

## **INNOVATIVE TEACHING METHODS AND PEDAGOGY OF THE TWENTY-FIRST CENTURY**

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### **Abstract**

*Education is a process of facilitating learning of knowledge, skills, values and habits. Basically, teaching must include two major components - sending and receiving information. Ultimately, a teacher tries his best to impart knowledge the way he understood it. The purpose of education is not only to make the students literate, but also to make them creative, knowledgeable, think of their own and to meet the demands of the workforce. The success of a student depends on the teacher and the innovative methods which he/she incorporates in teaching. The use of innovative methods in educational institutions has potential not only to improve education but also to empower people, strengthen governance and galvanize effort to achieve the human development goal for the country.*

**Keywords:** Education, teaching methods, learning, innovative techniques.

### **Introduction**

Education plays an important role in the growth of the students and in today's world. Education not only makes the students to think and also increase their own creativity by the innovative methods of teaching. Innovation and creativity in teaching are essential for both the students

and the teachers. Teaching has two important roles viz., sending information and receiving information. The innovative methods not only improve the education system, they also help the students to achieve different goals.

This study sought to determine the impact of the use of improvised instructional materials on student motivation to read, reinforcement of science concepts and ability to link classroom content to improvised materials. Instructors, therefore, often wonder about how to enforce reading compliance. In contrast, most students spend a lot of time on social and news media than on their school work. Therefore, there is a need for educators to devise instructional approaches, preferably those that meet the students where they are in terms of level of knowledge. In addition, educators in both K-12 and higher education are aware of the inadequate resources at their disposal. And so, even in well-funded schools and higher education institutions, there is always a need for instructor-creativity and improvisation to reinforce some concepts (Sithole*etal.*, 2016).

Mathematics was chosen as an object of study because it can be described as a common tool and the language used to define mental schemas throughout the world. Individuals who lack basic mathematical skills may face difficulties in school and social life; overcoming such difficulties requires the establishment of an effective learning environment. Reaching this goal depends on the employment of effective pedagogical methods; it is therefore essential to investigate different teaching methods—problem solving, inquiry-based teaching, discovery, games, lecturing, case studies, among others—and to draw attention to effective teaching and learning processes (Unal, 2017). Research-based teaching and learning are used for increasing student’s thinking ability and creativity.

This paper focuses on the effect of traditional methods of teaching as well as multimedia teaching and suggests other teaching methods that can be attempted in imparting knowledge to the students.

## **What is teaching?**

Teaching is the process of attending to people's needs, experiences and feelings, and making specific interventions to help them learn particular things. In much modern usage, the words 'teaching' and 'teacher' are wrapped up with schooling and schools. According to Gary Meegan, "Teaching is the art and science of helping others to grow in their knowledge and understanding". But more than that:

- Teaching is holding the hand of a young one and saying "It's going to be ok".
- Teaching is being careful to acknowledge every student every day.
- Teaching is never forgetting that for a moment each day you might be the only person who touches someone's life.
- Teaching is constantly being aware of what you are doing wrong in the classroom and trying to find ways to fix them.
- Teaching is keeping up with both the latest research and honouring the enduring traditions.
- Teaching is worrying that you don't know about the subject deeply enough to make it easily accessible to everyone.
- Teaching is correcting papers when your family is relaxing, watching TV or out in the yard.
- Teaching is pushing both yourself and the students those last few weeks of school.
- Teaching is running around before school, getting your room ready, the copies made, the desks straightened, and being careful to check that the whiteboard markers are still good.
- Teaching is listening to attack parents complaining about how you mark too hard and hearing caring parents thank you for the tireless work.
- Teaching is receiving gift cards at the end of the year from shy students.
- Teaching is grading papers and entering grades while simultaneously eating lunch, giving a make-up test, and helping

a student with a particularly difficult math problem.

### **Traditional Teaching Method**

In most parts of our country, traditional teaching methods are used in the educational institutions. In the traditional teaching method, teachers illustrate the concept to the students with the help of chalks and blackboard. Every important thing regarding the topic is written on the blackboard and students make important notes from the blackboard.

When the lecture is over, students revise their notes and try to memorize the notes. The main objective of traditional teaching is to pass the examination.

### **Limitations in Traditional Teaching Method**

Teaching in the classroom, using chalk and talk is “one-way flow” of information.

- Teachers often continuously talk for an hour without knowing students’ response and feedback.
- The material presented is only based on lecture notes and textbooks.
- Teaching and learning are concentrated on “plug and play” method, rather than practical aspects.
- The handwriting of the teacher decides the fate of the subject.
- There is insufficient interaction with students in classroom.
- More emphasis has been given to theory, without any practical and real life time situations.
- There is learning from memorization but not understanding.
- It is about marks rather than results.

### **Innovative Methods of Teaching**

Education should focus on fostering innovation by putting curiosity, critical thinking, deep understanding, the rules and tools of inquiry and creative brainstorming at the center of the curriculum.

There are some innovative tools suggested for classroom teaching:

### **Photographing whiteboard**

The new means of technology changes the classroom experience. For example, the room is wired with cameras for photographing whiteboards, so students can receive the images as digital files.

### **Mind maps**

Another innovative teaching method is mind maps, which is a simple technique for drawing information in diagrams, instead of writing it in sentences. The diagrams always take the same basic format of a tree, with a single starting point in the middle that branches out and divides again and again. The tree is made up of words or short sentences connected by lines. The lines that connect the words are part of the meaning. Mind maps are also very quick to review, as it is easy to refresh information in student's mind just by glancing at them once. Mind maps can also be effective mnemonics, and remembering their shape and structure can provide the cues necessary to remember the information within them. They engage much more of the brain in the process of assimilating and connecting facts than conventional notes. The key notion behind mind mapping is that the student learns and remembers more effectively by using the full range of visual and sensory tools at his/her disposal. Pictures, music, colour, even touch and smell, play a part in the learning armory, since they help to recollect information for a long time.

### **The sense of humour**

The sense of humour can also be an innovative teaching method. Students always like lively and delightful personalities, and that is natural. If one teaches whatever he/she wants in a humorous, delightful and entertaining way, he/she can easily achieve the set target. There are many devices with the help of which one can teach effectively. This method involves learning through delight. For example, games like word-antakshari, spin-a-yarn, role-playing, etc., are very effective in developing learner's linguistic competence.

### **The mnemonics words**

Another innovative teaching method is the mnemonics words. Here, the teacher is not supposed to talk on a particular concept for a long time. But to make it clear to the students, the teacher can just go on saying mnemonics or its associated meaning in words. Here, he/she goes on saying only words, instead of sentences, and once the students come to a basic understanding of the meaning of a particular concept, then the teacher will explain it in sentences. For example, in teaching language courses, this technique can be used as an effective medium by the teacher to develop word power.

### **Role-playing and scenario analysis**

Moreover, role-playing and scenario analysis is another innovative method of teaching. Science and engineering courses are practical, but in support of those practicals, if students are given a scenario and other options to solve a particular issue, then the students are exposed to decision-making in a given environment. One main advantage of role-playing is the possibility to encourage evaluation and synthesis of the subject matter, while practically taking students out of their chairs and allowing them to learn it by doing it. In addition, it is the role of the teacher to explain to the students that it is not only fun, but an opportunity to participate in the learning process.

### **Methodology**

In ancient times, the traditional approach to teaching was considered as formal teaching method. It involves the direct flow of information from the teacher as sage to students as a receptacle. That was the time of '*guru-shishyaparampara*' in India, when the classroom put students at the centre. The effectiveness of this transmission has been tested by posing various exercises to the students (Derek and Collett, 2003). The use of modern ICT in teaching develops higher order skills such as collaborating across time and place and solving complex real-world problems (Bottino, 2003; Mason, 2000; Lim and Hang, 2003). On the other side, Nickerson (1995) pointed out that technology does not

promote understanding in and of itself; it is a tool that can help students view learning as a constructive process and use simulations to draw students' attention. It provides a supportive environment that is rich in resources, aids exploration, creates an atmosphere in which ideas can be expressed freely and provides encouragement when students make an effort to understand (DelMas, Garfield and Chance, 1999).

### **Traditional teaching methods**

There are many arguments on whether or not traditional or modern teaching is better. Either way, schools are starting to get an earful from parents on how their child is learning. In traditional teaching, teachers control what the students are doing. Students are putting pencil to paper instead of typing on computers. Teachers stand in the front of the classroom, give lectures and have the students take notes (Jayalaxmi, 2016).

### **Modern Teaching**

Today, globalization, accelerating technological change, massive demographic shifts or whatever heavy words you choose to describe the present situation demands a change in education systems to more of the modern education format. Let us try to figure out what it is going to be like. Since new technologies appear at such a fast pace, formal education in the first 20 years of life, or the primary education as it is called, will only form a foundation for future learning. Unlike our parents once passed out of college, we cannot stop and say “that would be all”. Lifelong learning will become a necessity, even though it is not an ice-to-have idea.

Education is a very powerful instrument for social change and transformation, and innovative teaching practice is the only way to enhance the quality of our education. The use of innovative methods in educational institutions has the potential not only to improve education, but also to develop creativity, empower people, strengthen governance and galvanize effort to achieve the human development

goal for the country.

### **Innovative Teaching Methods**

Any teaching method that does not destroy the objective could be considered as innovative method of teaching. The researchers believe that the core objective of teaching is an innovative practice that could be a pathway created to further the interest of the student and the institution. The analysis reveals some of the suggestions that the teaching community can practice in the classrooms. Teaching with technology engages students with different kinds of stimuli involved in activity-based learning. Technology makes the material more interesting. It makes students and teachers more media-literate, and the mostly suggested one is multimedia. Teachers can also consider Z to A approach as it explains the application part of a particular concept first, so students would get interested in what the actual concept is. This approach helps in creating long-lasting memories or correlation of a concept. Collaborative teaching, sometimes called cooperative teaching or team teaching also considered as an innovative teaching, involves educators working in tandem to lead, instruct and mentor groups of students. Problem-Based Learning (PBL) is a teaching method in which complex real-world problems are used as the vehicle to promote student learning of concepts and principles, as opposed to direct presentation of facts and concepts. In addition to course content, PBL can promote the development of critical thinking skills, problem-solving abilities and communication skills (Jayashree, 2017).

### **Innovative Learning Methods**

If learners are actively engaged with a task which they accept is for learning, they are not simply following a prescription or set of rules, but contribute their own thinking to the task. The flipped classroom is a learning environment that provides students with a variety of means to the study of basic knowledge content aspart of homework and preparation for class meetings. The flipped classroom also contains homework assignments as asynchronous classroom preparation. Students may access the course materials as often as needed, and they



can return to reflect upon the materials while building more difficult concepts later in their course. Mind mapping is a learning technique which uses a non-linear approach to learning that forces the learner to think and explore concepts using visuospatial relationships flowing from a central theme to peripheral branches which can be inter-related. Experiential learning is any learning that supports students in applying their knowledge and conceptual understanding of real-world problems or authentic situations where the instructor directs and facilitates learning. MOOC is a new learning method in higher education. And it promotes active learning, where the learner watches videos and engages in interactive exercises (Jayashree, 2017).

### **Categories of Learning Styles**

***Auditory learner:*** learns more effectively through the ear (hearing). This style resembles the verbal/linguistic intelligence that deals with language and words which are to be heard by our ears.

***Visual learner:*** learns more effectively through the eyes (seeing). Again this style resembles the visual/spatial intelligence which deals with what can be seen by the eyes.

***Tactile Learner:*** learns more effectively through hands-on experience (touch).

***Kinesthetic learner:*** learns more effectively through correct body experience (whole-body movement). This style resembles the bodily kinesthetic intelligence which involves using the body movement. This implies that during the learning process, students, unconsciously, prefer to use some senses and neglect others. Some students, for example, prefer to hear or listen to the teacher while they are learning. In this case, their dominant learning style is the auditory learning style. As a result, these students prefer lecturing, as a teaching style, and tend to learn best when they listen to the speech delivered by the teacher. Consequently, they remember what has been said by the teacher in a very strong way.

**Meta-cognitive Strategies:** Planning, monitoring and evaluating one's learning. **Cognitive Strategies:** Making mental or physical images, grouping, taking notes. **Social/Affective Strategies:** Interacting with others, co-operating, asking questions.

Teachers should provide students with various and different learning strategies so as to encourage them to learn and get more involved in the learning process. These strategies can help students to do difficult tasks which require learners to exert more effort (Kang, 1999).

Despite that the conventional methods of teaching have been more or less similar around the world, the adaptation of teaching strategies and styles to different social, economic and educational contexts has been an issue for consideration. The tremendous growth of technology and computer applications affected almost every aspect of everyday life, worldwide. This is also the case in the field of education; the latter has changed dramatically by endorsing applications that help students improve their written and verbal abilities as well as help them develop new skills that broaden their potentials.

The respective literature suggests the use of a plethora of instruments, both conventional and modern, for the teaching of accounting courses internationally. Technology of information and communication are the new dominant tools for teaching such courses effectively. This is in line with Beattie *etal* (1997) who, for instance, argued for the importance of “in-depth learning” in any given academic subject, as opposed to superficial knowledge or learning offered by different education providers, worldwide.

Traditional teaching methods, including case studies, group quizzes, lectures and more recently collaborative teaching, homework, use of the blackboard and even more recently computer programs and other techniques like the pause method, allow student participation in lectures while providing them with the opportunity to select their own learning process. Modern teaching methods, on the other hand,

including contemporary software programs, distance-learning and hybrid teaching methods aim for the same end (Bonner, 1999).

Hybrid teaching models include both traditional face-to-face interaction among students and teachers and alternative teaching methods. They seem to be quite popular, especially among female students (Dowling *et al.*, 2003). Such programs, which have been effectively applied in student populations, are the Business Planning Model (Bersky and Catanach, 2005), which is based on case study simulations and the SCAM Accounting Program (Crawford *et al.*, 2011), based on real company data. Other hybrid teaching models applicable in the real business world are “Creating Financial Models and Calculation of costs by using Spread-sheet” (Beamen *et al.*, 2005) and “Teaching Through the use of Low-Income Taxpayer Clinics” (Anderson and Bauman, 2004) that seem to be useful as secondary learning tools (Belias Dimitrios, 2013).

### **Different types of teaching methods**

Traditional Teaching			
Chalk and Talk	lecture	Discussion	Books

Cognitive Teaching			
Thinking	Discussion	Analysis	Evaluate

Hybrid Teaching			
Face to Face	online	Questionnaire	Mixed and independent

Effective Teaching			
Innovative	Interactive	Constrictive	Collaborative

Modern Teaching							
Lecture	Discussion	Interaction	Problem solving	Audio and video visual	Skill based	Differe nt	Globally collabor

						language	ate
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Research-based teaching											
Set the goal	Explanation	Performance	New material	Practice	Concept	Understanding	Feedback	Flexibility	Technical equipment and practice	Connect globally	Learned differently

**Innovative Teaching and Learning Outcome**

It is clear that technological advances have improved teaching and learning processes. The students’ cognitive skills and their creative ideas can be developed through the following: professional learning, ICT teaching, Online interaction before, during and after class, demonstration, videos, self-learning, skill communication, group discussion, problem-solving teaching, use of digital tools and reusable learning objects, smart board class rooms, core qualities, interactive approach, critical thinking and analysis, activity-based learning, experimental approaches to class design, project-based teaching and learning, research-based teaching and learning, understanding best practices and special websites for teaching in the classroom. The students become very interested to learn with implementing these different types of teaching methods.

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