23 Vocabulary Notebook: a digital solution to general and specific vocabulary learning problems in a CLIL context

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Abstract

In this paper, we will introduce an innovative software platform that can be Lespecially useful in a Content and Language Integrated Learning (CLIL) context. This tool is called Vocabulary Notebook, and has been developed to solve all the problems that traditional (paper) vocabulary notebooks have. This tool keeps focus on the personalisation of the learning process as a key element, but it also provides the advantages of technology, solving paperrelated problems and providing additional multimedia features. Moreover, we will describe the current state-of-the-art in the implementation of CLIL (using Spain as an example) and afterwards we will discuss the benefits that this digital tool provides in a CLIL context. Nowadays, teachers are worried because they devote too much time to the teaching of CLIL vocabulary and not to the application of those words in social tasks, which are a way of consolidating knowledge and key competences at the same time. With Vocabulary Notebook, we will show how this problem can be tackled in a very successful way. Vocabulary Notebook is currently being used for educational purposes in more than 127 countries by more than 17,000 individuals, as well as several educational institutions around the globe.

Keywords: vocabulary, CLIL, MALL, educational software, key competences, personalisation, formative assessment.

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1. Introduction

Traditionally, paper notebooks have been used by students to create personalised vocabulary lists. Teachers have usually encouraged students to add their own definition and sample sentences to the terms. As reported by Walters (2009), "[v]ocabulary notebooks are frequently suggested as effective tools for students to use, to take charge of, organise and manage their vocabulary learning" (p. 112, see also Fowle, 2002; Schmitt & Schmitt, 1995). We reckon that this is so with CLIL vocabulary too. In the digital era, we propose that the old paper vocabulary notebooks evolve into a technological tool.

This paper deals with the use of a commercial platform called Vocabulary Notebook that is currently being used for educational purposes by individuals as well as educational institutions around the globe.

With Vocabulary Notebook, students can review and edit their personal vocabulary everywhere and using any device (smartphones, tablets or PCs); all devices are synchronised at all times, with their vocabulary safe in the cloud. Moreover, special teacher features are provided for educational institutions. These features for teachers provide useful metrics that allow them to successfully guide students during the learning process, facilitating their vocabulary acquisition and even facilitating formative assessment, thanks to the feedback about students' habits and interests provided by the tool.

When applied to a CLIL context, Vocabulary Notebook can help teachers reduce the excessive time that is usually dedicated to teaching specific vocabulary in class. This is often caused by the lack of students' organisation during the vocabulary acquisition process. By means of this platform, students are able to keep an organised and personal glossary of the new terms they learn, facilitating autonomous study. This approach leads to an improved retention of the vocabulary, saving time in class. Thereby, teachers are able to devote this extra time to the application of the vocabulary in practical activities that can lead to a better understanding and a productive learning of the concepts, such as in the case of social tasks.



2. Vocabulary Notebook

This software platform represents a digital vocabulary notebook. It is designed to help students to improve their vocabulary by replacing the traditional paper notebooks. This tech tool includes not only native mobile apps for both Android and iOS, but also provides a web application with cloud storage that offers extended functionality, including more types of tests and special features for teachers.

2.1. Students

Vocabulary Notebook keeps the focus on the personalisation of the learning process as a key element of vocabulary acquisition. However, apart from keeping this principle – that was also present in the traditional approach represented by paper notebooks – the proposed platform also enhances functionality by providing the benefits of technology, such as multimedia features, automatic backups, ubiquity, easy editions, advanced filtering options for studying and several self-assessment tests to make study more pleasant.

At first, Vocabulary Notebook looks like a blank notebook that allows students to write down the new words they learn – as easily as they would do it in traditional notebooks – allowing them to include several optional fields, such as sample sentences, translations or definitions. Later on, students will be able to comfortably review their vocabulary, using many features that make studying easier, such as sorting words alphabetically, reviewing vocabulary by importance or categories, searching within the list of words, etc. as well as doing self-assessment tests or listening to the right pronunciation of the words.

Additional optional fields and marks for the vocabulary are provided by the platform, such as the dichotomy fields 'known/not-known' and 'important/not-important', that are used as pre-built categories to tag words. The former field ('known/not-known') is automatically updated when students do a test. The terms in which the student has failed are automatically marked as not-known and the terms that have correctly been used in the tests are marked as 'known'.



That being said, it is important to mention that students can change these fields at any moment and that they can even create custom categories such as 'very important' or 'partially known' to group their vocabulary in a more specific way.

The main advantage of Vocabulary Notebook is that it solves paper-related problems such as space and edition issues, limited number of pages, difficulties when sorting words alphabetically or reviewing vocabulary by categories, etc. Thus, Vocabulary Notebook becomes a close and comfortable/convenient tool to keep our personal vocabulary in. Moreover, the additional technological features represent a clear advantage in comparison to paper alternatives. In addition, students do not have to carry heavy and uncomfortable notebooks anymore (Roda, Rodríguez, & López, 2014).

One of the most interesting features is the ability to group words by topics/ categories that are customised by the student (Figure 1). This feature allows them to filter the list while studying; being able to review only the words they want, such as the unknown words, the words within the category 'Science' or the important words in the category 'Maths'.

Figure 1. Main section of Vocabulary Notebook for iOS: the list of terms



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Through the web application (Figure 2), students can access additional features, such as five different types of tests (e.g. matching words with their corresponding definitions or selecting the right word from 3 options), that extend the functionality provided in the mobile apps. All these tests use the student's knowledge base, that is, their own vocabulary notebook. Furthermore, in the web application, additional sorting features are provided (most recent first, from A to Z, Z to A, etc.). Moreover, student-teacher interaction takes place through the web application, saving time during lessons at school. Thus, the suggestions for new words that teachers can send to students can be received by them through the web application at home.

Figure 2. Web application interface for students

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□ Study > ③ Test > ③ Categories >	Definition: Sample sentence:	Not Known A digital platform like Vocabulary Notebook will help you a lot in your learning proce	55.
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It is important to mention that the interaction that self-assessment tests provide offers a more enjoyable way for students to review vocabulary, since it has a gaming component. In the near future, additional gamification features will be added to the tool, including badges and symbolic awards that will be obtained by students when achieving different milestones in their learning process. Moreover, an image field for each term will be included too, which is specially interesting for younger students.

2.2. Teacher's dashboard

As mentioned above, the web application also includes special tools for teachers. These features allow them to organise their classes better and more efficiently, and to help their students learn vocabulary faster, as well as to increase students' motivation.

Teachers can organise students in groups through the platform. The most common organisation is by level. This organisation allows teachers to obtain valuable feedback about each specific group, as well as send specific suggestions according to the level of each group.

As mentioned above, among other features, the teacher's account includes the option of sending lists of vocabulary to the different groups of students he/ she has. This feature is particularly interesting when a teacher wants to make sure that students are aware of the important vocabulary of a specific lesson. However, since the platform promotes personalisation as a key element, teachers are only allowed to send lists of important/recommended terms to students, but definitions, sample sentences and all other fields of each term should be personal, and thus added by each student. Students can also decide whether they want to include a suggested term in their personal notebooks or not, as part of the personalisation process. However, among the feedback information offered to teachers, the number of terms each student has accepted from the suggestions that have been sent to him/her can be seen. We consider this information very useful to bring teachers closer to students and promote communication between the parties.

Additionally, the tool for teachers displays a great amount of additional information about the usage their students make of their digital Vocabulary Notebook, which makes formative assessment much easier to implement, since the real needs and interests of the students are shown on the dashboard. Teachers can see the words their students mark as 'not known' to review them in class later; they can also see the words that students consider important, or the topics/categories most used by them. This latter information shows the interest



of students and allows teachers to gear their classes to those topics. A few additional individual stats are shown, such as the number of words each student has, the number of logins he/she does and the number of self-assessment tests each student has performed.

By analysing the data that are collected and displayed in the teacher dashboard, not only about the groups but also about the individual students, teachers can save a considerable amount of time in detecting their real needs and difficulties. Moreover and most importantly, effective actions and activities to solve those problems can be prepared carefully and be carried out in class at an early stage, thus preventing a loss of students' attention and interest. Since these actions can be performed either in group or individually – allowing curricular adaptation – these actions can be very effective to engage students in the learning process.

This feedback tool for teachers contributes greatly to the role of the teacher as a facilitator, and if teachers perform the right corrective actions based on the data provided, a substantially better outcome can be achieved when it comes to vocabulary acquisition (Figure 3).



Figure 3. Teacher dashboard through the web application

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3. CLIL

Vocabulary learning is a very important process in the acquisition of a foreign language. As Wilkins (1972) stated: "[w]ithout grammar very little can be conveyed, without vocabulary nothing can be conveyed" (pp. 111-112).

Most learners of English acknowledge the importance of vocabulary learning; however, vocabulary teaching has not always been responsive to that problem. It is only in recent years that vocabulary teaching and research on vocabulary teaching and learning has emerged as an important field of study.

In the last decade, many Spanish schools have incorporated CLIL to the curriculum. CLIL is a dual-focused educational approach where a foreign language is used for both the teaching of that foreign language and of another subject of the school curriculum. CLIL has proved to be useful because of its transferability not only across countries but also across different types of schools. The term CLIL was adopted in 1994 (mentioned in Marsh, Maljers, & Hartalia, 2001), and it tries to define good practice in schools where another language is used to teach content. Marsch, Enner and Sigmund (1999) stated that

"[t]eachers have found that content and language integrated learning is about far more than simply teaching non [subject language matters] in an additional language in the same way as the mother tongue [... is] not a matter of simply changing the language of instruction" (p. 17).

Nevertheless, in many Spanish schools, problems with specific vocabulary have arisen as it has been recognised by Dobson, Pérez Murilo, and Johnstone (2010) in the Bilingual Project evaluation report. Teachers are worried because they devote too much time to the teaching of CLIL vocabulary and not to the application of those words in social tasks, which are a way of consolidating knowledge and key competences at the same time.

Deep learning nowadays involves retention of concepts that can be used to solve problems in real contexts. Learners must learn through the interaction



of perception and action. They must see learning as a continuous construction process in a social context. They must be aware of the interaction of the body, mind, emotions and reasoning, and that knowledge is constructed in a social and emotional way. In the 21st Century, we need citizens who can analyse and diagnose complex situations, who can act in flexible, sensible and creative ways and can reflect thoughtfully and formulate proposals accordingly. They need to live in a democracy in heterogeneous human groups and act autonomously and constructively to fulfil their life goals.

This implies a methodology where students fulfil very time-consuming tasks leaving very little time to specific CLIL vocabulary. These tasks are related to the key competences which understand teaching and learning in a different way from the traditional point of view. Teaching is seen as research, and it must integrate learning and experience (sense and significance). Learners must personalise their learning (metacognition and self-regulated learning with cooperation and empathy) and they must acknowledge the purpose and value of digital products.

4. Vocabulary Notebook and CLIL

With Vocabulary Notebook, the problem of teaching CLIL vocabulary can be tackled in a very successful way.

As we have shown in the previous section of this paper, with Vocabulary Notebook, learners can move their CLIL specific vocabulary to the cloud, being able to use this web application through any device, from iOS and Android smart phones/tablets to any computer. This tool allows students to write down all the new vocabulary they learn, with personalised definitions, translations, sample sentences, categories of their choice, and many other fields and marks (such as known, important, etc.), as they do with paper notebooks. However, with this tool, students can also sort their vocabulary from A-Z and review vocabulary by knowledge or categories. They can do self-assessment tests or even listen to the right pronunciation of the words. It saves time for teachers and learners, and they can always have the tool at hand to solve the questions that arise



while performing social tasks. It also provides them with long-term retention of those CLIL concepts so that they can later use them for problem solving in unfamiliar contexts outside the school. Consequently, CLIL vocabulary becomes meaningful; students use it in tasks instead of keeping endless lists of vocabulary they never practise.

Vocabulary Notebook can also be associated to the key competencies (linguistic, digital, social and civic, autonomy and entrepreneurship, and learning to learn). This tool is a very important help for the shift that the digital era is producing in teaching and learning; that is, to move from a curriculum based on areas of study to a curriculum based on problems or situations (Pérez, 2013).

5. Conclusion

Our research has proved that by using the application Vocabulary Notebook, the students were able to tackle the problem of incorporating specialised vocabulary derived from the use of CLIL in their classes. The tool proved to be an important element in the incorporation of vocabulary and development of 'learning to learn' and digital competences. Both students and teachers were very satisfied with the results.

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