Technology-Based Learning (TBL) and the Learners' Autonomy

التعليم القائم على التكنولوجيا (TBL)، واستقلالية التعلم

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Abstract:

Two areas of concern, technology-based learning (TBL) and autonomy are discussed in this paper and indicate a fundamental shift in the focus of practice in the field of learning. At the core of this shift is the fact that learning autonomy can be achieved through technology. The learners' autonomy is a major issue faced by teachers. Autonomy is important because autonomous learners are motivated and their learning is effective and efficient. Because of the changing and increasingly varied landscapes of teaching and learning, the learners' autonomy has to be carefully established. In view of this reason, TBL has established itself as a relevant method of learning from which students' autonomy is expected to benefit. Technology in general and computers in particular also engage the learners in classroom learning through the enjoyment and the increased ease of learning it offers. Yet, teachers can not withdraw from the educational scene. They have wider responsibility and more

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creative and challenging roles. They are the leaders who keep the gate to classroom use. What they need is to revise their knowledge because the eye-to-eye classroom methods and techniques are not fruitful in helping them find the way in the new landscapes of teaching and learning.

Key Terms: Technology Based Learning (TBL), computer based learning, learners' autonomy.

الملخص باللغة العربية: يناقش هذا المقال أبرز مسائل التعلم القائم على التكنولوجيا والاستقلالية وإذ يشير إلى تحول أساسي في تركيز الممارسة في مجال التعلم، جوهره أنه بالإمكان تحقيق استقلالية التعلم من خلال التكنولوجيا.

وتعد استقلالية المتعلمين قضية رئيسة ومهمة يواجهها المعلمون، فهي تعمل على تشجيعهم وإقبالهم على التعلق بلهفة، ثم إنهم يحصلون على تعليم جيد وفعّال.

وقد أثبتت رابطة TBL نفسها كطريقة ملائمة للتعلم يتوقع منها إفادة الطلاب، كما تعمل التكنولوجيا بشكل عام والحواسيب على وجه الخصوص على إشراك المتعلمين في التعلم داخل الفصل من خلال الاستماع وزيادة سهولة التعلم الذي تقدمه تلك الحواسيب. ومع ذلك، لا يمكن للمدرسين الانسحاب من المشهد التعليمي، إذ إنَّ لديهم مسؤولية أوسع وأدوارا أكثر إبداعًا وتحديًا، فهم القادة الذين يحافظون على البوابة لاستخدام الفصول الدراسية، لكنهم يحتاجون إلى إعادة النظر في معرفتهم لأن أساليب قاعات التدريس وتقناتها القديمة، ليست مثمرة تماما، ولذلك فإن الحواسيب تسهم في خلق طرق جديدة وفعالة لتطوير التعليم والتعلم.

الكلمات المفتاحية : التعليم القائم على التكنولوجيا (TBL) ، التعلم القائم على الكمبيوتر، استقلالية المتعلمين.

Introduction: Technology "is so intertwined with our lives that it sometimes hard to imagine life without it. Indeed, we are so intimately connected and reliant on technology that it is an increasing part of our cognitive processes and affects our every

nature" (Dror, 2008, p. 216). Technology touches people in a thoughtful way, in their daily lives, in business matters, and in their means of communication. Gane (2005) says:

It would seem to me that internet-related technologies have directly altered the patterning of everyday life, including the way we work, access and exchange information, shop, meet people, and maintain and organize existing social ties. These technologies have some more than 'add on' to existing social arrangements; they have radically altered three main spheres of social life, the spheres of production, consumption and communication. (Cited in Selwyn, 2011, p. 21)

Therefore, this makes sense to assume that learning can benefit from the increased use of technology in similar ways to the rest of society. In a world where technology has had far-reaching effects on people, its significant efficiency can also be gained in learning. Thus technology can be an integral component of what and how students learn.

According to Prensky (2001) "today's students are no longer the people our educational system was designed to teach" (Cited in Barger and Byrd, 2011, p. 2), therefore a change in education is necessary. This change is justified in a number of different ways. There are "internal" and "external" imperatives for technology use in education (Selwyn, 2011, p. 22). On one hand, there is an internal imperative for the growing use of technology within educational settings, simply because technology is capable, if used in specific ways, to change many aspects of education for the better. On the other hand, the general digitization of societies is the external imperative for the growing use of technology in education simply because the rise of technology elsewhere in societies has to bring change in education.

Definition of Learning: Different organized studies have focused on human learning for many decades, and the results of these works have become so significant. It is useful to familiarize the reader with the term learning. Today, there is no one single way to define learning (Salkind, 2008, p.573). Instead, there are different explanations, each of which provides an important frame of reference for thinking about learning as a human endeavour. There are numerous definitions of this process, and Pritchard (2009) examines a number of them. Learning is viewed as

1. A change in behaviour as a result of experience or practice.

2. The acquisition of knowledge.

3. Knowledge gained through study.

4. To gain knowledge of, or skill in, something through study, teaching, instruction or experience.

5. The process of gaining knowledge.

6. A process by which behaviour is changed, shaped or controlled.

7. The individual process of constructing understanding based on experience from a wide range of sources. (Pritchard, 2009, p. 02)

Technology-Based Learning (TBL): Students learn *from* technology, as in watching a film-clip, and need to learn *with* technology, using it more as a tool for learning (Jonassen et al, cited in Jordan, Carlile and Stack, 2008, p. 229). Koller, Harvey, and Magnotta (2008) use the term technology-based learning (TBL) to signify the use of computer and internet technologies in learning. They point out "*Technology-based learning* (TBL) constitutes learning via electronic technology including the Internet, intranets, satellite broadcasts, audio and video conferencing, bulletin boards, chat rooms, webcasts, and CD-ROM." (Koller, Harvey, and

Magnotta, 2008, iii). They add that TBL includes related terms, such as online learning and web-based learning that consist of learning via the internet, and computer based learning that is limited to learning through the use of computers (Koller, Harvey, and Magnotta, 2008, iii). TBL and e-learning can be used interchangeably. "E-learning is synonymous with TBL and has replaced it in scholarship and industry as the term of choice" (Koller, Harvey, and Magnotta, 2008, iii).

Computer-based learning refers to "the use of computers as a complementary or central part of the educational experience" (Barger and Byrd, 2001, p. 04). It employs computers to smooth the progress of learning. CBL is applicable by the learners who:

• decide when and where to interact and learn;

• select content related to their learning goals;

• determine the pitch of the lesson;

• interact at their own pace;

• select content according to learning preferences;

• regulate and assess their own learning through feedback;

• take responsibility for their own learning. (Jordan, Carlile and Stack, 2008, p. 229).

CBL can have a wide range of different types depending on "the design strategy adopted (for example, hypertext), medium employed (for example, video) and delivery approach taken (for example, online)" (Clarke, 2001, p. 39). The main types of CBL are:

1. computer-based training (CBT)

2. computer-managed learning (CML) or managed learning environments (MLE)

   3. integrated learning systems (ILS)

   4. intelligent tutoring systems (ITS)

   5. job aids or electronic performance support system (EPSS)

   6. computer-aided assessment (CAA)

   7. drill and practice

   8. virtual reality (VR)

   9. multimedia

   10. hypermedia

   11. online learning

   12. resource-based learning

   13. simulation

Learning using computer is classified into various types. Four main categories are recognized. Computers in language learning can be used as a tutor, an exploratory environment, a tool and a communication medium (Means (1994), cited in Nadzrah, 2007 a, p. 34).

Compared to eye-to-eye classes, e-based language learning has become a popularized area of modern education for a numbers of its advantages that can be summarized as follows:

1. TBL fosters greater accessibility to learning by offering anytime and anywhere delivery.

2. TBL suits both large and small groups since it can accommodate larger numbers of learners at little extra cost and

smaller groups of learners that otherwise would not be able to participate in traditional classroom training for lack of enrolments.

3. The content of TBL courses, especially that are delivered online, can be centrally developed and updated whenever the need arises.

4. TBL can be self-paced and matched to the learner's needs. (Koller, Harvey, and Magnotta, 2008, iii).

Technology-Based Learning and the Learners' Autonomy

Autonomy has become an increasingly important notion in foreign language education since the early 1980's. Cummins and Davison (2007, p. 734) cite a number of books, collections of papers, and journal special issues which have appeared since then (e.g., Barfield & Nix, 2003; Benson, 2001; Benson & Toogood, 2002; Benson & Voller, 1997; Brookes & Grundy, 1988; Cotteral & Crabbe, 1999; Dam, 1995; Dickinson, 1987; Dickinson & Wenden, 1995; Holec; 1988; Little, 1991; Palfreyman & Smith, 2003; Pemberton, Li, Or, & Pierson, 1996; Riley, 1985; Sinclair, McGrath, & lamb, 2000).

Learner autonomy is an important concept. It is defined as " the capacity to take change of one's learning" (Benson (2001), cited in Stockwell, 2012, p. 09), or "expressing one self as the origin of one's behaviour" (Dörnyei and Ushioda, cited in Stockwell, 2012, p. 09). Nadzrah (2007b) offers another definition. It is "the process of learners deciding their own learning objectives, choosing ways of achieving the learning objectives and evaluating their own progress" (p. 02). A more detailed definition of learner autonomy based on a

much longer definition agreed upon at a conference in Bergen, Norway, provided by Little (1991), considers it as:

Autonomy is a capacity― for detachment, critical reflection, decision-making, and independent action. It presupposes, but also entails, that the learner will develop a particular kind of psychological relation to the process and content of his learning. The capacity for autonomy will be displayed both in the way the learner learns and in the way he or she transfers what has been learned to wider contexts. (Cited in Cummins and Davison, 2007, p. 736)

The concept of autonomy has had radical implications within English language teaching. These implications have been widely accepted and thus more growing interest in the concept of autonomy has been marked. Cummins and Davison (2007) refer to the different changes in the landscape of English language teaching, in particular, as a social and economic practice over the past decades which have lead to this acceptance (p. 734). The growing student numbers and varieties in educational institutions and new ideas of the successful learner have directed language pedagogy towards radical revolutions. Within this changing landscape of teaching and learning, the concept of autonomy provides "a means of identifying the interests of learners" (Cummins and Davison, 2007, p. 734).

Many researchers recognize computers as attractive learning tools that provide students with opportunities to become autonomous learners (Nadzrah, 2007b, p. 02). E-learning helps students to be independent learners and to take responsibility of their learning process. Warschauer et al (1996) argue that new technologies, in

particular computer networks, if appropriately used, have the advantage of increasing learner autonomy. They claim that "the mechanics alone of computer-mediated communication provide students with a much better opportunity for control and initiative in language learning" (Cited in Chambers and Davies, 2001, p. 42). Learner autonomy is an advantage of Computer-Assisted Language Learning (CALL) simply because the learners can work alone on their own time (Stockwell, 2012, p.09). It can be said that "large class sizes and limited time allocated to language teaching are considered to be acceptable reasons for promoting learner autonomy" (Chambers and Davies, 2001, pp. 44-45). In other words, learner autonomy is considered a good way of saving costs and teaching time. It is evident that the learner's role to construct his/her language course is an important issue of learner autonomy. Benson (2001) points out that "there is an assumption that technology can provide learners with the kinds of support they need in order to develop the skills associated with autonomy" but the characteristics of the activities supported by technology determine the validity of this assumption (Cited in Spolsky and Hult, 2008, p.587).

A study has been conducted by Spires et al (2008) with middle school students to collect their views on technology in school. They found that students appreciate the use of computers in school simply because computers and other technologies were such a big part of their lives outside of school. They reached the conclusion that students prefer personal computer and internet research over their

teacher's explanation when dealing with a task. When the students use computers, they are generally more "on-task" and show more "positive feelings" than when they are asked to do other tasks (Becker (2000), cited in Barger and Byrd, 2011, p. 07). The significance of CALL lies in its ability to provide the learners with a richer form of language exploration and play than has ever been possible before (Higgins, 1995, v)

Though technology can provide the learners with opportunities to work autonomously, this does not mean the access to this technology is a guarantee that they will actually do so (Stockwell, 2012, p. 09). CALL materials which are appropriate for the practice of a certain skill or area could not enhance learner autonomy unless they facilitate the transitions from teacher-dependence to self-dependence, rather than just being a source of activities that learners can do without being supervised by the teachers (Stockwell, 2012, pp. 09-10). In other words, what might be considered as autonomous learning is not undertaking activities without the teacher's presence. Therefore, learner autonomy, in Stockwell's words, "is a complex and certainly dependent on factors that reach far beyond the technology itself" (p.10).

The Teachers' Role

The teacher's role remains of great significance in education as he/she supports the students' progress. Teachers have more creative and more challenging roles. Teachers function as

powerful *motivational socialisers*. Being the officially designated leaders within the classroom, the embody group

conscience, symbolise the group's unity and identity, and serve as a model or a reference/standard. They also function as 'emotional amplifier' of the group whose appeals and examples are critical for mobilising the group... Simply speaking, to lead means to direct and energise, that is, to motivate. (Dörnyei (2001), cited in Mullamaa, 2010, p. 532).

As technology has elicited many changes in language learning, the knowledge required by a language teachers has to be revised. This is simply because the eye-to-eye classroom methods and techniques are not fruitful in helping teachers find the way in the new landscape. As an alternative, this new setting requires "teachers with basic technological skills who understand the capabilities and limitations of technology in teaching, and who accept responsibility for critically examining the options and their implications" (Chapelle and Hegelheimer (2004), cited in Spolsky and Hult, 2008, p 589).

Challenges of TBL

Excellent computer facilities, such as good language software and programs, and also internet connection do not provide the learners with full benefits and opportunities of the English learning (Nadzrah, 2007a, p. 34). Means (1994) argues that this is true because computers without good activities do not "provide adequate instructional value in and of themselves", and to provide learners with beneficial computer-based activities, instructions for activities that supported by computer have to be planned (Cited in Nadzrah, 2007a, p. 34). Though TBL has witnessed marked growth in

education, it has a number of challenges. The most important problems encountered in TBL are:

1. the "digital divide" due to low computer literacy rates and lack of access to technology among some learner population

2. the "social loafing" demonstrated in students who work less diligently than they are supposed to, or who become annoyed with course material or technology and thus less engaged, because of the relative absence of instructor-learner or learner-learner interaction.

3. the high attrition rates among learners.

4. lack of credibility. (Koller, Harvey and Magnotta, 2008, iii-iv)

Conclusion

The prime objective of this paper is to bring together technology and learners autonomy and motivation. This paper has shed light on the effectiveness of TBL in relation to the learners motivation and autonomy and makes references to its role in helping learners achieve them. The ideas suggested and discussed in this paper lead to the following concluding remark. There is no escape from using technology, such as computers and internet, in the process of learning as it touches the lives of learners. Therefore, technology does not only provide classrooms with new applications, but it also redefines the concept of learning.

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