

# Student Perceptions of ePortfolio as Competence Assessment During the Practical Training Period for Early Childhood and Primary School Teaching

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**Abstract:** Many teacher education institutions aim to develop and assess teacher competences during teaching practice. This study explores students' perceptions regarding the integration of electronic portfolios (ePortfolios) during teaching practice. It is a result of the pilot study of an innovation research project. The aim of this project is to determine the key aspects in the use of technologies for learning and knowledge in the development, monitoring and mentoring during the practical training period between mentor teachers of school, tutor professor and students' double university degree in early childhood education and primary education. Data was collected through Focus Group to capture deeper information that will help to know most significant ePortfolio learning experience and how to make the educational teaching practicum more meaningful. This paper discusses the findings of a pilot study that set out to explore student perceptions of ePortfolio experience on four categories: (1) planning, organizing and time managing; (2) interaction, reflection and feedback; (3) Content and collecting evidences and (4) useful and usability of ePortfolio.

**Keywords:** ePortfolio, student perspective, teacher education, higher education.

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## 1. Literature review

Teachers' training is an academic training where the knowledge not only grows from the research but also from the experience. Practicum has an important role in the development of the professional competences and, hence, school becomes an interactional space between theory and the practice. Accordingly, it is a training context, which eases the implementation of the different learned resources from the learner (Alvarez, 2012; Le Boterf, 2002; Tejada & Ruiz, 2013). In this way, as Zabalza (2009 & 2011) states the practicum represents a curricular space available in order to prove the integration of the acquired competences from the students and so, these period becomes a key point for the creation of a relation between theory and practice.

In this sense, the relationship between the university and the schools is substantial. Both tutors of faculty and school have to accomplish monitoring functions for following and promoting the acquisition of the teachers competences in the early childhood and primary education (Coiduras, J., Cornadó, M.P., Fuertes, M. T. & Peire, T., 2016; Ros, Martínez, & Prats, 2015).

In reference to the monitoring, the evidences are the projections that the student selects as substantial documents in order to demonstrate de abilities, the capacities and the learned competences in this process. Therefore, the portfolio is a significant tool for realizing the evaluation of those competences. From this perspective, the portfolio use allows the possibility of publishing the evidences in a digital version and eases both the professors and students access to these diverse formats (Bairral & dos Santos, 2012; Sunstein & Lovell, 2000; Zawacki-Richter, Baecker & Hanft, 2010).

## 2. The project

The present project uses the e-portfolio as a tool to collect the evidences of the learning process for the preservice teachers. According to that, the selected methodology is Design-Based Research (DBR). It consists on a systematic study as it contemplates different phases which we are constantly working on in order to improve the chosen resource consistently. DBR normally lies in three big phases, from the most generic one to the most specific one. Those phases in our project have been structured in: (1) Needs and context analysis; (2) Design, development and formative evaluation and (3) Semi-summative evaluation. The data was collected in

the second one by questionnaires and a focus group released to five students, which are the respondents of this project. Taking everything into account, we have defined two general aims and five specific ones.

The general objectives of the project are:

- GO1: Taking into account the profiles of tutors in the university and schools contexts from both the training and technological perspectives, to determine the key aspects involved in the use of KLT tools such as e-portfolios in the development, monitoring and mentoring of student practicums.
- GO2: Using the rubrics and indicators associated with teacher competences, to generate the procedures and instruments incorporated into the e-portfolio in order to collect and validate competence-based evidence.

Our specific objectives are:

- SO1: From the perspectives of tutorial activity and technology, to draw up tutor profiles by identifying the competences tutors are expected to possess.
- SO2: To design a portfolio structure that is adapted to the actions students are required to conduct on their teaching practice.
- SO3: To set the basic tasks students and tutors need to perform to be able to use the portfolio as a support tool for learning and improving tutorial activities.
- SO4: Through the use of eportfolios, to apply a set of rubrics and indicators for evaluating the competences student are expected to acquire on their teaching practice.
- SO5: From a consensus among tutors, to associate with this set of rubrics and indicators a procedure for collecting and validating evidence.

For its suitability and convenience, the method we selected for our project was Design-Based Research (DBR). DBR is a systematic process for analysing, designing, developing and evaluating an intervention as a solution to a complex problem. Specifically, we use the variant Educational Design Research (EDR) which is appropriated for educational design process (Plomp & Nieveen, 2009; van den Akker, Gravemeijer, McKenney & Nieveen, 2006).

On the other hand, this centres on complex problems arisen from real contexts promoting the interaction between researchers and participants. All of this does by means a rigorous and reflexive study that promotes the continuous improvement. Consequently, this is a process on a long-term basis that it involves so much theoretical building about the solutions of tangible problems (Salinas, 2011).

Taking into account the methodology, the project has been structured in three big phases.

- Needs and context analysis: in this phase both needs and context analysis is done, a literature one and it develops conceptually and theoretically of the study aim.
- Design, development and formative evaluation: the second phase is about prototyping with a formative evaluation. In this way, different interactions occur in order to make a continuous improvement, and so, for improving the intervention.
- Semi-sumative evaluation: this last phase allows establishing the conclusions and, for this reason, it is called semi-summative as the solution of the problem is obtained from it, or even a recommendations summary for improving similar interventions as well.

According with these our experience is situated in the second phase, so we designed a portfolio prototype. Data was collected from 40 students with a questionnaire and a focus group with 5 students.

### **3. ePortfolio Design**

The results of the phase 1 enabled us to design a catalogue of evidence associated with the competences acquired on the practicum. A rubric based on size, objectives, actions and examples of evidence was designed. Hence, the catalogue has been designed by creating different structured tabs taken from the literature and the practicum report which the institution owns.

The portfolio has been designed splitting of the structure of Mahara, which is used by the University. Therefore, we start the process with the generic design to arrive at our final result that is used with

the preservice teachers students. The project has arrived there by integration of the different parts of the practices report.

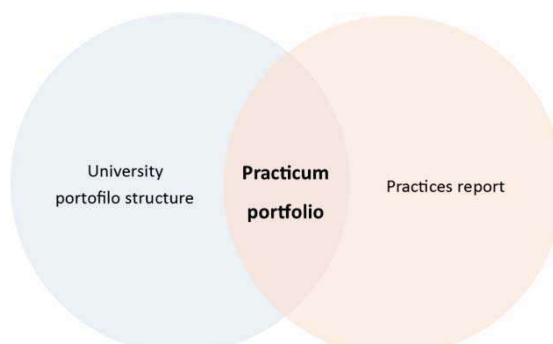


Figure 1: Practicum portfolio design

The rubric was validated by the project team, which included professionals from the schools participating in the project. The schools were a sample of local public (state) schools from a rural environment and state-sanctioned private schools and public (state) schools from an urban environment. The URV team was made up of academics responsible for kindergarten and primary education that coordinate student practicums in those areas, as well as two full-time researchers with methodological and technical profiles (Esteve-González, V., Sánchez-Caballé, A., Marqués, L., Holgado, J. & Cela-Ranilla, J., 2015).

From this catalogue of evidence, we designed the practicum portfolios using the Mahara tool built into the Moodle virtual learning environment (Figure 1 & 2).



Figure 2: Design of the practicum ePortfolio.



Figure 3: Structure of the practicum's competence-based evidence.

## 4. Results

The researchers asked the preservice teachers who used the portfolio during their practice period about the advantages and disadvantages about the usability of their portfolio template by a focus group. The results of that process are related to the second general objective and the second, fourth and fifth specific objectives. By the way, the collected information was organized by categories which are the result of the phase 1 (literature review):

### 1. planning, organizing and time managing

The students believed that the portfolio helped them to organize their report better than a traditional report. They explained that the portfolio enabled them to better organise content, though there was little freedom to adapt the template. They also reported that the organisation of time depended on several factors for which the tutors and the schools were responsible.

### 2. interaction, reflection and feedback

The students also expressed the opinion that their tutors, especially those in the schools, should receive more extensive training in using the portfolio and reported that they had generally not shared their portfolios with other students.

### 3. Content and collecting evidences

They believe it is positive that different types of evidence can be included in the portfolio because sometimes they consider that no written explanation is necessary. As this enables more space to be available during the reflection process, they believe that the use given to the evidence included is more practical and operational. On this matter they believe that more training is needed.

### 4. useful and usability of ePortfolio

With regard to the tool's usability, the students believe it needs to be more flexible when generating new structures. At the same time, however, they greatly appreciate the diversity of evidence the tool enables them to include since this makes the portfolio quick, useful and attractive to use. Finally, they also highlighted the fact that the portfolio helps them to draft their report of their student practicum.

## 5. Conclusion

The principles based on the results (regarding to the tool's usability and content) of the first iteration, that we should integrate into a future process, are:

- The template needs to be more flexible when generating new blocks in the view of the ePortfolio. This approach would facilitate the integration of evidence demanded in the practices and process feedback.
- It was appreciated the diversity of evidence the tool enables them to include since this makes the portfolio quick, useful and attractive to use.
- Must be incorporated a specific training for tutors in order to provide feedback.

## Acknowledgements

This research is supported by the Agency for Management of University and Research Grants, Government of Catalonia, "The accreditation and validation of skills of students through digital portfolios. A process for monitoring and evaluation of external practices in schools." (Ref: 2014ARMIF00032).

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