

From OER to Open Education: Perceptions of Student Teachers after Creating Digital Stories with Creative Common Resources

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Abstract

The current study explores the perceptions of three groups of student teachers in Spain after having used open licensed resources to construct their storytelling artifacts as OER. The theoretical framework briefly reviews the concept of Open Education and OER and the affordance and drawbacks previously observed in research. Data is obtained through a survey that enables the observation of students' tendency to adapt OER, Open Educational Practices and the Open Movement. The results reveal a general positive impact on student perceptions, although nuances and challenges are observed. The part containing the discussion and conclusions suggests some implications of this current step of research for future implementation in Teacher Education and related research.

Keywords: Open Educational Resources, Open Educational Practices, Teacher Education.

1. Introduction

This paper links two important topics in the current educational technology research since it explores the potential of the open movement in the educational context together with student teacher perceptions. The research is based on an innovative activity in which student teachers were asked to improve their digital stories by building them under the conditions of Open Educational Resources (OER) in order to publish a selection of the best ones in a Spanish Open Repository, *Agrega*⁴. After having lived the educational experiences of searching, using, mixing and modifying OER, students were asked about the possibilities of openness in the educational system and in their prospective professional careers.

2. Background

2.1. Open Educational Resources: definition, potential and drawbacks.

Despite the fact that digital OER have had a great impact, in fact they do not need to be strictly technologically-based. Moreover, it is a highly complex concept which goes beyond the technological context as such, and it has been related to the right to education (Unesco, 2012) and its transformational potential of society and, in particular, of educational institutions (Peter & Deimann, 2013). The open movement, the worldwide philosophies characterized by the willingness to collaborate and publish in order to enhance “accessibility, sharing, transparency and interoperability” (Couros 2010, p. 111) has had the most significant impact on the educational

⁴ AGREGA:

<http://agrega.caib.es/visualizadorcontenidos2/Portada/Portada.do;jsessionid=E63FD35E62F6111FF87B3DD161316282>

context based on the belief that it is a public good (Weller, 2014). Openness in education, according to Wiley and Green (2012), is observed in different aspects among which are OER.

The first definition of OER was proposed by Unesco and it has recently been “emphasized” (Unesco, 2012). Furthermore, OER have been defined as observing four phases, which have been called the 4Rs (Wiley & Green, 2012): reuse, revise, remix and redistribute. Recently, Wiley (2014) has added the fifth term, *retain*, defining it as “the right to make, own and control copies of the content”. Weller (2012) suggested two concepts in order to group OER in two basic parts: on one hand, “big” OER, which are the ones carried out by institutions and are derived from projects, and that mainly consist of highly-planned resources, and, on the other hand, “little” OER, generated individually and with less investment or quality.

Research has observed a wide range of OER potentials. It has been claimed that OER foster the spread of knowledge and that, among teachers, they can support learning from others’ teaching (McGreal, Kinuthia, Marshall, & McNamara, 2013; Teng & Hung, 2013). In addition, it has been argued that the creation of OER involves a boost for learning design and innovation since they are easy to use and bring value to adapting and adopting (Lane, 2010). Weller (2012) suggests that creativity is generated in both big and little OER although their nature differs. Thus, creativity in big OER is produced when adapting content in the implementation of the resource whereas in little OER it emerges from the production process itself, and also from adaptation in unexpected contexts (Weller, 2012). Furthermore, it has been stated that reusing and remixing OER enhances teachers’ creativity since they are encouraged to rethink their teaching and collaborate for the review of resources (Atenas & Havemann, 2014). It has also been argued that OER allow teachers to take ownership and control over their courses and textbooks in a way that was previously impossible (Wiley, Green & Soares, 2012). However, OER are not yet very well known among teachers and the possibilities for opening up education have not been very extensively explored either (Conole, 2012; Misra, 2014). Furthermore, the need for a more positive perspective on OER in order to use and share them has been claimed (McAndrew, Farrow, Elliott-Cirigottis & Law, 2012). It has been assumed that the introduction of OER in teacher education programmes will help prospective teachers to adopt them (Misra 2014).

Barriers for OER uptake have been observed in research (see for example, Clements & Pawlowski, 2011). Among all such barriers, special attention should be given to textbooks since publishers in particular represent a barrier. They consider OER as a threat (Santos-Hermosa, Ferran-Ferran & Abadal, 2012) and are lobbying in an attempt to pressure national and local educational administrations when policies promote the usage of open resources (Adell, 2010).

A wide range of perceptions has been observed in their re-use by teachers. Re-using has been defined as “using educational resources that have already been available via LORs for anyone’s own purpose, needs, and context” (Clements & Pawlowski 2011). Extending resources and creativity of their teaching are observed as the main reasons for using OER. However, it seems that open-licenses of resources are not generally respected although teachers are willing to use them properly from suitable repositories (Hassler, Hennessy, Knight, & Connolly, 2014).

3. The study

3.1. Context

Educational Technology forms a part of the curriculum for student teachers at the University of the Balearic Islands (UIB) in their Early Childhood Teacher Education degree course. In the context of this subject, students have to build a digital story in order to demonstrate the development of their technical skills. Furthermore, the resources of these artifacts have to be either personal or under Creative Commons licenses, which is the criteria for highest excellence in the final assessment. And finally, they have to give a CC license to their own material in order for it to be considered for publishing on *Agrega*, a Spanish educational repository.

3.2. Participants

The participants are three groups of students (n=128), one based in Mallorca (n=77), on the main Campus in Palma, and the other two in the off-campus centers in Menorca (n=19) and Ibiza (n=32). Among all the participants in the learning activity, a total of 86 students (61% of the total of participants) answered the survey: 58 from Mallorca (71% of the group), 8 from Menorca (42% of the group), 15 from Ibiza (47% of the group).

3.3. Methodology: research question and data collection

The research question of this initial study is:

- What perceptions towards OER, Open Educational Practices and the Open movement do students have?

In order to collect data from the students participating in the innovative activity, a questionnaire was developed.

Although the main methodological approach is qualitative since the aim of the study is to explore student perceptions, data is obtained through a quantitative analysis. So, a descriptive perspective is addressed to interpret numerical data obtained through the survey. In order to collect data from the students participating in the innovative activity, a questionnaire was developed. It was designed on a Likert scale, since it enables the observation of tendency of attitudes - so students had to choose their best answer from fully disagree (1) to fully agree (5).

3.4. Results

In the first place, it was important to know students' decisions about the license they were going to choose for their OER digital stories (question 1). Results show a great variety between the less open and more open licenses. There were two reduced parts of the group who chose some of the less restrictive Creative Commons licenses such as Attribution (8%) and Attribution-ShareAlike (4%) whereas the vast majority of the groups tended to choose others with diverse levels of restrictions. So, 36% chose Attribution-Noncommercial-NoDerivatives, whereas 26% choose either Attribution-Noncommercial-ShareAlike or Attribution-Noncommercial. No student chose Attribution-NoDerivatives, which, since it does not include permission for derivative work, like the BY-NC-ND license, has been argued as not being a proper OER (Cable reported by Campbell 2015).

In the following table, all data obtained in questions from 2 to 9 is shown in percentages.

Table 1. Results

	Totally disagree	Disagree	Neither A/D	Agree	Totally agree
Question 2	0	3	13	59	25
Question 3	0	3	12	56	29
Question 4	0	3	8	50	39
Question 5	1	1	1	42	49
Question 6	0	1	3	38	58
Question 7	2	4	37	45	12
Question 8	0	1	29	50	20
Question 9	0	0	16	46	38

When students were asked about the possibilities of OER in education (question 2), a vast majority of the group answered in positive terms (84% of the group agreed or fully agreed with the item). An insignificant average (3%) disagreed, whereas a rather relevant 13% answered “neither agree nor disagree”. After that, students were asked about the possibilities for collaboration among in-service teachers and again (question 3), most of the group showed positive perceptions about the item (85% answered “agree” or “fully agree”), whereas only 3% disagreed and 12% answered “neither agree nor disagree”. Again, the vast majority of the group agreed or fully agreed (89%) with the idea that all teachers should embrace the open movement (question 4) while only a few students were reluctant (3%) and another small part of the group (8%) chose “neither agree nor disagree”.

As well as OER, the questionnaire was intended to explore perceptions on the need to introduce pre and in-service teachers into the concept of Open Educational Practices (question 5). In this case, the same attitudinal pattern as in the first questions could be observed: 91% answered “agree” or “fully agree”, 2% chose “disagree” or “fully disagree” and 7% “neither agree nor disagree”. When asked about the improvement of the educational system (question 6), nearly all the group of students teachers agreed or fully agreed (96%), whereas only 1% did not agree and 3% were neither in agreement nor disagreement. Although mainly positive, the pattern observed in answers about the role of OER in the enhancement of creativity and an education without publishers’ textbook rather differed. So, when students were asked about the enhancement of creativity through the construction of OER (question 7) the average agreement decreased to 57% of the group, which is the lowest level achieved of all questions in the questionnaire. However, it is important to highlight that a relevant part of the group (37%) seemed to be skeptical as they chose “neither agree nor disagree” whereas only 6% clearly rejected the possibilities of creation and adaptation of OER to foster creativity. The question in which students were asked about the possibilities of OER to promote a less textbook-based education (question 8) presents rather challenging answers too. Thus, the average number of students showing positive attitudes was 70%, higher than the previous one but still lower than for the rest of questions. However, it should be pointed out that these attitudes do not mainly take on negative positions, since the average remains in a non-significant level (1%), but moves to certain skeptical attitudes since a rather relevant 29% chose the option “neither agree nor disagree”. Finally, the questionnaire included an item (question 9) aimed at exploring the willingness of student teachers to continue using OER in their future professional careers, and 84% agreed either answering levels 4 and 5, no student was unwilling for future usage and there was a rather relevant 16% of students who were more skeptical, which in this case is the highest level among questions.

4. Discussions and conclusions

Policies are important but as long as they do not engage students, as reported by Campbell (2015), it is important to foster OER in order to create a greater awareness of their value among students. OER have been strongly connected to the Higher Education so, in this sense, the reported activity was carried out in its most common context. However, these students were about to become teachers, and so it can be considered logical that this activity may have a future impact in the earlier stages of very young learners. Therefore, the activity was intended to promote OER among future teachers since research has observed that these resources are not widely known (Conole, 2012; Misra, 2014). In this work, OER are explored in the format of short stories built by student teachers, so, using Weller’s concept (2012), the current artifacts are the Little OER built by student teachers. The digital stories are in Spanish or in Catalan, which improves the diversity of languages of OER, mainly carried out in English speaking countries, as argued by Misra (2014). Along with the exploration of OER, the innovative activity analyzed in this paper is aimed at improving students’ perceptions towards Open Educational Practices and in general, openness in education.

The research question of the study is asked in relation to this aspect and the answer is that, in general, students have developed positive attitudes towards the usage of OER in education and the

need to follow the Open Education movement by embracing Open Educational Practices. However, results show certain challenges that allow us to observe the need for future implementations and future research. Students have answered showing positive attitudes when asked about general ideas whereas, when the question is focused on concrete aspects such as creativity and the role of textbooks to carry out the general principles, they have demonstrated more reluctance. This is evidence that although they can understand the principle, they have not achieved a transformative level of knowledge. It has been argued that openness can be considered a threshold concept which, once understood, can transform the way in which education is conceived (Tur, 2015). Thus, in order to improve reflection and greater student awareness of the implications of OER and the open movement, which have presented a limitation in the current design, future implementation should include the assignment of written reflective texts.

The low levels achieved by these questions suggest a need for further exploration. For the next steps of the research it is important to explore the possible barriers observed by students as well as to obtain higher levels of student support after improving the learning design. Moreover, it is important to explore in greater depth how this creativity has been enhanced. In relation to creativity as a high cognitive skill, it would also be interesting to explore the impact of this particular activity aimed at the creation of OER for critical thinking and self-regulated learning.

The current study represents the first step of this new line of research related to this innovative practice at the Early Childhood Education programme of the UIB. The limitations are derived from the short educational experience, whose design needs to be improved in future iterations of the activity. Also, one important limitation is the reduced number of participants, which will be increased in future experiences, in order to explore the possibilities of generalization of these first results. However, although this has been the first focus on the role of OER in pre-service teacher training, openness has been addressed in previous research such as in the context of eportfolios (Tur & Marín, 2015; Tur & Urbina, 2014) in which flexible and open learning has been addressed (Salinas, 2013). Thus, this new focus on OER was a mandatory line of work that promises new challenges for research and innovation in Teacher Education, which needs to be committed to the improvement of the educational system where current students will develop their professional teaching careers.

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Questionnaire

Question 1. CC licences under which students will share their OER.

Question 2. Publishing OER under CC licenses has great potential for education.

Question 3. I think that publishing OER under CC licences will promote collaboration among in-service teachers.

Question 4. I think that teachers should follow the Open Education movement.

Question 5. I think that Teacher Education has to introduce pre and in-service teachers into Open Educational Practices.

Question 6. I think that the improvement of the educational system requires that teachers are willing to open their educational practices.

Question 7. Using and remixing OER has enhanced my creativity skills

Question 8. I think that publishing OER under CC licenses will help teachers not to depend on closed textbooks so much.

Question 9. I think I will continue using OER in my future professional career.