

ePortfolio in Secondary Vocational Education in Russia

The analysis of the regulations, scientific publications and web-sites of secondary professional educational institutions brought us to the conclusion that most secondary professional institutions which use portfolio choose ePortfolio.

Secondary vocational pedagogical institutions present a more systematic use of ePortfolios. They support their activity by regulations more often, i.e. A.S.Pushkin's Surazhsk pedagogical college (Bryansk region), Samara social and pedagogical college, Kamishlov pedagogical college (Sverdlovsk region), Kemerovo pedagogical college, Mariinsk pedagogical college (Kemerovo region), Kirovsk pedagogical college, M.Gorky's Krasnoyarsk pedagogical college №1, A.S.Pushkin's Minusinsk pedagogical college, etc. At secondary vocational level there are no regulations from the Ministry of Education and Science of Russia, but the colleges have local acts regulating procedure of implementing and ePortfolio and its further development and use within the academic process.

ePortfolio in secondary vocational education is used for organizing the students' research activity [1]. To focus on the graduates' job application ePortfolio offers the following opportunities of interaction (Pic.1):



Pic. 1. Opportunities of using a graduate's ePortfolio on the labor market [7].

One may distinguish the following purposes of using ePortfolio in the secondary professional education in Russia:

- it is the means for promoting the image of the educational institution in the information environment;
- it is an alternative to the traditional entrance exams;
- it is the part of the quality assessment system of a secondary vocational education institution;
- it presents educational outcomes;
- it is used within the structure of state (final) examination process;
- it is used for employability purposes.

ePortfolio in Higher Education in Russia

Higher educational institutions regard ePortfolio as an effective means to promote their graduates on the labor market and a tool of assessing the graduates' professional competencies. ePortfolio in higher education is used for assessing the quality of education; and the quality of conditions for professional training. There is no regulations on the federal level on ePortfolio strategy in higher education.

In higher education in Russia ePortfolio is popular in design, linguistics, architecture, medicine, economics (SibFU, KSMU - in Krasnoyarsk; Moscow State University of Economics, Statistics and Informatics, Higher School of Economics in Moscow, Irkutsk State University, etc.).

In Tumen Oil and Gas University students start their work at ePortfolios within the first term. ePortfolio motivates the students to work seriously at reaching academic goals and life-long development [6]. The basic requirements to the students' ePortfolios include:

- systematic approach to self-analysis;
- attention to the structure and logical framework of the presented materials;
- the design of the ePortfolio;
- the materials presented in the ePortfolio should be logical and completed;
- ePortfolio should support the function of presentation.

Institute of Design and Advertizing of International Academy of Business and Finance, Moscow (<http://mabiu.ru/institutes/design/portfolio/>) presents the students' ePortfolio which include the three sections: "Graphical Design", "Costume Design" and "Environmental Design". In their ePortfolios the students demonstrate their professional competencies. Cherepovetsk State University use ePortfolio for constructing the students' rating and includes in its structure the sections "Introduction", "My Achievements", "Myself and the World", "My Future" and "Conclusion" [6]. Krasnoyarsk Voyno-Yasenetsky's State Medical University uses ePortfolio for presenting the students' academic achievements and as a part of the academic staff assessments system. Students, teachers, administrators and alumni are registered users of the university system with limited access. The system is not accessible for non-registered users.

Table 1 presents the types of ePortfolios used in higher education in Russia [9]:

Type of activity \ Subject	individual	group
educational	(post-grad) student's ePortfolios	portfolio of a student group
professional	teacher's, administrator's ePortfolios	a Chair, Department portfolio

Table 1 - Types of ePortfolio used in Russian higher education

We analyzed the accumulated information on using ePortfolio in higher education and may assume that most of the higher educational institutions using ePortfolio in Russia offer pedagogical education. Among them there are Moscow, St-Petersburg, Perm, Yaroslavl, Krasnoyarsk, and other universities. As a rule ePortfolio is used for assessment of pedagogical and research practical work; for reflection and presenting students' achievements to the potential employers.

Experience of IEPS SibFU in implementing ePortfolio

Institute of Education, Psychology and Sociology of Siberian Federal University (IEPS SibFU) takes one of the leading positions in Russia in implementing ePortfolio on different levels of training in Psychology and Education and in integrating with the labor market of the region. Since 2007 the Institute has been implementing a complex organizational and methodological model of an ePortfolio for assessment and professional development (for Bachelor and Master degree programs, extension courses for young teachers, assessment and socialization). IEPS SibFU probates ePortfolio models for transition from one level to another (Bachelor>Master>labor market; Bachelor> labor market).

The educational experiment on using ePortfolio in assessing the students' educational achievements began at SibFU in 2008 with the support from the Russian Humanitarian Scientific Fund. The experiment involved bachelor and master program students specializing in Education. In 2009 within the project supported by IREX we carried out the experiment on introducing ePortfolio in the teacher assessment system at IEPS SibFU.

In 2012 master program students of IEPS SibFU within a course in Business English studied Europass as an instrument of electronic identity. The laboratory work included using the web-site of the Europass and filling in Language Passport and CV (<http://europass.cedefop.europa.eu/en/documents/curriculum-vitae>) which they published in their ePortfolios in Mahara.

We may summarize that at IEPS SibFU ePortfolio is used for training:

- elementary school teachers for developmental education;
- bachelors of Education (different profiles);
- masters of Education in Educational management, Higher Education, Social Pedagogy;
- students and professionals in different areas obtaining additional specialization "Teacher";
- and for presenting and assessing IEPS teaching staff.

ePortfolio Software

All the software used for ePortfolio may be divided into categories:

- Applied software (office and presentation software, web-editors).
- Content management systems, designed for web-sites development and used for presenting personal ePortfolios.
- Network services used for portfolio publishing (blogs, social networks, wikis).
- Special network applications for ePortfolio management.

Among the open and free software for developing ePortfolio we may distinguish the project Mahara (<http://mahara.org>) funded by New Zealand's Tertiary Education Commission's e-learning Collaborative Development Fund. This project is most effective for developing ePortfolio and its holders' interaction in groups and professional communities.

At present there are many tools for working out ePortfolios. The main problem of using the software and online-services is interoperability of different ePortfolios worked out in different systems. For using ePortfolio technology for life-long professional development a platform to exchange data is needed, a platform on the regional level minimum.

ePortfolio for Human Resources

In 2012 IEPS SibFU as part of the international team started the project supported by FP7 and Russian Humanitarian Scientific Fund "ePortfolio for Human Resources". Our partners within the Projects are Heinrich Heine University, Dusseldorf (Germany) - Project coordinator, Tallinn University (Estonia), and University of Lorraine (France).

Project goals include: study the opportunities of using ePortfolio in the job application process, find out the employers' and employment agencies' requirements toward ePortfolio content, work out ePortfolio structure convenient for most of the users. The Project team held an open expertise of the employment ePortfolio structure.

Expert Workshop "ePortfolio for Human Resources"

Expert workshop "ePortfolio for Human Resources" took place 27 June 2012.

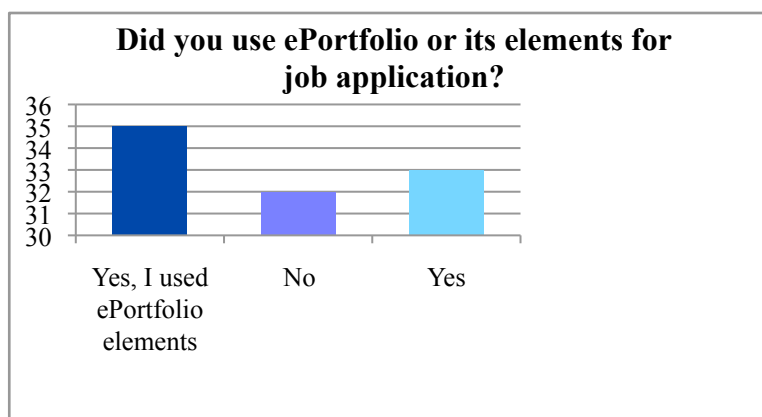
The goal of Workshop was to study the opportunities of ePortfolio technology for job placement in different areas of the labor market. 54 experts— representatives of different target groups (educational and professional bodies, registered employment agencies, teachers from higher and secondary professional institutions, pupils, post-graduate students, bachelor/master program students) took part in the Workshop. We employed different methods for coordinating the positions of the target groups: collective and group discussions, interviews, questionnaire polls, expert assessment. On the basis of the Workshop results the Project group worked out the online survey.

The investigation made it possible to define the most significant employment ePortfolio sections, both from the point of view of graduates and employers. Comparison of the employers' opinions to the graduates' seeking for a job allowed to define more important sections in the ePortfolio structure for employment, taking into consideration different target groups.

The participants defined the following ePortfolio sections as obligatory: Resume, Work Conditions, Work Examples, Documents Proving Achievements. Recommendations, Career Plans, Videoresume, Social Activity were defined as less important. Mobility section the respondents did not consider important. Though it was defined as positive by representatives of the Ministry of Emergency Situations, the Ministry of Medical Services and the Ministry of Education and Science. All the respondents placed Social Activity on the bottom of the list as the least important characteristic of an employee. These results confirmed expectations of the Project group.

The question on whether it is needed to certify the data included in the ePortfolio raised a large discussion. Most of the respondents (65%) think that not all of the materials should be certified. 75,5% of the respondents mentioned that diplomas should be certified. While analyzing the results of the survey we came across a contradiction: the section "Recommendation" was placed on the 9th position (the second least important). At the same time 60,6% of the respondents think that the recommendations from the previous employers placed in the ePortfolio should be certified. We found out that the respondents of the elder and middle age groups think the diploma should be certified while the representatives of the younger age groups believe that no certification is possible – they say an electronic document can be easily falsified.

The data we received prove that ePortfolio is popular for job placement. 67% of the respondents have experience in using ePortfolio or its elements. (Pic. 2).



Pic.2. Respondents' opinion on whether they use ePortfolio or its elements for job application.

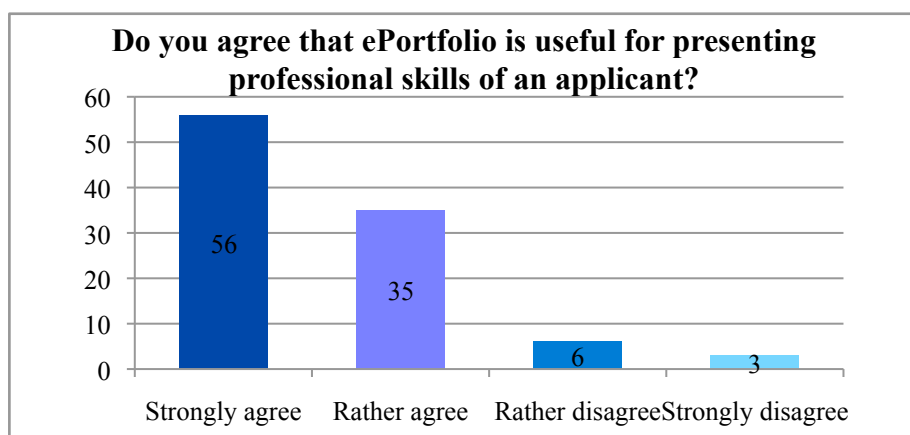
The most popular answer to the question "Why didn't you use ePortfolio for job application?" was that the organization has other format of professional achievements assessment (50%). 18% of the respondents

answered that they did not know about ePortfolio. And 32% chose “Other”. There is no significant difference among different target groups.

Most of the respondents, both divided by age or by professional area, agreed that ePortfolio may become an effective instrument of job application (91%). All the respondents working in education, health service and tourism chose “strongly agree” (55,9%) or “rather agree” (35,3%). Only the respondents working in trade and transport consider ePortfolio absolutely useless as an effective tool of job application.

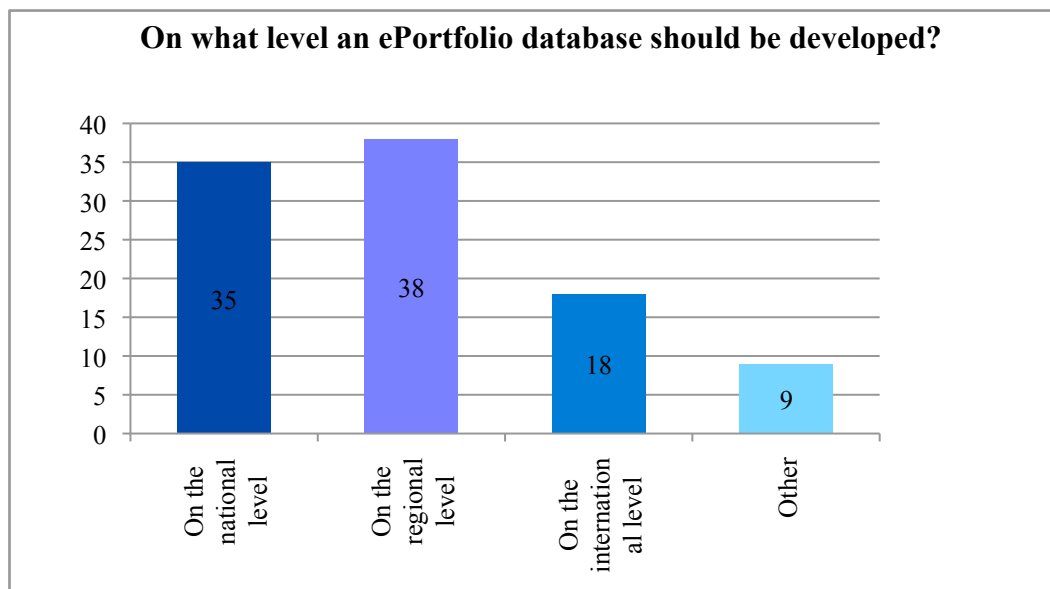
The employers expressed their opinion on what decisions they might take in case a job applicant has an ePortfolio. 50% of the employers are ready to invite an ePortfolio holder to an interview; 47,1% think an ePortfolio is an initial stage of the selection process and one employer (2,9%) working in tourism was ready to offer an applicant a job on the basis of an ePortfolio. This professional area is characterized by a high mobility of employees.

The respondents’ answers to the question “Do you agree that ePortfolio is useful for presenting professional skills of an applicant?” allowed us to assume that ePortfolio is an advantageous means of presenting professional competencies of an applicant (Pic.3).



Pic.3. Respondents’ opinion on whether they agree that ePortfolio is useful for presenting professional skills of an applicant.

The respondents state ePortfolio databases should be developed on the regional and national level (Pic.4).



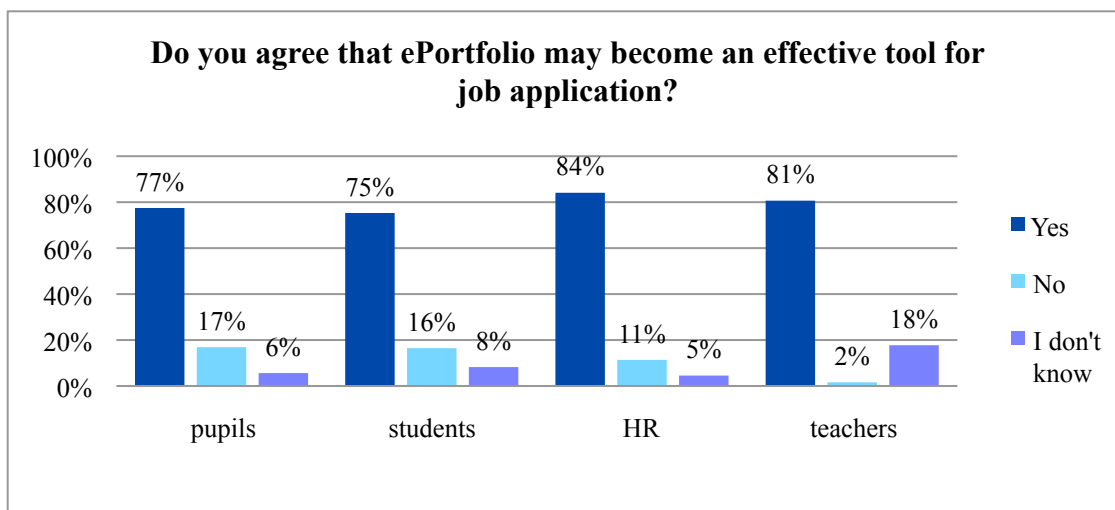
Pic.4. Respondents’ opinion on what level an ePortfolio database should be developed.

Online Survey within the Project “ePortfolio for Human Resources”

An on-line resource was aimed at studying the opinions of different target groups on using ePortfolio for employment and professional development. The online-survey we carried out was coordinated with the partners. We distinguished the four target groups: pupils (secondary schools, gymnasiums, lyceums); students of secondary vocational and higher professional institutions (specialist/bachelor/master/ post-graduate degree programs); teachers of secondary, secondary vocational and higher professional

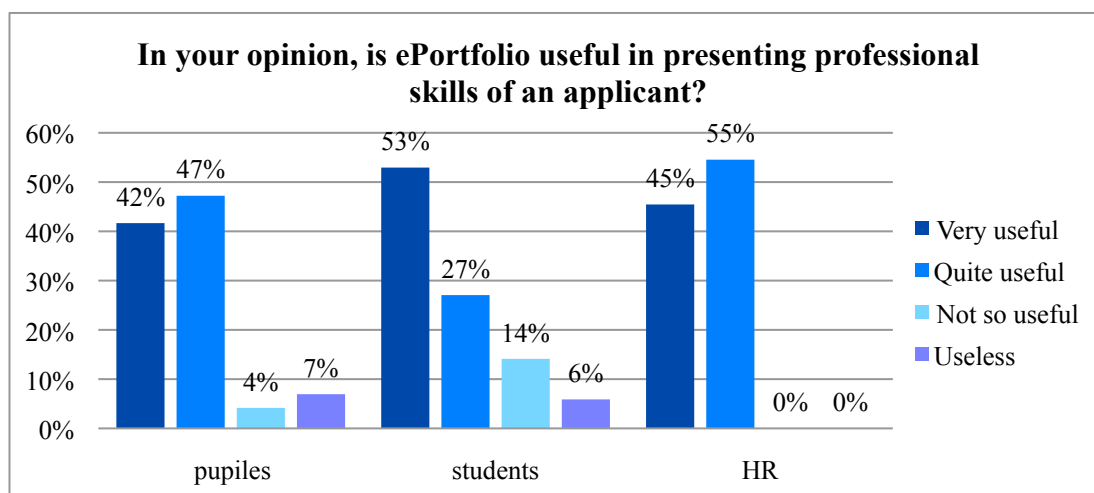
institutions; employers, HR staff, freelancers (72 pupils, 85 students, 62 teachers and 41 HR manager). Most of the received data in general corresponds to the results we received within our previous work.

We asked our respondents “Do you agree that ePortfolio may become an effective tool for job application?” (Pic.5). The majority of the respondents in all the target groups (77% of pupils, 75% students, 84% of HR managers and 81% of teachers) agreed.



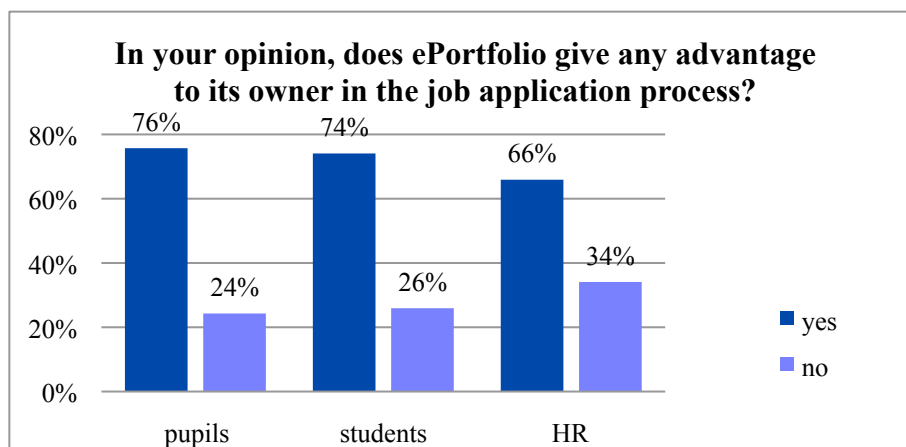
Pic.5. Respondents' opinion whether they agree that ePortfolio may become an effective tool for job application.

The majority of the respondents in all the target groups stated that ePortfolio is very useful/ useful/quite useful for presenting professional competencies of an applicant (Pic.6).



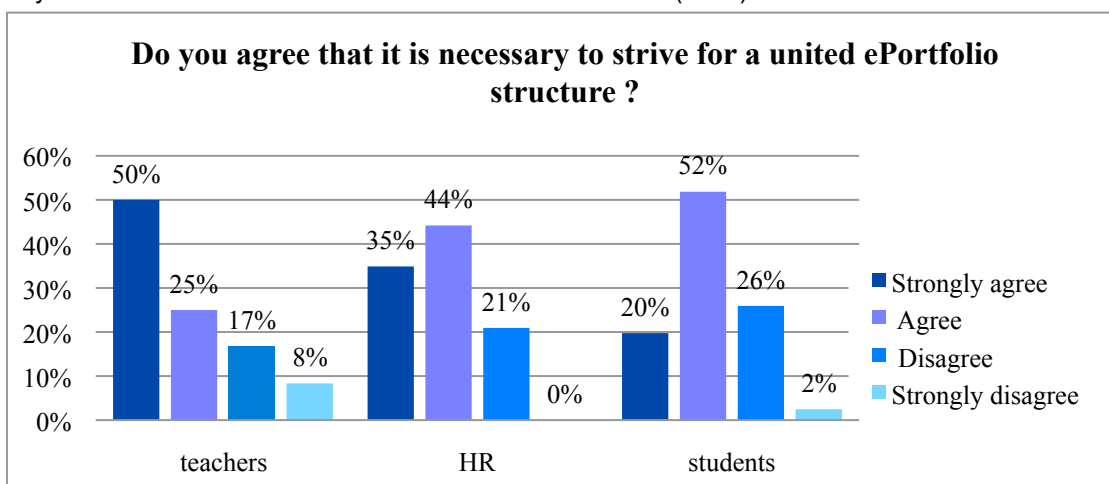
Pic.6. Respondents' opinion on whether ePortfolio is useful for presenting professional competencies of an applicant.

76% of pupils, 74% of students, and 66% of HR managers answer positively to the question “In your opinion, does ePortfolio give any advantage to its owner in the job application process?” (Pic.7)



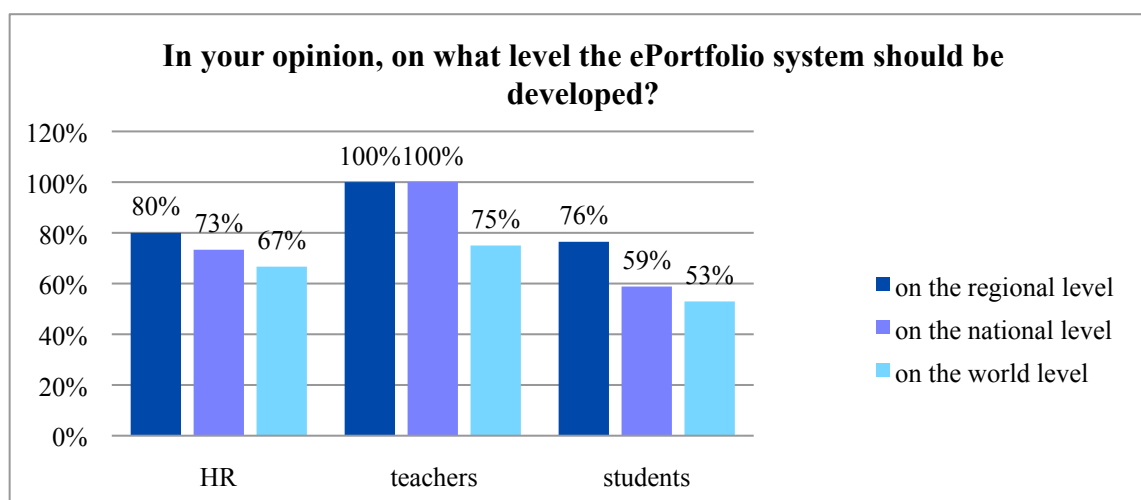
Pic.7. Respondents' opinion whether ePortfolio gives any advantage to its owner in the job application process.

One of the possible reasons why ePortfolio is not very popular may be lack of continuity and coordination at different levels of education. Most of the respondents in all the target groups agree/strongly agree that it is necessary to strive for a united ePortfolio structure at all levels (Pic.8).



Pic.8. Respondents' opinion on whether they agree that it is necessary to strive for a united ePortfolio structure at all levels.

People want ePortfolio to be developed on a more centralized level than it is done now. We offered the respondents the opportunity to choose more than one answer (Pic.9).



Pic.9. Respondents' opinion on what level the ePortfolio system should be developed.

Obstacles for ePortfolio wide-scale implementing

The analysis carried out within the project allowed to single out the problems which interfere with a large-scale implementation of ePortfolio into the academic and professional purposes. The most important are:

- Absence of opportunity to transform student's ePortfolio into career ePortfolio and life-long ePortfolio for using it for professional and personal development lifelong.
- Absence of legislations and regulations on the federal level for using ePortfolio for transition from school to secondary and higher professional educational institution. At present there are no regulations on the federal level.
- Focus of most of the educational institution on using software developed by their programmers. Siberian Federal University, Krasnoyarsk pedagogical college #1, Voyno-Yasenetsky's Krasnoyarsk Medical University, A.S. Pushkin's Minusinsk pedagogical college, etc. use their web-sites to present their staff and students - not open source software like Mahara or other special software - but the opportunities offered by their IT specialists.
- ePortfolio databases are not accessible for expert community, prospective users, colleagues, employers. Often ePortfolios are not accessible for those who is not registered in the system. ePortfolio system at Voyno-Yasenetsky's Krasnoyarsk Medical University is not open - and only university staff, students and alumni have access to this database.

Conclusion

ePortfolio is a technology for rational, prospective promotion of an individual on the labor market from the point of social and economic life-long effectiveness. ePortfolio supports professional development, career planning, presenting achievements and gives its holder an advantage in the process of job application. Developing structure and working out the strategy for selecting materials for including in the students' personal ePortfolio implies the idea that an ePortfolio will be used for career development for a long period of time, or lifelong and will be an important part of reaching success, integration of educational and professional sphere.

For realization of the model offered by our team it is necessary that the process of implementing the technology is described; orientation on the free open software; and working out a platform for transforming the data to ensure interoperability.

The analysis of the received data, open discussion of the project, coordination of the positions of different participants of the labor market allowed the team to work out a model of employment ePortfolio which is convenient for the employers of our region. This model was coordinated with the project partners and the coordinator and is being probated at the Siberian Federal University, Krasnoyarsk State Medical University and colleges of the Krasnoyarsk region.

For implementing the received analytical results into real practice supporting the process of professionalization and career development the agreement with the Labor and Employment Agency of the Krasnoyarsk region was signed. This agreement is devoted to working out the regional database at the "Trudoviye resursy" ("Labour resources") portal <http://www.rabota-enisey.ru/bank>. Thus, the results of the research are being disseminated and may be implemented at the regional level, and further in other regions of the Russian Federation.

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ePOP: electronically, personality orientated portfolio – using mobile apps to develop eportfolios & competence maps based upon educational standards

Andreas Riepl, Center for Cooperative Open Learning, Austria

ePOP – the concept

ePOP means “electronical personality orientated portfolio”. The electronical personality oriented portfolio combines tasks for self-instructed learning with educational standards.

Educational standards define which outcomes/competencies students should reach within a certain subject/field. A mentor initiates work with competencies by introducing eportfolio work to the student thereby documenting progress that a student makes towards reaching certain competencies.

Transporting this thought towards mobile phones and tablets enables users to develop their portfolios by creating artefacts with all options (apps) that a smartphone offers. A visualized competence map is developed for each competence-field (=subject). Tasks that are offered to the eportfolio-user are associated with educational standards in the data-model thereby operationalizing and visualizing the assessment of competencies.

The focus is set to using different apps that the user works with commonly on an individual smartphone to do eportfolio-work. A free app which can be downloaded via www.epop.at transports generated artefacts from mobile devices to the Open Source learning management system Moodle for storage, reflection and documentation of educational standards. Different tasks (which are associated with educational standards by the teacher) have to be solved - depending on the interests and goals of the learner.

ePOP – the app

The app consists of two major functions:

Development of an individual competence-map – examples are rolled out from a learning-management-system with a focus on social and personal competencies but can be enhanced with other subjects:

Tasks and examples are delivered to the app from a Moodle-server. These tasks can be solved by students individually. By working on different tasks competence-hexagons are colored increasingly documenting the advancement throughout a learning process towards a certain competence.

Expanding the competence-map with individual areas of interest:

New subjects (with main- and subcategories) can be added by students individually.

Within this individual structure new artefacts (=examples, achievements within a certain subject, documents of one's creativity) can be organized with the app and associated with competencies – this is classic eportfolio-work.

Views are collections of artefacts that can be assembled for different target-groups (i.e. reflecting teacher or students). These views can be generated with the app and are automatically stored in the Moodle-installation and in addition can be distributed via an external link (i.e. for further reflections) per mail. It is not necessary that teachers use Moodle actively to do this.

If the optional Open-Source Moodle-module exabis competencies is also in use, teachers can document assessments of competencies in Moodle-courses together with students.

The app was financed by ÖZEPS – Austrian center for personal and social competencies.

Predefined prototypical examples and tasks

Tasks/examples can be associated with educational standards. This is done with the OpenSource-platfom <http://www.moodleplugins.org/standards>. Examples and tasks can be of any kind – solvable from within the app in a textfield as well as referenced to an external website that is called up from within the app. These educational standards can be imported in Moodle and are distributed to the smartphone-app together with given tasks.

Artefacts that are produced are stored in the Open Source eportfolio-module exabis ePortfolio within a Moodle-installation.

Required Infrastructure

- Smartphone (iPhone/Android/PC for exe-version)

- Moodle-Server for saving data (Moodle is used as data-storage and does not necessarily have to be used actively)
- Moodle-extensions:
 - exabis eportfolio-module (is used as the data-container and reflection module)
 - optional: exabis competencies-module (is used to document the assessment of competencies within a subject)

Bottom line

This approach has several advantages:

1. Easy way of getting started with ePortfolio-work
2. Up-to-date tool for mobile devices for easy artifact-upload
3. Basic independency from software-functionality
4. time- and location-independency
5. graphical view of the assessment of competencies as a motivator
6. reflection of portfolio-work working with educational standards
7. The transparent digital documentation of the assessment of competencies within a certain field is an up-to-date assistance for enhancing learning processes.

The app as well as the backend-software it is based upon is Freeware/Open Source and builds upon open standards based upon one of the most secure and multifunctional learning management system worldwide. By associating educational standards with tasks and the possibility for students to do eportfolio-work in an easy way with mobiles an efficient tool is available for both students and teachers to enhance learning processes.

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e-portfolio based on Video for indigenous people: the case of Mapuches communities in southern Chile

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Introduction

This paper reflects on the value and the implementation of ICT (Information and communication Technologies) in indigenous communities in southern Chile, related to the appreciation of cultural identity. Assuming the presence of ICT in all several indigenous communities around in the world, and specially in the Mapuche communities, we present training-oriented approach from the concept of digital literacy, and introduce social media tools available to any member of these communities, in order to access, create and disseminate information, and to communicate and collaborate with their community and other communities, geographically close or distant. From this approach, we present the use of video e-portfolio as an assessment strategy in accordance with the context and the capabilities of Mapuche Communities members.

Background and develop of the experience

To Find find places without technologies is becoming increasingly complex, and logically the indigenous communities could not be an exception. Dyson, Hendriks y Grant¹ said the computers and Internet become part of the cultural landscape of indigenous organizations from more than a decade. Recently, the Social Media as a Tool for Inclusion Report² has pointed out the generalization of social networking sites in young people of aboriginal communities from Canada, even there is more presence of adults people in this sites owing to many associations and aboriginals organizations are promoting the use of these social media. Then, We we consider that we will get the digital inclusion providing to indigenous communities of technologies and training to their people^{3,4}. Only thus, we will get to overcome the digital divide of access and , the digital divide of use through by means of training-oriented approach and, of course, the cognitive digital divide⁵ promoting the active participation and negociation of every agents from these communities or any informal learning context..

These are the actions that we have carried out in the Cooperation project between Chile and Spain, coordinated by the professors Francisco Martínez From University of Murcia (Spain) and Rodrigo Garrido from University of La Frontera (Chile), and funded by the Spanish Agency of International Cooperation (AECI). From 2010, we have analyzed the conditions to carry out training activities to develop the digital literacy in mapuche communities which participate in them. In the first years, we affirmed that indigenous communities members considered the ICT as a source of exclusion, demanding for that the use of the ICT as much for the develop of daily activities (education, health, communication, heritage...) as to increase the value of their cultural identity and their economy⁶. During the second year, once overcame the digital divide of access, it developed training activities base on a constructivism approach, with a methodology according with this model, in this case, Based Task Learning and Bases Problem Learning, and even we used some studies cases on video streaming as an innovative methodologic strategy for them.

Actually, our training-oriented approach is founded on started from three basic pillars: the digital literacy, the configuration of collaboration networking and the development of a new learning approach based on PLEs (Personal Learning Environment). AdditionallyIn addition, once confirmed the difficulties that mapuche communities members have to show the evidences of their learning _ above all when they have to use the written communication_ we have decided to design a proposal based on the use of video. In this way, Boyle⁷ developed one of the first experiences validated in the use of e-portfolio in indigenous people, and she concluded that "E-portfolios have the potential to advance and enhance the formal recognition of lifelong and lifewide learning of Aboriginal people (...) Efficient and effective maintenance, storage and accessibility, ability to present artefacts using a range of media and a multiplicity of organisational modes are just a few of their characteristics". Afterwards, Boyle, Wallace, Grace, Sharma & Morgan⁸ made a similar study based on the used of e-portfolio for indigenous educators.

Prospective based on video portfolio for mapuche communities.

Support in these and others specific paper above the use of video & life streaming tool for e-portfolios⁹ we present in this paper our experience in southern Chile with Mapuche communities, in particular, we analyze the training activities that we have carried out from 2010, emphasizing the methodological and assessment strategies used. In this way, We we present in detail the principles of the use of video e-portfolio, and

explain the pedagogical, communicative and technical aspects that led us to obtain the first outcomes of this experience.

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Practice Case about Information Literacy Class with ePortfolio System Mahara: A Case Study of Kumamoto University

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Introduction and background

Our university has the information literacy course in each semester at first grade. In that course, students learn about operations for PC and some applications, usage of the copyrighted data, and method to secure private information and privacy. The first semester topic is to collect information needed for own learning, and the second semester topic is to transfer and publish information for own learning. All of the first grade students, about 1800 people, must definitely take this information literacy class. This information literacy class is provided with exercise style to handle PCs directly. Because of exercise styles and face-to-face lesson, the instructor cannot lecture 1800 students at the same time. So this information literacy class is divided into 26 classes. The number of students per a class is about 30-100 people. In order to unify instructions in all of the coursework and instructor, there is one online learning content on LMS (Learning Management System) for all of the classes. Each student uses same online learning content in a coursework. The program of this information literacy class consists of 15 coursework in one semester. Then, in the last coursework, students reflect about how much they acquire toward 8 skills, (1) a skill of fundamental operations and manipulations, (2) a skill of communications, (3) a skill of information gains, (4) a skill of publishing information, (5) a skill of presentation, (6) a skill of understanding the fundamental principle for PC, (7) a skill of establishing an ethical foundation and compliance, (8) a skill of a risk management.

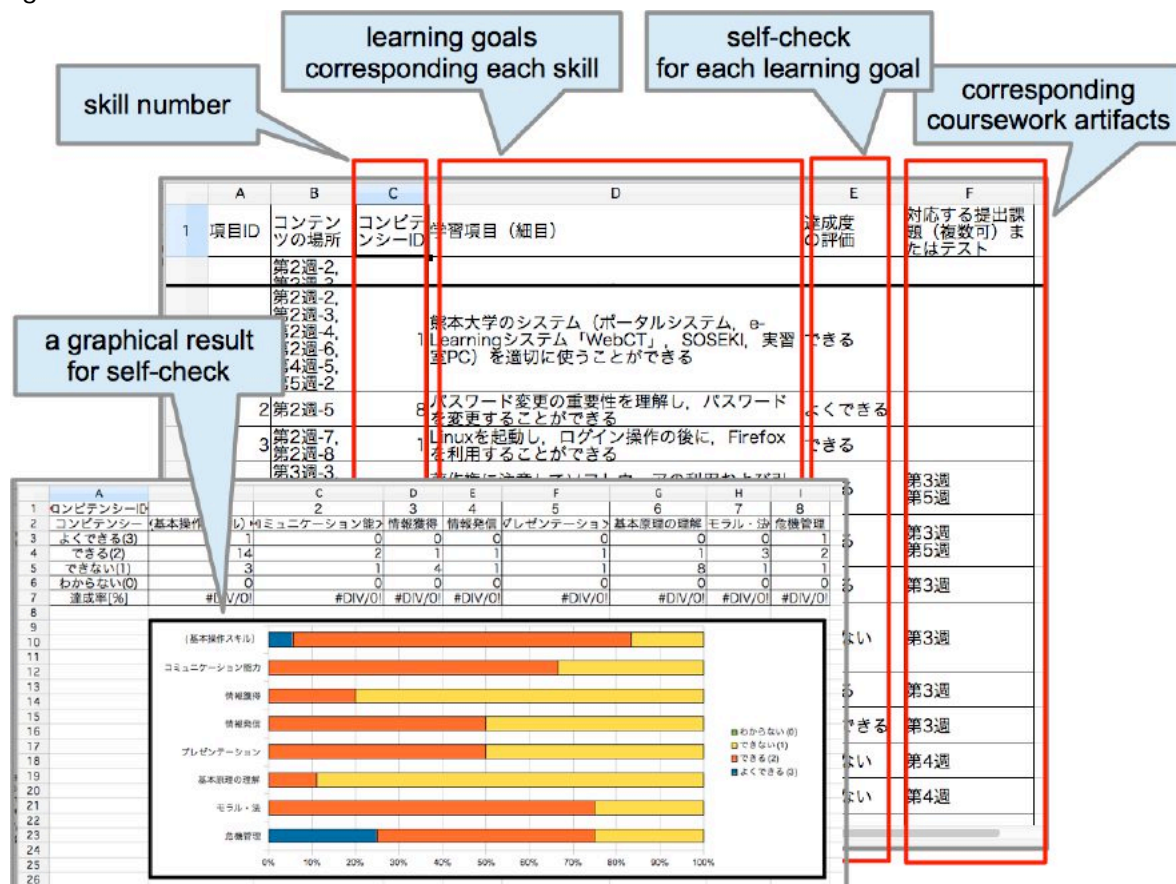


fig. 1: a spreadsheet which contains tables to reflect at each skill

In this reflection activity, using a spreadsheet which contains tables to reflect at each skill(fig.1), students reflect and just hand in the reflection result as an assignment to the LMS. This spreadsheet is made using the OpenOffice.org calc. The students reflect and evaluate their own learning by themselves as prompted. Students document their own learning owing to instructions and the spreadsheet. Their schedules are controlled owing to an LMS function to schedule an assignment. Thus students can reflect and evaluate

their own learning without exhausting to document and control their own learning. In the slide [1], the rubric “ePortfolio Literacy: Rubric of Essential Skills” is shown. This rubric contains the “Reflecting”(Rf) skill. The Rf skill is located into the next level to the “Documenting Learning”(DL) and “Self-Regulating”(SR) skill. This means the DL and SR skills are needed for the Rf skill. In our case, a method to submit an outcome as an assignment is sufficiently instructed. This instruction becomes a scaffolding of using the DL skill. Students' submission schedule is sufficiently controlled by the LMS function. This control becomes a scaffolding of using the SR skill. These scaffoldings support their reflection activities.

Although students can reflect their own learning without exhausting to document and control their own learning, it is a problem that students don't reflect learning processes and experiences in their reflection activities. In the ePortfolio literacy rubric [1], the Rf skill falls into 4 levels and the lowest level “level 1” is described that “Naming and/or describing educational artifacts as prompted but lacking awareness of learning goals and values or their significance”. We instruct for their reflection and hand out a spreadsheet to guide for their reflection. This spreadsheet indicates educational artifacts and learning goals with 8 skills. Students partly acquire the level 1 of the Rf skill through the our approach, to instruct for their reflection and hand out the spreadsheet. The next level “level 2” is described that “Identifying processes and experiences associated with a formal learning situation but unable to relate them to outcomes or values when prompted”. Using our spreadsheet, students can check the achievement degree as follow: very well, well, poor, not at all. However they don't consider learning processes and experiences in such a spreadsheet. Thus students cannot acquire the level 2 of the Rf skill using our approach. We thought it may be possible to acquire the level 2 by improving the instruction and spreadsheet to document their learning processes and experiences. To acquire the level 2 of the Rf skill, we also thought it is not enough for students to submit a reflection result based on the improved instruction and spreadsheet. They reflect without sufficient opportunities to know the other students' processes and experiences. Browsing their learning processes and experiences each other can acquire the level 2 more sufficiently. After browsing other students' reflection, it is natural that students compare their own reflection to other's reflection. As a result, students know other student's considerations and thinking methods, and try to use same considerations and methods. This activity leads to develop their metacognitive strategies.

Outline of the new reflection activity

In our previous approach, instructions and spreadsheets were given for their reflection activity. The ePortfolio literacy rubric[1] helped us that its reflection activity was inadequate. For more effective reflection activity, students are in need of documenting learning processes and experiences, and browsing others' reflection. So as to give more opportunities to document and browse their processes and experiences than now, we need to develop the spreadsheet and share others' reflections by using ePortfolio system Mahara[2], which has a function of sharing the portfolios with other's. In the next section, it is concerning to this development and implementation.

Development of the reflection activity

In the previous section, it is indicated that students are in need of documenting learning processes and experiences, and browsing others' reflection. Against browsing others' reflection, the authors thought that students can browse each other using ePortfolio system. For documenting learning processes, the spreadsheet should be developed.

Concerning to the ePortfolio system, we selected the opensource ePortfolio system Mahara. It was convenient for us that Mahara is the opensource system, and has the function to share the other's portfolio, to construct the single-sign-on environment with our LMS by the plugin, and to copy the existing portfolio.

In the old spreadsheet, students had ever chosen the achievement degree (i.e.. Very good, good, poor, not at all). For documenting learning processes, the spreadsheet should be developed to make new columns for writing learning processes and experiences. Adapting for the ePortfolio system, the spreadsheet of OpenOffice.org was translated into the HTML-coded reflection table. It is shown in fig.2. In the last column of fig.2, it makes students write the evidence for achievement degree and inadequacy against a goal. Instructions of this column help students documenting the learning processes and experiences. For students who are not used to consider learning processes, a table of learning process samples against each achievement degree were made such as fig. 3. The authors thought these learning process samples help students documenting. The table was provided as a spreadsheet file. In this table, the achievement degree was set from one to four. Achieving the level 4 was the most difficult in all of level.

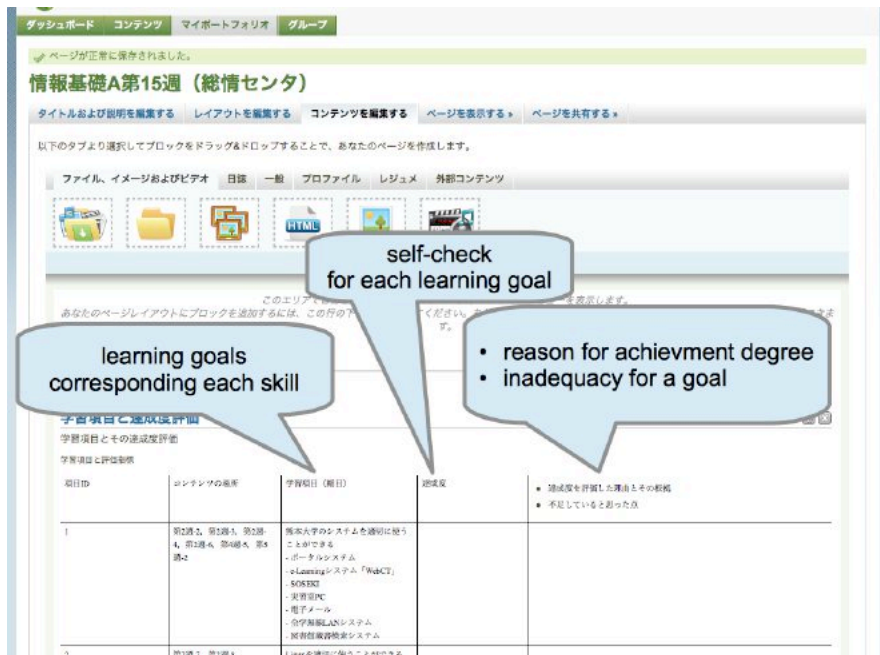


fig. 2: HTML-coded reflection table

learning goals corresponding each skill		learning processes in level two		learning processes in level four	
1	2	3	4	5	6
1	コンピュータの活用	学習目標 (総情)	レベル1	レベル2	レベル3
2	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
3	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
4	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
5	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
6	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
7	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
8	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
9	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
10	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
11	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
12	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
13	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3
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15	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	学習目標: 基本的なコンピュータのシステムを理解し、その機能を説明することができる。	レベル1	レベル2	レベル3

fig. 3: a table of learning processes against each achievement degree

For implementing this activity, some preparations were required. Firstly, it surely needed the user manual which contains the instruction for a reflection activity with Mahara. Secondly, it needed the HTML-coded reflection table in substitution for the spreadsheet-type one. And next, it needed the portfolio template page including the HTML-coded reflection table and to be set an authority that other students can access, because of decreasing students' operation. Especially, the instruction had procedures for copying the portfolio template page and publishing their own portfolio to share with others. Lastly, it was added in the user manual to comment for others' reflections so that students should carefully read and critically think others' reflections.

Implementation of the reflection activity

After the development, the reflection activity is implemented in the author's class. This class has 91 students. This practice had the following steps.

1. Students read the instructions and click the hyperlink to login to Mahara in the LMS.
2. Students copy the portfolio template page for themselves.
3. Students edit the achievement degree column and the evidence column in this copied portfolio.
4. Students select and browse the other's portfolio from a list of existing portfolios.

5. Students comment for the other's portfolio after understanding instructions in the LMS.
6. Students repair the own portfolio owing to others' comments.

In this practice, students give positive comments. However, there were some problems. There was an error for the user manual and a user-interface problem to edit the HTML-coded table.

There was an error for the user manual. The authors thought that an access authority which has the template page were also copied when students copy the portfolio template page. Surely course staff could access to the other's copied portfolio, but students could not access to the other's portfolio. When copying the portfolio template page, the access authority was not copied. In this practice, the instructor orally explained to change the access authority. This error was caused by forgetting the operation checks. It had been checked between a course staff and one student ID. It should be checked between two student IDs. Due to this manual error, most students could not share and comment for the other's portfolio. Fortunately, there were some students to share and comment for other's portfolio owing to the oral instruction.

It was noticed about the usability in this practice. It was hard for students to create a wide HTML-coded table by using Mahara user-interface. It is shown in fig.4. Mahara has a function to edit with full screen mode, which enable to edit after the HTML editor area spread throughout the PC display. It was surely more convenient for students to edit with the full screen mode. Unfortunately, some students had a trouble, which disappear the "Save" button when they went back original mode after the full screen mode.

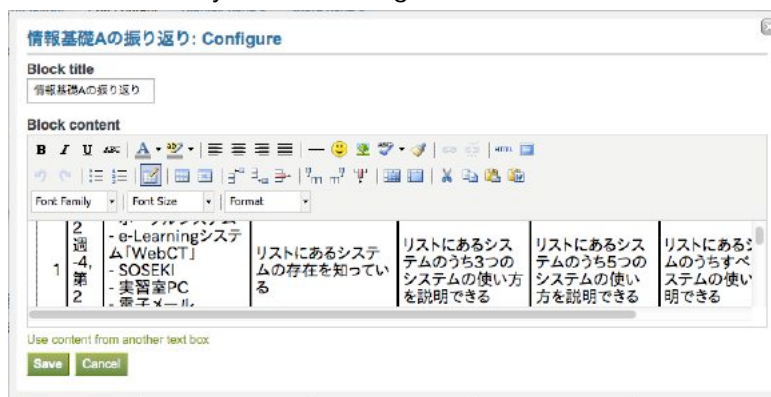


fig. 4: to create a wide HTML-coded table in Mahara

Conclusion

This paper firstly reports about our particular learning condition, where authors must lecture about 30-100 people in the class. In such an environment, the lecturer cannot effectively prompt for each learner. If authors have a small class, each student will be advised and supported for reflection activity. Our start point is how lecturer should use the learning strategy for effective reflection in the class, which is constructed by a huge number of students. In the previous method, the spreadsheet are just provided. The spreadsheet contains the learning goals. Students had to mark the achievement degree in the spreadsheet. This old type spreadsheet gave a reflection opportunity for students. The authors thought students should grow up the ePortfolio skill through the coursework. Using the ePortfolio literacy rubric, the authors noticed that such a reflection was not sufficient. It was especially found that students were not documenting the process and experiences for the learning goal. Against nothing to document processes and experience, the spreadsheet was developed to add the new column to write processes and experience. In addition to the development, it was attacked higher level of the ePortfolio literacy, where students evaluate the portfolio for oneself and other's. The ePortfolio system Mahara makes students browse and comment other's. The authors thought it became prompting for students to browse other's portfolio. Unfortunately, it was not measured how degree students' capacities were developed in this practice. In this practice, students give positive comments. However, there were some problems. There was an error of the user manual and UI problem to edit the HTML-coded table. Authors will repair the user manual near future. Against UI problem, the authors consider it will be effective to develop a navigate window to prompt each documenting. We deliver the plan for the learning activity and effectiveness measurement at the next term.

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Posters

PERFLECT: Your Personal Online Self-Directed Learning Coach

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Background / context

Competency-based education appears to have positive effects on the development of self-directed learning skills (SDL skills), including self-assessment of performance on learning tasks, formulating learning goals to match learning needs, and selecting new learning tasks that suit learning needs. However, previous research (e.g., Kicken, Brand-Gruwel, van Merriënboer, & Slot 2009a; Kicken, Brand-Gruwel, van Merriënboer, & Slot, 2009b) has shown that teachers have to invest a large amount of time and energy in coaching individual students to assure positive outcomes.

Objectives

The main objective of research reported in this paper was: Investigating to which degree an electronic development portfolio (PERFLECT, <https://www.perfect.nl>) with a self-coaching protocol and limited teacher-coaching promotes the acquisition of SDL-skills.

Method

Set in the context of senior vocational education, 7 ICT students and one teacher participated in the research. Using PERFLECT students assessed themselves weekly on learning tasks over a period of 10 weeks. Some of these learning tasks were also assessed by their teacher. The use of PERFLECT was complemented with one teacher coaching session in which the teacher gave feedback on students' self-assessments and formulated points of improvement, and gave "feedforward" on suitable future learning tasks to help stimulate students' self-directed learning. After the 10-week period had passed students and the teacher were interviewed and filled out an evaluative questionnaire, which measured students' perceptions about PERFLECT and its ability to stimulate self-directed learning on a 5-point Likert scale.

Self-coaching protocol

The self-coaching protocol consisted of leading questions such as: "Which aspects of the learning task do you need to improve on?" and "Can you formulate at least one learning goal to meet your learning needs?"

Results

Assessments

Combined, the 7 participating students assessed a total of 32 different learning tasks. Individually, students assessed an average of 4.6 ($SD=1.3$) learning tasks. Aggregated over all students, the participating teacher assessed 18 different learning tasks. Per student an average of 2.7 ($SD = 1.0$) learning tasks were assessed.

Formulated points of improvement

After removal of meaningless points of improvement (such as: "N/A" and "-") a total of 19 formulated meaningful points of improvement remained (per student: $M = 2.7$, $SD = 0.7$). Formulated points of improvement included: "I need to improve my focus and ignore side issues" and "I want to improve my website designs".

Evaluation questionnaires

Students thought PERFLECT was easy to use ($M \geq 4.0$). Students were fairly satisfied with complementary teacher coaching (multiple items, $3.5 \leq M \leq 4.0$). With the exception of one item ($M = 2.7$, $SD = 0.8$), perceptions about self-coaching were moderately positive (multiple items, $3.0 \leq M \leq 3.5$). The item that contracted moderately negative perceptions concerned stimulating reflection on weaker parts of student performance through self-coaching.

Conclusions

PERFLECT is user-friendly. The self-coaching protocol and complementary teacher coaching help to stimulate students' self-directed learning skills, although students are more positive about teacher-coaching than about the self-coaching protocol. The low number of formulated points of improvement, as well as the overall low quality of these points (i.e., some of them were formulated very broadly) underscore the need of teacher coaching. Further research among larger groups of students and teachers is needed.

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PERFLECT: Your Personal Online Self-Directed Learning Coach

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Background

Electronic development portfolios can stimulate the development of skills for self-directed learning (e.g. self-assessment of task performance and formulation of points for improvement). However, teachers do need to invest a lot of time and energy in individual coaching of students.¹

Research Question

To which degree does an electronic development portfolio (PERFLECT, <https://www.perfect.nl>) with a self-coaching protocol and limited teacher-coaching promote the acquisition of SDL-skills?



Method

PERFLECT with self-coaching protocol has been tested over a 10-week period in a senior vocational education context

- Seven students and one teacher participated
- Students were asked to assess themselves once a week and were individually coached by their teacher one time during the research period
- Self coaching consisted of leading questions such as:
 - "Do you want execute the next task with or without help?"
 - "Which parts of the task have you executed well?"
- At the end of the study period students filled out a questionnaire and participated in a subsequent semi-structured interview

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Results

Descriptive statistics	M	SD
Self-assessments per student	4.6	1.3
Teacher-assessments per student	2.7	1.0
Formulated points for improvement per student	4.6	1.3

Questionnaire	M (1-5)	SD
The coaching session with my teacher helped me reflect about what I still need to improve when I'm executing tasks	3.6	1.0
Answering questions by myself in PERFLECT helps me to reflect about what I still need to improve when I'm executing tasks.	3.3	1.0

Semi-structured interview

A student on teacher-coaching: "Afterwards I've really reflected more on my weaker qualities than upon my stronger qualities."



Conclusion

Teacher-coaching and self-coaching stimulate aspects of self-directed learning skills, but students are more positive about teacher-coaching than about self-coaching.

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Lessons From An E-Portfolio Learning Programme With The ZMET Approach - A Partnership Project Between Vocational Colleges And Job Bank Company In Taiwan

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Background

In response to the knowledge-based economy, there have been a number of changes in the dynamics employment markets and job matching trends over recent years. One of the changes is using digital multimedia information technologies to present job-seekers competencies. As the results, ePortfolios have assumed growing importance in higher education as college teachers seek new teaching-learning activities including goal setting, reflection, presentation, self-assessment, modeling, peer assessment, and feedback in order to help students to develop their career-oriented e-portfolio. The research issues are listed as following: 1) What are the meanings of an multimedia context collected for an e-portfolio? 2) By participating an action of the “partnership project” held aimed to provide a chance for students to share learning experiences and to acquire related feedbacks from job bank, what will students be empowered to make their competencies visible in e-portfolios?

Objectives

This report describes the ideas and outcomes of an ePortfolio Learning Programme for vocational college students to learn to apply the Zaltman Metaphor Elicitation Technique (ZMET) which are with the features that can be used to explore visual and emotional information. With the hope to improve their presentation of professional “self” to prospective employers in this study, using ZMET approach aims to create a visual multimedia context for eportfolios, and students were expected to visualize and enhance their standardized e-protfolios text, if better equipped with the technique. The Programme, per se, was a partnership project between Taiwanese vocational colleges and the 104 Job Bank, the largest online job site in Taiwan.

Methods

The report adopted the methods of action research. There were three main parts of it:

First. It elaborates the development of the course curriculum, which follows the ten major guidelines of the ZMET, i.e. (1) storytelling, (2) missed images, (3) sorting task, (4) construct elicitation & laddering, (5) most representative photo& frame-widening, (6) opposite images, (7) sensory Images, (8) mental map, (9) summary image, and (10) vignette.

Second. The report continues to explain the “104 Show Your Best” scheme, a campus CV collection event, and also the second part of the programme, which was co-hosted by the vocational colleges and the 104 job bank from April to October 2011. Students were encouraged to take part of the scheme, while the job bank would decide and circulate qualified portfolios on their web sites.

Third. Based on the recorded results and interviews with the focus group of the participants, the report further reflects upon the project, identifies the factors that determine the result, and suggests possible improvement for better outcome in the future.

Results

Regarding to quantitative perspective, after fostered by the method of ZMET in service-learning curriculum, And it turned out that 140 of the participants were selected as campus ePortfolios collections on 104 Job Bank site. (www.104.com.tw/area/gradshow/). Regarding to qualitative perspective, researcher works in progress to analyze the process of reflective thinking from the focus group interviews.

Conclusion and limitations

With the documented info of the programme, this report not only presents the lesson of this particular project, but would serve as a useful reference for schools of higher education intending

to add new elements to their existing e-portfolio programmes for students' job-seeking competency purposes, and it proved to be a success at the end of the project.

Thus, this case study is an empirical effort to examine the ideas and outcomes of an ePortfolio Learning Programme for vocational college students in Taiwan to learn to apply the Zaltman Metaphor Elicitation Technique (ZMET). This empirical study has limitation as small sampling was taken only from students in an university of vocational technology in southern Taiwan, which had implemented e-Portfolios for several years. We recommend that the study scope be expanded to other colleges/universities to avoid concerns based on the limitations of the sample.

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LESSONS FROM AN E-PORTFOLIO LEARNING PROGRAMME WITH THE ZMET APPROACH --- A PARTNERSHIP PROJECT BETWEEN VOCATIONAL COLLEGES AND JOB BANK COMPANY IN TAIWAN

1. Background

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4. Conclusion & Limitations

With the documented info of the programme, this report not only presents the lesson of this particular project, but would serve as a useful reference for schools of higher education intending to add new elements to their existing e-portfolio programmes for students' job-seeking competency purposes, and it proved to be a success at the end of the project. Thus, this case study is an empirical effort to examine the ideas and outcomes of an ePortfolio Learning Programme for vocational college students in Taiwan to learn to apply the Zaltman Metaphor Elicitation Technique (ZMET). This empirical study has limitation as small sampling was taken only from students in an university of vocational technology in southern Taiwan, which had implemented e-Portfolios for several years. We recommend that the study scope be expanded to other colleges/universities to avoid concerns based on the limitations of the sample.

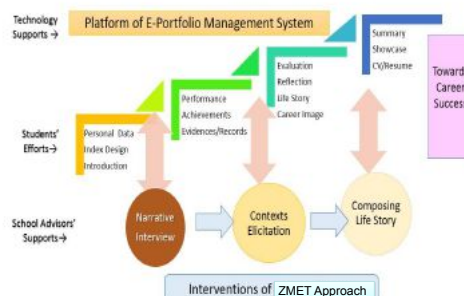


Figure 1: The concept module of integrating career projects into e-portfolios



3. Methods

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Nursing Student S' Perspectives Of The Pedagogical Values Of E-portfolios: Do Students Value?

Eman Ghallab, PhD student at the School of Nursing, Midwifery and Physiotherapy, University of Nottingham, UK

Introduction and back ground

The rapid change in the health care settings as well as the contemporary educational development and technological capabilities have given the rise to new educational tools to be used in order to prepare self regulated and life long learners who are able to adapt to these changes. The electronic portfolio is one of these tools which have been embraced recently by many nursing education institutions for its educational benefits. The use of e-portfolios in nursing education could have the potential to transform and enhance students' learning by providing them with a personalized, self-managed a learning space which can be accessed from anywhere including their clinical placement. Such accessibility would help students to reflect immediately on their experience, build and modify their learning, share their knowledge with others, and receive immediate feedback while they are on placement. However, such learning potentials and pedagogical values should be supported by empirical evidence. There is lack of a detailed and comprehensive research to understand such learning potentials for students in the current nursing literature.

Context of the study

Keeping with current change in nursing education, the School of Nursing at the University of Nottingham, UK has introduced e-portfolios to nursing students in September 2012. The e-portfolio was introduced into a new nursing program where the focus was on the students being self-regulated and lifelong learners who are able to take the responsibility of their learning. Fifty percent of the learning activities within this program is online activities so the e-portfolio was to be used to enable students to collate and evidence learning outcomes, reflect on their experience and achievement and work in partnership with the teaching staff at the university and the practice staff in the clinical setting in monitoring their progress and link theory to practice. Moreover, it was introduced as a tool that could help in making the curriculum more transparent to the students by making the program's and modules' learning outcomes more visible to them.

Aim/Objective

- Explore the pedagogical value of the e-portfolio as a learning tool for nursing students.

Method

The study adopted a qualitative case series design to gain a comprehensive picture and in-depth understanding of the pedagogical value of an e-portfolio for nursing students on a large scale implementation of an e-portfolio system for over 300 first year students at the School of Nursing, Midwifery and Physiotherapy, University of Nottingham, UK. Multiple data collection methods were used such as interviews with students, tutors, and curriculum planners, virtual observation and document analysis.

Results

Some initial findings of interviews with 14 first year nursing students will be presented. The findings demonstrate that there is variability in how the students perceived the pedagogical value of an e-portfolio for their learning. Some students perceive the e-portfolio as a valuable tool to communicate and share their work with their tutors, and demonstrate how they are ready for exams. On the contrary, one of the students was slightly annoyed by the fact that the e-portfolio can be used as 'a big brother exercise' as it will be accessed by her tutor to see how much she is engaged with the course modules. With regard to reflection, some students also appreciate the value of the built in reflection tools within the e-portfolio in enhancing their reflection and helping them to construct what they need to reflect on. On the other hand, other students find the reflection template within the e-portfolio is not helpful because students don't know whether what they have written in each box is enough or not. Moreover, some students perceived the e-portfolio as useful tool that helped them to stay focused on the module learning outcomes and know what is required to be achieve by the end of the year. In contrast, other students didn't perceive the e-portfolio as a necessary tool for their learning because they have got everything

they need including the learning outcomes.

Generally, students liked the flexibility of e-portfolio in the sense that they can review their uploaded work and edit and reflect back on it at any time. Also, some technical issues have been reported by the students such as login related problems; the alert system within the e-portfolio that informs students when a comment or feedback has been posted on their work is not working properly; and navigation problems have been reported particularly by visually impaired students. Finally, the variability in students' perception of the pedagogical value of e-portfolio could be very much dependent on the way the e-portfolio is accepted and used by the students and their tutors as the tutor's adoption and use of the e-portfolio is a significant factor for the e-portfolio to be successful and effectively used.

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Designing Courses Based On SECI Model With Mahara As An E-Portfolio

Yoichi Tanaka, Toshifumi Sawazaki, Jin-ai Women's College, Osamu Yamakawa, Fukui Prefectural University, Japan

We would like to explore three topics in our session. First, we introduce some Japan's current situations of online and blended teaching and learning. Second, we explain our teaching process and theory based on SECI, which is a knowledge-creating model within organizations by Ikujiro Nonaka. We designed some courses based on SECI, which visualizes knowledge creating process in group activities with support of Mahara and moodle. These are online and blended teaching and learning platforms in our virtual university environment. Third, we introduce our Institutional Research project, which gives us quantitative data to analyze students' learning behaviors.

Growing Roots: An EPortfolio Pilot Spreads Its Wings

Nadine Christina Scholz, Angela Karl, Regina Bruder, Technische Universität Darmstadt, Germany

Since 2010, the pilot project dikopost (digital competence portfolio for students) offers professors at the Technische Universität Darmstadt the infrastructure to use an ePortfolio in their classes. dikopost could be established due to funding of the University's quality of teaching and studies improvement fund. The goal was to develop exemplary classes, seminars and lectures that work well with an ePortfolio. A focus is on students wanting to become a teacher, but not limited to them.

During the pilot period of the first two years, the project developed a support ePortfolio framework which was considered to be successful regarding the evaluation: Lecturers get support with a trained tutor, counseling sessions, handout materials and support with Mahara, the ePortfolio software. Students have access to a weekly help-desk and e-ticketing system for their technical needs and there is also the course tutor for ePortfolio specific questions or feedback demands.

Since October 2012, the pilot phase has been over, and a new part of the project started: preserving this infrastructure for future student and professor generations. In this poster, information of the plan, current status of this change management process, and outlook of the institutionalization of the former pilot is being presented.

Project website (in German only): http://www.zfl.tu-darmstadt.de/dikopost_projekt/

Abstracts

S21A: Open Badges Track

Time: Tuesday, 09/Jul/2013: 9:00am - 10:30am · *Location:* Council Chamber *Session Chair:* Serge Ravet

Using Open Badges to Motivate and Recognise Patient Education and Achievements in Long Term Chronic Condition Self-Management

Rob Arntsen, MyKnowledgeMap, UK

Long term chronic diseases such as diabetes are proving to be the most expensive areas of healthcare provision in most countries, and diabetes in particular seems to be rising steadily in many countries. If patients and their carers can be educated and supported such that they improve their own self management of their diabetes then the outcome can be significant both for the patient in terms of life expectancy and quality of life and for the national healthcare organisation.

Some years ago a pilot programme called Upbete was started in Yorkshire and Humberside to trial new online education and condition support services for young people with Type 1 diabetes, and this programme took the unusual approach of involving the young people patients in the design of the online delivery service including its name and branding.

After the first year of trials the results were so encouraging in terms of improvements in personal self management profiles that the trial has been extended to cover all childrens in Yorkshire and Humber (some 22 clinics) and this extension is now underway.

It is against this background that the clinical team decided to test various new enhancements to the Upbete service, including the adoption of Open Badges to motivate and recognise improvements in knowledge and actual practice in self management of the patients self management of their diabetes.

The target age group is from 4 to 19. This presents many interesting challenges including the diversity of maturity and capability with age, the varying degree of family/carers involvement as the young person matures, and the particular challenges of potential complications associated with adolescent activity and the disengagement from direct family support.

So will one method of support and motivation may work better in some than others? Will different reward strategies or presentations be needed with different groups?

Also if we are to motivate and recognise progress in self management with Open Badges, what are the things we should recognise with Badges? Eg. first use/regular use of the system?; reading of specific resources? ;quizzes to test knowledge?; actual use of the systems tools for recording and tracking blood glucose levels? ;participation in forums or contributions to shared resources?

Other ideas have included:

- Possible gamification to show people who have earned most Badges in the last month
- Some form of peer assessments and Badge award for “likes” of shared contributions
- Patient/carers group awards of Badges to clinic teams for their superior quality of care
- Schools could be awarded badges for demonstrable ability to holistically support children with diabetes, ranging from proven teacher knowledge, proven relevant school nurse / dinner staff/ PE staff knowledge, peer assessment of good practice, and school governance oversight best practice,
- Recognising local restaurants for their support of diabetes (eg. showing carb counts on menus) with the Upbete App maintain a list of local restaurants that are recognised as being “diabetes friendly” by their Badge award.
- Family members and carers could earn Badges for being good cooks for diabetes, etc

This presentation will outline the decisions taken to implement Open badges in this context and the reasoning, including the process used to involve the actual target community in the design process, and will also provide an update on early results emerging from practical use.

Connecting Open Badges and the European guidelines for validating non-formal and informal learning; a critical perspective on accreditation procedures

Petra Muckel, Birte Heidkamp, Stefanie Brunner, Sebastian Hartong, Oldenburg University, Germany

Background

Inspired by Foucault's thoughts on the power/knowledge complex (1), we explore the promise and possibility of Open Badges to provide a significant contribution to efforts in the field of recognition and accreditation of prior (experiential) learning (AP(E)L) undertaken to date. Based on the premise that power and knowledge dependent on one another, we attempt to widen the discourse of recognition and accreditation by introducing two questions: who uses power/knowledge in this discourse, and to what ends?

Open Badges are seen as an innovative way of valuing and supporting lifelong learning. We view Open Badges as another way of validating competencies, as they tell, "a much more in-depth story given that we can use badges to capture more granular learning and each badge is evidence-based" (2). As an intentionally open and flexible system, "top down, authority driven decisions will not work for badges", (3) and would probably hinder innovation, as it would fall back on the conventional hierarchy of values for recognition. In this sense, Open Badges have the revolutionary potential to overcome what Foucault called the "micro-physics of power". The recognition of competencies through Open Badges puts the power of validation back in the hands of the people. This poses great opportunity and risk at the time, because power to every badge includes the risk of inflation.

We analyse the idea of validation as rational underlying metadata through connecting Open Badges and Open Badges Infrastructure (OBI) with the *European guidelines for validating non-formal and informal learning* (2009) (4). We explore what kind of content and structure is needed in metadata to demonstrate and prove the earner's competencies represented by a badge (or in a "badge backpack"), "ensuring that at any point in time someone can understand that badge and assess its value" (3). In our reading, Open Badges should act as a "gateway or conversation starter" (5). Similar to ePortfolios, as they are folders of authentic and reflected artefacts, Open Badges can tell much more about a person's competencies than marks, abstract certificates, or other conventional credentials (see also (6)).

Metadata as a key concept for recognition of competencies

Our starting point is to attempt to include metadata and the Open Badge rationale of validation in the process of learning certification as proposed in the European guidelines. To demonstrate this, we try to integrate Open Badges, and especially metadata — which are, in our opinion, crucial to the topic of recognition — in recognition and accreditation procedures (see (4), p.18). Metadata includes information such as badge origin, stakeholders/issuers, date of issue, criteria for earning the badge, expiration, the earner's work or evidence supporting the badge, etc. In this sense, metadata can act as an "informal validation system itself" (6). As a "record of certification", (7) metadata "makes the badges more reliable than résumés and more granular than degrees" (7). OBI conveys when the badge is issued and thereby guarantees that the competencies have been acquired. Understanding the badge and its underlying infrastructure as a complex net of relationships, the metadata is more or less 'baked'/burned-in the badge. Thus, a badge is more than just an image file; in contrast to an image file, where what you see is what you get, an Open Badge includes metadata with value and authentication.

Based on a comparative analysis of existing examples of metadata, we develop a template for the content (as a kind of 'index') and structure of metadata according to the European guidelines. This template serves as a proposal to treat Open Badges metadata as a framework for an in-depth story of competencies. Aspects of badge backpacks – pulled together as a journey or clustered as a group or in a master-detail or dynamic structure (8) – will be discussed and drawing parallels to ePortfolios will be fruitful in supporting validity and reliability of badges whereas technical details such as questions of interface or OBI specification will be neglected to a large degree.

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The Open Badge Factory project: issue Open Badges anywhere, manage them in one place

Eric Rousselle, Discendum Oy, Finland

Discendum is a Finnish company which develops elearning environments and an ePortfolio service. As many other actors in the elearning sector, we have understood that the Open Badges concept developed by the Mozilla Foundation enables recognition and making visible such knowledge and skills which are often overlooked and not utilized in the world of formal education.

As we have become inspired by the Open Badge concept, we have done our best to further its implementation in Finland. In the fall of 2012 we developed an Open Badge displayer application for our Kyvyt.fi ePortfolio service, and an issuer application for our Optima learning environment. In the spring of 2013 our pioneer customers have already issued dozens of badges via Optima.

Although according to our experiences many organizations have been very interested in the possibilities offered by the Open Badges, many challenges still remain concerning the implementation of the concept.

For earners of badges one of the hindrances of taking Open Badges into use is the fact that there are still few systems via which badges can be displayed. Additionally, the receiving process of a badge with its many steps is not user friendly and the authentication based on an email address is a problematic issue, because earners' email addresses may change. Nevertheless, we believe that these challenges will be overcome in the near future as technical solutions are further developed.

From an issuer organization's point of view, the biggest challenges concern badge design, creation and managing the issuing process. The number of tools, which enable issuing of Open Badges, is small but in addition to our company, many other providers in the field are also implementing issuer tools in their systems. According to our experiences, an organization which has a need to issue only a few badges, can, via a learning environment such as Optima, manage badges by using issuing tools inside the system and also manage metadata and creation/issuing rights. In the long run, however, this solution is not sufficient. It ties the badges to different functionalities inside a system and if the organization needs to issue badges from several different systems, the management of badges becomes fragmented. Problems in managing the badges will make it harder for especially larger organizations to take the Open Badge concept into use.

Once we realized that adding an issuer tool into a learning environment's tool box was not necessarily the best solution, we started to focus on developing another solution and a new kind of Open Badge issuer application. The new application was named Open Badge Factory. We have just started the planning process in a development project in which a few Finnish universities and companies and also the Mozilla Foundation and Learning Agents from Canada are taking part. The purpose of the project is to develop a cloud service environment which enables the issuing of badges from several different systems but also the creation, issuing and monitoring of issued badges from one place. The main idea of the Open Badge Factory is that we are building a client software on top of the open API we have developed which enables the users of Open Badge Factory to create, issue and manage their own badges. Additionally, our open API makes it possible for customers interested in the service and different providers of learning environments and portfolio services to develop their own Open Badge issuer clients for their own systems. In this project, we will develop clients for Moodle, Mahara and Optima but we are happy to support other systems as well, if partners interested in the Open Badge Factory emerge.

Another important mission of the Open Badge Factory is to make it possible for organizations issuing Open Badges to form communities. The idea behind this is that organizations which co-operate or function in the same networks can share badges, issue, validate and endorse community badges. For example, teachers in different schools could issue "official" badges created by educational authorities or an umbrella organization could certify badges created by their member organizations.

Many of our customers have also understood that in addition to being proof of learning, an Open Badge is also a great marketing channel. One of the purposes of the Open Badge Factory is to offer the issuers reporting, ranking and assessment tools which can gather feedback from the badge receivers and tell you how badges are used.

In our presentation we will introduce our Open Badge Factory concept and talk about its main features. Because many of the features are still in their planning stages, we will encourage discussion and hope to receive valuable comments and development ideas through it.

S21B: Parallel Session

Time: Tuesday, 09/Jul/2013: 9:00am - 10:30am · *Location:* Thompson Room *Session Chair:* Simon Grant

Researching construction of knowledge using blogs: an in-depth analysis

Alfredo Gaitan, Joseph Adonu, Maja Jankowska, University of Bedfordshire, UK

Considerations of academic attainment in HE typically concentrate on the learners' achievement of intended learning outcomes at the level of units/modules or courses (e.g. Murray, Perez & Guimaraes, 2008), in terms of grades or 'good degrees' (e.g. Richardson & Woodley, 2007). While these may reflect the final state of the learners' knowledge and skills, they do not tell us what they have learnt during a course or unit. Only recently have the notion of 'value added' and different ways of assessing it began to be discussed in some detail (see Coates, 2009). One such approach involves comparisons of what the learners knew at the start with the final state of their knowledge do not take place. However, little is known of the learners' prior knowledge before the start of a course, despite of the fact that many authors (e.g. Resnick, 1983; Glaserfeld, 1984; Schwartz, Sears & Chang, 2007) have argued that learning is strongly influenced by prior knowledge. Furthermore, the learning processes that take place between the start and the end of a course remain largely unexplored.

This project aimed to explore (a) processes of construction of subject knowledge and (b) the learner's epistemological shifts contained in such processes. A Patchwork Text Assessment (PTA) in the form of a blog, as part of an ePortfolio system (PebblePad), was introduced as in the context of an action research project in a final year unit of a psychology undergraduate course. It consisted of four short pieces, or 'patches', submitted at precise points during the course of the semester. 19 students granted permission to have their PTAs analysed, of which 11 agreed to be interviewed. The assignments and interviews were analysed qualitatively.

Preliminary analyses presented at last year's ePic 2012 conference (Gaitán, Adonu & Jankowska, 2012) revealed that the students' assignments contained a series of main claims, subsidiary claims, evidence, questions and quotations. The assignments also contained comments of an epistemological nature on the student's own knowledge, and that of others. With the analysis of the four 'patches' now complete, we have been able to observe the process of construction of knowledge by the students and in some cases shifts in the ways they thought of the topic and the disciplinary knowledge. The latter are interpreted in the light of the existing literature on personal epistemologies (Baxter Magolda, 2004).

This successful pedagogical experience has been replicated over three consecutive years and the findings have informed a larger study, currently ongoing, including another unit. We have now included the use of concept maps (Novak & Cañas, 2008) at the beginning and end of the learning process. The latter will provide another set of data on learners' prior knowledge and at the final stage, allowing for easier comparisons. It is hoped that triangulation with the results of the analysis of the blogs will add confidence on the findings as well as additional details.

Finally, we will discuss practical difficulties experienced by students as they used the ePortfolio system, but also their views of how it helped them articulate their knowledge. We will draw on the analysis of the interviews.

How Open Educational Practices Improve Evaluation and Assessment: Making Learning Meaningful through ePortfolios

Dr. Penny Finley, Florida Gulf Coast University, Florida, USA

Making Learning Meaningful through ePortfolios

In contrast to transcripts, employing ePortfolios as a high impact, open educational and assessment practice (with their added value of the "e" or electronic nature) allows students to gather in one place a range of digital artifacts that can be used to demonstrate numerous skills sets and competencies, including communication, presentation, inquiry and analysis, and information literacy. The representations of learning

in an ePortfolio reflect the individual student's view of the breadth of his or her education – what was learned both inside and outside the classroom and as the learning was experienced by the student, not just as it was delivered by the professor.

Developing an ePortfolio is a powerful, introspective experience that allows students to reflect on, and make sense of, accomplishments and the learning process over time. The portfolio process requires students to relate past learning experiences to educational goals, to exhibit critical self-analysis, and to demonstrate the ability to organize documentation in a clear, concise manner. The portfolio itself becomes the way in which to engage in open assessment – assessing and evaluating competencies and performance in a formative manner ‘for’ learning and in support of learning rather than an as a practice in the assessment ‘of’ learning (Ulf-Daniel Ehlers, Vice President of Quality and Academic Affairs, University of Duisburg-Essen, Baden-Wuerttemberg, *Open Assessment—Open Learning*).

An alternative response to the calls for better measures of student learning has been to use standardized tests. These tests often focus on three primary learning outcomes: written communication, problem solving/analysis, and critical thinking. They are administered to samples of freshmen and seniors, typically in a timed environment. The results are summarized and available at an institutional level, but they are often not reliable at the individual student level. In addition to being a closed educational practice, a key weakness of this kind of assessment strategy is that the tests are not high stakes or impact, so there is neither an incentive for students to perform well nor a penalty for not performing well.

Research has found that there are patterns of practice at institutions associated with enhanced student learning, where high impact open educational practices occur. When students engage in two or more high impact educational and assessment practices, there is a significant positive impact on their grades and retention (Kuh, 2008), and there is emerging evidence that ePortfolios are associated with some of these practices.

ePortfolios require students to reflect on their learning, which is in itself a learning exercise. Reflection is as a process by which we think – reviewing, as we think about the products we create and the ends we produce, but also about the means we use to get to those ends. Along the course of study, we check and confirm, as we seek to reach goals that we have set for ourselves. Reflection becomes a habit, one that transforms. Reflection has not only become an essential way for students to speak in their own voices, but it has also become a way for them to provide evidence of their capacity for critical thinking, analytic reasoning, and integrative learning. Reflection at strategic points in the development of the ePortfolio creates a venue for the formative examination and demonstration of learning and can play a summative role at key points in the assessment of student progress and achievement.

The current surge of interest in ePortfolios flows from increasing calls from accrediting organizations to demonstrate that students are really learning. Moreover, academics are expressing a need for demonstrations of a much broader array of learning outcomes than the existing closed practices support – i.e., personal and social responsibility, teamwork, intercultural knowledge and competence, and integrative learning (Rhodes, 2011). To meet these needs, we are charged with linking assessments of work done in individual classes with those done by other evaluators when they are for purposes of programmatic or institutional evaluation; we need shared expectations for student performance on a set of specified learning outcomes and competencies. And ePortfolios, with their wide range of capabilities, can help in this charge – both to ensure students are really learning and meeting stated learning outcomes, as well as to provide evidence of learning at the institution.

During this presentation, session attendees will learn good-practice processes for implementing an effective ePortfolio requirement for open assessment within their programs. Firsthand examples of faculty and students using ePortfolios will be shared so that attendees can gain insight into how students assemble an ongoing collection of best work that demonstrates competencies and skill growth over time, as well as true learning and reflection – the results being the assessed evidence of improved long-term learning retention that both enables students to analyze new information in ways that build connections to previous knowledge, and that can be used at an institutional level to fulfill accreditation requirements.

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Practice Case about Information Literacy Class with ePortfolio System Mahara: A Case Study of Kumamoto University

Shin-Ichiro Kubota, Ryuichi Matsuba, Kumamoto University, Japan

It is important that the information literacy class has reflection activities, what learners learned in their own learning. Until then, one learner has reflected own learning privately. In this practice, using the opensource ePortfolio system Mahara, learners can browse other learners reflection and such browsing activities help learners experience meta-cognitive activities. We report results to practice such an ePortfolio learning.

There is the information literacy class at our university. The contents of the class are constructed by how to operate PC and some applications, how to deal with copyrighted data, and how to secure private information and privacy. All of the first grade students, about 1800 people, must definitely take the information literacy class. This information literacy class is divided into 26 classes and provided with exercise style to use PC. The students reflect in last coursework about how much they acquire toward 8 skills, which are defined in the class. In the existing reflection activity, using a spreadsheet which contains tables to reflect at each skill, students reflect and just hand in the reflection result as an assignment to LMS. The students reflect and evaluate their own learning by themselves. They don't know other students' thought and thinking method. There is surely a reflection activity, but it seems that students reflect without sufficient opportunities to learn metacognitive strategies.

After browsing other students' reflection, it is natural that students compare with other students' reflection. As a result, students know other students' thought and thinking method, and use such abilities. This leads that students learn metacognitive strategies.

So as to give more opportunities to learn metacognitive strategies than now, it is implemented that students reflect and share others' reflections with Mahara, which has a function of sharing the ePortfolios with others.

For this practice, some preparations are required. Firstly, it surely needs the user manual which contains the instruction for reflection activity with Mahara. Secondly, it needs the HTML-coded reflection table in substitution for the spreadsheet-type one. And next, it needs the ePortfolio template page including the HTML-coded one, because of decreasing operation procedure for reflection. Especially, the instruction has procedures for copying the ePortfolio template page and publishing their own ePortfolio to share with others. Lastly, as students browse others' reflections well, the procedure commenting for others' reflections is added to the user manual.

In this practice, there were errors for the user manual to forget a part of operation checks. On the other hands, there was a student which feels the significance to browse others reflection. In the next term, it will be monitored to change the student feeling. It was noticed that students are hard to create a big HTML-coded table using Mahara UI. Due to manual errors, most students cannot share and comment for others' ePortfolio. In order to make up for these errors, it was orally instructed to share and comment for others' ePortfolio. Unfortunately, there was a little student to share and comment for others' ePortfolio.

This paper reports about our particular learning environment, reflection activity and implementation of the reflection activity with ePortfolio system Mahara. As a result, there were needs to be improved in the instruction and system UI. We deliver the plan for the learning activity and effectiveness measurement at the next term.

S21C: Parallel Session

Time: Tuesday, 09/Jul/2013: 9:00am - 10:30am · *Location:* Mountbatten Room *Session Chair:* Dominique-Alain Jan

The usage of ePortfolio as assessment and application instrument in Germany - First results of the (era.net.rus project “ePortfolio for Human Resources“)

Anja Kirberg, Anna Schwickerath, Heiner Barz, Heinrich Heine University Düsseldorf, Germany

ePortfolio usage in Germany

Since in 2007 the first study about ePortfolio activities in Germany was published by Melis and Homik¹³ there is still no federal state policy for the implementation of ePortfolios introduced by the German Federal Ministry of Education, Science, Research and Technology (BMBF). It seems that the situation in Germany has not significantly changed. Even though the German eLearning business is growing: due to recent information an increasing growth rate of 21,9% and a turnover of half a million euros was achieved in 2012¹⁴.

Similar to the European Union strategy the German Federal Ministry of Education and Research emphasizes that the validation of competencies gained during non-formalized learning is one of the major political and social challenges to increase employability. Therefore the overall aim of all ePortfolio implementations within the educational system is to create a more qualitative assessment process by improving the transparency of informal learning outcomes. It will lead to a more permeable educational system as not only formal qualifications will be regarded for selection processes throughout transition processes within educational and vocational systems. This vision could become reality if ePortfolios are used as job applications.

The project “ePortfolio for Human Resources”(eHR)

The aim of the project “ePortfolio for Human Resources” initiated by Prof. Dr. Heiner Barz (Heinrich Heine University Düsseldorf, Germany) is to extend the EU strategy by developing a media-oriented ePortfolio as the europass framework instruments are so far largely based on formal educational inputs. The project is carried out with Prof. Dr. Olga Smolyaninova (Siberian Federal University, Russia), Dr. Samuel Nowakowski (University of Lorraine, France) and Dr. Kai Pata, (Tallinn University, Estonia).

The focus of the project is to investigate the perception of ePortfolios as part of assessment processes within educational and vocational systems. The identification of critical success factors in the acceptance of ePortfolios should enhance the development of the ePortfolio-Strategy for Europe.

The research design includes qualitative and quantitative methods targeting persons who are currently using or might use ePortfolios in the future in secondary and higher education as well as in human resources.

At ePIC 2013 the German team will talk about the current situation in Germany by presenting first research results.

Since the eHr project started the German team identified three different types of ePortfolios: learning, career and integrated portfolios.

In our definition a learning portfolio is prepared by students and pupils during their studies. It is used to collect papers, photos, links and other data. By writing blogs or notes ePortfolios provide the opportunity to let students reflect on their work.

On the other hand the content of career portfolios is more focused on the users working sphere. These portfolios usually contain documents which can be used in the application process, like CVs, work samples and certificates. Compared to learning portfolios the users aim is to collect

¹³ Erica Melis / Martin Homik (2007): E-Portfolio Study. Germany. German Research Center for Artificial Intelligence GmbH

¹⁴ Frankfurter Allgemeine Zeitung (29. October 2012), Rekordgeschäfte mit elektronischem Lernen, Nr.253, p.12.

helpful information about his or her work experience. Therefore career portfolios are an instrument for self-marketing.

With integrated portfolios the project team identified a combined version of learning and career portfolios. Users have the opportunity to save data on their education and work experience to reflect on their competences with regards to their longtime goals. Selected parts of these portfolios can be made public (online) to apply for jobs.

Although in Germany ePortfolios are currently used rarely and most often in the form of learning or career portfolios, the integrated version might be the future.

A new ePortfolio implementation in Germany – the ProfilPASS

One example of the recent ePortfolio implementations in Germany is the ProfilPASS. This might be classified as a career portfolio, which is developed and tested by the German Institute for Adult Education (DIE) and others¹⁵.

Between July 2009 and September 2012 the aim was to raise attention for the usage of Profilpass to identify competences and skills at human resources departments and to extend the paper-based Profilpass by developing an ePortfolio. The online version of the Profilpass is hosted by the publishing house Bertelsmann and open to everyone¹⁶.

ePortfolios in France: from e-identity to an assessment and application instrument - First results of the (era.net.rus project “ePortfolio for Human Resources“)

Samuel Nowakowski, Nathalie Issenmann, Isabelle Houot, Université de Lorraine, France

General presentation of the special session: project “ePortfolio for Human Resources“(eHR)

The aim of the project “ePortfolio for Human Resources” initiated by Prof. Dr. Heiner Barz (Heinrich Heine University Duesseldorf, Germany) is to extend the EU strategy by developing a media-oriented ePortfolio as the europass framework instruments are so far largely based on formal educational inputs. The project is carried out with Prof. Dr. Olga Smolyaninova (Siberian Federal University, Russia), Dr. Samuel Nowakowski (University of Lorraine, France) and Dr. Kai Pata, (Tallinn University, Estonia).

The focus of the project is to investigate the perception of ePortfolios as part of assessment processes within educational and vocational systems. The identification of critical success factors in the acceptance of ePortfolios should enhance the development of the ePortfolio-Strategy for Europe.

The research design includes qualitative and quantitative methods targeting persons who are currently using or might use ePortfolios in the future in secondary and higher education as well as in human resources.

Introduction

The French Ministries of Education and Higher Education and Research lead a proactive policy to promote the use of information technology and communication in the school and higher education. Many actions have been carried out with two main objectives: one hand, the control by the pupil and the student of the environment in which these technologies are increasingly present, other hand, the diversification of forms of teaching and learning in conjunction with the reforms in the education system.

In this context, the use of digital learning environments and Web 2.0 tools (blogs, wikis, social networks) in schools and universities has been increasing steadily. Although during recent years the users' interest in e-portfolio system has increased and many initiatives (at local and national levels) are initiated. Moreover, many official reports and studies are pointed out the importance of the development of the digital competencies in education[1].

¹⁵ The ProfilPASS is funded by the Federal Ministry of Education and Research and the European Social Fund. See for further information: http://www.valid-info.eu/pdf/guide_DE.pdf?ae8beb4c897d3d1ede31ecc289a5f4fb=b717a9e1cb29af456329de32e8922c70 (28.02.2013)

¹⁶ See: <https://www.eprofilpass.de> (28.02.2013)

We first give the national context of the ICT development in the Higher Education systems. We detail national level recommendations and requirements of the French ministry of Education and Higher Education. Thus, in France, new regulatory texts refer more or less to the ePortfolio approach. We then detailed the whole national process involved in the deployment of such methodologies and tools (national working group, white papers, ...).

From e-identity to ePortfolio

Knowing this national context, we focus our work on the concept of e-identity. Thus, the ePortfolio could not be seen as data and documents collectors but as a reflexive tool or an image of someone's e-identity. The following figure shows the moving frontier between education, learning and personal and professional experiences. This frontier is seen as one possible representation of this e-identity used in the assessment and application process.

Detailed results will show that the ePortfolio, its consequences on the educational process and its link with e-identity, has a major role in the reconstruction of the social sense of the multiple experiences.

ePortfolio and professional insertion

All these studies have brought many results concerning the impact of the ePortfolio on professional insertion. We then present a review of the situation in France in terms of ePortfolio deployments (projects types, tools, conclusions, ...). We derive some important results coming from the different studies concerning the impact from ePortfolio on professional insertion.

Acknowledgment. This project is linked to the project AND (Learning and e-identity) funded by the Maison des Sciences de l'Homme de Lorraine

[1] Technology for education – rapport Fourgous

<http://www.missionfourgous-tice.fr/missionfourgous2/>

E-portfolio in Transition from Formal Education to Working Life

Kairit Tammets, Mart Laanpere, Tallinn University, Estonia

Although e-portfolio has been applied in various contexts in Estonia for several years, its use has been marginal. Mainly the designers, models, photographers and artists have used e-portfolio in their job application process. Universities have implemented e-portfolio in the admission process and as a formative assessment tool in teacher education. Several state-level recommendations and regulations mention e-portfolio. For instance, the Educational Technology Competency Model for teachers expects teachers to use e-portfolio for documenting their professional development and the national curriculum for primary schools (2011) recommends e-portfolio as formative assessment tool. In the informatics courses (grades 5 and 8), the use of e-portfolio for assessment of learning outcomes is compulsory. Still, uptake of e-portfolio has been marginal both in formal education and in transition from academic studies to working life in Estonia.

The project “e-Portfolio for Human Resources” explored the potential of e-portfolio in smoother transition of graduates from academic context to working life. In the Estonian context, the project aimed to identify:

- a) What is the current level of awareness and application of e-portfolios in formal education system and in human resources development in Estonia?
- b) Which barriers and incentives influence the level of acceptance of e-portfolio as a professional development tools in the context of transition from formal education to workplace, especially in the ICT sector?

The current study focus on e-portfolio as a development tool and relies on the definition of the Joint Information Systems Committee JISC (2008): *a product, created by the learner, a collection of digital artefacts articulating experiences, achievements and learning. Behind any product, or presentation, lie rich and complex processes of planning, synthesizing, sharing, discussing, reflecting, giving, receiving and responding to feedback.* In Estonian teacher education context, there have been a couple of attempts to develop national scale e-portfolio systems. Portal for the Learning Teacher (OPAH) based on Plone/Zope platform was launched in 2006, it reached 1000 users by 2007. National educational portal Koolielu.ee was built on top of Elgg platform in 2009,

almost the third of all teachers in Estonia are registered users today. Although Koolielu.ee contains e-portfolio functionalities, these are used by few. Several of our research projects have been recently focusing on e-portfolios, e.g. in the context of teachers' accreditation (Tammets, Pata & Laanpere, 2011) and for workplace learning with mobile devices in construction and medical sectors (FP7 ICT project Learning Layers started in 2012).

Research methodology

Data was collected with the online survey questionnaire and focus group interviews. The aim of the online survey was to identify the awareness and attitudes related with the use of e-portfolio in academic and work settings. Questionnaire consisted of five blocks, four of them taken from the joint instrument of eHR project: (1) background information, (2) previous experience with e-portfolio, (3) e-portfolio application and its expected functionalities, (4) e-portfolio in admission process. We added to Estonian version of the questionnaire a set of questions about trust issues, because low trustworthiness is potential barrier for adopting e-portfolio.

Responses to the survey were submitted by 41 university/college students, 230 pupils from secondary and vocational schools, 104 teachers and 10 HR specialists. Four university teachers, four schoolteachers and three HR specialists participated in focus group interviews.

Results

Only a few respondents were aware of or had been using e-portfolio. Although 64% of teachers admitted some experience with e-portfolio (due to university studies or job application requirement), majority of respondents from other target groups have not used it, nor were they aware of the concept. Still the attitudes towards e-portfolio were generally positive among all respondents, as they saw the potential value of e-portfolio, e.g. in the job application context.

All four groups of respondents demonstrated low level of trustfulness and willingness to share information via Internet with the people they don't know. Compared with students, teachers and HR specialists indicated slightly higher levels of trust towards e-portfolio. All groups considered e-portfolio being less reliable than the traditional CV. Yet, teachers and HR specialists did not expect that e-portfolio ought to be formally validated by a third party (e.g. school, employer, state agency etc.).

Conclusions

Initial results indicate that although the majority of teachers in Estonia are aware of e-portfolio, the students and HT specialists are not. Yet, all respondent groups seem to understand the benefits of using e-portfolio in the job application process and its potential in smoothening the transition from academic studies to working life.

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Education and Employability in Russia: State of the Art

Olga Smolyaninova, Elena Nazarenko, Siberian Federal University, Russian Federation

The second decade of 21th century is characterized by the rise of interest of different target groups and institutions in Russia toward using ePortfolio as a tool of personal professional electronic identification. ePortfolio is used at all educational levels, in the employment system, in the system of medical services and in business. The number of employers using ePortfolio is increasing. ePortfolio receives support on the federal level as part of primary education standard. Though many European ePortfolio initiatives such as Europass, European Language Portfolio, Mahara Open Badge are still not well-known in Russia.

In our work we describe the state of the art in using ePortfolio in secondary and higher school and for employability purposes in Russia.

ePortfolio was implemented in secondary education in profile training in 2002-2005. The legislation was worked out on the regional/municipal level, recommendations used were offered by Higher School of Economics and the National Training Foundation. Schools from different regions took part in the experiment. Now ePortfolio is used practically in all schools in Russia. Schools themselves regulate ePortfolio implementation, work out the documents and start school portfolio associations (e.g. www.portshkolio.ru). Unfortunately the results presented by the school leavers in their ePortfolios cannot substitute the State Examination and be used for enrolling the university. From the Ministry of Education and Science of the RF ePortfolio needs a political decision regulating ePortfolio use and precise criteria of assessing the artifacts.

In 2012 the team of researchers from the Institute of Education, Psychology and Sociology, Siberian Federal University (IEPS SibFU) took part in the international project "ePortfolio for Human Resources" within FP7. This Project included research on the state of the art in using ePortfolio in secondary and higher education in Russia.

To study the use of ePortfolio on the level of higher education we analyzed the official web-sites of more than 120 Russian universities, scientific publications and thesis of Russian scientists. On the basis of our analyses we may conclude:

- HEIs regard ePortfolio as an effective means to promote graduates on the labor market and a tool for assessing graduates' professional competencies;
- ePortfolio is used for assessing the quality of education, and the quality of conditions for professional training;
- there is no legislation and regulations on the federal level on ePortfolio strategy in higher education.

At present most of the HEIs using ePortfolio in Russia offer pedagogical education. ePortfolio is used for assessing pedagogical and research practical work, reflexion and presenting students' achievements to the potential employers. In higher education in Russia ePortfolio is popular in design, linguistics, architecture and medicine.

IEPS SibFU takes the leading position in implementing ePortfolio in different levels of training in Psychology and Education and in integrating it in the labor market of the Krasnoyarsk region. Beginning from 2007 the Institute is implementing a complex organizational and methodological model of ePortfolio for assessment and professional development (Bachelor and Master degree programs, teachers' extension courses, assessment and socialization). ePortfolio models for the transition process are being probated (Bachelor>Master>labor market; Bachelor> labor market).

After analyzing the software used in Russia for educational and career ePortfolios the authors distinguish Mahara system as prospective special software for life-long ePortfolios which raises growing interest in the Russian academic environment.

Within our research the Projecting workshop was carried out. The goal of the workshop was working out optimal ePortfolio structure for employers. Representatives from different target groups (higher and secondary school students, employers, HR managers) of the five professional areas were represented: education, medicine, IT, transport and architecture. Focus groups, interviews, questionnaire polls were employed for the projective work. On the basis of the received data the online survey among secondary and higher students, employers and teachers was worked and carried out. The analyses of the received data, public discussions of the project and coordination of the positions of different target groups resulted in the ePortfolio structure model approved by the State Employment Agency of the Krasnoyarsk region. The pilot probation was launched at SibFU, KSMU and colleges of the Krasnoyarsk region.

The article describes the results of the on-line survey and employment ePortfolio model for Krasnoyarsk region.

S22A: Open Badges Track

Time: Tuesday, 09/Jul/2013: 2:00pm - 3:30pm · *Location:* Council Chamber Session Chair: Helen Barrett

Integration of Third-Party Issuers into Open Badge Infrastructure - Case: BadgeBridge.net integrating Foursquare.com badges

Jakub Štogr, Navreme Boheme, s.r.o., Czech Republic

The Open Badge Infrastructure (MOBI) creates the common environment that enables verification of digital badges based on predefined structure of meta data. However, the initial phase of implementation of MOBI comes with a lot of challenges; and one of them is a side of Issuers and their right to issue the badge. There are already lots of systems and online services using digital badges, ranking and levels to enhance user experience, participation rate, feedback and other processes and characteristics. But only a few of them are aware of potential and even existence of MOBI. Current situation therefore opens a space for Third-Party Issuers that could bridge this gap and immediately provide services as a temporary substitution. These day this could help to promote the idea of MOBI in general and push providers of "original" services to adopt MOBI. From a long term perspective, this could lead to phenomenon of duplicates (and multiples) which is not the same issue as already heavily discussed problem of so called "orphan badges" where issuers no longer provide information about the requirements for earning their badges. Multiples as such should be identified, merged, stored and presented in a specific way to avoid confusion and misinterpretation in the future. The process of searching for multiples should be able to distinguish between "original" badge (and Issuer) and third-party solution. As a consequence, Open Badge Infrastructure as such, personal MOBI Backpack and also users of MOBI in general has to take this possibility into consideration, be aware of this issue and be able to critically assess Issuers and their role in badge-creation process. This specific scenario will be presented and further investigated in this paper which is based on the case of BadgeBridge.net web service (created by the author of this paper) that enables transformation of Foursquare.com badges into MOBI.

The Process of Creating and Validating an Open Badge: The Impact of Metadata, Quality, and Endorsement Procedures

Stefanie Brunner, Birte Heidkamp, Petra Muckel, Sebastian Hartong, Oldenburg University, Germany

Background

Creating a badge poses challenges. The philosophy behind the Open Badge initiative is the development of an open and flexible ecosystem of badges. This arrangement has the benefit of offering everyone the possibility of demonstrating his or her own competencies that otherwise might have remained invisible, and getting them recognized by others. To reduce the danger of inflation, developers suggest implementing an endorsement process for the validation of the badges.

This paper questions this approach and presents research concerning the development and the validation process of an open badge:

- (1) We create a badge for the study preparation course, "Mathematics for Business Administration." (1)
- (2) We identify *technical requirements* (which code language to use and if professional support is needed for constructing the technical infrastructure of the badge), design an image, and find out how it is connected to the metadata.
- (3) We decide which competencies we want to represent with our badge by relying on the learning outcomes approach (2).
- (4) We present the badge to experts in the concerning field of competence (i.e. the ones the badge aims to represent). We conduct interviews to determine if the experts believe the features

and contents of the badge are of the intended value and if so, if they would consider providing endorsement.

Creating a badge

The Open Badge initiative, introduced by the Mozilla Foundation, aims at the development of an online ecosystem of badges that allows users to make informally and non-formally acquired competencies visible (3). Of course, the badge itself does not recognize the competencies; this part has to be fulfilled by the issuer, who awards a badge for specific activities or achievements. Basically, a badge consists of two parts: an image and a corresponding file that contains specific metadata. The data provide the badge-related competencies (or a link to a website that presents them) that must be demonstrated by the learner to earn it, as well as information such as the issuer, issuing date etc.

Thinking about badges and the underlying assumptions and conditions raises many questions, such as how the metadata is constructed; if a badge can be constructed independently or if assistance from a software engineer is necessary; if everybody who wants to can issue a badge (or if there are any restrictions); and how the endorsement approach actually works in comparison to the guidelines, which advise “allowing third parties [to] endorse or sign badges to indicate their support and vetting of those badges, and that additional information can be carried with the badge. For example, the Department of Education may endorse a series of badges from informal learning providers, giving those badges some extra weight and perceived value” (4). This statement leads us to the question how these third parties might evaluate the badges’ value and which criteria they would apply. The following example clarifies this problem even more precisely: “(I) imagine that MIT reviewed MOUSE’s technology skill badges and if they felt that the badges were high quality, MIT could sign the MOUSE badges, and thus endorse them” (5). Indeed, when does a company “feel” that badges are of high quality?

Furthermore, we wonder about the consequences for the learning process when learners know that they can earn badges by completing tasks, especially in regards to the concepts of intrinsic and extrinsic learning motivation. The effect of external rewards is impressively demonstrated by a study conducted by Deci (1985), who discovered that intrinsic motivation is reduced by offering monetary rewards (6). In addition to this effect, extrinsic motivation often corresponds with surface learning strategies like learning by heart (7). Does the badge ecosystem “just add another” new evaluation tool and risk becoming a necessity for everyone to earn to be able to compete within the labor market?

It is one thing to investigate these issues by researching the available literature, but some questions are still not easily answered, or at least not in a satisfying manner. Thus, we decided to develop our own badge to document the process and the steps we had to take, the experiences and observations we made concerning the concrete technical and content-related tasks, as well as the organizational and structural conditions and impacts. We identify the most important challenges that are part of the process of issuing a badge and the implications for further research. Finally, we interview experts in the fields of educational science and technologies to gain deeper insight regarding a prospective validation/endorsement process for badges.

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Blogging in the ePortfolio environment to enhance reflective practice: the Operating Department Practitioners’ experience

Barbara Anne Nicolls, Shane Roadnight, James Ellis, Buckinghamshire New University, UK

The Bucks 2-year full time Diploma in Higher Education – Operating Department Practice (Dip HE in ODP) curriculum was developed in the School of Advanced & Continuing Practice in collaboration with the local National Health Service (NHS) Trusts and the College of Operating

Department Practitioners (COPD) and adheres to the COPD's Curriculum Document 2008 as well as the UK Health Professions Council's (HPC) Standards of Education and Training and the Standards of Proficiency which advocate the principles of autonomous and accountable practice with practitioners exercising their own professional judgement. These are organizations and accrediting institutions which have defined learning outcomes for educating lifelong learners capable of reflective, integrative and evidence-based practices. The Bucks ODP curriculum is therefore, "projectional" outward facing to employers and the economy rather than introjectional facing inwards to the discipline. Therefore, the curriculum is designed to develop highly flexible, integrative and adaptive life-long learners who are capable of keeping pace with the rapidly changing demands of new knowledge, emerging work roles and changing work environments.

Driven by the HEFCE's e-learning strategy 2005-12 and the constructivist approach to education, the Bucks ODP curriculum like many other professional programmes within the UK higher education sector incorporates the Google Sites ePortfolio both to support learning and to provide evidence of the achievement of the specified professional standards. The ODP trainees own and use the ePortfolio for the collection of artefacts normally assignments and feedback and the related reflections and setting goals to improve not only transferable essential skills but the capacity to learn through re-processing knowledge, understanding and possibly, emotions. All of this is also underpinned by the exercise of professional judgement and ethical awareness. Thus, the purpose of the ePortfolio demonstrates the concept of reflective practitioner and its development into a reflective professional.

The Year 1 ODP reflective accounts in the ePortfolio are prescribed entries linked to the level 4 modules and are therefore, shared with the course team only. This prescribed nature of the construction and development of the ePortfolio process limit the use of critical thinking, sharing and collaboration, aspects that promote reflective practice in a student-owned ePortfolio environment; on the other hand, it allows the trainees to familiarise themselves with the technology and become confident in maintaining the ePortfolio space as required by the course albeit introjectional in the nature of the curriculum. In other words, the trainees "learn to write" reflectively within the boundaries of academic writing.

However, an element of the Year 2 CL505 Specialising in Peri operative Care module which requires the trainee ODPs to engage with a blog within the ePortfolio environment attempts to achieve the projectional curriculum aims by helping the trainees develop reflective thinking, assist with learning interaction in the transition from student to professional . The act of blogging or "writing to learn" is becoming a growing part of the public face of the health professions including physicians, nurses, operating department practitioners for the opportunity it avails to document their reflections on experiences relevant to their daily life and share them with their peers promoting reflective practice. The blog task supports constructivist learning theory because the content that the trainees create becomes part of the wider body of knowledge of peri-operative care. It also supports connectivism learning theory, which states that knowledge is formed from a diversity of opinions and ideas and continued facilitation of communication creates continual learning. This process of continuous learning is based around dialogue and collaborative activity with peers reflecting Kolb's experiential learning cycle keeping dialogue at the core.

The aim of this paper is to examine the extent to which "writing to learn" through blogging over a 2-week period compared with the "learning to write" through prescribed reflective writing on course specified topics in an ePortfolio environment contributed to developing reflective practitioners using learning theories of constructivism, connectivism, critical reflection and community of practice.

Prescribed reflections documented in the Google Sites ePortfolios as well as the content of the blogs will be analysed to examine the extent to which blogging contributed to reflective practice. Focus group interviews will be conducted and the responses from the six trainees and the course team will be thematically analysed for exploring their perceptions of the impact of blogging on developing reflective practice.

The findings will be shared at the ePIC2013 and together with any new information will also be utilised to inform course amendment for future use and manage a larger cohort of ODP trainees.

Using Moodle and Open Badges infrastructure to document students' knowledge and skills

Darko Grabar, Igor Balaban, Faculty of Organization and Informatics Varazdin, University of Zagreb, Croatia

Learning as we know it today can be experienced within educational institution as well as outside formal educational curriculum and all this as a part of lifelong learning. Accreditation and verification of knowledge acquired in such manner currently presents a general issue that has been recognized by Mozilla Foundation. They have started the Mozilla Open Badges project to provide solution for this problem. This Open Source project has been initiated due to necessity of recording non-formal and informal education results as well as the need for verification of artifacts or recognitions acquired through specially designated infrastructure (Mozilla Foundation). We can characterize this project being in its early beginnings but it has been recognized by a large number of organizations and project initiatives, esp. the ones who deal with e-learning.

This paper will demonstrate the usage of Open Badges in formal education using Learning Management System (LMS) Moodle. First Open Badges support for Moodle LMS is included in its latest version 2.5 that was released 15th of May 2013. Moodle is first LMS that officially supports Open Badges project and currently all standard functionalities provided by Open Badges Infrastructure are supported. Basic idea about this implementation is to define all badges that are available (in site or course level) and to define specific conditions that have to be met in order for badge to be awarded (manually given by the teacher, upon course completion, upon assignment completion, etc.). Furthermore, a basic set of functionalities needed to display badges under user profile is also supported. Considering the fact that the main idea of Open Badges initiative is aligned with ePortfolios and their usage, integration of Open Badges and Mahara ePortfolio platform is currently one of the highest priorities, as defined in Moodle Open Badges documentation.

First part of the paper demonstrates the need for having an infrastructure such as Open Badges in order to help users to record and show their accomplishments and in the same time enable others to verify this information.

In the second part of the paper we will show how Open Badges can be used within a course in Moodle LMS. First, general steps for issuing, earning and managing, and in the end for displaying a badge will be elaborated. After that the focus shall be put on Moodle and concrete example of badge creation. A badge evidencing different knowledge levels in computer literacy based on Open Source software will be created. It will be also shown how to manage badges in terms of badge details, different criteria for issuing badge, badge message options, etc. Once a badge has been created it shall be demonstrated how it can be awarded to different recipients. Awarding of the badges will be presented in two scenarios: manual assignment by teacher and automatic one. Each recipient can review the badges he or she earned in Moodle and can also view badges from other web sites using a backpack. Badges earned in Moodle can be sent to user's backpack using backpack connection, thus making backpack.openbadges.org a central badge repository for a single user.

Additionally, possible scenarios/use-cases and advantages of Mahara/Moodle integration related to Open Badges will be discussed.

S22B: Parallel Session

Time: Tuesday, 09/Jul/2013: 2:00pm - 3:30pm · *Location:* Thompson Room *Session Chair:* Patrick Craven

Blogs and Web 2.0 tools to open student teachers' eportfolios: student teachers' perceptions on eportfolio openness

Gemma Tur, Santos Urbina, University of the Balearic Islands, Spain

Context

There is a debate on the influence of technology on eportfolio processes. Zubizarreta (2009) does not see the influence of technology as he states that in spite of the new roles of the social media, "the fundamental process of learning portfolio development remains steadfast" (Zubizarreta, 2009, 64). On the other hand, Cambridge (2009, 2010) argues that technology has a key role in the construction of eportfolios, even becoming "part of its content, and shape the way readers use it to create meaning" (Cambridge, 2010, 188).

As for blogs, many authors have argued the optimal conditions of this tool for the construction of eportfolio processes. For instance, Chuang (2008) has demonstrated the enhancement of collaboration and students' motivation through blog-based eportfolios. Attwell (2012) has also considered the new processes introduced by social media into eportfolios.

Being aware of these wide and interesting debates, our eportfolio project is based on the idea that technology can influence eportfolio processes, and that open blogs and Web 2.0 tools can play key roles in eportfolio processes, such as networking.

The study and objectives

At the University of the Balearic Islands, at the Ibiza local branch, an eportfolio project is being implemented from the school year 2009-2010. The implementation of electronic portfolios has two main aims: documenting the construction of student teachers' identity during their time at University and introducing ICT in all our Teacher Education programmes.

The eportfolio platform is based on blogs and Web 2.0 tools for many reasons, one of them being openness. Open eportfolios were chosen to foster networking (Cambridge, 2009, 2010) for the first to steps of the construction of eportfolios (Barrett, 2009, 2010, 2011), which can be understood as the construction of the networked self (Cambridge, 2009, 2010) as Tur and Urbina have stated (2012). Also networking would be a way of empowering the classical collaboration portfolio process defined by Zubizarreta (2009).

The framework of the research is based on a qualitative methodology with the aim of understanding and interpreting the participants' perceptions of eportfolio openness. Therefore, the main research question is: what are the perceptions of participants of eportfolio openness? The research on the first two school years of the experimental implementation has highlighted some key issues. Beyond the affordances of openness of eportfolios, interviews with student teachers have brought to light some unforeseen disadvantages.

Summary of results

Data collected show a general positive attitude towards open eportfolios as student teachers value the opportunity of sharing: they admit having learnt from each other by accessing and reading colleagues' eportfolios. They have realised their major concern is about the use of language, spelling and the global coherence of their texts.

However, data collected have also highlighted some negative effects of open eportfolios. Student teachers have admitted having lived with anxiety the process of open documentation of their learning process. They have also pointed out the problems of the imbalance of traditional assessment at University and open collaboration processes.

Conclusions

Lots of disadvantages have arisen from our data collected about the openness of eportfolios. It is our profound belief that the use of open eportfolios is empowering eportfolio processes. Thus, the answer to this problem is not to use closed instead of open eportfolios but rather to better

control the negative effects of openness in assessment. We have learnt a great deal from these first steps in eportfolio implementation and its research. The lessons learnt will help us in the following: avoiding the contradictions that have arisen by having to share and being assessed at the same time; scaffolding portfolio processes that are open in student teachers' eportfolios to reduce students' anxiety.

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Support of students' higher level of conscious awareness of self-regulation of research activity in laboratory with ePortfolio and pattern language

Tomohiro Nabeta, Taisuke Ogawa, Mitsuru Ikeda, Japan Advanced Institute of Science and Technology, Japan

Goal of the study

Students in graduate school should progress two kinds of activities in the laboratory; the research activity and the learning process. For example, the students progress the research activity (e.g., developing software) as well as they progress their learning process (e.g., acquiring new programming skill). Although students are required to progress the both of the activities in the laboratories by their own initiative, students who can progress their activity by themselves sometimes have difficulty to consciously regulate their research activity and learning process. This difficulty comes from lack of conscious awareness of students' cognitive process of research and learning activities in laboratory. The present study aimed at giving the students support to improve their conscious awareness of self-regulation with ePortfolio and pattern language.

ePortfolio and pattern language

The authors developed ePortfolio and pattern language on basis of the self-regulation theory (SRT) assuming that the self-regulation of activities involves practice and knowledge. The SRT

posits that self-regulated practice functions if three components are in effects, namely planning of activity, processing of activity and evaluation of activity. The goal of the eportfolio is to improve the students' self-regulated practice. To this end, the ePortfolio was designed to make students consciously aware of their self-regulation practice by displaying the objectives about self-regulation practice such as outcome, learning goal and so on via ePortfolio.

While the SRT indicates students' conscious awareness of self-regulation enhances as experience of self-regulated practice increases, the theory emphasized critical role of knowledge of self-regulation on its conscious awareness. This is because knowledge of self-regulation leads reflection on their self-regulated practice, such as *"this program skill is too complex to acquire in two weeks. In this case, to my knowledge... I search for easier skill or knowledge but I cannot decide which one is basic for acquiring the target skill"*. Namely, this student conducted self-regulated practice and then s/he refers to the knowledge on self-regulation of learning process (e.g, you should begin with basic skills again if you cannot progress learning). Owing to the reference to the knowledge in their reflection, the students can plan next practice (e.g., discuss with supervisors). The pattern language is designed to give knowledge on self-regulation in some case of laboratory activity. The authors aimed at letting the students combine knowledge on self-regulation with self-regulated practice by showing pattern language to the students who conduct self-regulated practice with ePortfolio.

Experiment and results

The present experiment designed to investigate the effect of ePortfolio and pattern language on students' awareness of self-regulation in the laboratory. The students participated to the experiment during two weeks. In the experiment students referred to the pattern language on self-regulation as they actually conducting self-regulation practice in the laboratory. The results showed that students who conduct self-regulation of research activity enhanced conscious awareness of their self-regulation. The result shows the greater score of knowledge on self-regulation than before the experiment. However, after the two weeks experiment, the student rated difficulty of self-regulation higher than before they took the experiment. Together with these results, the students enhanced conscious awareness of self-regulation by the experience of self-regulated activity in laboratory with ePortfolio and pattern language.

Exploring the Roles of Digital Teaching Portfolio in Higher Education

Cher Ping Lim, John Chi-Kin Lee, Lixun Wang, Yeung Chung Lee, Ricci Wai-Tsz Fong, The Hong Kong Institute of Education, Hong Kong S.A.R., China

Digital teaching portfolios offer a dynamic platform for educators to document and reflect upon their scholarship of teaching and professional development ((Baume & Yorke, 2002; De Rijdt, Tiquet, Dochy, & Devolder, 2006; Klenowski, Askew, & Carnell, 2006). A teaching portfolio may be defined as a structured collection of evidence of a teacher's work across diverse contexts and over time and framed by deliberation and reflective writing (Shulman, 1998). Smith and Tillema (2001) identify two main uses of a teaching portfolio: (1) self-assess and self-evaluate about individuals' teaching practices and strategies for developmental purposes; and (2) promote a culture of sharing of resources and strategies in teaching practices. Through engaging in quality dialogues and sharing resources with colleagues, users of digital teaching portfolios can benefit from the potential of collective capacity building. These personal and professional interactions facilitate individuals, departments and faculties to map out the way forward.

With a vision to build a professional learning community at a higher education institution in Hong Kong, this paper highlights the milestones of promoting the use of digital teaching portfolio in the institution and showcases examples of how the teaching portfolios can contribute to sustainable growth in professional capacities and foster knowledge exchange in the community of practice. The paper will close with an in-depth discussion to address the issues and concerns related to using digital teaching portfolios. Based on two case studies in the Institution, the audience would gain a better understanding of the potentials and benefits of making digital teaching portfolios a facilitating tool for pursuing professional and career endeavours.

Taken together, using digital teaching portfolios may benefit colleagues, particularly academics, teaching staff, graduate students and aspiring higher education professionals on many fronts.

- It enables colleagues to critically reflect upon their pedagogies and formulate plans for future

professional development.

- It provides opportunities to engage in constructive dialogues regardless of time and location.
- It facilitates colleagues to collect evidence of effective teaching and learning.
- It offers a platform to showcase one's work and achievement for formative and summative purposes.

Although the higher education professionals who have used teaching portfolio agreed that it benefitted them in transforming or fine-tuning their teaching practices to enhance student learning outcomes, there are challenges that included (1) time constraint; (2) motivation; and (3) linkage to professional development. Therefore, if teaching portfolio is to be implemented within the whole institution, it would depend on the time and support available for staff to develop their own teaching portfolio, and whether it is 'goal-oriented' and 'outcome-oriented' for both short-term and long-term institutional and individual goals.

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S22C: Policies and institutional deployments

Time: Tuesday, 09/Jul/2013: 2:00pm - 3:30pm · *Location:* Mountbatten Room *Session Chair:* Lise Agerbaek

Open practice in support of wide-scale institutional e-Portfolio adoption

Gordon Joyes, Kirstie Coolin, Judith Wayte, University of Nottingham, UK

This paper presents case study research related to the University of Nottingham e-Portfolio implementation strategy that was informed by the guidance provided within the JISC e-Portfolio Implementation Toolkit (JISC, 2012). Key features of the strategy are the carefully staged 'middle through' community of practice approach and endorsement by senior management that uses further development of the open Toolkit itself to showcase and share practice.

The benefits surrounding the learner-centred nature of e-Portfolio use are well documented (JISC, 2008). However implementation can present challenges particularly across whole programmes or institutions (Joyes et al, 2010). This is in part because of the varied contexts and purposes of use which means that any expertise in practice that is developed in one context is likely to only be relevant to those who are considering use in similar contexts and for similar purposes. Yet there are instances of wide-scale e-Portfolio implementation within Higher Education and Colleges and the e-Portfolio Implementation Toolkit was developed between 2009-11 using a wiki to engage with 19 Universities/Colleges from the UK, Australia and New Zealand in order to share practice through a rich resource of case study exemplars and provide guidance for implementation for both practitioners and senior managers.

Like all of the Toolkit case studies there was existing practice in using portfolios and e-Portfolios in some contexts within the University of Nottingham and there existed a central unit The Centre for International e-Portfolio Development (ClePD) with the expertise to technically manage the implementation and well informed about implementation issues. The drivers for a strategic implementation originated from the interest shown by some departments through 2009-11 to embed e-Portfolio work within programmes. This aligned with key strategic teaching and learning initiatives within the University that focussed on feedback as well as the role of the tutor and in 2011 senior management support was gained by the ClePD for the staged implementation suggested in the Toolkit guidance. Mahara was chosen as the e-Portfolio tool, partly due to existing experience of using this as well as the open source culture that was developing within Information Services and across the University, for example, Moodle was being introduced from 2010 and Xerte and U-Now are University initiatives.

A one year pilot stage in 12 University wide contexts, including the campus in Malaysia, and involving 1500 users began in September 2012 with the intention of a wider roll out across the University in September 2013. The ClePD provided support for individual implementations drawing on resources in the Toolkit and strategies for establishing the Community of Practice were established, such as a community blog, face-to-face community meetings, individual interviews by an advisor from Education to discuss progress and issues arising leading to the development of rich case studies in the Toolkit.

Research into the roles of change agents to understand how best to support them is central to the current pilot stage in the implementation strategy. There is wide diversity in these roles and the status of the practitioners engaged in supporting implementation who range from administrators to professors and this presents challenges in relation to the ways they perceive themselves as 'expert' and are perceived by others and are able to offer advice to support plans for embedding practice across the University. The session will further explore the approach to empowering practitioners and their changing identities as change agents to support wider engagement of learner-centred pedagogies across the University. This is critical to the next stage of implementation - the move to embedding, deepening and extending practice across the University.

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Opening up Large Scale Change Initiatives: Calling on Faculty Perspectives to Develop a Framework for Organization-Wide ePortfolio Implementation

Jennifer M. Brill, Virginia Tech, USA

Background and Objectives

The use of electronic portfolios (ePortfolios) to support learning, assessment, and professional development across the university has increased in recent years. However, those who are instrumental to successful adoption and implementation, higher education faculty, are not often invited in as active participants in an open innovation process. In addition, while student perspectives of ePortfolio adoption are well represented in the literature, faculty perspectives are not. The goal of this research study was to investigate faculty (and, to a lesser extent, administrator) perspectives regarding the university-wide implementation of an ePortfolio initiative in order to develop a framework for implementation that integrates the voice of faculty as well as systemic change theory. In regards to the ePic conference, this work is intended as a long research paper; supports the Policies track in that it addresses innovation management across an organization; and considers the open infrastructure and open learning themes in trying to expand faculty participation in and ownership of higher education change.

The focus of this study, a large research university in the United States, began a university-wide initiative to implement ePortfolios in 2002. Several credible strategies and resources were considered to support the initiative's success including: strategic alignment of the initiative to department, college, and institutional goals; partnerships with key stakeholders; pilot-testing; faculty development opportunities; and the use of the Concerns-Based Adoption Model (CBAM) for change and Ely's eight conditions of change implementation. However, it was unknown the extent to which these elements were systematically and successfully woven throughout the initiative. Anecdotal data suggested a myriad of challenges with long-term implementation, yet empirical evidence to guide improvements was not available.

Methodology

This study employed a development research methodology to first investigate faculty and administrator perspectives regarding the ePortfolio innovation process and second, develop a framework that could be used by university community members to improve upon an ongoing initiative or enact a new one. As a third and final step, the resulting framework was evaluated by an expert in higher education change initiatives for recommendations regarding framework revisions. Diffusion of innovation theory (DOI), which seeks to understand the social process that community members engage in to adopt or reject an innovation, was relied on as the broad conceptual framework for guiding all aspects of the study's design including instrument development, data collection and analysis, framework development, and framework review and revision. Faculty and administrator perspectives were investigated through an online survey of all ePortfolio initiative participants (both adopters and rejecters) and follow-up interviews of a select cross-section of survey respondents.

Summary of Results

Study findings have resulted in an understanding of faculty and administrator perspectives as participants in an ongoing university-wide ePortfolio implementation that, in light of DOI theory, have been used to construct a framework that can be called upon by higher education community members engaged in such an initiative. The framework itself consists of six essential elements: awareness, defined as when faculty become aware of ePortfolios through varied avenues; motivation, when faculty understand and appreciate the intrinsic and extrinsic incentives for using ePortfolios; commitment, when faculty make the decision to integrate ePortfolios; resources, when faculty seek out resources needed for ePortfolio implementation; leadership, when faculty gain leadership support for sustained ePortfolio use; and evaluation, when faculty participate in ePortfolio evaluation to inform the next iteration. In the paper

presentation, each framework element will be described in detail in terms of intent, activities, and operational units necessary to enact the element successfully in a real-world context.

Conclusion

A university-wide implementation of ePortfolios is a large, complex process requiring the long-term and thoughtful coordination of infrastructure, resources, and people. This study offers insight into faculty and administrator perspectives regarding the process as well as a framework for enhancing it. An organization choosing to use the framework to guide implementation can benefit in a number of ways. The framework opens up the innovation process, making it transparent to all stakeholders, thus guiding open communication and decision-making across the organization. Rather than feeling isolated and guessing at next steps, faculty remain vested in and connected to the initiative and are better prepared to identify and call on the most important support resources at critical and appropriate times. By working within an open implementation process, faculty are less distracted by unexpected innovation stumbling blocks and better able to focus on ePortfolio as a vital means for supporting student learning, assessment, and professional development.

The Required Functions and Implementation Principles of the University-wide ePortfolio System linked to the Curriculum Map

Hiroshi Nakano, Riken Homma, Ryuichi Matsuba, Shin-Ichiro Kubota, Takayuki Nagai, Toshihiro Kita, Tsuyoshi Usagawa, Kumamoto University, Japan

Background

We developed a competency-based learning portfolio for a graduate school program (Miyazaki et al. 2009 and Matsuba et al. 2011). The program is the online graduate program for e-learning specialists training and has clear competencies expected of program graduates (Suzuki 2009 and GSIS website 2013). The web-based e-portfolio system was designed by the rigorous competencies and the curriculum, and was implemented based on the OSP included in the Sakai CLE.

We started an university-wide eportfolio project since 2009 for outcome-based bachelors degree program (Smith et al. 2012). The eportfolio system was developed based on the above-mentioned system. The students' earned credits categorized into the major seven outcomes are shown with the evidences from LMS and the grades from Student Information System (SIS). Unlike the above system, this eportfolio system should cooperate not only with LMS but also with SIS and each program has different curriculum map and sub-categories of outcomes. The system is also expected roles of the accreditation and the institutional research. The specifications are being updated and improved frequently in such a beginning stage. It is not so easy to customize OSP in order to answer many requests.

We therefore decided to change our developing policy and depart from OSP-based implementation to home-made one at least while such an unstable situation. The home-made system can be designed freely and can respond flexibly and quickly to requests, but we must develop everything by ourselves and there are problems of compatibility, interoperability and continuity. For reducing these problems, we defined required functions and implementation principles.

Objectives

We defined required functions and implementation principles of the university-wide eportfolio system linked to the curriculum map in order to design flexibly and to reduce problems of the home-made development. The system is specialized for the university-wide portfolio and we provide Mahara working with the campus Single Sign-On (SSO) for general use.

Method

The required functions for our university-wide portfolio were discussed and defined from several perspectives, e.g. evidences, syllabuses, grades of courses, categorized outcomes, grade point average (GPA) for each categories and all subjects, curriculum map of belonging program and so on.

As the implementation principles, we defined several developing policies. The applications are being implemented as client rich web applications with web application program interface (API) working with campus SSO.

We made several technical improvement to increase generality during the development, e.g. changing the web api implementation from remote procedure call (RPC) to representational state transfer (REST) as web API, and changing the internationalization procedure from server-side to client-side.

Results

We have indicated possibility to solve problems of the home-made developing portfolio. Using the web API by Ajax technology implemented by jQuery as a client-rich application, the data communication interface is defined clearly and it is not frequently necessary to touch server-side programs to develop or modify the system. The API can be called from the other systems. Such flexibility has an advantage in cooperating or integrating with some other standard systems. Using jQuery and HTML5 provided additional advantage in intelligent visualizations of tables and graphs by open-source libraries developed for them.

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S22D: Parallel Session

Time: Tuesday, 09/Jul/2013: 2:00pm - 3:30pm · *Location:* Nuffield Room *Session Chair:* Don Presant

Joining the dots and colouring in the spaces: Facilitating the acquisition of a social work professional identity with e-portfolio

Jo Mensinga, Tracey Dickinson, James Cook University, Australia

Background / context

Field placements in social work education are considered pivotal in providing students with the opportunity to integrate what they have learnt in the classroom with what can be achieved in practice but, maybe more importantly, they also create a liminal space in which the student can explore, acquire and demonstrate a professionally recognized identity. In the Australian context, the professional qualifying body the Australian Association of Social Workers (AASW) states that students wishing to become social workers must complete two field placements totalling 140 days during the final 2 years of their degree program and that each placement experience must be given the status of a full academic subject (AASW, 2010). As such, developing a tool that can both facilitate and best assess a student's capacity to meet the goals of the field placement experience can be challenging. This is especially so because students are always placed in diverse practice settings that are also facilitated by individual supervisors who have different levels of experience and understandings of what a pass grade may entail.

Objectives / what was the problem?

Until 2013 James Cook University (JCU) Social Work Field Education programme had used a number of different paper-based tools to assess students' capacity to meet the AASW's expectations. Feedback on the most recent of these tools revealed that while comprehensive, its size and reliance on text meant that it failed to support and document the students' learning and development to become a competent professional. Other feedback focused on the design of the assessment tool itself and noted how it encouraged a linear learning approach which often limited and/or misrepresented what actually occurred in the practice setting and failed to capture the way the placement experience contributed to the formation of a professional identity. In response, an e-portfolio assessment tool that provided a 'space' where students could collect, reflect, interact with and revisit learning 'artefacts' while on placement was proposed.

Summary of results / how was it addressed

With the support of a teaching and learning grant received in 2012 and in consultation with key stakeholders (students, field educators and liaison and university staff) an e-portfolio tool was developed and is in the process of being trialled and evaluated in 2013. Drawing on the expected professional and practice standards required by the accrediting professional body (AASW) and those graduate attributes required by the university, the tool consists of a visual diagram to illustrate the foundational areas in which students need to develop and collect experiential evidence while in the practice setting and a variety of templates to facilitate students' achievement and demonstration of their learning. The foundational areas include the identification and understanding of: (1) the practice settings' context, history and philosophy, (2) the theoretical and practice knowledge needed to work as a social worker in the setting, (3) the values and ethics that guide practice, (4) the methods and processes of social work practice drawn upon, (5) the specific skills needed to work within the setting, and finally (6) the impact that the student's own personality and characteristics could have on the setting and the influence of the setting on their personal and professional identity.

Summary of results / how was it addressed

Although still a work in progress, the e-portfolio tool has provided students with an opportunity to think in a less linear fashion and brought with it the recognition of the 'messiness' that can accompany the formation of a professional identity while in the practice setting. It is becoming clear that because of the inherent flexibility of the tool that there may be a need for future training for all stakeholders to better understand the ways in which the tool can be used to facilitate learning and the assessment process. Moreover, we as developers have also recognised the

need to introduce the model earlier in the students' education so that they are more than just familiar with the foundational areas identified in the e-portfolio. While students in the first year of the degree are introduced to the visual diagram that underpins the e-portfolio model, familiarity with the templates could scaffold their understanding and future use of the tool in the practice setting.

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Achieving “High-Po” Know-How: The Role of ePortfolio’s and Analytics in the Employee Lifecycle Management of Sales Executives

Bryan Donald Eldridge, Desire2Learn Ltd, USA

Introduction

This paper will discuss how a well-strategized ePortfolio approach utilized in tandem with a sound analytics strategy can be an effective means to evaluate and refine the key competencies associated with high-performing sales executives. Such an approach allows organizations to utilize the artifacts within high-performers' ePortfolio's to predict the success of early-tenure sales executives, provide tailored support and remediation for existing sub-par performers, and better select future candidates in corporate sales organizations. Furthermore, it will illuminate how the systematic evaluation of the ePortfolio collections of high-performers yields potentially valuable contributions to both an organization's IP and its support of the entirety of the sales executive employee lifecycle.

Background

Traditional means of identifying and tracking competency development for high-performing sales executives have often fallen short. The inadequacy is primarily due to the highly-quantitative and procedural focus of tracking and evaluating sales executives' performance. Results of this approach have yielded strong indicators of *who* is performing at a high-level but typically not *why* high-producers are performing so well. Research has shown that behavioral competencies tend to be much more accurate indicators and predictors of high-producers than procedural competencies but few standards and best practices have been available to employ practical methods to track and evaluate these behavioral competencies. Not only do these behavioral competencies indicate the potential quality of execution in common areas of sales, service, and advisory strategies but strong behavioral competencies have also been shown to strongly benefit in other areas such as customer and brand loyalty.

Methods

Organizational and Classification Considerations for ePortfolio's

The first step of constructing the strategy is selecting the appropriate classification taxonomies for organizing artifacts within the sales executives' ePortfolio collections. Two common taxonomies to consider at the beginning of this exercise are the proficiency levels across the targeted behavioral competencies and the second taxonomy to consider should mirror the individual employees broader KPIs measured for their periodic evaluation. Sample artifact types typically include structured client success case studies, successful sales strategies based on client-profiling strategies, audio and video captures of client interactions and other evidential artifacts of behavioral proficiency in the targeted areas. Publishing annotated versions of these artifacts to an LOR (learning object repository) memorializes the content as valuable corporate IP and facilitates the content being incorporated into training and performance support offerings for early tenure sales executives and other sales executives requiring support or remediation. Further analysis of artifacts within the ePortfolio could influence the constructs and contents within the enterprise's competency-based role definitions and contribute to the continuous improvement processes around employee selection processes. This technique is easily

extensible into the utilization of ePortfolio's to a cadre of other key roles within the enterprise.

Creating a Preliminary Analytics Strategy

The second step in this process is building the analytics strategy to cull through and evaluate the ePortfolio collections with the objective of gleaning the data and resulting evidence necessary to predict which existing and future sales executives are high-potential performers. To do this with any expectations of predictive validity, two tasks must first be completed: 1. the creation of a data model, with underlying assumptions, that accurately describes the relationship between explanatory variables and predicted variables associated with a high-performer's behavioral competencies and 2. the development of Rubrics and other evaluation tools to classify and score the evidence of behavioral proficiencies provided by artifacts within individual ePortfolio collections to yield meaningful explanatory variables.

Conclusions and Extensions

To achieve a true transformation within the corporate enterprise, it is critical to understand how to select, evaluate, and remediate employees within a given role. Understanding why existing high-performers within a role are successful via the analysis of their behavioral competencies is paramount to this effort. Through the careful inspection of how this was achieved in the evaluation of high-performing sales executives, lessons can be learned to apply the same techniques to any number of job families and roles across the corporate enterprise.

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E-Portfolio models using Sakai: the experience in the University of Murcia.

Paz Prendes Espinosa, Ana Sabina Del Rey Carrión, University of Murcia, Spain

This presentation is focused on the different uses of e-portfolio in the University of Murcia. We'll explain the uses of different e-portfolios in our university and the telematic tools adapted to them. This project is developed with the support of the Vicepresident of Studies and the Vicepresident of Economy and Infrastructures.

ABOUT E-PORTFOLIO

We understand E-portfolio as an educational strategy based on the use of a telematic tool where students can evidence their work, tasks and learning (the perspective of an activity register tool), and moreover they can interactuate with teachers who can provide a feed-back over all this information (an online assessment management system). We base these approaches in Barret (2004) and in our experiences with e-portfolio (Prendes & Sánchez, 2008). We have also reviewed other interesting works (BECTA, 2007; Cebrián, 2011; Fimia & Moreno, 2012).

WHAT WAS OUR PROBLEM?

A lot of teachers in our university are using e-portfolios with different telematic tools, but they were waiting for an institutional solution connected to base data of students.

CONTEXT OF THE EXPERIENCE

Three years ago we changed our LMS (until this moment we had used our own developed tool) forward an alternative based on open software: Sakai. Two years ago we have been working to

adapt this new tool Sakai to the needs and particularities of our context. We can briefly describe our university explaining that we are over 2000 teachers, more than 30000 students and over 8000 different subjects in our grade and posgraduate studies.

The project "Aula Virtual" based on Sakai has promote the idea that e-portfolio can resolve a lot of pedagogical problems in relation with the continuous evaluation and the registration of information generated by students in their autonomous work. We organized the work creating a new group integrated by technical staff and educational innovation staff. This working group has been the responsible to decide the best solution about each type of e-portfolio and to adapt the tools in Sakai.

MODELS OF E-PORTFOLIO

We have designed three different models:

- a) for continuous assessment;
- b) for external practices; and
- c) for the registration of all activities developed by each student in our new postgraduate programs (it's designed but not tested).

Currently we're working on "a" and "b" options based on the concepts defined by Barret (2004). So we understand the portfolio for continuous assessment as a classic e-portfolio, however the model for external practices is an online assessment management system.

Our third proposal is an e-portfolio to facilitate the organization of information about all the activity of the students in a phd program in order to the final certification, so really it's not really a pedagogical approach, it's an administrative model of e-portfolio where both, students and teachers, can register the useful information requested by the institution. We're still working on this model and developing the tool, so it hasn't been tested.

TELEMATIC TOOLS USED

For continuous assessment our practical experience has been with different free software to design blogs. Now we are using the tool "clog" in Sakai. It's a blog tool and at the same time it permits to have a complete view of all new posts in one introductory page.

For external practices we have designed a site inside Sakai with structure of e-portfolio. In this site we have defined different roles: administrator, coordinator, academic tutor, external tutor and student. Each role has different permissions.

PARTICIPANTS IN TESTS

The first e-portfolio model has been tested with Education Sciences students and the second model has been designed for Farmacy Students and they will use it next course. The third model for postgraduate students will be developed and tested next year.

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S23A: Parallel Session

Time: Tuesday, 09/Jul/2013: 4:00pm - 5:00pm · *Location:* Council Chamber *Session Chair:* Lise Agerbaek

How to get ready for E-Portfolios at HEIs – strategy and process model

Hans Pongratz, Stephan Graf, Technische Universität München (TUM), Germany

E-Portfolios are the logical consequence of the digitalization of our life. They are human centered and work outcomes-based. In theory they offer great opportunities for learners and for institutions, e.g. to integrate formal and informal learning experiences or to collect all learning achievements in the context of lifelong learning. Yet, E-Portfolios are not ubiquitous used and present lots of challenges for learners and organizations. Over the past years E-Portfolio maturity models were presented, but lasting E-Portfolio strategy and process models for HEIs were neglected.

This paper will discuss the preconditions and requirements for a sustainable implementation and procession of E-Portfolios at higher education institutions (HEIs) based on a process model approach. The approach is adaptable to organizations and companies. The suggested model considers both so called “Faces of E-Portfolios” [1]: The portfolio used as workspace with the focus on reflection & learning and the portfolio as showcase-tool with focus on accountability & display. New challenges for HEIs like the consideration of Massive Open Online Courses (MOOCs) can be integrated straight forward.

The process model was developed on the basis of a case study at TUM, where in 2005 a central E-Learning platform (LMS) was implemented and got 2010 changed from CLIX to Moodle. In the following Moodle got step-wise integrated to the central campus management system (CMS) TUMonline. Lecturers can choose e.g. if their course data and participants should be transferred from the CMS to Moodle automatically. A pilot project to implement Mahara as central E-Portfolio System at TUM got stopped due to the missing holistic approach and needed prerequisite conditions after a short time period.

A good example for a needed precondition is the ICT-modeled triad of modules, courses and tests. At TUM an obligatory standard form for describing modules and the supposed learning outcome was released. This form contains e.g. details about the workload, achievements and assessments, person responsible, descriptive information, courses and assignment of module to program(s). Module compendiums for each study course and faculty are provided by TUMonline. This process was constructed after lots of research and discussion with the faculties.

A consulting staff unit was founded to support the faculties on the job of creating and keeping the module descriptions up to date. Guidelines for describing the learning outcome with concrete do's and don'ts, taxonomies and keywords help the lecturers with the goal of a “constructive alignment” between learning outcome, learning activities and assessment methods.

An elaborate system has been established for the interaction of modules, courses and tests, which had a long maturation time. A likewise approach must be establish as a process model for E-Portfolios and sustainable lifelong learning. We have developed a proposal for this based on the case study.

Central findings of the case study are: Intuitional long-term strategy has to consider E-Portfolios with a strong linkage to a step-wise rollout. To be successful faculties and central administration have to be involved. The definition and communication of the clarity of purpose is crucial. A less important factor is the selection of the software tool, but the seamless & purposeful integration into the processes and software systems of the institution is essential.

Further, important aspects are questions like: access policy to the E-Portfolio system for former students & alumni, continuous technical support and guidance for student and staff and the definition of the wanted level of interchangeability with other systems.

Case studies of using ePortfolios: from classroom to Career development planning

Ana Coric Samardzija, Igor Balaban, Faculty of Organization and Informatics Varazdin, University of Zagreb, Croatia

This paper illustrates the pedagogical values of electronic portfolios to support the lifelong learning concept. ePortfolio because of its flexibility and adaptability to different contexts, challenges the traditional educational system. It supports environment where learners and their learning process are in the centre of attention and they are responsible for its own progress through time. Some of common applications ePortfolio system is as a collection of created artefacts and reflections that are outcome of learning process. Created collection of learners' work is further used as basis for assessment of learners' progress. Second common application is as showcase of learners' achievements, skills, experiences and competencies. The use of ePortfolio forces learner's to become self-aware of their skills, values, knowledge, strengths, weaknesses and interests. EPortfolio system further enables learners to define their potential career orientation and along with that plan the steps of future education and skills development. In other words, it enables learners to better manage their personal growth and development. The future challenge is to encourage learners to recognize and extend the value of ePortfolio outside borders of formal education to support their growth personally and professionally. Therefore there is much potential for the use of ePortfolio, but its actual usability depends on how it will be used.

In this paper we will present several cases and lessons learned of using ePortfolio at the Faculty of Organization and Informatics, University of Zagreb, Croatia in order to help other institutions in similar undertakings. First we will show some cases of in-class usage where we teach students how to use self-reflection and other possibilities for different types of ePortfolio usage. This is mostly done at the undergraduate level of study at the Faculty of Organization and Informatics. EPortfolio reveals great potential and offers students range of functionalities to record, plan and improve their professional skills to help them in preparation for labour market. In the next case study we will present ePortfolio usage at the level of Ph.D. study where it is used to monitor Ph.D. students, their work, plans, progress, as well as to help supervisors to communicate with their Ph.D. candidates. The idea was to encourage doctoral students in balanced planning of careers in the field of scientific research and expertise. To help those students to better manage their portfolio, guide for doctoral portfolio structure was developed. Further, this doctoral portfolio offers Ph.D. students the possibility of (self-) presentation not just to teachers, supervisors and mentor(s), but also to other stakeholders such as potential employers, project managers, colleagues, etc. Finally, we will provide a comprehensive case study of using ePortfolio to monitor the work of researchers and teaching assistants, and also to enable supervisors with and insight into the work of their subordinates, all this being a part of Faculty's quality management. We will show elements for monitoring that also enable young employees to develop their CDP (Career Development Plan), thus enabling the Faculty to recognize skills of its employees and manage people accordingly, as a part of Human Resource Management. While the demands for employability in higher education are raising the thresholds, career management, even in this type of work is becoming more necessary in order to increase the chance for further employability.

S23B: Workshop

Time: Tuesday, 09/Jul/2013: 4:00pm - 5:00pm · Location: Thompson Room

Te Ariki- Collaborative Critique using evidence of practice

Gary Punler, Te ARIKI Trust, New Zealand

Professional conversations and reflective critique helps teachers and school leaders establish meaning and authenticate purpose. The Ariki Project provides both a context and a set of protocols, supported by appropriate resources for ensuring that high quality thinking is applied to the work that educators do. A reworked Quality Learning Circles methodology both within schools and across schools is the means of progressing this goal. The prime focus for the ensuing reflective critique is evidence of their practice.

At the centre of attention are the interactions that the various participants engage in as they seek to achieve the school goals. The sequence begins in the individual school and then following the same protocols moves to a leaders' forum where principals demonstrate examples of their interactions, explore the implications and consequences for teachers and students, consider other options and views and make choices based on the notion of 'worthwhile activities'.

There is a coherence and strong sense of professionalism contained in all these procedures which can be collected and catalogued in the concept map provided through an online e portfolio.

Provision is also made for inter-school visiting matching the internal classroom visiting to validate and extend the critical discussions. Many of the procedures parallel those cited and studied in overseas literature but the manner in which these elements are assembled and operationalised in this particular project is thought to be unique.

Four major values are held for the Ariki Project:

1. Collegial obligations-teachers are professionals and schools function as teams;
2. Reflective inquiry and discourse-is the core of professional development;
3. Evidenced based/informed professional practice-spreads across all school activity ;
4. and Professional discretion-multiple ways of thinking and many ways of achieving the same aim is encouraged and supported.

In this workshop participants will operate the Te ARIKI e portfolio Sandpit (playground) that is used for inservice training in the Te Ariki programme. Participants will enter evidence of practice under one of the ARIKi interaction dimensions and will reflect on that evidence. In addition they will also find out how to invite peers to comment on their evidence using a reflective questioning taxonomy.

The session will conclude with using the evidence submitted in the online web

diary(e portfolio) in a face to face Quality Learning Circle session. In this forum four participants listen to the evidence presented and then via the reflective questioning taxonomy begin to 'Dig' deeper into to the evidence . The intent is not make a

judgement about it but to learn from it. By default the presenter also begins

to turn over the questions being asked and the answer they have heard themselves supply. Time for them to reflect and act. The question taxonomy is categorised under the four headings of 'meaning- e.g What does this mean for your students? . " Lateral links-e.g. Is there another way this could be done? , 'data gathering- e.g.what data/records do you keep?' and 'validation- how do you know this is workingfor your students?."

Principals and teachers who engage in the type of processes advocated here ultimately contribute to their school collectively and individually to become a highly effective and successful learning community where the focus is on the interactions that happen within and across in school settings on daily basis to link principal intent for learning with teacher implementation of those intentions leading to how children ultimately have their learning enhanced as a result of the principal and teacher interaction. Participants to this workshop will

need to bring internet ready devices

S23C: Parallel Session

Time: Tuesday, 09/Jul/2013: 4:00pm - 5:00pm · *Location:* Mountbatten Room *Session Chair:* Serge Ravet

Competence structure standard to inject new motivation for portfolios

Simon Grant, CETIS, University of Bolton, UK

Even the most enthusiastic of the portfolio community would probably admit to some disappointment over the last 10 years, as the uptake of portfolio tools has been less than one could have hoped for, and motivated mainly by authorities requiring people to use them. Could this change? Social networking tools have found their mainstream niche, so why not portfolio tools? I suggest here that there is the real possibility of a new enthusiasm, and that it might benefit from a standards project I have been working on, InLOC -- "Integrating Learning Outcomes and Competences", which finally provides a simple and powerful standard way of representing and publishing structures or frameworks of these things as XML or linked data on the open web.

People are likely to explore a tool when it is seen as offering useful help with something that they really want or need. Social networking sites make it easier to have everyday communication with friends, including sharing plans, ideas, gossip: all basic social needs. Dating sites help find partners: a fundamental human need. Recruitment sites help people with the sometimes pressing economic need to find a job, or conversely, to find a suitable employee. And yet portfolio tools do not seem to have made significant inroads into these areas. In particular, for recruitment, employers cannot practically use portfolios as a primary means of gathering information about potential employees. CVs are difficult enough, but the richer, more time-consuming media in portfolios can only practically be used for a short list of candidates.

But what if there were a method by which employers could search, accurately and effectively, for the knowledge, the skills, the competence, the abilities that they really wanted? There are still several obstacles in the way of realising this vision practically, but what follows describes a possible solution for one of these obstacles, with InLOC filling the void, to facilitate the publication of frameworks of learning outcomes, competence, or anything related -- whatever useful things people learn, whatever people want in terms of the useful abilities or qualities of other people.

Imagine first that several authorities, for their own reasons, decide to publish their frameworks in InLOC format. The fact that these are publicly available may persuade others to reuse components from them, transparently. Then, tool builders start to build in compatibility with InLOC. Some enterprising tools emerge, allowing employers to describe job opportunities in terms of published skills and competences, rather than relying on full qualifications. Employers, particularly the majority employers -- SMEs -- start to use these tools. Perhaps the recruitment web sites get drawn in, and provide a superior service for those employers who specify their job requirements using these tools, using identifiers from frameworks that are published in InLOC format. Job seekers use these web sites, perhaps unaware at first that they are benefiting from a new technology.

Or, perhaps, the established recruitment sites ignore the new ideas, as they disrupt their comfortable business models. Many portfolio tools already have the capability of referring to personal abilities using URIs, and those tools could then be adapted so that they fit in seamlessly with some new, more direct approach for employers to find job-seekers, and vice versa. Could portfolio tool providers start to offer their own recruitment services, perhaps? Or could new players provide innovative services here?

A natural side benefit of using uniquely identifying URIs is that there are no language issues. The requirements that are specified by employers can be easily understood across Europe, or to wherever the labour market turns out to extend. InLOC easily and natively allows multilingual descriptions at any level.

Meanwhile, using those same URI identifiers, courses of learning, education or training can specify their intended outcomes, so that learners have a much more transparent view of which courses may prepare them for which jobs or opportunities. Similarly, learning resources of all

kinds can be helpfully tagged with the same identifiers, to help learners find helpful resources -- many of them, free.

It's not a new vision. But attempts to implement the vision have fallen at the first hurdle, as there have been no published identifiers to act as the vocabulary for putting together different people's abilities with the requirements of various opportunities. InLOC provides a simple and coherent way to represent the frameworks which contain all the definitions or descriptions of the abilities or qualities that people want. It's now just up to the framework owners (many supposedly acting in the public interest) to publish in that way.

So there is some reason now to hope for a new dawn for learning outcomes, competences, and portfolio tools growing in adoption together.

ePOP: electronical, personality orientated portfolio – using mobile apps to develop eportfolios & competence maps based upon educational standards

Andreas Riepl, Center for COoperative Open Learning - Federal Ministry of Education of Austria

ePOP – the concept

ePOP means “electronical personality orientated portfolio”. The electronical personality oriented portfolio combines tasks for self-instructed learning with educational standards.

Educational standards define which outcomes/competencies students should reach within a certain subject/field. A mentor initiates work with competencies by introducing eportfolio work to the student thereby documenting progress that a student makes towards reaching certain competencies.

Transporting this thought towards mobile phones and tablets enables users to develop their portfolios by creating artefacts with all options (apps) that a smartphone offers. A visualized competence map is developed for each competence-field (=subject). Tasks that are offered to the eportfolio-user are associated with educational standards in the data-model thereby operationalizing and visualizing the assessment of competencies.

The focus is set to using different apps that the user works with commonly on an individual smartphone to do eportfolio-work. A free app which can be downloaded via www.epop.at transports generated artifacts from mobile devices to the Open Source learning management system Moodle for storage, reflection and documentation of educational standards. Different tasks (which are associated with educational standards) have to be solved - depending on the interests and goals of the learner. The tool can be used within any educational level - from formal education, training in the workplace to the tertiary education.

2. ePOP – the app

The app consists of two major functions:

2.1 Development of an individual competence-map – examples are rolled out from a learning-management-system with a focus on different competencies that are provided:

Tasks and examples are delivered to the app from a Moodle-server. These tasks can be solved by students individually. By working on different tasks competence-hexagons are colored increasingly documenting the advancement throughout a learning process towards a certain competence.

2.2 Expanding the competence-map with individual areas of interest: New categories and artifacts can be added by students individually.

Within this individual structure new artifacts (=examples, achievements within a certain subject, documents of one's creativity) can be organized with the app and associated with competencies – typical for eportfolio-work.

Views are collections of artifacts that can be assembled for different target-groups (i.e. reflecting teacher or students). These views can be generated with the app and are automatically stored in the Moodle-installation and in addition can be distributed via an external link (i.e. for further

reflections) per mail. It is not necessary that teachers use Moodle actively in the course-structure to do this. If the optional Open-Source Moodle-module exabis competencies is also in use, teachers can document assessments of competencies in Moodle-courses together with students.

3. Predefined prototypical examples and tasks

Tasks/examples can be associated with educational standards. This is done with the OpenSource-platform <http://www.edustandards.org>. Examples and tasks can be of any kind – solvable from within the app in a textfield as well as referenced to an external website that is called up from within the app. These educational standards can be imported in Moodle and are distributed to the smartphone-app together with given tasks.

Artefacts that are created are stored in the Open Source eportfolio-module exabis ePortfolio within a Moodle-installation.

4. Required Infrastructure

1. Smartphone (iPhone/Android/PC for exe-version)
2. Moodle-Server for saving data (Moodle is used as data-storage and does not necessarily have to be used actively)
3. Moodle-extensions:
 - exabis eportfolio-module (is used as for storage and eportfolio-work)
 - exabis competencies-module (is used to document the assessment of competencies within a subject developing a competency-profile for each student)

5. Bottom line

This approach has several advantages:

1. Easy way of getting started with ePortfolio-work
2. Up-to-date tool for mobile devices for easy artifact-upload
3. Basic independency from software-functionality
4. time- and location-independency
5. graphical view of the assessment of competencies as a motivator
6. reflection of portfolio-work working with educational standards
7. The transparent digital documentation of the assessment of competencies within a certain field is an up-to-date assistance for enhancing learning processes.

The app as well as the backend-software it is based upon is Freeware/Open Source and builds upon open standards within one of the most secure and multifunctional learning management system worldwide.

By associating educational standards with tasks and the possibility for students to do eportfolio-work in an easy way with smartphones an efficient tool is available for both students and teachers to enhance learning processes.

The app is being piloted in Upper Secondary Education in Austria at the moment.

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S31A: Parallel Session

Time: Wednesday, 10/Jul/2013: 9:30am - 11:00am · *Location:* Council Chamber Session Chair: Don Presant

Looking Forward: Moving from Capstone to Springboard with Eportfolios

Joseph Ugoretz, Macaulay Honors College-CUNY, USA

Background/Context

“Capstone” experiences have long been identified as powerful learning opportunities for students at a range of different levels in a range of different programs. Generally defined as projects of some sort that require students to integrate and demonstrate what they’ve learned in a lengthy, rigorously judged collection, paper or presentation, capstone projects ask students to look retrospectively at their learning over the course of a degree program, career at an institution, or other bounded educational experience. Eportfolios have been a common and successful medium for the implementation of these kinds of experiences.

The very title “capstone,” however, by definition, identifies these projects as fundamentally conclusive, retrospective and comprehensive. The essential nature of a capstone project is that it is a demonstration which focuses on completion and culmination.

For many students, this focus is unnecessarily and even destructively limiting. The portrait of learning that ends with a degree or certificate, neatly packaged and statically presented, is a portrait that does not provide the room for the kinds of exploration, deepening and interaction with others, beyond the completion of the program or degree, that can be so beneficial.

This paper will describe our efforts, at Macaulay Honors College of the City University of New York, to use eportfolios as a tool to develop a new, interactive, prospective, creative model with our students: a “springboard” project, rather than a capstone.

The Springboard Project

The idea of the springboard project is one that grows out of our students’ experiences in an existing year-long thesis colloquium. As students developed eportfolios during this colloquium to document their work on their traditional (written) honors theses, they found that they were going beyond the assignment of collecting and presenting previous assignments and research. Using eportfolios to present their drafts, their alternate versions, background information, and related links and multimedia materials, gave them an opportunity to develop new questions and new directions for their research and learning—directions that the eportfolios pointed for them to follow after their graduation.

In addition, the use of our open source eportfolio platform (built in WordPress), with Web 2.0 capabilities of social networking, collaborative authoring, connected commenting, gave students the opportunity to open their work to wider international audiences of scholars and collaborators. Instead of being completed culminations, their projects became open communities, positioning the students as active participants in real-world conversations that could continue to develop and grow beyond the boundaries of the degree and the institution.

In the coming academic year, the new “Springboard Experience” blended course will be offered to all graduating students as a year-long guided workshop, explicitly directed to the process of creating projects which propel learning into the future. Springboard Projects, developed and launched at graduation, will continue to guide and reflect students’ thinking and learning as they enter lifelong pursuits beyond the college years, including graduate education, professional careers, service and independent research.

The Springboard Experience, as a course and as a project, is distinguished by several key features:

- A Springboard Project builds on a students’ earlier work and displays and reflects on that work.
- A Springboard Project proposes new directions, asks unanswered questions, poses unresolved dilemmas. In response to these challenges, the Springboard Project proposes specific

research and learning pathways, providing a plan with clear goals and defined next steps

- A Springboard Project includes personal reflection, uniting the affective and the cognitive elements of research.
- A Springboard Project includes multimedia facets, utilizing appropriate tools and presentation techniques to present extra-textual resources.
- A Springboard Project is presented to, and open to the interaction of, a wide public audience. It is a multidirectional communication.

As a new use of the eportfolio tool, specifically for helping students to construct their identities as lifelong learners situated in wide social networks of similarly questioning scholars, the Springboard Experience is easily adaptable and highly productive, suitable for a wide range of programs and institutions.

This paper will detail the process of developing and instituting the Springboard Experience course, with recommendations and suggestions for other institutions contemplating similar projects. Exemplary Springboard Projects will be demonstrated and explored, and the audience will have the opportunity to see concrete examples and interact with students' projects themselves.

Wanted: Well Organised ePortfolio to Manage an Unruly MOOC. Skills Required.

Kirstie Coolin, University of Nottingham, UK

Background

The web is awash with rhetoric about MOOCs[i] (Massive Open Online Courses), which “have quickly traversed the cultural cycle of hype, saturation, backlash, and backlash-to-the-backlash”[ii] (Carey 2012). Shirky helped draw the battle lines claiming that “Higher education is now being disrupted”[iii] (2012) and prompting Universities to defend their institutions without which, there would arguably be no MOOCs in the first place.

A more measured response proposes the advantage that “MOOCs can become another generally benign way that universities can extend their influence and general visibility while realizing some of the benefits of university education for those who might not otherwise receive it.”[iv] (Thrift 2013)

Meanwhile, as debates rage, people are taking these free online courses in their thousands from every corner of the globe, creating new online communities and opportunities to pursue low/no cost and low-risk learner-centred Lifelong Learning. When the MOOC excitement subsides, whatever pedagogical models emerge as the most successful for large scale online learning, learners will be at the centre – a model already familiar to the ePortfolio community.

Objectives

This paper discusses a personal perspective on using a learner-centred ePortfolio to manage learning in a MOOC and reflects on the skills and literacies required to maximise the benefits of a MOOC experience.

In January 2013, the author enrolled, with 40,000 others, on the 5-week ELearning and Digital Cultures MOOC (edcmooc) run by the University of Edinburgh. Almost immediately, numerous social media networks, links and materials emerged, and it was evident that these needed managing in one place. It seemed logical to use an ePortfolio to build structure around the course to manage personal learning.

Also in January, Trent Baston, in Campus Technology argued that

“MOOCs are one manifestation of our era of openness in which learning opportunities are almost infinite. MOOCs need ePortfolios to improve their value.”[v] (Baston 2013)

Edcmooc is considered a good example[vi] of how to run a MOOC. Edinburgh reported “shifting from a focus on content delivery to a foregrounding of process, community and learning networks”[vii] promoting connectivism as the dominant pedagogy, resulting in a high volume of student-led social learning occurring before, during and after the course. However, this course

demographic was already well educated, including a high number of educators. To have a 'successful MOOC experience' therefore there will require competence in skills and literacies in order to organise and self-direct learning, self-motivation, digital literacy and use of social networks.

Summary of results

The author was motivated to undertake edcmooc by; subject interest; curiosity about the learner experience and; that it was at no cost/risk.

ePortfolio was used to structure the tasks, temporally and thematically, using public and private spaces where appropriate, re-considering these throughout the course. It provided:

- Placeholders for tasks and social media channels
- Public and Private/reflective blogs
- Aggregated external content/blogs/artefacts
- A trusted place to create, host and share the final assignment artefact
- An archive to record learning

Public/private spaces helped the author to engage with other participants flexibly (alongside the social media spaces) with confidence about privacy, thus entries were more reflective. Regular reflection meant that the final assessed artefact was easy to create and share. A general feeling of 'being overwhelmed' was reported by participants on the course; the ePortfolio helped counter this early on.

Conclusions

The ePortfolio was beneficial in managing edcmooc learning and the author would concur with Baston that it helped 'tame' the MOOC. ePortfolios have great potential to support self-directed, online learning in this massive context for a wide range of learners. However, there are still implicit skills required, in particular related to autonomous learning. In addition, engagement with and confidence within the connectivist model requires a significant level of digital literacy skills, not only in tool-use, but in developing and engaging in online community, navigating networks, data privacy, and presentation of an online identity.

If these skills barriers can be cracked and the drivers behind providing low/no cost online and quality education represent a genuine desire to widen educational opportunities, then MOOCs may represent a significant democratic force, promoting Lifelong Learning in accessible and affordable ways for huge numbers of individuals, and a learner-centred portfolio is its logical companion.

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TRANSIt: Training teachers in competence based education: Using ePortfolios to support key competency acquisition

Katerina Riviou, Ellinogermaniki Agogi, Greece, Serge Ravet, ADPIOS, France

Introduction The aim of the “TRANSIt - TRANSversal key competences for lifelong learning: Training teachers in competence based education” project is to have a positive impact on the development of students’ competencies through building teachers capacity. To achieve this, a pilot teachers training methodology will be developed on the didactics and e-assessment of key transversal competences. The methods of the project are founded on a holistic view of students learning, going beyond subject boundaries and finding application in a wide spectrum of curriculum subjects. The TRANSIt approach contributes to the development of creativity, intercultural and multilingual competences, social development, and “learning to learn” competences. TRANSIt aims to add its contribution towards the improvement of the quality of competence education by improving teachers’ awareness and professional skills regarding the didactics and e-assessment of the key competences with the use of ePortfolios, supporting them to bring European and national policies into practice. The impact of the training material will be assessed by authentic assessment methods analysing qualitative and quantitative characteristics of user-generated OER content uploaded in the TRANSIt e-portfolios environment.

Background Key competence acquisition (KCA) is one of the long term objectives of the updated strategic framework for European cooperation. Most of the EU Member States are beginning to implement policies that move their school systems from being predominantly subject-oriented towards curricula which include competences, active and individual learning, as well as a focus on learning outcomes. One such example is Greece, where only the school year 2012-2013, pilot curricula for competence driven education have been introduced. On the contrary in Austria, the promotion of holistic teaching methods has been supported at policy level for several years. In other countries (France, Netherlands) innovative policies are already embedded in national strategy documents and in some cases these have already led to major structural changes, such as the introduction of new qualifications frameworks or the reform of the curriculum around the Key Competences. In general, there are different models of competences in European countries.

Yet, these developments do not necessarily result in significant, widespread changes in practice – that is, in how schools actually organise and provide learning experiences for pupils. The difficulty is in all cases translating these policies into practice. One of the core problems for the effective implementation of the above policies is the lack of initial education and training, as well as systematic support of teachers. One more obstacle regarding KCA is the lack of effective assessment practices. Assessment of competence is one of the vehicles that can be used to support teachers in making this paradigm shift. This places new demands on the competences of teachers and trainers and therefore on the structure and content of initial and continuing teacher education. The support of teachers in the holistic assessment methods design is also crucial for their everyday practice and will be implemented through the use of ePortfolios.

TRANSIt approach aims to support teachers at bridging the gap between policy and practice on a European scale.

Aims/Methodology TRANSIt project will perform teachers’ needs analysis in order to identify the obstacles in the process of introducing new approaches in teaching practice and to identify enablers that will effectively support such interventions. Communities of key stakeholders (teachers, teacher trainers, school leaders, policy makers) will be mobilised to support this process. Also, TRANSIt will develop a teachers training framework that will improve teachers’ awareness and professional skills regarding the didactics and e-assessment of the key competences with the use of ePortfolios. Localisation of the approach will be achieved through the modular approach of the training framework. The training programme will include extended cycles of school - centred work, so as to get teachers feedback about their experiences gained in the classroom during the implementation of the proposed activities. A systematic evaluation methodology in order to identify the impact of the proposed approach in terms of efficiency and effectiveness of the training process will be developed. The key to effective professional development is finding a way to organize qualified teachers so they can collaborate with their colleagues, therefore the TRANSIt will develop a community of practice. Finally, a common set of guidelines in the didactics and assessment of competence driven education will be constituted.

Conclusions/Further work TRANSIt project is at the phase of designing its eportfolio environment with use of open source tools, as well as the Open Badge Infrastructure, as a mechanism for accrediting teachers and students KCA.

S31B: Parallel Session

Time: Wednesday, 10/Jul/2013: 9:30am - 11:00am · *Location:* Thompson Room *Session Chair:* Esther Linley

Constructive ePortfolios: Fostering Deep Learning through User Open Source, Pro-Interactive Environments, and Learning as Assessment

Peter Edison Doolittle, Virginia Tech, USA

Learning, deep and meaningful learning, results from cognitive, social, and behavioral processing, where the individual constructs knowledge and action by interpreting and integrating his or her experiences. A constructive eportfolio is focused on the proactive generation of student learning through the creation of an instructional environment that directly fosters cognitive, social, and behavioral processing. ePortfolios, as currently constructed (e.g., Moodle, PebblePad, Digication), provide a powerful platform for creating environments that foster this cognitive, social, and behavioral processing. One constraining component of these platforms that limits learning and innovation is openness. “Open source” platforms, such as Moodle, Sakai, and Mahara, are open, but only at the institutional level. What is needed is openness at the user level, where the user can build strategic and sophisticated functionality through web development tools - database management (MySQL, Access), scripting (php, CFML), and communication (SMS, twilio).

This presentation is not about platforms, it is about learning.

This new level of openness will allow users (e.g., individuals, departments, groups) to innovate in order to build more effective learning environments. As currently constructed, “closed” eportfolios provide a rigid structure within which innovative students and teachers must (a) learn to adapt within the structure, making activities fit; (b) connect to an outside application, or transfer in the results of working in an outside application; or (c) jury-rigging a solution. Within “open” eportfolios, institutions will typically link the eportfolio with the institutional LMS, but will rarely create new functionality unless there is a large institutional need, and then it will be the institutional programmers who build in the new functionality.

This presentation is not about openness, it is about learning.

User Open Source, the ability for a user to create innovative environments that integrate seamlessly with the eportfolio backbone, allows the user the opportunity to foster learning that is (a) specific to students’ needs, (b) molded to the cognitive, social, and behavioral processing necessary to foster the desired learning, and (c) deep and integrative. A User Open Source eportfolio would allow for the creation of Pro-Interactive Environments, environments constructed with forethought (pro-active), that are part of a larger instructional design process (outcome, assessment, and activity alignment), and where activities directly promote cognitive, social, and behavioral processing (inter-active). Finally, these seamless, aligned, and interactive activities would yield a product or artifact that would naturally serve as an assessment data point. This Learning as Assessment approach combines the learning activity and assessment data generation components into a more integrated and authentic assessment.

This presentation is about learning.

For example, ePortfolios involve products (artifacts) and processes (cognition). Typically, ePortfolios are comprised of artifacts (e.g., essays, reflections, or videos) that serve as evidence of processing, that a student has attained particular knowledge and skills (e.g., the causes of AIDS, how sustainability relates to his/her own life, or how to conduct a patient interview). A Constructive ePortfolio approach will move beyond this “evidence and explanation” approach, focusing more on a “cognition and construction” approach. In this cognition and construction approach, particular assignments (e.g., 5 and 30 minutes microteachings) are created that yield specific artifacts (e.g., lesson plans, teaching episodes, videos of teaching), that require specific cognitive processing (e.g., planning, comprehension monitoring, reflection), and that yield specific knowledge (e.g., instructional design, instructional strategies), skills (e.g., completing a lesson introduction, jigsaw strategy use), and/or attitudes (e.g., valuing instructional scholarship, good teaching is challenging). In this approach, the ultimate goal is not the artifact itself, but rather, the knowledge, skills, and attitudes that are constructed in the process of developing the artifact.

What would this Constructive ePortfolio look like? How would it function? This presentation will layout the rationale for a constructive eportfolio, its benefits, and provide a demonstration of such an eportfolio in action. Deeper, more integrated learning may require a more flexible environment than currently exists in eportfolios.

ePortfolio for assessment of informal learning in web design and computer animation (in the frame of CREATE project)

Elitsa Veselinova Licheva, Rosen Kirchev Petkov, Student Computer Art Society, Bulgaria

1. Introduction

“Validation of self-acquired learning and credits transfer in web design and computer animation” (CREATE), www.create-validate.org, is an international project supported by “Leonardo da Vinci” programme of the EC. Its main aim is to **propose innovative methods and tools (including ePortfolio) for validating the results of informal learning in two creative professions** - web design and computer animation. It is implemented by a coordinating organization SCAS, Bulgaria and partners from Germany, Ireland and Bulgaria.

In this short paper we would like to present CREATE project by focusing especially on the use of the ePortfolio method for assessment and recognition of informal learning in web design and computer animation. Organization SCAS (www.scas.acad.bg) has experience in ePortfolio usage for assessment, personal development and career development for more than ten years. SCAS has participated in MOSEP project (“More self-esteem with my ePortfolio”) in 2006 and then in 2007 developed “ePortfolio for Your Future” project (www.my-eportfolio.org) including a Mahara-based ePortfolio system and manual for using the ePortfolio for career counseling of students and young people.

2. Context

More and more young people nowadays (especially those interested in arts and creative, contemporary subjects) start experimenting and learning while they are at home in front of the computer or while they are working somewhere, during internships, for example. This is called informal learning and its assessment, validation and recognition have become an EU priority during last few years.

The question remains – how to assess the results of this informal learning, how all those young people can prove that they have some knowledge, skills and competences in those fields?

One of the methods for assessment and recognition is the ePortfolio. ePortfolios are known as alternative assessment tools. In contrary to classical assessment concepts, ePortfolios provide a possibility for the learners to present their individual knowledge in their own preferred way. Using ePortfolios for assessment purposes is more than “handing in a presentation and getting a mark”. When working with ePortfolios in the assessment context, it is necessary to look at the portfolio from a wider perspective. Moreover, with an ePortfolio, learners get the possibility to lead the assessment process and to present their skills, knowledge and competences from a pro-active perspective.

The ePortfolio method addresses the questions of validity, reliability and authenticity by combining a variety of methods as well as “internal” self-assessment with external assessment which reduces the subjectivity of the assessment.

3. Summary of results

As a first project step **units of learning outcomes** in web design and computer animation were developed. Then, appropriate **methods for the assessment of informal learning** were assigned to each unit. Finally, according to the methods assigned to the units the respective **online tools for assessment of informal learning** were developed. In order to ensure credits transferability and informal learning recognition each unit was assigned **ECVET points**.

In the online toolkit we have included an example how the ePortfolio can be used for assessment of informal learning in web design and computer animation. First, we developed two example ePortfolios – one for computer animation (Unit9: Advanced character design) and one for web design (Unit 2: Design) using two different online systems in order to demonstrate their pros and

cons. Then, we have provided an online questionnaire for each of the ePortfolios which can be applied to the assessment of any ePortfolio developed for the respective units.

The assessment works as follows: the ePortfolio evaluator has to examine the ePortfolio and then answer the online questionnaire. For each answer a certain number of points are given. Then, the evaluator has to enter the username of the ePortfolio's owner. This way the score for the ePortfolio will be automatically calculated and transferred to the profile of the respective user. Depending on the total score the author of the ePortfolio gets the respective amount of ECVET points for the unit.

4. Conclusions

CREATE project provides a model that could be followed by organizations who want to assess and validate informal learning. This model strives to be comprehensive – starting from units of learning outcomes, then methods and tools for assessment and finishing with recognition and accreditation through ECVET.

In this comprehensive model the ePortfolio has its place as a powerful tool to assess one's skills and practical knowledge in the fields of computer animation and web design. It is extremely useful for creative professions where visual representation of knowledge, skills and competences is essential.

e-portfolio based on Video for indigenous people: the case of Mapuches communities in southern Chile

Isabel M. Solano Fernandez, University of La Frontera, Chile, Rodrigo Garrido Maldonado, University of Murcia, Spain

This paper reflects on the value and the implementation of ICT (Information and communication Technologies) in indigenous communities in southern Chile, related to the appreciation of cultural identity. Assuming the presence of ICT in all several indigenous communities around in the world, and specially in the Mapuche communities, we present training-oriented approach from the concept of digital literacy, and introduce social media tools available to any member of these communities, in order to access, create and disseminate information, and to communicate and collaborate with their community and other communities, geographically close or distant. From this approach, we present the use of video e-portfolio as an assessment strategy in accordance with the context and the capabilities of Mapuche Communities members. To find places without technologies is becoming increasingly complex, and logically the indigenous communities could not be an exception. Dyson, Hendriks y Grant (2007) said the computers and Internet become part of the cultural landscape of indigenous organizations from more than a decade. Recently, the Social Media as a Tool for Inclusion Report (Taylor, 2010) has pointed out the generalization of social networking sites in young people of aboriginal communities from Canada, even there is more presence of adults people in this sites owing to many associations and aboriginal organizations are promoting the use of these social media. These are the actions that we have carried out in the Cooperation project between Chile and Spain, funded by the Spanish Agency of International Cooperation (AECI). From 2010, we have analyzed the conditions to carry out training activities to develop the digital literacy in mapuche communities which participate in them. In the first years, we affirmed that indigenous communities members considered the ICT as a source of exclusion, demanding for that the use of the ICT as much for the develop of daily activities (education, health, communication, heritage...) as to increase the value of their cultural identity and their economy. During the second year, once overcame the digital divide of access, it developed training activities base on a constructivism approach, with a methodology according with this model, in this case, Based Task Learning and Bases Problem Learning, and even we used some studies cases on video streaming as an innovative methodologic strategy for them. Actually, our training-oriented approach is founded on started from three basic pillars: the digital literacy, the configuration of collaboration networking and the development of a new learning approach based on PLEs (Personal Learning Environment). Additionally, once confirmed the difficulties that mapuche communities members have to show the evidences of their learning _ above all when they have to use the written communication_ we have decided to design a proposal based on the use of video. In this way, Boyle (2010) developed one of the first experiences validated in the use of e-portfolio in indigenous people, and she concluded that "E-portfolios have the potential to advance and

enhance the formal recognition of lifelong and lifewide learning of Aboriginal people (...) Efficient and effective maintenance, storage and accessibility, ability to present artefacts using a range of media and a multiplicity of organisational modes are just a few of their characteristics". Afterwards, Boyle, Wallace, Grace, Sharma & Morgan⁸ made a similar study based on the use of e-portfolio for indigenous educators. Support in these references, we present in this paper our experience in southern Chile with Mapuche communities, in particular, we analyze the training activities that we have carried out from 2010, emphasizing the methodological and assessment strategies used. In this way, We we present in detail the principles of the use of video e-portfolio, and explain the pedagogical, communicative and technical aspects that led us to obtain the first outcomes of this experience.

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S31C: Parallel Session

Time: Wednesday, 10/Jul/2013: 9:30am - 11:00am · *Location:* Mountbatten Room Session

Chair: Gemma Tur

ePortfolios: From Masters Project to Student Notebook

Andrew Micheal Olson Shawnigan Lake School, Canada

How a Masters project created a new way of teaching in a paperless classroom

Background

In July 2011 I completed my Master of Education Technology Degree from the University of British Columbia. The final project for this degree was an ePortfolio of the work completed throughout my coursework based upon a theme. As I am also a senior history teacher at a boarding school I used the school year as my theme. To create the project I used website maker Weebly.com. The reason for choosing this was that I needed a website creator that easily allowed me to add components and multi-media without having a strong knowledge of computer programming. While this was helpful for me, in the back of my mind I had always envisioned using this with my students.

Application

In September of 2011, I began to use Weebly in my classes. From the beginning I had only imagined that I would use the tool as a note-taking function in order to replace our paper notebooks. However, after creating a rubric with my students, we soon realized that the multi-media aspects of the web site could replace our textbooks (which it has). While the skills taught in the note-taking stage, which students do during class on their laptops, were the primary focus, it soon became apparent that there were far more in-depth skills that the students were learning from these ongoing projects. With the share editor functions, this became a collaborative project that included summaries and subjunctive questions (only added this month!) as the project continued to evolve and take on new life. Having the students learn the art of embedding and being critical of the websites they were linking to became a major focus of their research.

Moreover, a year ago I made the decision to move to open-Internet assessment. This has been the best shift in assessment strategy I have made in my career and I now have the results from a full cohort to support this move. I recently presented on the topic of ePortfolios at the annual Independent Schools of British Columbia Professional Development Conference. The presentation I gave explained how the move to ePortfolios has allowed my classroom to be paperless over the past two years. Some of the other topics for discussion in this presentation include the use of technology breaks, the devices used in delivery, and open-Internet assessment. Furthermore, one of the key changes has been the addition of social media to the project. Incorporating and embedding Facebook, Twitter, Animoto and memes has further enhanced this project. The following links are exemplars of student work from my senior world history classes (some are still in progress):

Exemplars

[Nahanni](#)

[Joe](#)

[Georgie](#)

Analysis

This project has allowed students to take responsibility for their own learning. I have found that limiting the guidelines has allowed for more identity and expression to occur and with the help of social media, students have branched out beyond this assignment and I am pleased to see them sharing their work with the world. Many students have continued to use the tool in their post-secondary education and still refer to their notes while studying future history classes. Prior to this project, these were only things I hoped for from my students.

Conclusion

While I propose that this presentation will be about the use of an ePortfolio in the classroom for note-taking, I expect to tie in many other aspects of educational technology. As the Chair, of the Technology Committee at Shawnigan Lake School, I have also been heavily involved in creating the policies needed (compulsory 2:1 laptop and smart phone program, campus-wide wifi, embedded educational technology skills and practices in our curriculum, open-Internet assessment) in order to make this project happen. I suspect that sharing some of the experiences will be of some value for those looking to incorporate similar projects at their schools or work places. The presentation is designed for an hour and a half; however, I have managed to do condensed versions lasting 30 minutes for our Board of Governors. I look forward to hearing from you.

*Note: All links are active in digital format.

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MAGICC and EPOS – ePortfolio Systems for Self-directed Language Learning in Higher Education

Juergen Friedrich, University of Bremen, Germany

Language learning is a key issue in Europe and enables people to successfully act in a globalised world, as an employee as well as a citizen. Especially high qualified employees who will become mobile members of internationally operating enterprises have to provide a high level of language skills combined with profound intercultural competences. In the European Union - with 23 official languages and a total of about 150 languages (national, regional, minority languages) - one *lingua franca* like English seems to be quite limited and does not appropriately reflect the existing linguistic and cultural diversity.

Language learning is one of the educational fields where the portfolio approach is well established. Collecting documents written in a foreign or second language, recording the learner's experiences and progress in language learning and documenting the learner's achievements reflects the fact that language learning is an ongoing process of personal development and cultural growth.

Linguistic diversity, plurilingualism and language learning throughout life are promoted on various political levels in Europe since a long time – especially by the Council of Europe. To support language learning on an operational level several standards and tools have been developed. Particularly, the European Language Portfolio (ELP), based on the Common European Framework of Reference for Languages (CEFR), is implemented for different target groups, on different educational levels and in various contexts, e.g. secondary/higher education, general/vocational education/further education, immigrants etc. More than 100 ELPs have been validated by the European Validation Committee, but until now almost all of them have been published as paper versions. Only few are implemented using ICT, i.e. as an ePortfolio. One of the major developments in this area takes place in the **EPOS** project in Bremen (Germany), aiming at the implementation of an ePortfolio system, based on a sound pedagogical approach, following an action-oriented, competence-based and learner-centred philosophy and using an innovative web 2.0 technology.

The presentation will describe the results of our analysis of existing ePortfolio systems for language learning in Europe (Minerva project eELP, Bordeaux University project e-PEL, EAQUALS-ALTE project eELP, the Dutch Electronic Language Portfolio etc.) In most cases the systems consist of the three basic components of an ELP: language passport, language biography and dossier. Besides the biography these components focus on the learning results. The development of **EPOS** is going to extend this product-oriented approach by a process-oriented perspective, focussing on learning activities: writing of shared stories, recording oral conversations, cooperating in virtual language learning groups, reflecting on one's learning progress by using a learning diary etc. Computers will not simply be used as "reading machines", "document databases" or "certificate stores" but as inter-action facilities which

provide learning opportunities and motivational incentives. The second principle of **EPOS** is “competence-oriented learning”. Learning as well as assessment are guided by the “use of language in context”. The digital media components of **EPOS** present a variety of communication contexts in which language learning is embedded.

The technical aspects of the system development will be presented in detail, starting with a description of the advantages and challenges of adapting an open source ePortfolio (Mahara), continuing with questions of multi competence grid technology, integration of other subjects’ competence grids, identity management, multi-client capability, as well as performance and scalability issues. In addition, usability and privacy aspects which widely influence the acceptance of the system will be analysed. The description of innovative components like “digital pronunciation feedback” and “embedded video tutorials” will indicate the next developmental steps of **EPOS**. The results of the evaluation of the system in several universities will be shown.

The **EPOS** approach is not limited to language learning. There are already several installations where other subjects like Biology, Chemistry or even the acquisition of key qualifications, like moderation and communication skills, time management, negotiating etc. are using **EPOS**. The contribution will also report about this extended generic approach.

MAGICC extends the described language learning approach of **EPOS** by going beyond learning several languages independently. The EU funded project (ERASMUS) and the corresponding ePortfolio system focus on a multilingual language capacity of learners. Acquisition of a second language should profit from the knowledge and competence of a proper first language usage. The development of the **MAGICC** system is based on empirical research, including interviews with stakeholders from academia and industry. Resulting from this research various learning scenarios for multilingual and transcultural learning are developed and implemented in the **MAGICC** system. The **MAGICC** system is going to be evaluated by the eight consortium partners in six European countries.

USING E-PORTFOLIOS TO IMPROVE TEACHER PROFESSIONALISM

Rosie Sage, The College of Teachers, PEEP Project, UK

ABSTRACT

This article reflects the work of a European Partnership aiming to improve teacher professionalism through the adoption of an e-portfolio recording system that tracks career experiences. The rationale argues for the inclusion of **formal, non-formal and informal evidence** in order to provide a more complete picture of professional knowledge, skills and attitudes that is needed to judge a range of purposes such as annual appraisal, revalidation and job interviews. Evidence collected suggests that such a professional tool assists career planning, monitors progress and enables feedback from colleagues. It is envisaged with the present progress in technology that personal/professional evidence will be available on smart phones over the next decade with buttons to press for producing the requisite evidence for a particular purpose. Careful preparation for such a situation is necessary and a major outcome of the project is a policy for e-portfolio development that can drive this initiative further.*

Key terms: teacher e-portfolios; formal, non-formal, informal evidence; professional principles; tracking grid; recording purposes; recording fields; key competencies; career passports