

# CALL research in the primary school setting – problems, possibilities, and potential

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**Abstract.** This paper looks at Computer Assisted Language Learning (CALL) in the primary school setting and the problems, possibilities, and potential associated with this context. CALL normalisation is a key feature of successful CALL usage. This paper looks at CALL normalisation in the primary school context through three different lenses: Leakey's (2011) 3P's, Bax's (2003) CALL normalisation, and Chambers and Bax's (2006) CALL normalisation. The paper provides an overview of the use of a CALL resource for primary school students over a period of three years, with students ranging in age from seven to 12, both boys and girls with a number of different teachers across two different schools. It finishes up with some reflections and tips for others looking to work in this particular area.

**Keywords:** CALL, primary school, normalisation, Irish Word Bricks, Irish.

## 1. Introduction

Successful adoption of CALL artefacts (resources) depends on many factors including pedagogical, technical, and deployment factors. The CALL artefact should be suitable for the target learner group, be pitched at the right level, and have a suitable pedagogical approach. The CALL artefact should work on the devices that are available to learners. Real world deployment factors are key – a CALL artefact must work within the physical infrastructure and classroom setting.

There are many different approaches to looking at CALL success and CALL normalisation is a key element (Bax, 2003; Chambers & Bax, 2006; Leakey, 2011). Leakey (2011) has proposed the 3P's approach which looks at platform, programme, and pedagogy. Bax (2003) looks at eight different components that

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are key to CALL normalisation: task type, student activity, feedback, teacher roles, teacher attitude, curriculum position, lesson position, and computer position. [Chambers and Bax \(2006\)](#) follow on from [Bax \(2003\)](#) and they consider four different components: logistics; stakeholders' conceptions, knowledge, and abilities; syllabus and software integration; and training, development, and support. There is limited reported CALL research in the primary (elementary) and post-primary (secondary, middle/high school) sectors. [Macaro, Handley, and Walter \(2012\)](#) provide a systematic review of 117 post-2000 CALL papers in primary and secondary schools, [Pim \(2013\)](#) discusses game-based CALL at primary level and [Ward \(2007\)](#) looks at Irish CALL in the primary context. This paper looks at the problems, possibilities, and potential of CALL in the primary context through a normalisation lens.

## **2. CALL in the primary school context**

Ethical approval is particularly important in CALL research in the primary school context. There is an evolving understanding of consent/assent in this context which draws on the philosophy of 'nothing about me without me' (i.e. those affected by something should have their opinions heard). Adult and young learners differ in many ways: learner autonomy, access to CALL resources, maturity, and knowledge of their learning preferences – see [Knowles \(1973\)](#) for a discussion on pedagogy and andragogy.

In most countries, there is a set primary curriculum. It is generally full with limited extra space for additional activities that facilitate CALL normalisation including providing professional development for teachers, learner training, and time for learners to actually use CALL resources. Primary school teachers and CALL researchers have different domains of expertise. Primary school teachers are pedagogical experts, they teach a variety of subjects and have experience of teaching young learners. They have different levels and comfort and competence with digital learning. CALL researchers are generally not familiar with the primary school context (except maybe from a parental point of view). They may have to adjust their thinking and assumptions about suitable CALL resources at primary level.

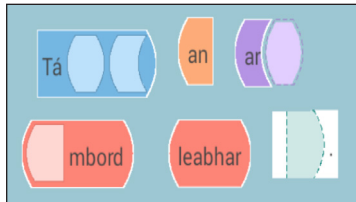
## **3. CALL potential – Irish WordBricks (IWB) example**

There is a lot of potential for CALL in the primary school context, especially if they are designed with the target learners in mind from the start. IWB ([Purgina,](#)

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Mozgovoy, & Ward, 2017) is a CALL resource that enables learners to construct grammatically correct sentences in Irish by combining bricks of different parts of speech together in the correct order. It is curriculum aligned, requires minimal running requirements, and very little teacher and learner training and these features are important for CALL normalisation. It is designed to complement rather than replace classroom teaching. Figure 1 shows a screenshot from IWB. The sentence is “Tá leabhar ar an mbord” (There is a book on the table).

Figure 1. Screenshot from IWB



The IWB app has been used in two different primary schools in Ireland by a total of 323 students over a period of three years to research the same app with students of different ages and teachers with a spectrum of interest in Irish and technology knowledge. The age range of the learners was from seven to 12 years of age across 13 different classes. This meant the app was tested by students with different levels of knowledge of Irish from two different schools. Students and staff were surveyed via anonymous, age-appropriate surveys with a mix of closed and open questions after each CALL session. The overall feedback on the app from students across the three years was that they enjoyed using it and had several suggestions for improving it (including gamification and more flexible components). The teachers across the three years were also happy with the app; it aligned with what they had done in the class and considered it a suitable tool for revision and refresh purposes (based on survey responses and interviews). Table 1 shows a summary of the class who used the IWB app.

Table 1. Summary of four cohorts (C1-C4) who used the IWB app

Class	Age	Y1	Y2	Y3
3rd	8-9	C1: 72 (3 classes)		
5th	10-11	C2: 52 (2 classes)		
2nd	7-8		C3: 72 (3 classes)	
5th	10-11		C4: 52 (2 classes)	
5th	10-11			C1: 75 (3 classes)
Total		124 (5 classes)	124 (5 classes)	75 (3 classes)

There were several challenges that had to be overcome. These included issues liaising with the schools, seeking ethical approval for the research and lack of computing devices in the schools. These were addressed by meeting with the principal and explaining the app, providing a clear plan to the University Ethics Committee and providing low-cost tablets on loan to the students to use the app. Other issues included finding a suitable time slot for the CALL session and catering for students of different abilities. These issues were addressed by being flexible and working with the teachers. It also involved being guided by teachers as they are the most knowledgeable about the abilities of their own students. It was also important to be efficient and effective with the CALL timeslot, including being organised and having the devices ready before each session.

#### **4. Discussion and reflections**

In terms of [Leakey's \(2011\) 3P's](#), IWB worked well on basic tablets (platform) as it was built on the WordBricks app (programme) for English ([Mozgovoy & Efimov, 2013](#)), and the students could work at their own pace (pedagogy). The students worked on constructing grammatically correct sentences, with immediate feedback. The teacher role was that of a facilitator and while attitudes towards CALL varied among the different teachers, they were all happy with the app. A key feature that contributed towards the success of the app is that it was curriculum and syllabus aligned. The app was used in a whole CALL lesson scenario with a table in the classroom and this enabled the students to focus on the content without interruptions. These features helped to somewhat normalise the app in the classroom ([Bax, 2003](#)). In relation to the four main categories of [Chambers and Bax \(2006\)](#), the app could be considered as appropriate in relation to stakeholders' conceptions, knowledge, abilities, and training, development, and support (as very limited support was required). However, there is room for improvement in terms of logistics and syllabus and software integration in future versions of the IWB app.

#### **5. Conclusion**

In summary, this paper presents an overview of a CALL app in the primary school context. The IWB app has been relatively successful from a pedagogical and technical point of view and could provide an example to others. The project and the related data-analysis is still on-going and there is still room to improve in terms of deployment and this is the most difficult part. CALL is not yet fully normalised in the Irish primary school context and while this will continue to be a big challenge,

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the IWB app shows what is possible. Some recommendations for other researchers in this space include adopting a co-creation approach whereby CALL researchers and teachers work together from the start and try to ensure curriculum/syllabus alignment where possible.

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