THE ROLE OF IT LANGUAGE TEACHING

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Abstract

Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources." The term educational technology is often associated with, and encompasses, instructional theory and learning theory. While instructional technology is "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning," according to the Association for Educational Communications and Technology (AECT) Definitions and Terminology Committee, educational technology includes other systems used in the process of developing human capability. Educational Technology includes, but is not limited to, software, hardware, as well as Internet applications and activities. But there is still debate on what these terms mean.

I. Introduction

In the past twenty years, computers have become an essential tool for communication, work and entertainment. For the new generation of children born in industrialized countries, a world without computers and video games seems more preposterous than a little green man from Mars. Computer-related occupations are the fastest growing segment of the modern job market, and the mastery of computer technology gives a competitive edge to individuals and nations alike. To address this growing need for a technology-savvy population, policymakers and administrators are scrambling for money to bring computers into the classroom, while critics argue that this money can be better employed on traditional instructional methods. This debate is critical, particularly for developing countries, due to the magnitude of the investment involved in buying and maintaining computer hardware and software, and providing adequate training for teachers and school staff.

This paper presents insight ideas on the role of technology in the classroom. In addition, it addresses issues on attitudes to technology as well as the close relationship between language and technology.

II. Technology in the Classroom

Technology in language teaching is not new. Indeed, technology has been around in language teaching for decades, if we classify the blackboard as a form of technology. Tape-recorders, language laboratories and video have been in use since the 1960s and 1970s, and are still used in classrooms around the world.

Computers based materials for language teaching, often called as CALL (Computer Assisted Language Learning) appeared in the early 1980s. Early CALL programs typically required learners to respond to stimuli on the computer's screen and to carry out tasks such as filling in the gab texts, matching sentences halves and multiple-choice activities. Probably, one of the best-known early CALL activities is that of text reconstruction, where an entire text is blanked out and the learners create feedback, ranging from simply pointing out whether the answer is correct or incorrect to providing more sophisticated feedback, such as showing why learner is mistaken and offering remedial activities.

Technology of education is most simply and comfortably defined as an array of tools that might prove helpful in advancing student learning and may be measured in how and why individuals behave. Educational Technology relies on a broad definition of the word "technology". Technology can refer to material objects of use to humanity, such as machines or hardware, but it can also encompass broader themes, including systems, methods of organization, and techniques. Some modern tools include but are not limited to overhead

projectors, laptop computers, and calculators. Newer tools such as "smartphones" and games (both online and offline) are beginning to draw serious attention for their learning potential. Media psychology is the field of study that applies theories in human behavior to educational technology.

The 1980s and 1990s produced a variety of schools that can be put under the umbrella of the label Computer-based learning (CBL). Frequently based on constructivist and cognitivist learning theories, these environments focused on teaching both abstract and domain-specific problem solving. Preferred technologies were micro-worlds (computer environments where learners could explore and build), simulations (computer environments where learner can play with parameters of dynamic systems) and hypertext.

Digitized communication and networking in education started in the mid 80s and became popular by the mid-90's, in particular through the World-Wide Web (WWW), eMail and Forums. There is a difference between two major forms of online learning. The earlier type, based on either Computer Based Training (CBT) or Computer-based learning (CBL), focused on the interaction between the student and computer drills plus tutorials on one hand or micro-worlds and simulations on the other. Both can be delivered today over the WWW. Today, the prevailing paradigm in the regular school system is Computer-mediated communication (CMC), where the primary form of interaction is between students and instructors, mediated by the computer. CBT/CBL usually means individualized (self-study) learning, while CMC involves teacher/tutor facilitation and requires scenarization of flexible learning activities. In addition, modern ICT provides education with tools for sustaining learning communities and associated knowledge management tasks. It also provides tools for student and curriculum management.

In addition to classroom enhancement, learning technologies also play a major role in full-time distance teaching. While most quality offers still rely on paper, videos and occasional CBT/CBL materials, there is increased use of e-tutoring through forums, instant messaging, video-conferencing etc. Courses addressed to smaller groups frequently use blended or hybrid designs that mix presence courses (usually in the beginning and at the end of a module) with distance activities and use various pedagogical styles (e.g., drill & practise, exercises, projects, etc.).

The 2000s emergence of multiple mobile and ubiquitous technologies gave a new impulse to situated learning theories favoring learning-in-context scenarios. Some literature uses the concept of integrated learning to describe blended learning scenarios that integrate both school and authentic (e.g., workplace) settings.

III. Attitude to Technology

One of the goals of technology education is to promote technological literacy of a broad and encompassing nature (Technology for All Americans Project (TAAP), 1996; International Technology Education Association (ITEA), 1993). To achieve this goal, technology education must prepare students to understand, control, and use technology. Students need to learn how to adapt to technological change and how to deal with forces that influence their lives and potentially control their future (Waetjen, 1985).

The paradigms for teaching technology education are changing. Technol-ogy education teachers and curriculum experts recommend a variety of differing instructional approaches such as self-paced modules, interdisciplinary method-ology, and problem solving to inform students about technology and its affects on society. These instructional approaches all have their advantages and disadvantages. Gloeckner (1990), Thode (1989), and others have argued that self-paced modular instruction is an appropriate method that best accommodates diversity in both learning styles and learning levels. Others (Illinois State Board of Education, 1992; Wicklein, Hammer, Balistreri, DeVore, Scherr, Boudreau & Wright, 1991) suggest that technology is interrelated to other disciplines and that students need to see the connection between math, science, technology, social studies, and English; therefore, teachers should use interdisciplinary instruction. Other educators, DeLuca (1992) and James (1991), plead the case for problem-centered instruction as an authentic way to focus on

the development of students' higher-level cognitive skills.

IV. Measuring Technological Literacy

Regardless of the instructional approach utilized, the purpose of technology education is to prepare students to become technologically literate citizens (TAAP, 1996). The recent TAAP rationale and structure document stated that technological literacy "...involves a vision where each citizen has a degree of knowledge about the nature, behavior, power, and consequence of technology from a broad perspective" (p. 1). Although technological literacy is a frequently used term, its broad and encompassing nature makes it difficult to defineoperationally or to attempt to measure. Technological literacy has been difficult to define because of a lack of consensus as to what comprises "technological literacy." TAAP defined technological literacy simply as "the ability to use, manage, and understand technology" (p. 6). Dyrenfurth, Hatch, Jones, and Kozak (1991) noted that technological literacy is a multi-dimensional concept that includes the ability to use technology (practical dimension), the ability to understand the issues raised by the use of technology (civic dimension), and the appreciation for the significance of technology (cultural dimension). Both of these definitions suggest the scope of technological literacy, but do not address content specifics nor begin to suggest how technological literacy may be measured.

It is clearly difficult to measure a construct if it has no readily agreed upon boundaries. To resolve this problem, many technology education programs limit the scope of their curriculum to "industrial" technology. Hayden (1991) developed the Industrial Technology Knowledge instrument to measure students' industrial technological literacy. Hayden concluded that there exists a construct of technological literacy that is a subset of general achievement. However, the construct can only be reliably measured by cognitive testing if there are similarities in the curriculum content of industrial technology programs.

Although there is no widely accepted standardized instrument suitable for assessing the broader construct of technological literacy, variations on the portfolio method are used to observe gains in students' technological literacy. Daiber, Litherland, & Thode (1991) described the following techniques to assess the technological literacy level of students in a specific technology education course or program: (a) analysis of taped one-on-one and group discussion that have similar topics at the beginning and end of the course, (b) observation of students involvement with problem solving activities, and the results of hand on activities, (c) utilization of paper and pencil exercises in the format of a pretest/ posttest design, and (d) development of a technology achievement test that includes major objectives of the course. Similarly, the British technological literacy framework used nine criteria to assist teachers in assessing the performance of 11 to 13 year olds in design and technology programs (Ager, 1992). The framework argued that an accurate assessment of technological capability of individuals is best conducted by teachers who have worked with students over long periods of time. These proposed methods for the assessment of technological literacy are time consuming and limited to specific curriculum content and concepts. The inability to measure technological literacy as practiced within the broad scope of technology education has led some educators to select measures in the affective domain as an alternative way to assess technological literacy

V. Language and Technology

Language plays a critical part in all of our daily lives and now, ever increasingly, technology is also playing an important role. While language allows humans to express themselves, record and preserve cultural records and develop culture, technology is often argued to be mostly a neutral medium. Certainly, information and communications technology (ICT) at its very foundation is simply the unemotional manipulation of 1s and 0s.

ICT is necessarily adapted to human languages in order to enable its use by non-specialists. For historic and economic reasons, however, certain languages dominate in this role, regardless of where ICT is used. So, when technology is used where the language and culture are different, it will exert an unintentional influence on the

latter that could be negative. Localisation – the adaptation of ICT to the language and culture where it is used – allows that cultural pressure to be reduced, eliminated or even reversed.

Language plays an important role in communities and culture. It allows information to be passed from generation to generation. This transfer of knowledge happens in written form or in oral tradition has been happening for millennia. ICTs have allowed this documentation and sharing of knowledge to happen more easily and quickly. However without local language ICTs the very process of documenting indigenous knowledge has to happen with the influence of another language. The lack of localisation impacts peoples' ability to capture and share information yet when localised ICTs can play an important role of a neutral observer.

If the only way to write information is in a language other than the primary one of a culture, then knowledge (cultural, traditional, environmental) is easily eroded. By only writing in other languages new generations no longer see value in the language and therefore do not take on the role of custodian of the language and its related cultural values. Modern ICTs that are not enabled for a language can act to speed up the contraction of the language. As each generation becomes less and less equipped to work in the language we see this phenomenon of language contraction which eventually results in a language that is beyond recovery. There are many factors that influence language contraction but with localisation a language community is equipped firstly to write in their language and secondly to ensure that their language is available in modern ICTs and is thus seen as relevant to the future language custodians. Thus lack of localisation can actually create a force of cultural erosion while active localisation can create the environment in which cultural knowledge is grown, shared and preserved in the language of the people.

An important aspect of the digital divide is access to technology. This would traditionally include physical access (being able to find a computer to use) and financial access (being able to afford a computer). However, often forgotten is the concept of the last inch, the small distance between the eye and the screen that could be infinite if a user is unable to write, to read or understand the written text. Thus having no access to technology even though all other barriers have been eliminated.

The world has moved into what is commonly referred to as the knowledge economy. Access to information makes it possible for people around the world to share and trade. At the simplest level localization exposes the technology taken for granted in the developed world: communication, writing, accounting systems and makes the available to local language speakers. Thus opening up opportunities to build systems to allow them to interact with global players but also automate their own systems making them more productive.

Localising the knowledge economy presents opportunities to lower or remove barriers affecting African women. Localised ICTs make information and communication more accessible to women who on average, are less literate in dominant world languages through lack of education. Thus making it possible for them to communicate, build networks, educate themselves and work in environments that augment their current income with all associated benefits.

It is a known fact that mother tongue education in primary schools years helps children be better in the subject matter, better in their mother tongue and better in their second language. Thus this project is extending that language advantage to the domain of ICTs. Enabling learners to fully grasp ICTs by eliminating the problems associated with working primarily in second languages.

Thus it can be seen that the dimension of language and ICTs have a great influence on culture and language preservation and development. But also a great influence in access; computers, technology and the economy. While the lack of localisation has a potential negative effect on all of these dimensions. By addressing the issue of localisation this network and its sub-projects aim to address these dimensions to indeed turn ICTs into a positive force for all of the above dimensions.

VI. Conclusion

There are various types of technologies currently used in traditional classrooms. Among these are:

1. **Computer in the classroom:** Having a computer in the classroom is an asset to any teacher. With a computer in the classroom, teachers are able to demonstrate a new lesson, present new material, illustrate how to use new programs, and show new websites.[21]
2. **Class website:** An easy way to display your student's work is to create a web page designed for your class. Once a web page is designed, teachers can post homework assignments, student work, famous quotes, trivia games, and so much more. In today's society, children know how to use the computer and navigate their way through a website, so why not give them one where they can be a published author. Just be careful as most districts maintain strong policies to manage official websites for a school or classroom. Also, most school districts provide teacher webpages that can easily be viewed through the school district's website.
3. **Class blogs and wikis:** There are a variety of Web 2.0 tools that are currently being implemented in the classroom. Blogs allow for students to maintain a running dialogue, such as a journal, thoughts, ideas, and assignments that also provide for student comment and reflection. Wikis are more group focused to allow multiple members of the group to edit a single document and create a truly collaborative and carefully edited finished product.
4. **Wireless classroom microphones:** Noisy classrooms are a daily occurrence, and with the help of microphones, students are able to hear their teachers more clearly. Children learn better when they hear the teacher clearly. The benefit for teachers is that they no longer lose their voices at the end of the day.
5. **Mobile devices:** Mobile devices such as clickers or smartphone can be used to enhance the experience in the classroom by providing the possibility for professors to get feedback.[22] See also MLearning.
6. **Interactive Whiteboards:** An interactive whiteboard that provides touch control of computer applications. These enhance the experience in the classroom by showing anything that can be on a computer screen. This not only aids in visual learning, but it is interactive so the students can draw, write, or manipulate images on the interactive whiteboard.
7. **Online media:** Streamed video websites can be utilized to enhance a classroom lesson (e.g. United Streaming, Teacher Tube, etc.)
8. **Digital Games:** The field of educational games and serious games has been growing significantly over the last few years. The digital games are being provided as tools for the classroom and have a lot of positive feedback including higher motivation for students.
9. There are many other tools being utilized depending on the local school board and funds available. These may include: digital cameras, video cameras, interactive whiteboard tools, document cameras, or LCD projectors.

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