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AN OVERVIEW ON INNOVATIVE IDEAS TO BE USED IN TEACHING AND LEARNING

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Abstract: We are always looking for new and better ways to educate the young. Research suggests when children are having fun, they tend to learn better. In the teaching learning process, it is important that whatever the teacher explains is clearly understood by the students. By understanding, it is important that the particular concept taught is remembered by the student for a long time. So, there are many different traditional and modern ideas in the teaching learning process that are been used, So, therefore, this paper gives an overview on the traditional and modern ideas used in teaching learning process and also some different ideas that can be implemented in the teaching learning process which can be effective. By these innovative ideas, there can be surely a change in the teaching and learning which can be helpful to both teachers as well as students.

Keywords*:* Teaching learning process, innovative ideas, traditional and modern ideas

I. INTRODUCTION:

When we adopted the western type of education, there are many positive changes done in the education field. But, still the teaching learning process is not been much effective for teachers as well as students. The professors explain the modules with some power point presentations by just reading it. So, what actually happens is, the content professors explain does not connect with the students. It's just like a bouncer ball bowled in cricket. Due to this, the students feel sleepy, etc. So, the main thing is that the students should automatically get involved in the learning. And this is what this paper explains. The paper explains about various teaching learning process that can be inculcated or implemented by which the classrooms can get interactive. Now-a-days, the process in teaching learning in universities/ colleges is by explaining through ppt or through on a whiteboard by pen and marker or by orally. As mentioned above, students feel bored, they feel sleepy. It also affects on the attendance of students. As, it is human psychology, that if we feel bored to do a thing we never do it with full concentration and focus. In the same way, as students feel bored to learn, they think that then what is the use of attending such classes in which we do not understand anything? So, they just avoid these classes. So, there should be some innovative techniques which should be implemented in classrooms which can make teaching learning process more effective in classrooms. So, this paper suggests some ideas which make classrooms teaching learning effective. Also, this paper explains about the traditional ideas used and the innovative ideas that can be used to improve this teaching learning process.

II. LITERATURE SURVEY:

The development of the use of Geographical Information Systems (GIS) for professional purposes and the success of virtual globes (VG) for personal uses leads to addressing the question of the integration of geotechnologies into secondary education. In this paper, it examines the changes in geography education linked to the increasing use of geotechnologies by the general public (1).

For successful work in the classroom, it is important to create a positive climate and to involve students actively in the process of learning. The presented research focused on how the students perceived the classroom climate, and on their interest in the contents of the subject Science, Engineering and Technology (STE). 92 primary school sixth- and seventh-grade students had been included in research. Two groups are established, one from a class using mainly frontal teaching methods (control group) and another, expert group from a class using an innovative teaching/learning
Methods mainly as problem and research based learning and participatory learning supported with information communication technology (2).

The study in this paper tells us about the teaching learning that is been followed. Also, the paper suggests some ideas that can be implemented to improve the teaching learning. How the teaching and learning can be improved, what are the different obstacles or challenges faced by the teachers to explain atopic and how students learn that particular topic etc is explained in this paper (3).

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Across the Internet where massive amounts of data are being created every second. Widely known as the big data, this tool can be signified as the techniques to capture, store and analyse data of resources. It enables us to provide instrumental means in formulating data such as for communication, sending information and online activities purpose. Moreover, it can also offer innovative teaching and learning for higher learning institution. This study aims to discuss the teaching based on big data application and practices to enhance innovation in teaching, learning, sociality, and technology for students (4).

Creativity and innovation are becoming increasingly important for the development of the 21st century knowledge society. They contribute to economic prosperity as well as to social and individual wellbeing and are essential factors for a more competitive and dynamic Europe. Education is seen as central in fostering creative and innovative skills. This report provides an overview of the theoretical foundations for creativity and innovation in the context of education. It emphasises the need to encourage the development of pupils' and students' creative and innovative potential for several reasons (5).

This paper proposes a collaborative approach to enhancing the student learning experience based on Web 2.0 principles. Specifically, wiki Web sites are used by students for collaboration and for publication of course assignments, which are then shared with the class. Web 2.0 principles include: the Web as platform, harnessing collective intelligence, data are the next Intel Inside, and rich user experiences. Based on a case study in a junior- level undergraduate class, this paper studies a set of six factors with comprehensive grading and evaluation criteria that are critical to make this approach successful (6).

A new efficient optimization method, called 'Teaching–Learning-Based Optimization (TLBO)', is proposed in this paper for the optimization of mechanical design problems. This method works on the effect of influence of a teacher on learners. Like other nature-inspired algorithms, TLBO is also a population-based method and uses a population of solutions to proceed to the global solution. The population is considered as a group of learners or a class of learners. The process of TLBO is divided into two parts: the first part consists of the 'Teacher Phase' and the second part consists of the 'Learner Phase'. 'Teacher Phase' means learning from the teacher and 'Learner Phase' means learning by the interaction between learners. The basic philosophy of the TLBO method is explained in detail. To check the effectiveness of the method it is tested on five different constrained benchmark test functions with different characteristics, four different benchmark mechanical design problems and six mechanical design optimization problems which have real world applications (7).

Educators have witnessed lately a proliferation of Web-based learning applications. These Web-learning environments have made learning much more convenient by stretching the spatial and temporal barriers. Their effectiveness, however, remains to be examined. In this research, the authors study the relative effectiveness of two different types of Web-learning environments: distributed passive learning (DPL) versus distributed interactive learning (DIL) environments. In the DPL environment, the Web is only used to deliver linear learning material, such as Word files and PowerPoint slides. In the DIL environment, however, the learning material is in hypertext format, providing the learner with more exploration and interactivity capabilities. The results of an empirical study show that the DIL environment is superior to the DPL environment in terms of both the learning-process and the learning outcome (8).

III. TRADITIONAL IDEAS VS MODERN IDEAS:

Traditional Teaching Method

In the pre-technology education context, the teacher is the sender or the source, the educational material is the information or message, and the student is the receiver of the information. In terms of the delivery medium, the educator can deliver the message via the "chalk-and- talk" method and overhead projector (OHP) transparencies. This directed instruction model has its foundations embedded in the behavioral learning perspective (Skinner, 1938) and it is a popular technique, which has been used for decades as an educational strategy in all institutions of learning. Basically, the teacher controls the instructional process, the content is delivered to the entire class and the teacher tends to emphasize factual knowledge. In other words, the teacher delivers the lecture content and the students listen to the lecture. Thus, the learning mode 3 tends to be passive and the learners play little part in their learning process (Orlich et al., 1998). It has been found in most universities by many teachers and students that the conventional lecture approach in classroom is of limited effectiveness in both teaching and learning. In such a lecture students assume a purely passive role and their concentration fades off after 15-20 minutes. Some limitations which may prevail in traditional teaching method are

- Teaching in 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 lecturer notes and textbooks.

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¬ Teaching and learning are concentrated on "plug and play" method rather than practical aspects.
¬ The handwriting of the lecturer decides the fate of the subject.
¬ There is insufficient interaction with students in classroom.
¬ More emphasis has been given on theory without any practical and real life time situations.
¬ Learning from memorization but not understanding.
¬ Marks rather than result oriented.

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If discussing about the traditional ideas in teaching and learning, the teacher teaches the students by the traditional chalk and talk method. In traditional methods of teaching and learning, the students are dependent on teacher. Teacher directs what, when and how a subject is learned and tests that it has been learned. Of little worth, teaching methods are didactic. Students learn what society expects them to. So, the curriculum is standardized. Curriculum is organized by subjects.
Taking about the modern teaching and learning process, students move towards independence. It is like self – directing and teacher encourages and motivates this learning. There is rich resource for learning. So, therefore, teaching methods include discussion, problem-solving etc. Students learn what they want to know so that learning becomes easy for students. Learning experiences are based on their experiences. But we think, the effective teaching and learning process should be mixture of both, traditional as well as modern ideas. We know that there are some advantages and disadvantages in both the ways but the mixture of both these ways can proceed to effective learning.

TRADITIONAL IDEAS	MODERN IDEAS
Students need to learn every thing	Students learn what they want to know.
Teacher directs what and how to learn	Self-learning
Dependent on teacher	Not dependent on teacher
Curriculum is standardized	Curriculum is not standardized

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Fig 1: Smart Classroom

IV. IDEAS REGARING EFFECTIVE TEACHING LEARNING PROCESS:

There are many teaching learning conferences held. So, therefore to get knowledge about the methods we can use, we attended one international conference which held in pune in Ajeenkya DY Patil University. Many different methods were discussed in this conference and it was great to attend this conference. So, therefore, to improve the teaching learning process, we can implement various ideas. Below are some of its illustrations.

(i.) BY CONDUCTING QUIZ SESSIONS:

One effective way to improve the teaching learning process can be conducting quiz sessions in classroom. There are many quiz conducting platforms such as kahoot etc. When a session is delivered by a teacher, teachers can just conduct a quiz based on the topic delivered by them in that particular session.

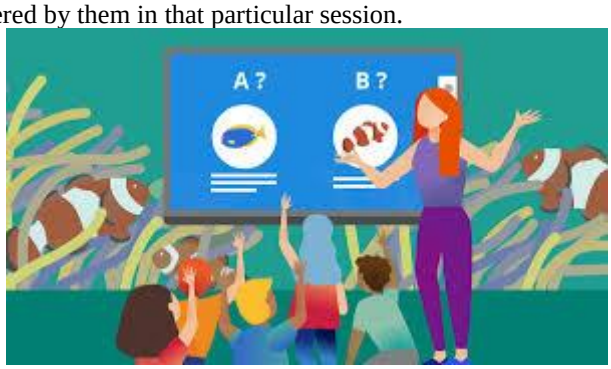

Fig 2: conducting Quiz sessions

We think it is one of the best ways of effective teaching and learning. By conducting such quiz sessions, there are many advantages of it such as the topic covered by the teacher in the particular session sticks into the mind of students. It is been easily remembered by the students. Also, by quiz, it increases fast answering capability of students.

(ii.) BY USING ANIMATION:

We always come across some videos, movies; ads etc. and they are remembered by us. So the same trick can be used in teaching learning. If we use some animated videos in teaching to explain a topic it can remembered by the students forever and the concepts could be grasped easily by the students.

Fig 3: Use of animation

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We can use of animation in this teaching learning process. For example, if we saw an episode of Mr. Bean we remember it for a long time. In the same way, the topics to be taught can be explained to students by creating animated videos. By this the students will also not get bored during lecture.

V. CONCLUSION:

Whether it is traditional methods or modern methods, both have some advantages and disadvantages, but we should use both the ideas efficiently and effectively for a better teaching learning process. It is important that the topics taught by the teachers is well understood by the students and remember that topic for long time. As discussed in the paper, we can use these ideas for better and effective teaching and learning by which it is helpful to both teachers as well as students.

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