

MobiLex: The use of LSP dictionaries on mobile phones in higher education

Faculty of Education | Department of Curriculum Studies

Target Group: BEd First-Year Students

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Learning activity:
Online dictionary

Learning technology:
MobiLex

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Context

Background

Mobile technologies have become worldwide phenomena, opening up new opportunities for language teaching and learning. Mobile-assisted language learning is employed all over the world as technology advances.

As opposed to other types of computers, smartphones require only one hand to operate and therefore have an immediacy of use that other minicomputers, such as tablets, have yet to attain. The possibilities of using mobile devices for learning are endless. The number of smartphone users has increased dramatically since the mass introduction of smartphones in 2007 by Apple Inc. In 2013, the number of smartphone users was 1,31 billion; in 2014, this increased to 1,64 billion. By 2016, the number is predicted to exceed 2 billion. Teenagers and young adults aged between 16 and 24 are the group with the highest rate of smartphone use, namely 88% (www.zeendo.com).

In South Africa, the use of mobile phones has increased dramatically and most university students are equipped with mobile phones. It is estimated that smartphones will make up 30% of all connected devices in the country in 2019 (Alfreds, 2015).

The Faculty of Education has approximately 250 first-year students enrolled in a BEd degree from various linguistic backgrounds. Of the 2016 undergraduate cohort at Stellenbosch University, 46,1% of the total undergraduate cohort indicated their home language as English, 44,6% indicated their home language as Afrikaans and 2,6% indicated their home language as isiXhosa. In the Faculty of Education, English and Afrikaans are used as languages of instruction, although these languages are not necessarily the home languages of all the students. Many of these students therefore need extra learning support in language to be able to understand concepts explained in class and in the learning material.

Subject area

The framework of multilingualism is used in the Language Plan of the University. To justify the development of a dictionary for first years in the Faculty, however, research on the perceptions of students on the use of a dictionary was needed. MobiLex (mobile lexicon) was therefore employed

in a pilot project in the Department of Curriculum Studies. The target group of this project was BEd first-year students.

Intended learning outcome

The intended outcome was to offer language learning support to English, Afrikaans and IsiXhosa students through their modules via the use of a language for specific purposes (LSP) dictionary on a mobile phone.

Established practice

Lecturers in the Department of Curriculum Studies had identified the need for linguistic support and the development of academic concepts with regard to subject-specific knowledge. Both within the Department and the linguistic context, strong motivation therefore existed for an LSP dictionary to enhance academic literacy and fulfil the linguistic needs of first-year students in particular.

During the development stage of the project to meet this need, it was necessary to research the students' perceptions of such a dictionary and to find out if they would make use of such a dictionary on a mobile phone. Perceptions were researched by means of a questionnaire, with the students having access to History terms on MobiLex. Ethical clearance was given to do the research with the first-year students. Most of the students had relied on internet searches to define and translate terms and concepts but this had not always been reliable.

Implementing the dictionary with specific terms usually available only in one language of instruction can improve the adaptation of new theoretical concepts within the higher education arena. The use of the dictionary can also improve students' understanding of certain concepts and therefore make studying easier. The dictionary furthermore narrows down useful vocabulary, cutting through a major amount of the content allocated to first-year students.

Advantages associated with the integration of technology

The perceptions of the students regarding MobiLex were overwhelmingly positive, as indicated by their response to the questionnaire. The fact that they had immediate access to subject concepts with a short explanation and to translations of the concepts proved to be very attractive and useful



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to them. One of the advantages was the clarification of language and word concepts during class for the three different languages used by the students.

Regarding the convenience of the technology, they had this to say:

"It would be easier than to look up a term in your textbook."

"Sometimes I do not understand the lecturers and I'm too shy to ask in class, so it would be easier to look it up on my cell."

Student overview

The group consisted of 120 BEd first-year students.

The students take a number of modules during their first year, some of which, such as Educational Psychology and Philosophy, are especially unfamiliar to the students. The difficult terminology along with poor academic writing skills can create challenging learning experiences for the students.

Other relevant role-players

Various lecturers were involved in collecting, defining and translating the terminology: Karen Horn (History), Helena Wessels (Mathematics – Foundation Phase), Carina America (Economic and Management Sciences) and Gerjo Cloete (Geography). The translators of the Language Centre also assisted, as did BEd honours language students, who analysed the questionnaires as part of their research projects.

Learning and assessment activities

Educational approach

According to Naismith, Lonsdale, Vavoula and Sharples (2004), mobile technologies can be used in the design of six different types of learning or categories of activity:

- **Behaviourist learning:** When quick feedback or reinforcement is facilitated by mobile devices because they are at hand. For example, during class, students can look up the meanings of terms used by their lecturers.

- **Constructivist learning:** When students build up new concepts, perhaps engaging with their physical and social environments, and are responsible for their own learning. An example of independent learning is students studying and referring to MobiLex when they do not remember the meaning of certain concepts.
- **Situated learning:** When students take mobile devices into educationally relevant real-world locations and learn from those settings.
- **Collaborative learning:** When mobile devices are an essential means of communication and electronic information sharing for students in groups outside their educational institutions.
- **Informal and lifelong learning:** When possibly unconstructed or opportunistic learning takes place, driven by personal curiosity, chance encounters or the stimulus of the environment. For example, students use their mobile devices wherever they are to become convenient sources of information that assist with learning or recording learning experiences for future consultation and reviews.
- **Supported learning:** When mobile devices monitor progress, check schedules and dates, and review and manage progress.

According to Traxler (2009), mobile devices are involved in the wider social transformation of how people in general – not just students – acquire and distribute information, images, ideas and opinions and of how learning is being redefined.

Learning activities

The students were asked to search for particular subject-specific terms on the mobile application while completing the questionnaire. The application provided the English, Afrikaans and isiXhosa translation equivalents (depending on the language selected).

Learning environment

Learning setting

Learning activities took place both in class and out of class because of the mobile access of the application. All students and staff at the University have



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access to MobiLex at <http://www0.sun.ac.za/mobilex>.

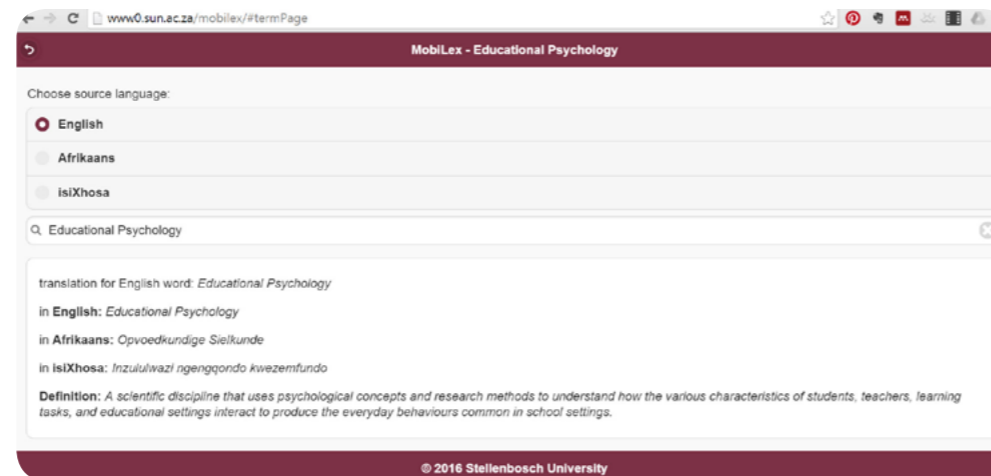


Figure 1: Screenshot of a phrase searched on MobiLex

Collaborative setting

According to Kukulska-Hulme and Traxler (2005), designing content for MALL can include a variety of content. The interactivity afforded by mobile technologies creates a teaching and learning environment more suited to a constructivist approach, where the device is a tool for information and direction. Content is specified with the author's reference to MobiLex. MobiLex is a trilingual dictionary featuring the languages English, Afrikaans and isiXhosa. The following aspects are important to consider:

- **Learner-centred content:** If students are expected to construct some of the content as part of their learning, this can be done in various locations, which mobile devices facilitate. This is personal and specific to context and usually to time and place. For example, when lecturers mention terms in class in languages of teaching and learning, such as English or Afrikaans, that students do not understand, the students can use the MobiLex dictionary to translate the terms. IsiXhosa students can look up the isiXhosa translations of the English or Afrikaans terms and the definitions of the terms in isiXhosa can elucidate the concepts to the students.
- **Personalised content:** Students can receive, assemble, share and carry around personally useful and appropriate resources. For example,

when the Curriculum Studies lecturer instructs the class to draw up a lesson plan and a student is unsure of the content of such a plan, the student can find a description of such a lesson plan in MobiLex.

- **Updated content:** Updates can be delivered to mobile devices when students are highly mobile and cannot access desktop computers regularly. MobiLex is a web-based application and can be updated as new terms are added to the dictionary.
- **Timed or scheduled content:** Students can engage with content frequently, repetitively or periodically using a mobile device without overhead costs or inconvenience. For example, they can look up difficult terms while studying for tests or working on assignments.
- **Prioritised content:** Content can be made available on mobile devices in such a way as to prioritise it over other content. This can be a useful deliberate-teaching strategy. For example, when students are frequent users of MobiLex, their search histories are stored on their smartphones and they can easily access these whenever they need them.
- **Flexible content:** Students may appreciate having the option of mobile access to learning material and resources as an alternative to desktop content. MobiLex is always available: during class, for group discussions or when otherwise needed.

Support challenges

Not all the students had access to mobile phones and could therefore not access the online dictionary. They could still, however, gain access via the browser webpage on the campus computers.

Student experience

Student feedback on the learning experience

The students reported that the app allowed convenient and fast access to terms and definitions. They could use the digital dictionary effectively, which improved their learning opportunity. It saved them time and it did not add to the number of books and physical material that they had to carry around. They were, however, concerned about data usage. Three of the students preferred hard copy digital dictionaries instead of a dictionary



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on their mobile phones.



Figure 2: Students using MobiLex on their mobile phones

General Opportunities

MobiLex can be used in more faculties on campus for language support within the framework of multilingualism and the advancement of academic and concept literacy. As MobiLex is web-based, it can also be used to create an application for mobile phones.

Challenges

There is no wireless internet access in the building where the Faculty of Education is housed. Since the students relied heavily on their smartphones and other mobile devices for access, it proved difficult to use MobiLex without internet access.

Advice

Students have to be prepared for using the digital dictionary. It has to be confirmed beforehand that they have access to data or are registered on the campus WiFi.

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