

Effective Teaching with Information Technologies: Towards an Interactive Pedagogy

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Abstract: *With the current increasing awareness of the theory associated with learning afforded with new Information and Communications Technologies (ICTs) there seem to exist a call for a change in the way teachers teach and learners learn. Based on the conception that interactivity is a means to a greater end – participant learning which may lead participants to a point of reflection on content, the present paper considers an important issue related to the validity and reliability of information technologies, based on interactive pedagogy accessed for use in classrooms, i.e., an interactive approach may be adopted in classrooms to promote collaborative process, learners' autonomy and thus, learners' centeredness which may in all probabilities manage the learner's attention and create motivation in the classroom.*

Key-words: *Information technologies, interactive pedagogy, collaborative learning, motivation.*

1. Introduction

*"A new age demands a new paradigm!"
Walter McKenzie*

*"With the help of technology, teachers will be leaders in the transformation of education around the world."
Craig R. Barrett, Chairman, Intel Corporation*

A new global landscape is emerging as our world now witnesses a period which may be called "a digital age" where countries are trying to catch and utilize amazing technological developments into every area of their technical and social life. It is often assumed that one of the main challenges of current pedagogy seems to be the incursion of technology into classroom tasks. Language researchers strongly argue that it appears to be inevitable that, the more a teacher makes use of instructional technology in the classroom, the less teacher-centered and the more student-centered a classroom will become.

Throughout language teaching history, a great number of researchers have condemned teaching as being restricted to the teacher as the distributor of knowledge and the learner as the unquestioning recipient of knowledge, treating the minds of learners like storehouses to be filled with information. Within the current changes, like any area of research, education has witnessed a drastic but a noteworthy change which is characterized by the inclusion of ICTs within the field of education.

2. ICTs in Education

The sharp rise in the application of ICT resources in the curriculum has been driven to a large extent by the adoption of interactive pedagogy and related technologies in the classroom. Considering language as being a remarkable index of pedagogy changing, it would be surprising; indeed, if such a radically innovative phenomenon; namely technology did not have a fascinating impact on the way learners learn and grow. Joining this idea, NCEL (2004) states that:

The integration of new and powerful technologies in our educational institutions and increasing emphasis on higher-order skills in curriculum content will not bring about the broad changes required without essentially changing the ways teachers and learners work together.

However, the feasible combination of technology into education seems reasonably doubtful if it is not carefully integrated the curriculum accompanied by appropriate services, mechanisms and professional development support (Fox, 2003). Traditional classrooms treat the learner as an isolated and abstract being having little *interaction* with students or the teacher who is characterised by his authoritative nature. Hence, the genuine challenges for teachers at this point in the growth of digital classrooms seem to be tremendous to see the great potential that lies ahead, this is to master the interactive tools and the state of mind to begin collaborate with colleagues and students for effective use of these new tools within the teaching in the digital world.

3. Interactive Pedagogy

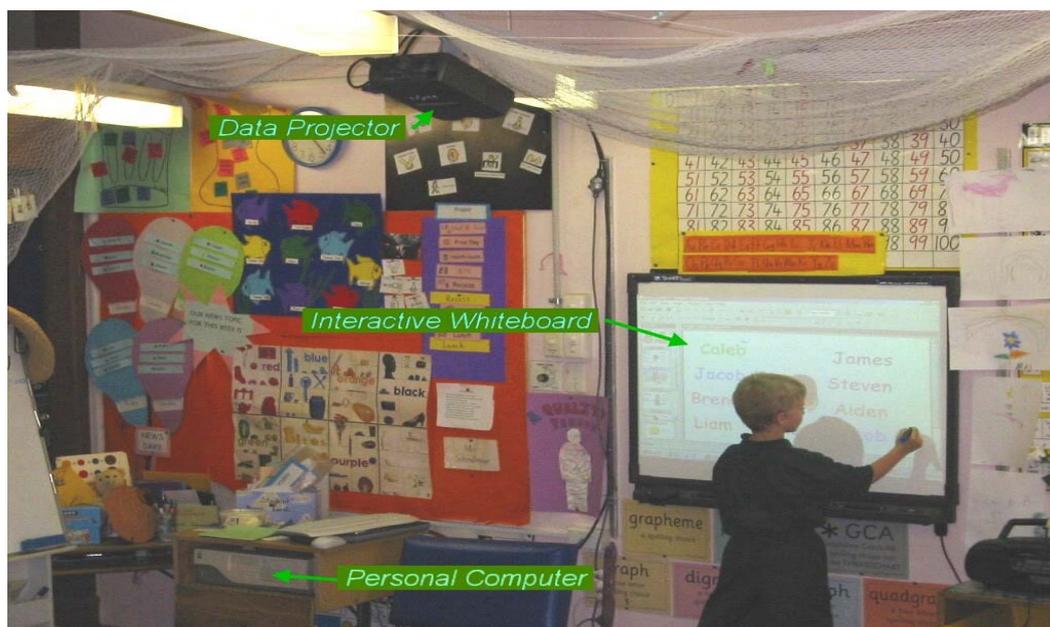
Interactivity may simply mean that teaching resources should be designed in a way which allows students interact with the tools either physically or mentally. It also may mean using software like Google Earth to pick up the whole globe, rotate it and zoom in, showing animated layers to demonstrate some geographical principle, or manipulating objects in a virtual physics environment in an easy way, economising time and energy too. Interactive pedagogy may take the form of *"self-paced, student-controlled, individualized learning opportunities embedded with formative and summative assessments to gauge student learning outcomes"*. Lawrance (2010:136)

Traditionally, classrooms were limited within the four walls, a teaching board and rows of tables and chairs; far too many teachers still believe the traditional tools for learning, i.e., textbooks, worksheets, the conventional teaching board are enough; and in far too many classrooms the teaching tends to be a one-way experience, with the teacher at the front imparting knowledge to students who passively absorb these facts in order to repeat them back in an exam.

Interactivity incorporation may in all probabilities transform classrooms into technology-enhanced learning environments which support, to a large extent, innovation, achievement and success. This may equip students with the spirit of collaboration, critical thinking and technology skills which they need to conduct leading-edge research in an interactive and collaborative environment which result successful careers in the classrooms and workplaces in the future.

Thus, it seems to be high time to explore the new world of 'e-teaching', which is usually described by the act of teaching using technology to enhance learners' achievements. Online learning platforms such as Moodle or Blackboard are typical of e-learning environments which enhance interactivity in which students log into in order to check published documents, tasks and activities to support a course of study, or which in some cases are actually the entire course of study. On the other hand, Students may also submit assignments and tasks electronically through the learning system, creating a digital, interactive work between the teacher and students.

The most remarkable example of interactivity is the Interactive Whiteboards or IWBs for short, which is a large interactive display that combines the simplicity of a whiteboard, power of a computer and front projection. IWBs may engage students with vivid images, video and audio, it also enables anything that can be seen or done on a computer screen to be projected onto an interactive whiteboard – bringing every classroom to life.



Our argument is that successful learning takes place when learners achieve a capacity to learn at their own pace, *engaging* and *interacting* with creative ideas in motivating ways. For instance, activities such as writing, creating, designing, thinking, problem solving may be intensely personal in a way that and most learners will construct meaning for themselves in their own heads, in their own learning styles, as they work through these higher-order activities. In this way, teachers achieve well-run classrooms through well-organised curriculum which caters for the individual learning styles and needs.

4. Teachers' Changing Views on Interactive Pedagogy

The majority of teachers seem to emphasis on the relationship between their role in generating interactivity and enhance learners' responsibility for *managing activities*, *generating ideas*, *reflecting on learning* and *assessing* what they had achieved (their outcomes). In this fashion, teachers felt that group work may encourage learners to instigate interactions, and tasks were often structured to ensure that these interactions took place. ICT was seen by a great number of researchers and teachers as a means of encouraging and motivating learners.

As it seems to be clear, an interactive approach involves a radical change in teachers' roles from traditional pedagogy. Teachers may become a manager or facilitator of interactions designed to bring about learning, while learners take an active role and engaging in actions such as questioning, evaluating and explaining, i.e., this approach calls for learners' centeredness at a large extent. A great number of researchers were conscious to shift to a more *dialogic pedagogy*, where teachers incorporate ICTs and integrate its principles into their work and practice.

The following ATLAS framework seems to be valuable in revealing that learning may be affected according to orchestrating variables in the resources and support provided. Thus, the use of ICTs as a medium of interaction may be particularly valuable for effective learning.

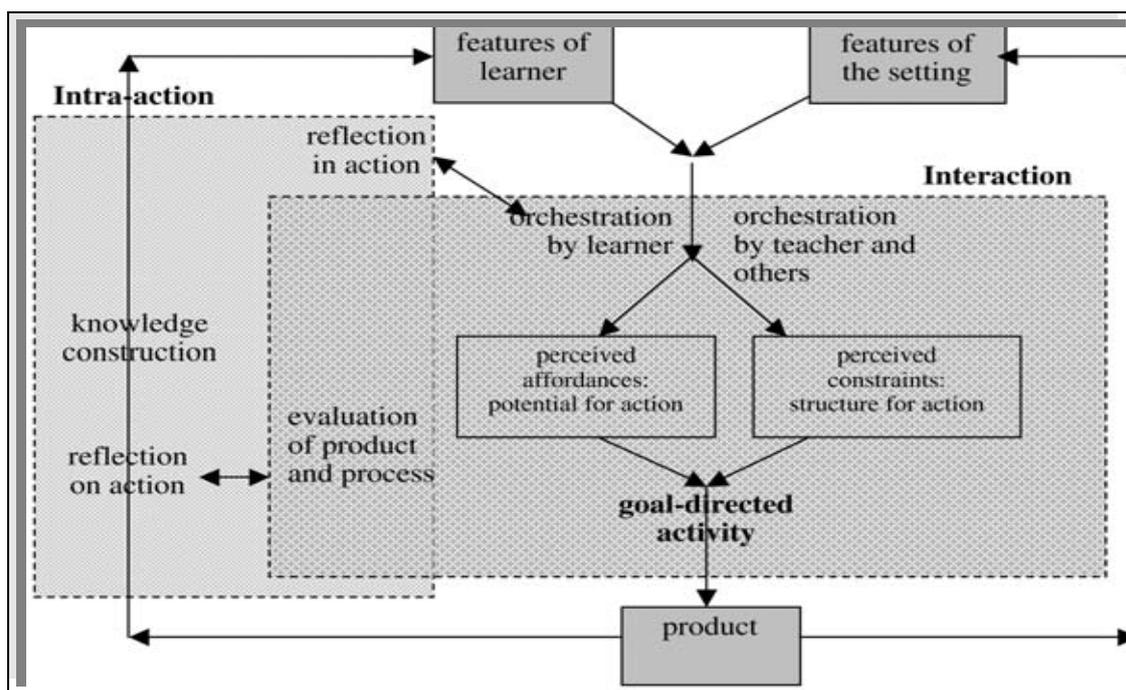


Figure 1. The ATLAS Framework

At this level, it is worthwhile that one should be careful while creating an interactive lesson. This was the concern of many researchers to help teachers succeed in their teaching task. Hence, language teacher' roles moved away from being the "source of all knowledge" to being more of an 'information architect' charged with the task of designing engaging learning pathways for their students". Betcher *et al* (2009:77), i.e., designing digital lessons which cope for learners' styles and needs. In this line of thought Strickland (2006) puts forward the ADDIE instructional system design model which aims at creating an Interactive Lesson. The abbreviation ADDIE stands for, Analyse, Design, Develop, Implement, Evaluate. Within each step in this model, a practical, hands-on task is completed as support to prove that the skill has been mastered. Here's how it goes:

1. *Analyse*: define the needs and constraints
2. *Design*: specify learning activities, assessment and choose methods and media
3. *Develop*: begin production, formative evaluation, and revise
4. *Implement*: put the plan into action
5. *Evaluate*: evaluate the plan from all levels for next implementation; evaluation is essential after each step.

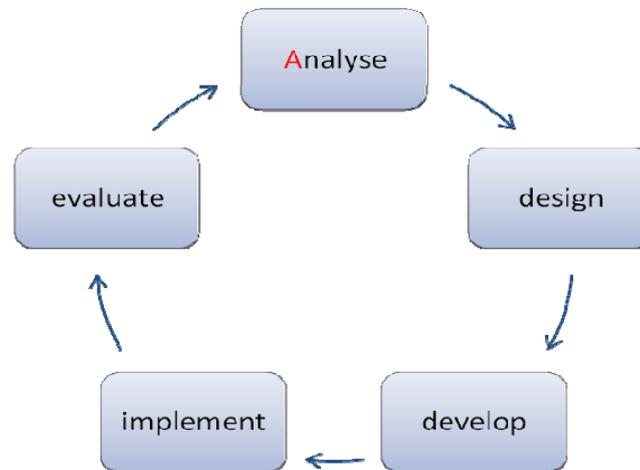


Figure 2. ADDIE Model

5. Conclusion

Armed with computers, mobile phones and social networks learners have easy access to enormous quantities of information, thus, they need to have digital learning opportunities which take into account their learning needs and styles for successful achievements.

To put it in a nut shell, this new technology-enhanced pedagogy may be put under a generic term to describe 'e-teaching' (Kent 2004). E-Teaching involves the use of ICTs to improve the art of teaching. Harnessing the potential of digital technology in presenting a concept, exploring the implications, placing the concept in various contexts, creating links with existing knowledge, and leading discussions that probe student understanding and allow students to take their learning in personally relevant directions.

IWBs may create another way that the class can interact with the content of the lesson. Teachers can use the technology to promote higher order thinking and to lead substantive conversations. Interactive Whiteboards used within an e-teaching pedagogical framework have the ability to make an important impact on classroom practice. It may allow teachers to manage the teaching and learning process so that the learners can interact with the content and context of the lesson.

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