

# Design, Development and Evaluation of Collaboratively Developed Open Educational Resources for the Post-Primary Classroom

Dr Ann Marcus-Quinn  
National Digital Learning Resources service, University of Limerick  
[Ann.Marcus.Quinn@ul.ie](mailto:Ann.Marcus.Quinn@ul.ie)

## Introduction

Despite the attempts to integrate ICT across the curriculum of all post-primary education systems in the developed world there remains low levels of use (Cuban, 2001, Ertmer, 1999). One of the major reasons for this low level of use is the availability of curriculum relevant Open Educational Resources (OERs). In recent years the availability of high quality authoring tools has provided opportunities for the low-cost development of highly reusable curricular relevant materials (Boyle, 2003, Ringstaff, and Kelley, 2002, Kupetz and Ziegenmeyer, 2006). The increasing use of educational repositories can now facilitate the wide-scale distribution of these resources. This has the potential to radically reconceptualise use of ICT across the curriculum in Irish schools, particularly in the Humanities area, an area that has not traditionally incorporated ICT (McGarr, 2009).

## Objectives

The research aimed to develop curricular specific OERs for the teaching of poetry at Junior Certificate level in Irish post-primary schools. It aimed to capture the collaborative design and development process used in the development of the courseware and describe and evaluate the implementation of the resource by teachers in different educational contexts.

## Methods

The research employed a case study approach as it was seen as the most suitable methodological approach to capture the richness of the design and implementation of the resource. The resource was developed (adhering to the model developed by Marcus-Quinn and Geraghty, 2010) in collaboration with six practicing teachers and implemented in three different schools in very different classroom settings. Through the use of semi-structured interviews, questionnaires and classroom observations the research methodology employed aimed to capture the richness of the experience from the participants' perspective.

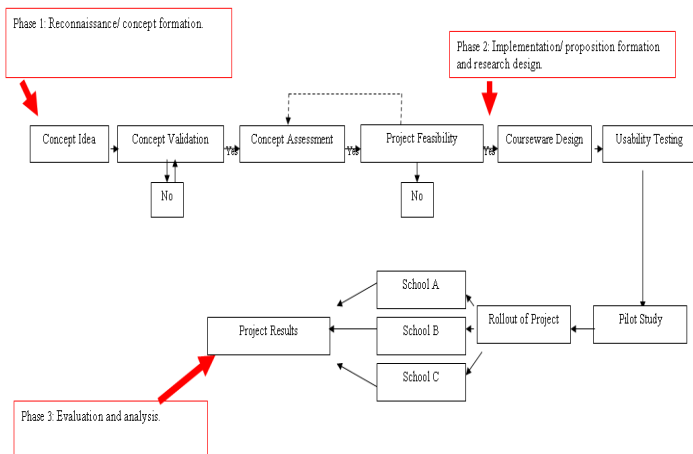


Fig 1: Visual representation of the study

## Keywords

ICT, Open Educational Resources, Repositories, Teaching and Learning, Schools.

## Results

The research found that despite the low levels of ICT use in schools the participating teachers were enthusiastic users of the resource (Baek, Jung and Kim, 2008, Laurillard, 2009). While it was evident that the students had limited experience of using ICT in schools they nonetheless enjoyed the experience and appeared to benefit from use of the resource. The research also found that the resource was highly reusable and was interpreted and used by teachers in different ways to best suit their needs and the needs of their students.

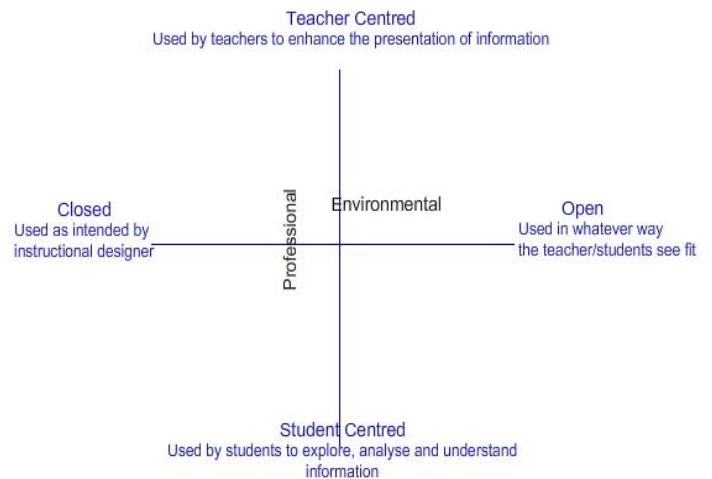


Fig 2 Visual representation of the nature of use of OERs in the classroom

## Conclusion

The findings of this research suggest that the framework used in the collaborative development of the resource has enhanced the reusable nature of the object and that future resources should employ a similar collaborative approach. The research also suggests that the reusability of the resource is dependent of the curricular and pedagogical coherence of the learning object. The research raises a number of issues for the development of such tailor-made solutions and highlights opportunities for future developers.

## References

- Baek, Y, Jung, J., & Kim, B. (2008). What Makes Teachers Use Technology in the Classroom? Exploring the Factors Affecting Facilitation of Technology with a Korean Sample. *Computers & Education*, 50, 1, pp. 224-234.
- Boyle, T, (2003) Design principles for authoring dynamic, reusable learning objects, *Australian Journal of Educational Technology*, 19(1), pp. 46-58.
- Cuban L (2001) *Oversold and underused: computers in the classroom*. Cambridge, MA: Harvard University Press.
- Ertmer, P. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. *Educational Technology Research and Development*, 47, 4, pp. 47-61.
- Kupetz, R., and Ziegenmeyer B (2006). "Flexible learning activities: fostering autonomy teaching training" *ReCALL* 18 (1) 63-82.
- Laurillard, D. (2009). "The Pedagogical Challenges to Collaborative Technologies," *International Journal of Computer-Supported Collaborative Learning*, 4 (1), pp. 5-20.
- McGarr, O. (2009). The development of ICT across the curriculum in Irish schools: A historical perspective. *British Journal of Educational Technology*, 40(6), 1094 - 1108.
- Ringstaff, C. & L. Kelley, L. (2002). The learning return on our education technology investment: A review of findings from research, WestEd, San Francisco. [URL:http://www.wested.org/cs/we/view/rs/619](http://www.wested.org/cs/we/view/rs/619).
- Marcus-Quinn, A., and Geraghty, B., (2010). Design and development of a digital learning resource to deliver online content to teach Japanese syllabaries in *Critical Design and Effective Tools for E-Learning in Higher Education: Theory into Practice*