THE CHALLENGING ROLES OF THE TEACHER AND THE STUDENT IN THE TECHNOLOGY-SUPPORTED LANGUAGE CLASSROOM

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Abstract

In the education arena, the age of Information and Communication Technology has definitely arrived. While some educators have embraced it, others remain cautious or weary. However, without a doubt, we are in the centre of a monumental technological paradigm shift, one which will eventually change the way that all instructors teach and the way students learn. Educators, by tradition, are known to respond to the need for change more by reaction rather than by action. The focus of this paper is on how the roles of teachers and students in different classroom settings are altered as a result of computer-based technologies, how the capabilities of computer-based technologies, and technology-enhanced learning environments can enable and/or constrain innovative pedagogical practices in a language setting. The paper concludes that technology and technological tools are here to stay, and their effects, be they positive or negative upon education, will have a lasting and unavoidable influence on the roles of both teachers and students in schools. It recommends, among others, that teachers should see technology as motivating tools enhancing the teaching-learning environment rather than as 'annoying' and 'dehumanising'.

Introduction

Just say the word 'technology' and you will incite a wide range of responses from that of a super keen computer fan to that of an apprehensive computer skeptic. The topic of technology, which has almost become synonymous with that of computers, is so hot right now that it is almost in danger of becoming overdone. In the educational arena, the age of Information and Communication Technology has definitely arrived, but while some educators have embraced it, others remain cautious and weary. The second language (L2) classroom is not an exempt from involvement in this technological wave but questions are still being asked as to the specific role of the computer in this particular learning environment. Technology, although inclusive of computers, is not exclusively related to this particular ''machine''. The use of television, radio, overhead and slide projectors have already gained their rightful place in the language classroom as valuable and necessary tools. The computer possibly because of its complexity, diversity, expense and/or dynamic nature seems to be slower to find its niche in the second language learning context.

Kozma (1994) posits that powerful new capabilities of computers make it possible to access, represent, process, and communicate in new ways. These capabilities make it possible to search and organise information, analyze data, represent ideas, simulate complex systems, and communicate with others in ways that were not practical or even possible previously. They also enable new ways of teaching and learning – new activities, new products, and new types of learning and teaching (Kozma & Schank, 1998), but, do all teachers, students and educators feel and agree with the general, positive, societal perception of technology in education?

School's hierarchical organisation is intimately tied to its view of education and in particular to its commitment to hierarchical ways of thinking about knowledge itself. What one will consider to be the proper place for school on the heterarchy-heirarchy scale of organisational forms depends on the location of one's theory of knowledge on the heterarchy - hierarchy scale of epistemologies (Papert, 1993:pp. 61 – 62). Means & Olsen (1997) document in their research literature a strong association between new technology-based practices, and changes in curriculum and pedagogy. For example, in many countries, the use of educational technology is part of an instructional shift toward project-based, constructivist approaches to teaching and learning within a context of school improvement or reform. Instead of focusing solely on increasing the acquisition of facts related to specific subjects areas, teams of students are collaboratively engaged in solving complex, authentic problems that cross disciplinary boundaries. Instead of dispensing knowledge, teachers set up

projects, arrange for appropriate resources, and create the organisational structure and support that can make students succeed. This approach moves conceptions of learning beyond rote memorization of facts, instructionist and behaviourist methodologies, and procedures to learning as a process of knowledge creation. It moves education beyond the notion of a place where knowledge is imparted, to one of classrooms, organisations, communities of practice, and societies as knowledge building communities (Wenger, 1998: Bereiter, 1999). These are more appropriate constructs for the information society and knowledge economy of the future. Technology plays a role in this approach of providing students with tools and information that supports their problem-solving, communication, collaboration, and knowledge creation. It also provides teachers with new tools and challenges that can transform instructional roles, curricula, and practices. Plomp et al (1996) define learning as a process in which four components interact: the teacher, the student, curriculum content and goals, and instructional materials and infrastructure – more specifically in this paper, the role of multimedia and information and communications technology (ICT). This paper, will discuss the changing teacher's and student's roles and classroom practices in technology-enhanced, language classrooms. This paper will also allow for a more open debate on the effects of Technology- Enhanced Language Learning Environments, be they positive or negative, advantageous or dis-advantageous, creative or destructive, on the roles of both teachers and students (perceived and emergent), in their daily lives, with technology, at school.

Rolling the Role – Student's New Roles

What implications do these new instructional approaches have for the roles of teachers and students? What new teacher roles complement those of students and vice-versa? How does technology support these roles?

Taking a cursory look at the students in our language classrooms, three new roles can be perceived and these are often associated with project-based or inquiry learning: self learner, team member/collaborator, and knowledge manager/leader. Each of these roles can, in turn, be associated with typical activities.

In the 'self-learner role, students can select their own real-world, real-time, multimedia project in the language classroom and identify possible solutions to improving ways of making their lessons more interactive, more enjoyable, more relevant, more authentic, and more meaningful. Students can, again, organise their multimedia projects into 'Thematic Portfolios' for future usage by themselves and other classes. They can also manage progress made on the various 'portfolios' as various collaborative groups come up with new multimedia ideas and possibilities to enhance learning. Papert (1993:pp.139-140) rightly asserts, ''If children really want to learn something, and have the opportunity to learn it in use, they do so even if the teaching is poor. For example, many learn difficult video games with no professional teaching at all!'' This management task extends to managing students' time where they often sacrifice other activities to complete design tasks. The role of self-learner extends to that of helping others learn also and a definite mentor/mentee role relationship is also prevalent. They will definitely depend on each other more than on their teacher(s) since the work is all about them and not just about their teacher(s).

The 'Team member/ collaborator' role: While students have almost always been divided into groups, even in some traditional, 'instructionist' environments, the role of a collaborator or ''team member'' is a relatively new one for students. The difference here is that the social interaction of the teams in some way will give them ownership on the multimedia projects or 'portfolios', and the team members will be actively involved in advancing the project. Consequently, there will be both shared and individual responsibility for the success of the project as students will work collaboratively to move it forward. For example, in the multimedia project, students can rotate between different tasks given to a design committee, a research committee, and a language committee. Students can also perform specialised tasks such as collecting survey data on the preferences of their friends, their neighbours, developing and implementing an advertising campaign for a 'top of the pop' show where the multimedia presentations will be used to encourage other students to make preferences concerning various pop-groups and design their own presentations using the Power Point templates which can be created by their fellow-students.

The role of a ''knowledge manager/leader'': This is, perhaps, the most prevalent role and the one most often associated with the use of technology to support project-based learning. The focus of

the role is on the development of knowledge products. These are often reports, newspapers, or multimedia presentations that solve a real world problem, address a social question, or express personal feelings. Activities demanded of this role include formulating questions, searching for information, collecting and analysing data, and designing reports and presentations.

Technology Supports for New Student Roles

A range of hardware and software applications are available to support these new student roles. The role that can be the most supported is that of ''knowledge manager''. This is because, in this role, students have access to vast stores of information, either on the internet or in a limited way, on CD-ROMs. In addition, they have a variety of tools that they could use to transform this information into knowledge, tools such as search engines, word processors, graphics packages, multimedia, presentation and web-development software.

The role of 'team member' can be supported through the use of communications hardware and software. Student groupings can generally be based on what made the most sense for learning rather than on hardware constraints which can be few in most schools.

The least-supported role will be that of ''self-learner''. This role is marked by the need for students to see their own goals, organise their own work, and manage their own time.

The New Teacher Roles

Generally, teachers will retain many of their traditional roles – class leader or director, lecturer, information giver, and discussion leader. They will also negotiate multiple new roles in language classrooms that utilise innovative technology-supported practices. The new teacher roles will be: instructional designer; trainer; collaborator; student; silent partner; team co-ordinator; advisor; and monitoring and assessment specialist. Each role is associated with specific activities and will be made possible by the use of technology in support of project-based learning in inquiry-based instructional methods.

''Instructional designer'' is one of the more common new roles to be taken on by teachers. Much like the ''self-learner'' role adopted by students, teachers in this role will find themselves designing, planning and organising their classrooms in order to effectively use and integrate technology into their language lessons. ''The instruction designer takes into account all of the resources available to meet the variety of needs his/her students have and implements well-designed activities to address those needs.'' (Kozma, 1994)

The role of ''trainer'': ''Trainers'' give individual instruction to enable skilled development. This training or mentoring will be accomplished through modelling the use of multimedia and technology, and helping the students see how they can use software tools to accomplish unique language learning tasks.

''The collaborator'' role: ''Collaborator refers to a variety of activities teachers undertake to work with their colleagues to improve their instruction.'' (Kozma & Schank, 1998). These activities include informal sharing with colleagues and team teaching. They also include collaborating, sharing and learning with the students as equals ''I am convinced that the best learning takes place when the learner takes charge...,''(Papert, 1993:p.25).

''Team co-ordinator'' role: The focus of this role will be on the active assignment of individual students to project or portfolio teams. In addition to opening up opportunities for collaborative and social learning activities, teachers who assume the ''team co-ordinator'' role will create opportunities for peer tutoring, apprenticeship modelling, and support between students with mixed ability levels.

The role of ''enabling advisor'' refers to those teachers who will give assistance, advice, suggestions or posed questions in a way that will enable students to find the information they need to complete particular multimedia or language-learning tasks. ''Teachers who give so much autonomy to their students are thereby declaring their belief in a radically different theory of knowledge, one that entails far more work for them as well as their students (Papert, 1993:p.63). A common term used sometimes to describe this role is the term 'facilitator'. ''

The ''mentoring and assessment specialist'' refers to the new role where teachers and students alike will mentor and monitor performance and attempt to assess and improve that performance.

These various teacher roles align with, and exist in tandem with the new student roles previously outlined. Additionally, the new teacher roles will appear to overlap the different student roles. The student role of ''self learner'' will be complemented and supported by the roles the teacher plays as ''trainer', ''instructional designer'', and ''monitoring and assessment specialist'', and vice versa. The student role of ''knowledge manager'', a creator of language knowledge portfolios, will be related to and supported by the advisor, instructional designer, team co-ordinator, and collaborator roles that teachers will adopt. Indeed many roles can be interchangeable.

The Flip Side of the Coin

Cuban (2001) believes 'rampant featurism' in computer programmes mean that simple and powerful technological ideas are becoming more and more complex and require faster and hungrier hardware. Lam (2000) notes that the top-down implementation of technology by authorities may cause resentment and avoidance by teachers. He adds that the lack of perceived legitimacy of the computer as an educational tool has an influence on teacher adoption of the technology. Lam also suggests that language teachers do not use computers in their classrooms not because they are technophobes, as some of them suggest, but because institutions and programs overlook the importance of training teachers and matching their goals with the tools they hope to employ. Similarly, Cuban (1986, 1996) notes that technology advocates have ignored realities such as the social organisation of classroom that serve as an inhibitor of classroom technology use. He also observed that ''innovations for solving productivity problems defined by non-teachers invariably were mandated into use by policy makers, not teachers'' (1986,p.54). He adds that ''views of teaching and organisational compliance ill-fitted to schools and classrooms and married to feckless strategies aimed at coercing teachers to use the innovation explain limited use of the new technologies'' (1986,p.56). Teachers' attitudes and philosophies toward teaching and technology, regardless of their basis, can both support and prohibit the use of technology in the classroom.

Some of the teachers who display a certain resentment to the presence of what they perceive to be the policy-makers' non-consultative imposition of technology into their classrooms usually comment on the fact that government seems to have literally millions of Naira to distribute among schools to buy computer hardware while at the same time, many school buildings and other infrastructures all over the country are in deplorable state and in dire need of refurbishment. They view technology as annoying tools, which in some cases challenge their professionalism and 'raison d'être' or a possible de-humanising influence in their relationships with students. And so, to this group, time to be given to technology-enhanced language projects, detracts from what they believe to be what language teaching and learning is all about – instruction and communication, reading and writing. Another group of teachers usually indicates that their students, being surrounded in society with the gadgets of the digital-age, are being de-sensitised to, and deprived of what they perceive to be the basic human needs for face-to-face communication and inter and intra-personal social skills.

All those negativities are usually expressed by teachers opposed to technology-supported classrooms for fear of one thing or the other. The students, on the other hand, who have been exposed to sophisticated media delivery systems outside the classroom environment will certainly be totally engrossed in the technology-enhanced tasks already outlined. Akanbi (1993) notes the pervasive influence of the technological media on both the conscious and unconscious minds and the attendant effects on the teaching-learning situation. Notable among the problems created, he added, is the ever-widening gulf between learner's expectations and capability to process information from several channels as a result of out-of-school exposure to sophisticated media delivery systems and the teacher's obsolete presentation strategies. So, majority of the students will prefer the combination of instruction and project-based learning to traditional face-to-face only instruction. It will challenge them to think and work in a variety of interesting and fun ways and will rarely be boring as they will want their language classrooms to become communities of practice around the world, based on the 'technology toys' which they will find most motivating in life and free from the teacher-controlled, 'behavouristic methodologies' which so often plague language learning (L2) classrooms. It will also seem that the students will be more adaptive to new technologies than their teachers, and their desire to experiment and innovate will surpass any semblance of fear or reservation if it comes to incorporating technology in their language classrooms. Video games teach children what computers are beginning to teach adults—that some forms of learning are fast-paced, immensely compelling, and

rewarding. The fact that they are enormously demanding of one's time and require new ways of thinking remains a small price to pay – and is perhaps even an advantage – to be vaulted into the future. Not surprisingly, by comparison school strikes many young people as slow, boring, and frankly out of touch. (Papert, 1993:p.5)

Conclusions

Technology can be used in a variety of ways to improve classroom instruction in language teaching and learning. Moreover teacher and student roles can be altered in ways that will reflect not only the presence of technology, but also the efforts at spontaneous and systematic school and curriculum reform. Some of the different and emergent roles that students and teachers can adopt in the course of their interaction with technology-enhanced, technology-supported pedagogical practices in the language classroom have been highlighted. These practices can promote active and autonomous learning in the students; provide students and teachers with competencies and technological skills that will allow them to search for, organise, and analyse information communicate and express their language ideas in a variety of multimedia projects; enable teachers, students and the general school population to communicate and share information; engage students and teachers in collaborative, project-based learning in which they will work together on real-time, real-world like language projects; provide students with individualised or differentiated instruction at all levels of ability, interest and/or learning styles; and allow teachers and students to assess performance – a total interactive, interpersonal human process.

It is important that we do not ignore any of the experiences to be explored in technology-enhanced learning environment as there are two sides to every story. The word 'enhanced' as indicated in Technology-Enhanced Language Learning Environment (TELLE) must not be viewed solely as implying 'advantage, positive, wonderful' but also as possibly signifying 'inhibitors and ill-fitted'. The literature likewise portrays technology enthusiasts who claim that computers will save urban schools and revolutionise education as we know it (Blumenfeld, Fishman, Krajcik, Marx, & Soloway, 2000; Papert, 1993), and critics who argue that technology does nothing at best and masks the real problem at worst (Cuban,1993; Tyack & Cuban, 1995). One thing is certain, technology and technological tools are here to stay and their effects, be they positive or negative upon education, will have a lasting and unavoidable influence on the roles of both teachers and students in schools. Change is never easy, but with thoughtful, responsible and inclusive negotiation and collaboration, respect for differences of opinion, one would hope that the positive effects of technology upon the roles of all partners in the education process would come to the fore and make our language learning classrooms more authentic, more meaningful and more communicative! One moral of the story is that we might all do better if we dared classify ourselves as ''developing.'' (Papert, 1993:p.75).

Recommendations

All stake holders in the education field should realise that whether they embrace technology/technological tools in the classroom or they do not, technological advancement keeps moving on while the roles of both the teachers and learners get more challenging with high expectations from the tax payers. Therefore, both teachers and learners should brace up to meet the emergent challenges of technology enhanced learning environment. They should recognise that some forms of learning are fast-paced, immensely compelling and rewarding even though they are enormously time demanding and require new ways of thinking which eventually will be a small price to pay.

Teachers should not see technology as 'annoying' or 'de-humanising' but motivating tools enhancing the teaching-learning environment.

Policy makers need to carry along teachers in taking decisions having to do with the classroom rather than forcing decisions down their throat.

Finally, technophobes should know that learning is getting more individualised every waking day through technology.

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