Promoting Interactive Whiteboard Use in Language and Vocational Education: a Tale of iTILT and SmartVET EU Projects

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Abstract. In this study we provide an overview of the strategies and instruments developed through two European projects to support teacher training and to promote effective use of interactive whiteboards in a variety of subject areas and educational sectors. The two European projects, both funded through the Lifelong Learning Programme of the European Commission, are:

Interactive Technologies in Language Teaching (iTILT) and Supporting Continuous Professional Development of Vocational Education and Training (VET) teachers in the use of Interactive Whiteboards (SmartVET).

We will outline both projects and report in detail on the outcomes and recommendations resulting from the needs analysis on which both projects based the design of their training models and material. Other results reported include the training practices and resources that were developed, including 1) online training through more than 250 video clips of IWB practice in classrooms in six European countries, some 30 instructional video clips together with additional resources, 2) training handbooks with realistic model materials. We conclude by summarizing the project related research and discussing evaluative data provided by the teachers and the reflections of the trainers / researchers.

Keywords: interactive technology, language training, teachers’ professional competence development.
Introduction

The research literature highlights several positive pedagogical benefits of Interactive Whiteboards (IWBs) in (language) education, such as a) facilitating the integration of new media in the regular classroom, b) enhancing the scope of interactivity and learner engagement in the lesson, c) supporting the development of so-called “electronic literacies”, and d) meeting the needs of students with diverse learning styles (aural, visual and kinaesthetic) through the use of multiple media. A review of the recent research literature shows that teachers’ pedagogical skills, knowledge and media literacy are important factors which support the contribution of IWB-use to improved student attainment.

As IWBs also gradually find their way into (language) classrooms across the world, the investment in good quality training in the pedagogical use of this technology becomes increasingly important.

Various metastudies (Kennewell, 2006; Higgins et al., 2007; Koenraad, 2008a) show that IWB use does not of its own accord provide added value in educational practice. Several researchers (Gray et al., 2007; Cutrim Schmid & Schimmack, 2010; Fisser & Gervedink-Nijhuis, 2007) emphasize that specific teaching skills and materials designed specifically for this medium are preconditions for creating added value.

These findings also inspired the definition of the projects iTILT and SmartVET which we describe in more detail below starting out with the iTILT project.

2. The iTILT project (2011–2013)

iTILT (Interactive Technologies in Language Teaching), focused on the use of interactive whiteboards in the communicative language classroom. The project aimed to enhance interactive teaching with technology for different languages, proficiency levels, and age groups in seven European countries, and to help teachers gain confidence with technology in communicative language teaching.

Throughout the process of producing the iTILT resources, the project partners undertook a number of classroom research initiatives, including both quantitative and qualitative analyses of IWB use by project teachers. This research has resulted in the development of numerous training courses for pre- and in-service teachers. The project partners (language teachers, teacher educators and researchers) created a number of web-based resources including:

a) a training manual – and related IWB teaching materials - (available in 6 language versions) aiming to support teachers in exploiting the potential of the IWB and to help them to teach in accordance with communicative and task-based approaches to foreign language.
b) an open educational repository with over 250 multimedia reports including video clips of IWB-mediated language teaching practices by 44 teachers of 6 languages in four education sectors (primary, secondary, higher and vocational) in 7 countries. These are designed to function as learning objects to encourage reflection on IWB use in modern language education.

c) An actively curated library section offering over 200 annotated links to additional resources in the field of IWB and Language Education including IWB & Language Education related research, relevant collections of IWB (training) materials and related communities.

These resources and more information on the iTILT results (including the related research discussed below) is available at the project website: www.itilt.eu/

3. The SmartVET project (2011–2013)

Initiated by County Wicklow Vocational Education Committee (VEC), with FIT (Fastrack to IT) as a lead partner, the EU project ‘Supporting Continuous Professional Development of VET teachers in the use of Interactive Whiteboards’ (SmartVET) is a transfer of innovation project focused on the continuous professional development (CPD) of vocational teachers in the use of interactive technology for teaching and learning.

From findings in the literature and reported experiences elsewhere in Europe and beyond it was concluded that, essentially, IWB training should be all about appropriate courseware, practice and peer learning. This applies particularly because the main obstacle with IWBs appears to be that teachers very often cannot manage to develop their IWB from the basic form of application to more sophisticated use in teaching and learning, on their own. Consequently, peer to peer training is key to the SmartVET approach.

To guide this process a number of early IWB adopters across the VET sector in Wicklow were identified and, – after having been trained – these so called ‘IWB Champions’ joined the project partners in organizing and delivering several professional development opportunities for their peers.

The project aims to build up initial IWB competence across disciplines so that there will be teachers in VET centres who are confident in using IWBs and willing to share their expertise and promote the use of IWBs. Specific project results include:

Needs Analysis to provide research-based evidence to inform the design of materials for the delivery of the professional development programme. One of the conclusions in the report (Koenraad, 2012) was that the rationale for the SmartVET project was supported by the fact that the majority of the respondents indicate that a) they do not use the IWB b) are interested in using it in their teaching and c) would welcome training in the use of IWBs. The research also provided ideas about the training format: most respondents
appear to prefer a face-to-face and blended approach to professional development - preferably in small groups that facilitate hands-on activities, collaborative learning with peers and opportunities to pilot subject specific materials in actual practice.

A Training Programme. In addition to the outcomes of the needs analysis the training programme (and related learning resources) are based on the knowledge and expertise of the project partnership, in particular on experience gathered within the EU Project Smarteach.

Learning Manual & Training Resources. A learning manual was developed to assist IWB Champions and teachers participating in the programme and to guide them step by step through the training process, and the use of IWBs in the classroom. The main focus of this manual is to introduce champions and teachers to Interactive Whiteboards, their technical aspects, main features as well as different approaches to teaching and training. Short video tutorials were produced by the UK partner, City College Norwich, that show in practice how to use features on a range of different IWBs to support the CPD activities.

A Model of Interactive Whiteboard training implementation (Irish Context). This model emerged as a result of the piloting of the proposed training process for teachers, and was based on feedback from the teachers and champions involved in SmartVET. This has been documented and developed into the Model on Interactive Whiteboards Training Implementation (Irish Context). It aims to support VET organisations that are planning to implement the use of Interactive Whiteboard. Together with the related delivery methods and training resources it is meant to provide a field-tested approach to professional development related to interactive classroom technologies for VET teachers in Ireland and across Europe.

These resources and more information on the SmartVET results (including the related research discussed below) are available at the project website: www.smartvetproject.eu

4. Project related research

Both projects invested in baseline data collection to inspire general project development strategies and the design of training materials in particular. Online questionnaires were used with a focus on i) demographic details, ii) perceived confidence levels in relation to IWB use, iii) perceived confidence levels in relation to general ICT use. Hillier et al (2013), reporting on findings in the iTILT project in relation to Beauchamp’s (2004) transitional framework, suggest that overall, teachers indicated relatively low levels of confidence with particular features and tools of the IWB, despite the varied levels of experience (in IWB use and teaching) in the countries involved. Comparable outcomes, also related to positive attitudes to the potential of IWBs and willingness and motivation to be (further)
trained in their educational use was also found in the responses from the vocational teachers in the SmartVET needs analysis research (Koenraad, 2012).

Other iTILT related research concerned teacher-selected video clips and teacher and learner interview data (Whyte et al., 2012) from sessions in primary foreign language classes in France and Wales, with 4 teachers from each country across 5 primary schools. Analysis of the video data showed a rather conservative and cautious approach to IWB use for language teaching. Despite this, teachers perceived their learners to feel motivated and more engaged in language lessons. Learners not only confirmed the teachers’ perceptions but some also reported that the IWB facilitated and supported their language learning.

Additionally another collaborative article was written by Cutrim Schmid and Whyte (2012) with a focus on France and Germany. The article placed greater emphasis on language models adopted by teachers and additional data was collected via other programmes and projects to produce a longitudinal study which covered IWB use and video-conferencing. While there was some variation in the data collection process, the general framework adopted included designing and implementing constructivist materials and training; classroom observations; video-recorded lessons and in-depth interviews with teachers (Cutrim Schmid and Whyte 2012). They concluded that despite teacher and trainers’ expectations that their teaching approach would shift towards a more socio-constructivist model, a variety of differing teaching approaches were implemented across the spectrum from grammar-translation to more constructivist models. It was also noted that a variety of language teaching approaches were used, and that the degree to which teachers altered their teaching practices varied. It is concluded that isolated training sessions alone are insufficient as teachers also require constructive feedback, adequate time to allow for development of skills and on-going training and support in order to shift towards a more socio-constructivist approach to language teaching (Cutrim Schmid and Whyte 2012). Comparable conclusions and related recommendations, but in this case for training features promoting effective IWB use across disciplines, are listed in the SmartVET needs analysis report (Koenraad, 2012).

The final research article that has been published throughout the lifetime of the iTILT project relates to the development of the project website. The paper discusses the challenges and opportunities associated with developing an open educational resource (OER) such as the iTILT website to support CLT (Whyte et al., 2013). In particular, a reflective discussion of the various project phases is focusses on the development of appropriate training materials; the logistics of data collection; selection of video clips and development of website tags. The authors not only stipulate the importance of developing and implementing piloting measures for training resources, classroom video clips, and the beta version of the website to ensure the OER/website but more importantly on allowing the project teachers and other language educators to have central involvement in the piloting stage. Such contribution gave them a voice in developing resources and areas for further improvement to assure quality (Whyte et al., 2013).
The partners have also recently contributed to the book ‘Teaching Languages with Technology: Communicative Approaches to Interactive Whiteboard Use’ edited by Cutrim Schmid and Whyte which is due to be published November 2014. This book draws on theories of second language acquisition (SLA) to illustrate how the IWB can be exploited to support language acquisition. It examines interaction, collaboration and negotiation of meaning and focus on form in the communicative language classroom across primary, secondary and vocational schools within different contexts and countries. Each chapter reports on authentic practice and gives a full account of in-depth research with reflections and points for discussion that could be used for training.

SmartVET’s internal quality control process together with the external project evaluation, done by Dr. Miriam Judge of Dublin City University, produced valuable insights for the co-ordinating parties which may also be of use for other Education Authorities on aspects such as vision, culture and leadership including:

- Middle Management (School Principals and Education Centre Co-ordinators) are critical in the delivery of the organizational vision, and need to be clear about the strategic goals.
- Creating a culture of staff development in the organisation – including performance indicators based on participation.
- Recognition of Champions as leaders with skills in ICT, and need for support for ‘champions’ from school leaders and managers.
- As the SmartVET Champions provided positive role models the train-the-trainers approach is recommended for increasing competence and capacity.

5. Discussion and Conclusion

The iTILT participants, who were trained in IWB use in language education, shared their ideas on the impact of IWB on their teaching after using the technology. Findings have shown that the language instructors could identify a variety of potential uses of the IWB for supporting language teaching and learning in various educational contexts. These teachers seem to have developed positive attitudes towards IWB use. However, the findings also corroborate findings of previous research showing that, if instructors are not convinced that IWBs will reduce their work load and/or enhance their teaching, they will not embrace the technology fully. Some of the participants highlighted a few challenges they faced while incorporating this technology into their practice, placing special emphasis on the time commitment necessary to design IWB-based materials for the higher education context. The participants have also highlighted the key role played by quality professional training in allowing teachers to exploit the full potential of the IWB.
The approaches to training staff in both projects have followed a framework for IWB-related professional development that has been suggested in the literature, namely, that training activities should use contextualized examples of technology use, focus on teachers’ immediate pedagogical needs, by providing them with a database of pedagogical resources, and provide reflective practice concerning teachers’ own and other lessons (Gray et al., 2007; Cutrim Schmid, 2010). The literature has also pointed out that the predominant concern of educational institutions when implementing IWBs must be to select appropriate training opportunities and to do so early in the process (Glover et al., 2005; Miller & Glover, 2007).

The projects have also enabled us to formulate some recommendations and guidelines for good practice for the development of training programmes and the design of materials. They include:

- Ensuring there is enough time for pre-and in-service teachers to get acquainted with the medium and its features.
- Create an IWB early adopters’ group among the teachers of your school and organise short sessions to train, demonstrate / discuss materials and exchange real teaching experiences to learn from each other.
- Implement some sort of reflective practice through peer-feedback, because it leads to better results and critical self-evaluation.
- Pay enough attention to the activating potential of IWB materials. Raise issues related to enhancing technical, cognitive and social interactivity.
- Choose the appropriate medium to realise your teaching goals. Start by asking yourself if IWB use can support the cognitive and skill development activities related to your planning.
- Define whether and when a plenary or individual approach would be in place.

The described projects also share comparable exploitation strategies including the annual offer of ErasmusPlus fundable, international courses. Find more information here.

References


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**Interaktyvių lentų panaudojimo skatinimas užsienio kalbų ir profesiniame mokyme: apie ES iTILT and SmartVET projektus**

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**Santrauka**

Straipsnyje apžvelgiamos strategijos ir priemonės, kurios buvo sukurtos, vykdant du ES projektus, skirtus tobulinti mokytojų profesines kompetencijas ir skatinti efektyvų interaktyvių lentų panaudojimą įvairiose švietimo srityse.

Abu projektai „Interaktyvios technologijos kalbų mokyme (iTILT)“ ir „Profesinio rengimo įstaigų mokytojų nuolatinio profesinių kompetencijų tobulinimo stiprinimas naudojant interaktyvias lentas (SmartVET)“ buvo finansuojami iš Europos Komisijos Mokymosi visą gyvenimą programos lėšų.

Straipsnyje detaliai aptariai vykdytų projektų rezultatai ir pristatomos rekomendacijos, pagrįstos poreikių analize, kuria buvo remiamasi, renkant medžiagą ir kuriante mokymo modelius. Pateikiami rezultatai apima mokomąją praktiką ir sukurta resursus, tarp kurių 1) internetinės mokymo priemonės – daugiau nei 250 vaizdo ir 30 mokomųjų įrašų su papildomais resursais, panaudotų praktinių užsiėmimų, vykusiu šešiose Europos šalyse, metu ir 2) mokymo vadovėliai su realistine modelių medžiaga.

Išvadose pristatomas projektinių tyrimų apibendrinamas, aptariami mokytojų pateiktų vertinimų duomenys ir mokytojų tyrėjų refleksija.

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**Esminiai žodžiai:** interaktyvios technologijos, kalbų mokymas, mokytojų profesinių kompetencijų tobulinimas.

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