Technology Mediated Classroom Communication: Enhancing Inclusion in the Teaching Learning Process

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Abstract

Technology has become integrated in the inclusive classroom in so many ways. Technological tools help the educators make better use of instructional material and also help students to improve their technological skills and better understanding within the context of the regular curriculum. When technology is used in communicating teaching-learning material in an inclusive classroom setting it will enrich the learning experience. Technology fosters the educational needs of differently abled students in regular classroom environment and helps them in mainstreaming. We can use different hardware and software to interact with the students and aid the teacher in delivering the instructional material efficiently.

Key Words: *Communication, Components of Communication, Inclusive Classroom, Technology Mediated Classroom Communication, Ways of Technology Mediated Classroom Communication, Role of teacher*

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1.Introduction

Across the world technology is the part of social and academic lives of the students. Throughout the history of human communication, advances in technology have powered paradigmatic shifts in education (Frick, 1991). In technology mediated classroom communication there is a sender, a receiver, message (content) and technology. If this message is delivered through any type of technology only then technology mediated communication occurs in classroom setting. Any communication pattern mediated through the technology like computers, Internet, audio video equipment, educational satellites and mobiles etc. to facilitate the technology in creating interactive teaching – learning process. The active environment of classroom provided by the technology with access to local, national, and international networks increases interaction and communication among students, their teachers, peers, parents, and other members of the community.

2. Communication

The term communication has been derived from the latin word 'Communis" which means 'Common" thus to communicate means 'to make common' or 'to make known'. This act of making common and known is carried out through exchange of thoughts, ideas or the like.

Anderson (1972) defined it as a dynamic process by which an individual, consciously or unconsciously affects the cognitions of another through materials or agencies used in symbolic ways. Communication can also be conceived of as an 'Innovative' dealing with means and ends of bringing about change. (Kimbrough and Nunnery, 1988)

3. Classroom Communication

Classroom communication refers to the process of information sharing that consists of verbal and non-verbal transactions between teacher and students, or between and among students in a classroom setting. There are various

methods of communication available to the classroom teacher. Communication may take the form of written, oral, pictorial, kinetic communication.

4. Inclusive Classroom

An inclusive classroom is a general education classroom in which students with and without disabilities learns together. Equally important as creating an inclusive environment is using different technologies to make learning accessible to every student. In an inclusive classroom, many students have a wide variety of educational needs. Therefore, having a large toolbox of technologies can help the students for better understanding. Students have different learning styles; teachers will teach using verbal cues, visual information, such as videos and pictures, music and other technological devices. By presenting information in a variety of ways, students can receive information in their preferred learning style.

5.Technology Mediated Classroom Communication

Technology plays an active role in the upbringing and development of students. Understanding and internalizing Technology is an organic process for the students for better learning. Technology is intertwined with the growth ofstudent itself."Technology makes classroom communication universal that means it is not limited to students from one classroom, school, grade, or country. Effective learning hinges on active engagement by the student and the construction of knowledge on their own leads to understanding (Sheingold, 1991). This learning is not a solitary process. Rather, it occurs in a larger world of people and technology. "Technology mediated communication promotes a type of interaction that is often lacking in the traditional teacher- based classroom. It allows learners the freedom to explore alternative pathways-to find and develop their own style of learning. What if content could be delivered in the form of graphics, text, full-motion video, smart boards,E-lessons, E-books and social networking sites etc.

Figure:1 Components of technology mediated classroom communication
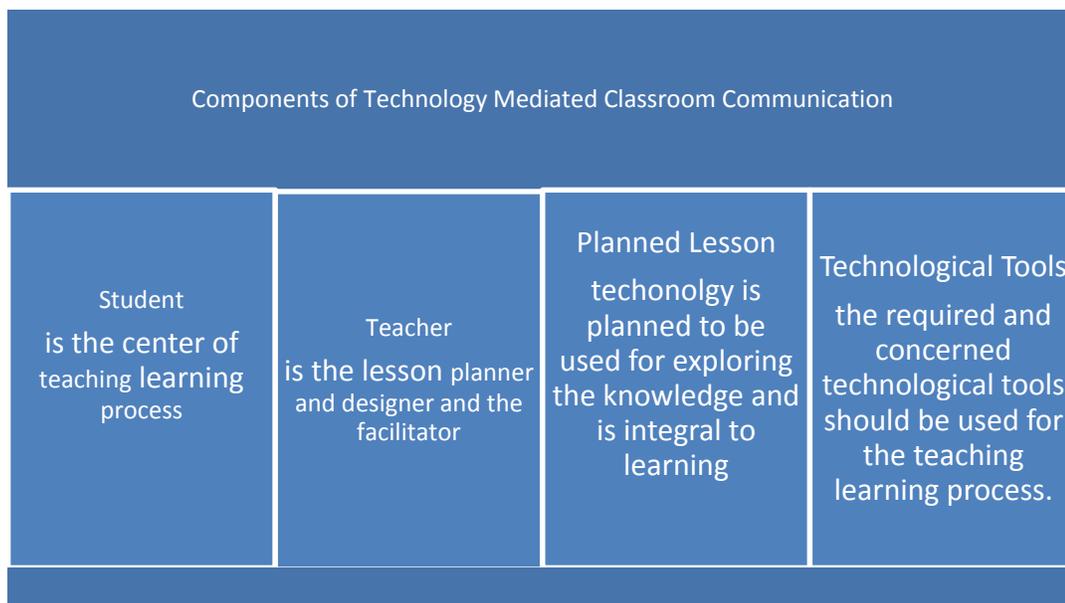
6. Various ways of Technology Mediated Classroom Communication

Technology mediated Classroom Communication offers a rich set of ways that can be used to support a variety of learning experiences.

- **Radio**: Radio has been used in educational classrooms. It provides source material for the main stream of classroom work. It supplements the classroom teaching and under the general knowledge of the people

and the teacher by arranging the curriculum in a new pattern.

- **Television**: communication by speech is a learned skill but seeing and the thought stimuli provoked by sight comprised to gather the base of experience on which sensory reaction and knowledge are built.

- **Educational Films**: a film presents facts in a realistic way of dramatizing of human relations. It may be used for the

communication of ideas, attitudes and experience to the students.

- **Projectors**: A projector or image projector is an optical device that projects an image (or moving images) onto a surface, commonly a projection screen that make the teaching-learning material more interactive. It can cater to large audience at the same time.

- **Computers, laptops, Tablets and smart phones**: having a computer or laptop in the classroom allows students and teachers access to websites and other programs, for example: Microsoft Word, PowerPoint, PDF files and images.

- **Smart Boards**: smart boards have enabled the teachers to teach instructional material and make it more effective and interesting. These are the interactive instructional tools which display attractive graphics and can also cater to all learning styles.

- **Puzzle Maker**: it can be used by teachers and students alike to develop crossword puzzles, word searches, cryptograms and more based on curriculum vocabulary and concepts.

- **Brain booster**: it offers many activities that can be used to help students develop higher level thinking skills.

- **E-Pals**: Teachers use the free E-Pals Global Classroom to create real world, culturally-enriching learning experiences for their students. With E-Pals classroom matching, a high school class studying Chinese can connect with a class studying English in China, or the classes can work on a special project together.

- **Blogs**: blogging is similar to online diary; it provides a quick and easy way for teachers and students to share work, opinions, ideas, and information.

- **Videoconferencing** - a means by which small groups of geographically distant people can hold discussions in real time, during which they are able to hear and see each other and share various other types of data.

- **Computer conferencing** - (sometimes also known as 'discussion boards' or more accurately 'threaded discussion lists') which enables groups of people to hold discussions by reading and posting text messages on a computer system. Computer conferencing is

widely used to support learning, and within the educational context is generally what people mean when they talk about technology mediated communication.

- **Email** - the most popular Internet tool, used to exchange messages between individuals

- **Social networking**: it has become a major way for groups of people to communicate, share ideas, learn about one another and built relationships. These sites can help students and teachers to communicate with each other.

- **Scholarly publishing online:** Google is working with several academic libraries around the worlds to scan their books into their database.

7. Technology to foster Inclusion

- In inclusive classroom, some students need devices that provide access to computers or environmental controls. Examples to access technology are special switches, modified keyboards, head pointers, and keyguards. Independent use of equipment in the classroom is a possibility for students with physical disabilities through environmental controls such as remote controls and special adaptations of on/off switches to make them accessible.

- Students who are nonverbal, dysfluent or who have articulation problems may benefit from using a wide variety of communication devices.

- Listening is an important part of teaching learning process, hearing impaired students needs assistive devices for hearing such as hearing aids, personal FM units, or closed-captioned TV. Special listening systems can help a child with a hearing loss "tune in" to the teacher's voice from a distance.

- Just like listening, vision is also equally important in learning. Technology can be used to help these students by increasing contrast, enlarging stimuli, and making use of tactile and auditory modes. Kurzweil (1997) has studied that technology provides new opportunities for people who are visually impaired (i.e., are blind or have low vision) to be independent at work, school and home. Devices that help with vision include screen readers, screen enlargers, magnifiers, audio books, Braillers, light boxes, and scanners. E-books can be presented in large print, in a different color, or with different backgrounds for students who have visual impairments. It can be read aloud via computer for students who are blind or non-readers. It can even be presented in a different language for students for whom English is a second language.

- Students with mobility impairments may need wheelchairs, self-propelled walkers, or recreational vehicles like bikes or scooters. Recreation is an important part of school life because it promotes

interaction with other students. Adapted recreational activities can make a real difference to students with disabilities. Examples of adapted recreational activities are drawing software, computer games, computer simulations, tutorials and adapted puzzles.

- Computer-based education is beneficial for inclusive classroom environment. Hasselbring and William Glaser (2000) studied that computer technology has the potential to act as an equalizer in freeing many students from their disabilities.

- Some Softwares provide immediate feedback and motivation to the learning disabled students. Talking software can help a child hear the words while seeing them on the page while reading. Word processing with word prediction helps children with limited vocabularies, as well as children whose use of a keyboard is limited by motor impairments, to express themselves in writing. A textbook can be presented graphically for students who have reading disabilities.

8. Role of Teacher in Technology Mediated Inclusive Classroom.

Technology is a tool and not the end in education. It cannot replace the teacher but can help in improvising the teaching- learning process. With the advent of technology, the role of teacher has changed from that of a dispenser of knowledge to a facilitator and a guide. Teacher plays an important role in mediating technology in inclusive classroom and communicates through following ways:

- Teacher as a Designer: as a designer a teacher can carefully consider and plan classroom environment that embraces technology-enabled student learning.

- Teacher as a Facilitator: teachers who use the technology also need to know how to assume the role of the facilitator. Instead of giving complete information to the students directly, teacher as facilitator guides the students in their own learning process.

- Teacher as a classroom manager: teacher as manager plans, organize, directs and controls all the activities in the technology mediated classroom.

- Paraprofessionals, or educational assistants, are assigned to a teacher in a classroom to assist students with special needs. This encourages and allows the teacher to take ownership for every student in the class. It also provides the teacher and all students an opportunity for extra instruction and support. Paraprofessionals commonly assist with tasks such as:

  ➢ leading small group instruction designed by the teacher,
  ➢ collecting materials,
  ➢ providing assistance for personal care and other physical needs,
  ➢ assisting students to complete the assigned task given by the teacher,
  ➢ facilitating communication between students,
  ➢ adapting lessons under the teacher's guidance, and
  ➢ Executing in the inclusive classroom environment.

9. Conclusion

Rapid changes in technology ensures the the promotion of shared working benefits for both the learner and the teacher, including space and resources, the promotion of collaborative learning and new ways of teaching and learning. Technology makes the classroom communication universal and promotes the creation of the constructive classroom. Technology can be used in classroom settings creating an innovative environment through smart boards, tablets, computers, internet and educational software. In techno savvy world the role of teacher has been modified from the dispenser of knowledge to the facilitator and manager in the classroom setting.

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