
Project Report

Sustaining Inquiry-based Learning

beyond the PRIMAS Project

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The project

PRIMAS (2010-2013) was an EU-funded research project that sought to promote inquiry-based learning (IBL) in mathematics and science classrooms across 12 European countries (<http://www.primas-project.eu/>). This type of pedagogy distances teaching and learning from the traditional transmission model that is characterised by the teacher dishing out 'knowledge' to his or her largely passive students. The emphasis, instead, is on active learning approaches that facilitate students' personal constructions and the integration of the resulting knowledge.

The University of Malta was one of the 14 partner universities in this project. The Malta project team, which grouped together a number of mathematics education and science education colleagues at the Faculty of Education, collaborated closely over a period of two scholastic years with ten so-called 'multipliers' – five for mathematics and five for science. The multipliers were chosen from among interested practitioners, Heads of Department and Education Officers. Each multiplier worked in turn with a small group of either mathematics or science teachers in selected State secondary schools.

This organizational structure favoured the formation of communities of practice at two distinct levels. At school level, multipliers guided and offered support to their teachers. On the other hand, multipliers found mutual support and guidance when they met with the University team. The fruitful collaboration that distinguished most of these communities has been identified by the local PRIMAS participants as one of the more positive aspects of their involvement in the project

Recognising achievements and limitations

The PRIMAS project met with different levels of success, both within and across the two subject areas and the different schools where it was implemented. Given that inquiry has traditionally been more associated with the teaching and learning of science than mathematics, the notion of IBL was initially more widely accepted within the science classes. By and large, the mathematics teachers in the project required more time and persuasion to start experimenting and engaging with this pedagogy. Again, even within the individual school-based communities, there were mathematics and science teachers who enthusiastically embraced and did their best to practise this pedagogy, while others remained sceptical and apparently disengaged till the very end. Overall, however, the PRIMAS experience suggests that many

Maltese teachers are willing to partake in carefully thought initiatives that respect their professional knowledge and address their contextualised needs. There were also clear indications that these initiatives can really thrive once continuous professional support is readily available, preferably as part of the schools' daily organizational structure.

Evaluation was an important component of the PRIMAS project. The research data – which was collected primarily through questionnaires, observations and interviews – suggest strongly that students and their teachers tend to equate IBL pedagogy to an enjoyable educational experience. Moreover, there seems to be a general acceptance that an inquiry-based approach helps students to construct and internalise knowledge as opposed to simply storing and retrieving on demand the information received. Reservations were however expressed primarily with regards to syllabus coverage and IBL's ultimate utility with regards to students' success in high stakes examinations that continue not to necessarily favour understanding over rote memorisation. But in spite of these concerns, which were largely linked to systemic issues, the University of Malta PRIMAS team and the multipliers still came across oases of good pedagogical practices that were identifiably rooted in teachers' participation in the project.

Looking beyond PRIMAS

Logistical and financial constraints dictated that the implementation of the PRIMAS project in Malta be limited to a small number of schools in the State secondary sector. Notwithstanding this, constant efforts were made to bring IBL pedagogy to the attention of other local stake holders, including prospective teachers, other schools and other teachers, educational researchers and policy makers (for an indication of these initiatives see <http://www.primasnational.eu/MT/>). It was heartening to note that participation in IBL-related events that were open to non-PRIMAS participants was always encouraging and feedback was generally positive. More strikingly, perhaps, were the genuine demands by numerous non-PRIMAS schools and teachers to become involved in the project. Having to tell them that it was not possible at that stage was always a big let-down.

PRIMAS as a project has now come to an end. The crux at this point is how to ensure that IBL pedagogy continues to flourish in Malta beyond PRIMAS. This desire for continuity and renewed investment has been on the minds of all involved in the running of the project. The good news is that local education authorities seem to share this feeling. As a result, meetings are currently

being held among a number of interested stake holders to ensure a strong, lasting and fruitful presence of IBL in the Maltese education system.
