

Technology in Language Education: Benefits and Barriers

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Abstract

Technology, especially e-learning technology, is being increasingly employed in instruction to enhance teaching and learning. This paper is a preliminary discussion of the advantages of and barriers to the use of technology in language instruction. Understanding the benefits and barriers of technology integration is a crucial step in integrating technology into education successfully. Lack of this knowledge may significantly impede stakeholders and educational centers from meeting the challenges of introducing and supporting the extensive use of technology by teachers in the classroom. Findings from empirical research in this area, as well as implications for language practitioners, are included in the discussion.

Keywords: Language teaching, Technology, Barriers, Benefits.

1. Introduction

A variety of e-learning technologies are available for use in educational programs. In many parts of the world, education ministries and universities have invested much effort into increasing the use of the web in all its forms (for example, e-books, simulations, text messaging, podcasting, wikis, and blogs) to meet the demands of competitive markets and to bring a variety of learning choices to their learners.

It has been reported that the advent of new technology has a positive influence on both learners and teachers (Mansor 2001). Researchers (Friggard 2002; Miner 2004; Timucin 2006) have demonstrated that technology boosts the development of teaching methods as well as students' knowledge. Lam and Lawrence (2002) claim that technology provides learners with regulation of their own learning process and easy access to information the teacher may not be able to provide. The potentially positive side of incorporating technology has encouraged foreign language educators to apply its advantages to enhance pedagogical practices. However, the integration of technology in the classroom cannot be devoid of problems. This paper aims to discuss both the positive and negative aspects of technology use so as to provide practicing teachers and researchers with some essential background information and useful references. The list is not exhaustive but serves to be a starting point for interested readers. We will begin with the advantages.

2. Advantages

Several studies have documented the advantages of technology for language learning. These studies cover different aspects of learning as discussed in the following sections.

2.1 Engagement

Some researchers maintain that one of the benefits of technology use is an increase in student motivation (Dunken 1990), as fun and games are being brought into the classroom (Lee 2000). This fun factor is a key benefit in a language classroom (Galavis 1998; Warschauer & Healey, 1998). Moreover, the novelty of the new technologies or learners' experience of those technologies in the classroom can enhance learners' engagement and motivation in fulfilling tasks (see Department of Education and Early Childhood Development (DEECD 2010).

2.2 Improvement in Academic Ability

In addition, technology appears to improve language learners' academic ability. Lee (2001) believes that Computer Assisted Language Learning (CALL) can do just this. This improvement is probably achieved by changing students' learning attitudes and boosting their self-confidence. Along this line, Galavis (1998) and Dunken (1990) assert that the use of technology enhances learners' language proficiency and their overall academic skills.

2.3 A Paradigm Shift in Teaching and Learning

The advent of technology and development in the field of education has accelerated a shift from teacher-centered to learner-centered approaches in language learning and teaching. To meet the needs of digitally grown-up learners, teachers need to adopt a different role. They need to be facilitators, rather than the traditional bench-bound instructors, and they need to support and guide students' learning (DEECD 2010). Learning technologies support this important shift for the benefit of the learner.

2.4 An Assessment Shift

Incorporation of technology in the classroom enables learners to assess their own work in a more meaningful way, become better aware of the quality of their work and accept feedback more willingly. Moreover, it gives them a chance to undertake a more self-monitoring role, which leads to a higher chance of fulfilling tasks successfully. Teachers can also assess students' knowledge more accurately and objectively. The overall assessment shift from teacher to self and peer evaluation (see DEECD 2010) contributes to the development of student autonomy which is emphasized in learning in the 21st century.

2.5 Collaborative Learning Enhancement

Another benefit of technology use is the encouragement of collaboration and communication in learning activities. According to Gillespie (2006), new technology enables students to collect information and interact with resources, such as images and videos. Murphy (2006) states that the Internet can serve not only as a reference source but also as a means of communication. It is argued that technology enables the user to get connected to the world outside of the classroom and hence produce high-quality work, knowing that their work will be viewed by a large audience. In addition, learners can get in touch with their peers from other schools, experts in the field and members of interest groups (see DEECD 2010)

2.6 Lowering Learning Anxiety Level

Another advantage of technology is its potential for lowering anxiety among learners (Chapelle 2001; Levy 1997). In an exploration of EFL teachers' perceptions of CALL, Ozerol (2009) selected 60 language teachers, from various schools in Turkey. These teachers commonly agreed that technology lowered students' language learning anxiety whilst giving them more opportunity to communicate. Consistent with such findings is Brual's (2006) study that showed that using computers in language classrooms brought variety into the classroom atmosphere, developed learners' particular language skills and increased learner autonomy.

3. Barriers

While the advantages of technology use are often reported, it would be naïve to expect technology use to transform language teaching or learning without first encountering and overcoming some barriers. Like the benefits, these barriers are wide-ranging.

3.1 Lack of access

Lack of access to technology resources that requires an Internet connection is a major disadvantage for those schools and individuals who can barely afford or do not have access to a computer or an Internet connection (Coghlan 2004). The initial startup expenses (Warschauer & Meskill 2000) and the costs of hardware and computer equipment are also an issue for low-budget schools (Gips et al. 2004; Lai & Kritsonis 2006). Mike (1996) states that unequal opportunity to access technology and the Internet has been frustrating for both language teachers and students. Non-availability of technology resources is not, in and of itself, the result of inaccessibility to such sources. The low frequency of technology use could be due to lack of expertise on the part of the teachers. In some other cases, school budgets may not be able to support teacher training (Vi 2005).

3.2 Lack of Effective Training

Many researchers believe that lack of teacher training, lack of knowledge and practice are factors that prevent the successful use of the Internet as a learning tool. Many researchers (e.g., Coghlan 2004; Lai & Kritsonis 2006; Schwab & Foa 2001) agree that teachers must increase their computer competency to use technology effectively. As found in Symonds (2000), teachers are not given sufficient training. Romano (2003) found clearly that access to technology does not improve learning unless teachers are empowered to adopt technology as an educational tool. Baylor and Ritchie (2002) also argue that technology would remain unused if faculty members do not develop the appropriate skills, knowledge and attitude for incorporating it into the curriculum.

3.3 Teachers' Attitude

Research into the barriers to technology use in education has found that teachers' attitude was a significant barrier in the academia (Hodas 1993). Some teachers thought that technology was a disruptive tool and resisted any changes (McGrail 2005). Fang & Warschauer (2004) reported that traditional teachers were afraid of authority loss. Some scholars agreed that context could be a big barrier to deterring teachers from adopting the use of technology (see Dawes 2001; Becta 2004). Teachers' lack of confidence was rooted in their fear of failure or lack of technology knowledge, which made them feel anxious (see Beggs 2000; Balanskat et al. 2006). In Becta's (2004) study, the teachers reported that they felt frightened to use technology in the classroom if they could not trust their knowledge.

3.4 Students' Attitude

Some researchers, on the other hand, have been concerned about the students' reactions to the use of technology in the classroom. The justification for their concern is that the use of technology is in its infancy and its use requires a shift from traditional teaching approaches. If the shift is drastic and sudden and students perceive the experience negatively, they may resist such changes, which in turn will lead to poor academic performance.

3.5 Lack of Time

Lack of time and technical support (Jacobsen & Lock 2005; King 2003) could be other reasons for teachers' disinclination toward using technology. In an exploration of teachers' perceptions of the use of technology in teaching languages in United Arab Emirates schools, Ismail & Almekhlafi (2010) reported teachers' lack of time for preparation and technology implementation as the most important barriers. Similarly, the teachers in ChanLin et al. (2006) reported that the integration of technology in their classes required much more time and effort compared to regular classes which do not use technology.

In sum, the discussion in this paper emphasizes that the use of technology brings about both advantages and barriers for language teaching. However, the benefits to learning seem significant. As Davies et al. (2010) put it, increasing the use of technology in the classroom may improve certain aspects of classroom experience. Nevertheless, the issue that deserves continued investigation is how much value the use of technology adds to education. It is hoped that more research will be conducted to help teachers overcome barriers in technology integration and create models of technology-based and web-based teaching.

4. Conclusion and Implications

This paper has attempted to present the advantages of and barriers to the use of technology in today's language classrooms to maximize its benefits for language teaching and learning. Findings from empirical research and the literature showed that technology integration in language teaching is advocated for a variety of reasons which include: 'engagement', 'improvement in academic ability', 'paradigm shift', 'assessment shift' and 'collaborative learning enhancement'. However there are some barriers hindering the use of technology. The barriers discussed are 'lack of accesses', 'lack of time', 'lack of effective training', 'teachers' attitude', and 'students' attitude'. Awareness of the barriers to and advantages of technology in enhancing teaching certainly has implications for teacher education.

Perhaps the first step before equipping institutions with technology and implementing any change is to train the staff adequately. In addition, teacher training might prepare teachers for their new roles to use technology for collaboration and engagement. Teacher training centers should work towards providing

teachers with sufficient computers, Internet access, and technical support. Additionally, as time is a legitimate concern of teachers to plan technology-based lessons, to surf the different websites, and to cover sufficient content in the allotted time frames, schools should provide teachers with sufficient time to spend on incorporating technology into their teaching practice. For example, giving opportunities to teachers during regular professional development courses to explore different aspects of technology can help them increase their confidence in using technology and thereby change their negative attitude.

Further, teachers new to technology-based learning and teaching need to understand their changed roles and responsibilities in the new modality of learning and teaching (Lorenzetti 2004). At the same time, teachers need to bear in mind that it is pedagogy, not technology that determines learning effectiveness (Appana 2008). To make a successful transition from traditional pedagogy to technology-enriched instruction, teachers need to alter their teaching approaches to achieve effective teaching (Grosse 2004; Maguire 2005).

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