

## M-portfolios: Using Mobile Technology to Document Learning in Student Teachers' E-portfolios

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We briefly analyse the enhancement of eportfolio processes defined by Zubizarreta (2009) with the introduction of mobile technology. We give some examples of appropriation of mobile device usage in eportfolio processes carried out by student teachers. These examples become the evidence of the enhancement possibilities of one of the portfolio processes defined by Zubizarreta (2009), that of documentation.

### 1. Introduction: Zubizarreta's portfolio model

Zubizarreta (2009) defines learning portfolios as a tool that engages students into collaborative processes of reflection and learning documentation. There are three processes in Zubizarreta's (2009, 23-25) portfolio model: documentation, reflection and collaboration. The learning portfolio achieves its maximum level when the documentation of learning is improved by reflection and teacher and peer collaboration.

### 2. Enhancement of Zubizarreta's eportfolio model by mobile technology

It seems that currently, efforts are centred on developing mobile-friendly eportfolio systems, as Stewart (2011) claims. But we also think that there is a need to develop a pedagogical approach to eportfolios that includes mobile technology. So, in order to develop our own model, to which we can refer in our practical work with our own students, we posit that mobile technology can empower the three processes defined by Zubizarreta (2009).

There is a wide interest in tools and apps that can be used to document learning. Barrett (n.d.) and Rate (2009a, 2009b), for example, have cited numerous of tools and apps to document learning with mobile devices. The process of documentation learning can be enriched by the documentation on the move, in real contexts. Taking photos of evidence, recording videos and audios in real context are examples of this documentation process. This process can also be the answer to the inclusion of informal learning for formal learning processes.

Reflection has also been studied by Barrett (2012) from the point of view of mobile technology. We argue that the possibilities of taking brief notes as reflection on the move, whether written or audio recorded, which allow us to return to them later, can improve the whole process of reflection on learning (Camacho and Tur, 2012).

There is an important line of research that analyses the impact of social networking with mobile technology. In fact, this is a way to improve collaboration with mobile technology too. We argue that these sociocultural practices of networking, which are currently under study, could be transferred to the collaboration process in an eportfolio model empowered by mobile technology.

Therefore, all these means that Zubizarreta's learning portfolio model can be enhanced by mobile devices.

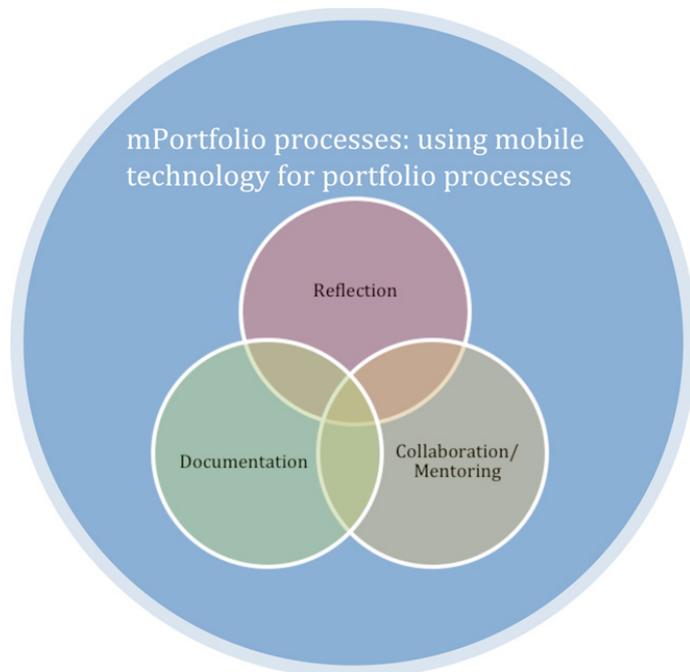


Figure 1: Adaptation of Zubizarreta's learning portfolio model. Integrating mobile technology in the model of learning portfolios

### 3. Examples of uses of mobile devices in eportfolios processes

At the University of the Balearic Islands, Ibiza headquarters, an eportfolio project is being developed based on Web 2.0 tools. Mobile technology for learning has been introduced as a non-compulsory component in the eportfolio design we are developing. The University is not providing mobile devices to students which is one of the reasons why we considered it could not be compulsory for students to carry out assignments with mobile technology. However, we are encouraging students to apply their own sociocultural uses of their mobile devices, following Pachler, Bachmair and Cook (2010), to their learning processes and eportfolios. Therefore, they are encouraged to use their own mobile devices such as mobile phones and

cameras to document their formal and informal learning. They are encouraged to use them both for taking graphic and textual evidence of learning in everyday and real contexts.

### 4. Mobile technology usage in formal education context

Some students have used their cameras to document with multimedia artefacts the assignments they handed in non-technology subjects. For example, student 1 took photos of mushrooms in the forest to document a text-based assignment in a subject based on teaching natural sciences. Awareness of the affordances of using mobile technology to document learning has enhanced her activity as she built a multimedia artefact afterwards to empower a traditional text-based assignment.

This evidence eportfolio can be found here: <http://tercer-nieves.blogspot.com.es/2012/02/la-ruta-dels-pebrassos-eivissencs.html>

Drama students were asked to build a poster with the Web 2.0 tool Glogster. They were asked to take photos of the process of creating a theatre play and videos of some parts of the final show. All these multimedia objects were finally to be joined in a poster as a summary of how to create a theatre play for their future teaching careers. Student 2 blogs it and reflects on the pro-



Figure 2: Video presentation by student 1

cess as well as observing some characteristics of the tool such as its visual impact. This evidence, based on personal reflection on a group assignment, can be seen here: <http://larepresentacioescenicacira.blogspot.com.es/2011/05/reflexio-6.html>

### 5. Mobile device usage in informal contexts.

Some students have also used their mobile devices in an informal context to document their learning on their eportfolios, which for us is the most powerful example of the possibilities of introducing mobile technology into eportfolio processes. A re-

flexion carried out in a real context is made visible in an eportfolio built within a formal learning context. For instance, student 3 built a video from a video she recorded while being with some students in a trip in the country. She reflected on the value that recording spontaneous students' dialogues would have for her as an in-service teacher. She also documented some videos where she appears playing the flute in a concert as evidence of their music competence. These two blog posts can be found here:

<http://segonanyeducaciomarta.blogspot.com.es/2011/05/va-daprenentatges.html>



Figure 3: Evidence of learning by student 2: group artefact + reflection

<http://segonanyeducaciomarta.blogspot.com.es/2011/04/va-de-musica.html>

### 6. Conclusion

Parry (2011) says that teachers “have responded by banning this new technology from the learning space” so we think that giving a model to use mobile technology for the construction of learning portfolios is giving teachers reasons to allow mobile technology in the learning space. Moreover, using mobile devices to document learning on eportfolios would be a way to appropriate socio-cultural practices (Pachler, Bachmair and Cook, 2010) in formal contexts that may motivate teachers to introduce mobile technology in their lessons.

We have shown how students integrate mobile devices in the construction of eportfolios based on their daily life usages.

They simply take advantage of the uses they have integrated from their current life into their learning process. Based on Merchant (2011) this is a way of making advantageous usage of mobile devices for learning. Santos and Ali's (2012) research shows that the activities of audio and video podcasting are not

so usual among students, so it is a key aspect to foster this kind of activity by encouraging their already appropriated sociocultural practices.

However, maybe because of their previous sociocultural usages, our students have only started using their own mobile devices to take visual evidence of learning on the move, so further work will be needed to enhance reflection processes with their mobile devices as well. Finally, more research is also needed to see how the other two portfolio processes defined by Zubizarreta (2009), collaboration and reflection, can also be empowered through the integration of mobile technology. mPortfolios are still a challenge for teachers and educational technologists.

dimarts 31 de maig de 2011

### Va d'aprenentatges...

Hola!

A principi de curs se'ns va demanar que anéssim entrenant la nostra mirada educativa i que quan veiéssim una situació, un cartell, una persona, un animal o un objecte que ens semblés atractiu educativament li fèssim una fotografia o un vídeo.

Doncs bé, ara ja som a final de curs i he de dir que he anat veient diverses situacions que m'ha aportat alguna idea d'una activitat o un tema que es podria tractar a classe però n'he triat un que em va sorprendre moltíssim.

Va ser a l'octubre, un cap de setmana vam pujar a Es Cubells un grup de persones. Els adults tenien reunions i mentre jo em feia càrrec dels nens (una quinzena aproximadament des de 4 anys fins a 12). Dissabte al matí van trobar una activitat o descobriment molt interessant per ells i que varen continuar durant tot el dia! Fins i tot diumenge al matí volien seguir amb aquesta. Aquesta activitat consistia anar a la captura de bitxos! Els més petits miraven els grans per veure com caçaven ells i aquests els mostraven molt orgullosos. Miraven atentament quina havien agafat, els contaven, buscaven un recipient per posar-los, etc. Encara que no tots els nens volien fer el mateix amb els bitxos: hi havia alguns que els volien aixafar o matar però els altres els defensaven (jo els vaig deixar fer per veure com ho solucionaven i van arribar a l'acord que no matarien els bitxos ja que aquests no els havien fet res).

Per tant, he agafat aquesta mostra perquè vaig quedar molt sorpresa que un grup d'infants (no tota la quinzena) estigués un dia sencer, i volgués continuar a l'altre, amb una mateixa activitat "tan simple" per nosaltres però que per ells va ser molt enriquidora. A més a més, als fragments de vídeo podem observar com els nens fan diferents hipòtesis sobre els bitxos: "és un escorpió?" demana un nen petit.

Finalment, disculpar-me per la qualitat del vídeo i de les imatges ja que estan fetes amb la càmera del mòbil i no és veu molt bé. Tot i així crec que es veu i es sent bastant bé. Espero que us agradi!

Comparteix ▼ More info

Nous bitxos!! Alguns volen fer-los mal, altres els defensen; jo els deixo fer per veure on arriben

0:00 YouTube

Assignatures

- 22010 Educació Inclusiva (5)
- 22018 La Representació Escènica en l'Escola Infantil (3)

Dia a dia (1)

e-learning (1)

OPINIÓ (3)

REFLEXIÓ (4)

Els meus blocs

Posant paraules

El raó de l'art

Bloc principal

Primer!

Tercer!

Quart!

Diari Personal

Arxiu del bloc

- ▼ 2011 (10)
  - ▼ maig (3)
    - Va d'aprenentatges...
    - Va de danses...
    - Va de Glogster...
  - ▶ abril (1)
  - ▶ març (2)
  - ▶ febrer (1)
  - ▶ gener (3)
- ▶ 2010 (8)

Sobre jo

Marta

Visualitza el meu perfil complet

Seguidors

Inscriu-vos en aquest bloc amb Friend Connect de Google

Membres (1)

Figure 4: Evidence of learning by student 3: reflection + video artefact

### References

**Barrett, H.** (n.d.). Processes . Mportfolios. Retrieved from <https://sites.google.com/site/mportfolios/home/processes>

**Barrett, H.** (2012). Supporting reflection with mobile devices. *EPortfolios for learning*. Retrieved from <http://blog.helenbarrett.org/2012/01/supporting-reflection-with-mobile.html>

**Camacho, M., & Tur, G.** (2012). Exploring learners' practices and perceptions on the use of mobile portfolios as methodological tool to assess learning in both formal and informal contexts. *Procedia-Social and Behavioral Sciences*, 46, 3182-3186. doi:10.1016/j.sbspro.2012.06.03

**Merchant, G.** (2011). Mobile practices in everyday life. Presentation. Retrieved from <http://www.slideshare.net/edsghm/mobile-practices-in-everyday-life>

**Pachler, N., Cook, J. & Bachmair, B.** (2010) 'Appropriation of mobile cultural resources for learning.' In *International Journal of Mobile and Blended Learning* 2(1), pp. 1-21.

**Parry, D.** (2011). Mobile Perspectives: On teaching Mobile Literacy. *EDUCAUSE Review*, vol. 46, no. 2. Retrieved from <http://www.educause.edu/EDUCAUSE+Review/EDUCAUSEReviewMagazineVolume46/iMobilePerspectivesOnteachingi/226160>

**Rate, N.** (2009a). EPortfolios and mlearning = mportfolio part 1. *ELearning infusion*. Retrieved from <http://nickrate.com/2009/11/11/eportfolios-and-mlearning-part-1/>

**Rate, N.** (2009b). EPortfolios and mlearning = mportfolio part 2. *ELearning infusion*. Retrieved from <http://nickrate.com/2009/11/13/eportfolios-and-mlearning-part-2/>

**Santos, I. M., & Ali, N.** (2012). Exploring the uses of mobile phones to support informal learning. *Education and Information Technologies*, 17(2), 187-203. doi:10.1007/s10639-011-9151-2

**Stewart, S.** (2011). Dithering about ePortfolio. Sara Stewart. Retrieved from <http://sarah-stewart.blogspot.com/2011/06/dithering-about-eportfolio.html>

**Zubizarreta, J.** (2009). *The Learning Portfolio. Reflective Practice for Improving Student Learning*. San Francisco: Jossey Bass.

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