



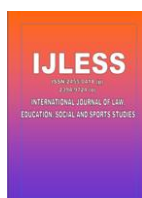
Innovative Methods of Teaching for High School Students

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ABSTRACT

Methods of teaching play a very important role in Education. Educators always aim at novelty ways of imparting knowledge to younger generation. One of the challenging issues in education today is to adopt innovative methods to motivate students towards learning new concepts. The various ways of teaching high school students make a remarkable impact on the development and personality of the student.

To achieve best results in students we explore and evaluate certain novelty methods of teaching. Our goal is to discuss innovative methods which stimulates their interest in the subject and apply the technology to create something new. Such small creation of their own helps in boosting their confidence to face bigger challenges in life which in turn is an asset to the nation.

The need of the hour is to adopt innovative ways of strengthening the learning foundation of school children so that they are fit to survive in the future exponential age and can face the challenges of exponential technologies.

In this paper we discuss a few methods of teaching which will help us to achieve the goal viz, (a) Use of Multimedia (b) Demonstration (c) Role Playing and (d) Inductive way.

Introduction

Teaching is an essential part of education. Its special function is to impart knowledge, develop understanding and skills. Exploring new and innovative **methods of teaching** is a crucial skill for **high school teachers**. Brain research has shown that certain **methods** and approaches can truly enhance the learning process. Applying innovative learning and attention-management **techniques** to classes is a win-win for both **students** and **teachers**. To achieve best results in students we explore and evaluate certain novelty methods of teaching. Our goal is to discuss innovative methods which stimulates their interest in the subject and apply the technology to create something new, such small creation of their own helps in boosting their confidence to face bigger challenges in life which in turn is an asset to the nation.

Innovative teaching

Definition: Innovative teaching is a proactive approach to integrate new teaching strategies and methods into a classroom. Research on education supports the benefits that certain processes, tools and methods of learning. Innovative teachers implement novelty methods before they appeal to mainstream educators.

Innovative methods of teaching are a goal of many educators. Teaching students in ways that keep them engaged and interested in the material can sometimes be a challenge. In the short-attention span world we live in, it can be harder than ever to keep high school students excited and engrossed in learning.

Teaching Method:

A **teaching method** comprises the principles and methods used for instruction to be implemented by teachers to achieve the desired learning or memorization by students. These strategies are determined partly on subject matter to be taught and partly by the nature of the learner. For a particular teaching method to be appropriate and efficient it has to be in relation with the characteristic of the learner and the type of learning it is supposed to bring about.

The term **Teaching method** refers to the general principles, pedagogy and management strategies used for classroom instruction. Your choice of teaching method depends on what fits you – your educational philosophy, classroom demographic, subject areas and school mission statement. Teaching methods primarily fall into two categories or “approaches”.

- (i) Teacher-centered approach and (ii) Student-centered approach.



To understand these approaches, it is important to discuss what is generally understood as the three main teaching styles in educational pedagogy (a) Use of Multimedia (b) Demonstration (c) Role Playing and (d) Inductive way

Use of multimedia in education

Technology plays a key role in innovative teaching. Innovative teachers use new technology to enhance or expand upon the student experience. The transition from traditional blackboard and overhead projector instruction into computer-aided presentations was innovative. As of 2014, innovative teachers incorporate tools like tablet computers and mobile devices to offer students a more interactive experience. Innovative teaching also involves creativity on the part of the teacher. Innovative teachers sometimes reorganize the educational process.

Teachers primarily require access to learning resources, which can support concept development by learners in a variety of ways to meet individual learning needs. The development of multimedia technologies for learning offers new ways in which learning can take place in schools and the home. Enabling teachers to have access to multimedia learning resources, which support constructive concept development, allows the teacher to focus more on being a facilitator of learning while working with

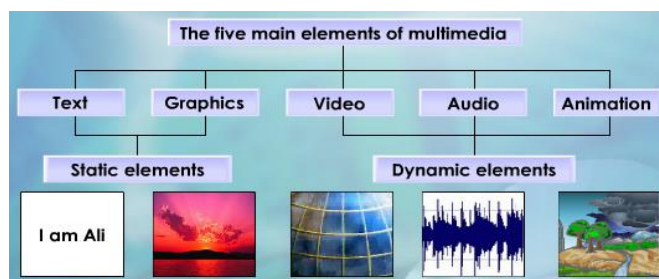
individual students. Extending the use of multimedia learning resources to the home represents an educational opportunity with the potential to improve student learning.

Definition: Multimedia combines five basic types of media into the learning environment: text, video, sound, graphics and animation, thus providing a powerful new tool for education.

Robert Winter: UCLA Roundtable in Multimedia: "Multimedia is a synthesis: a hybrid offering the advantages of the user-driven book with the wonders of electronic technology".

Multimedia elements in education

The teacher uses multimedia to modify the contents of the material. It will help the teacher to represent in a more meaningful way, using different media elements. These media elements can be converted into digital form, modified and customized for the final presentation. By incorporating digital media elements into the project, the students are able to learn better since they use multiple sensory modalities, which would make them more motivated to pay more attention to the information presented and retain the information better.



(i) Text: Out of all of the elements, text has the most impact on the quality of the multimedia interaction. Generally, text provides the important information. Text acts as the keystone tying all of the other media elements together. It is well written text that makes a multimedia communication wonderful.

(ii) Sound : Sound is used to provide emphasis or highlight a transition from one page to another. Sound synchronized to screen display, enables teachers to present lots of information at once. for example, art – pictures are ‘glossed’ by the voiceover; or math – a proof fills the screen while the spoken explanation plays in the background. Sound used creatively, becomes a stimulus to the imagination; used inappropriately it becomes a hindrance or an annoyance.

(iii) Video: The use of video is appropriate to convey information about environments that can be either dangerous or too costly to consider, or recreate, in real life. For example: video images used to demonstrate particular chemical reactions without exposing students to highly volatile chemicals, or medical education, where real-life situations can be better understood via video.

(iv) Animation : Animation is used to show changes in state over time, or to present information slowly to students so they have time to assimilate it in smaller chunks. Animations, when combined with user input, enable students to view different versions of change over time depending on different variables.

(v) Graphics: Graphics provide the most creative possibilities for a learning session. They can be photographs, drawings, graphs from a spreadsheet, pictures from CD-ROM, or something pulled from the Internet. The reason for this is that images make use of a massive range of cortical skills, color, form, line, dimension, texture, visual rhythm and especially imagination.

Advantage of multimedia approach in education

There are many advantages in applying multimedia elements in education. One of it is that multimedia enable students to represent information using several different media.

- Provide students with opportunities to represent and express their prior knowledge.

- Allow students to function as designers, using tools for analyzing the world, accessing and interpreting information, organizing their personal knowledge, and representing what they know to others."
- Multimedia applications engage students and provide valuable learning opportunities.
- Encourages deep reflective thinking.
- Create personally meaningful learning opportunities.
- Students that experience the technical steps needed to produce effective multimedia documents become better consumers of multimedia documents produced by others.
- Students indicate they learn the material included in their presentation at a much greater depth than in traditional writing projects.

There is another aspect to developing multimedia documents that empowers students. Students quickly recognize that their electronic documents can be easily shared. Because of this, students place a greater value on producing a product that is of high standard. An audience of one—the teacher—is less demanding than an audience of many—particularly one’s peers. Students quickly recognize that publishing a multimedia document that communicates effectively requires attention to both the content and the design of the document.

Demonstration

Demonstrating is the process of teaching through examples or experiments. For example, a science teacher may teach an idea by performing an experiment for students. A demonstration may be used to prove a fact through a combination of visual evidence and associated reasoning.

Definition: As a **teaching** technique, a **demonstration** is a valuable alternative to getting students to 'learn by doing'. While learning by doing is ideal in subjects like science, adopting this approach is not always possible.

Demonstration involves showing by reason or [proof](#), explaining or making clear by use of examples or [experiments](#). Demonstration means 'to clearly show'. Use the demonstration or “doing” method to teach skills. Demonstrate, step-by-step, the procedures in a job task, using the exact physical procedures if possible. While demonstrating, explain the reason for and the significance of each step.

Techniques used in the demonstration method

The basic method of instruction for teaching skill-type subject matter is the demonstration-performance method of instruction. This method is recommended for teaching a skill because it covers all the necessary steps in an effective learning order. The demonstration step gives trainees the opportunity to see and hear the details related to the skill being taught.

Merits of demonstration as a teaching method :

The benefits of demonstration as a teaching method are a better learning experience in the classroom for students; the generation interest in the subject; help in developing the spirit of inquiry; students cooperating in the teaching-learning process; and the process of learning becoming permanent in the student's life.

- Saves time in presenting and It is a means of strong motivation
- Concentrates attention of learners on relationships to be understood
- Makes efficient use of "power of observation,"
- It can be used in training groups or individuals.

- Moving easily from a presented subject to another provides a good chance for questions & discussions.
- They rise the attention & interaction between students & the educational subject([qandeel, 1998, p. 1625](#)).
- They provide teachers with a new educational style & encourage curiosity ([holsinger, 1995](#)).

Role playing

Role play may be defined as the way one behaves in a given position and situation. In managerial science, discrepancies in the identification role are referred to as “role conflict” –inconsistent prescriptions held for a person by himself or by others. Role playing as a teaching methodology is the conscious acting out and discussion of the role in a group. In the classroom a problem situation is briefly acted out so that the individual student can identify with the characters.

Definition : Role-play is any speaking activity when you either put yourself into somebody else's shoes, or when you stay in your own shoes but put yourself into an imaginary situation. Imaginary people - The joy of role-play is that students can 'become' anyone they like for a short time! The President, the Queen, a millionaire, a pop star. The choice is endless! Students can also take on the opinions of someone else. 'For and Against' debates can be used and the class can be split into those who are expressing views in favour and those who are against the theme. Imaginary situations - Functional language for a multitude of scenarios can be activated and practiced through role-play. 'At the restaurant', 'Checking in at the airport', 'Looking for lost property' are all possible role-plays.

Merits of Role-play method:

- ❖ Student interest in the topic is raised.
- ❖ Active Participation and It develops competence.
- ❖ It enhances communication and interpersonal skills and It help individuals to learn to accept both their own feelings and those of others.
- ❖ It teaches empathy and understanding of different perspectives.
- ❖ Provides teacher immediate feedback about the learner’s understanding and ability to apply concepts.
- ❖ It is useful for a range of topics, including interviewing, counseling skills, personal relationships, and team working.
- ❖ They require mental and physical activity. Example gesturing to put forward a point.
- ❖ Students need to understand the needs and perspectives of the people around them to get through life, and to understand themselves.
- ❖ Role-playing exercises can be used to develop skills important inside and outside of science: the kind of skills needed to make learned information useful in the real world. Many of these are very difficult to teach using more traditional methods of instruction: self-awareness, problem solving, communication, initiative, teamwork ([Blatner, 2002](#)).
- ❖ If an assignment includes research or problem solving, students are more likely to retain knowledge that they have constructed themselves more than that simply handed to them in lecture ([Havholm, 1998](#) ; [Duveen and Solomon, 1994](#)).
- ❖ The creative aspect of the exercise will make it seem more like play than like work.

The pressure to solve a problem or to resolve a conflict for their character can motivate a student far more than the sort of pressure that they usually face preparing for an exam, and it is far more typical of the pressure that will be on them in real life. The primary purpose of role-playing exercises is to get students to look at the material they are learning in a new light. The instructor is persuading them to alter their mental maps of the world instead of just filling them in ([Blatner, 2002](#)).

Inductive way

ü Inductive approach is advocated by Pestalozzi and Francis Bacon. Inductive approach is based on the process of induction. In this we first take a few examples and justify for larger numbers we generalize. It is a method of constructing a formula with the help of a sufficient number of concrete examples. Induction means to provide a universal truth by showing, that if it is true for a particular case, it is true for all such cases. Inductive approach is psychological in nature. The children follow the subject matter with great interest and understanding. This method is more useful in arithmetic teaching and learning.

Inductive approach proceeds from

- Particular cases to general rules of formulae
- Concrete instance to abstract rules
- Known to unknown
- Simple to complex

Inductive approach, also known in inductive reasoning, starts with the observations and theories are proposed towards the end of the [research process](#) as a result of observations. Inductive research “involves the search for pattern from observation and the development of explanations – theories – for those patterns through series of hypotheses”. No theories or hypotheses would apply in inductive studies at the beginning of the research and the researcher is free in terms of altering the direction for the study after the research process had commenced.

Merits of Inductive method:

- ❖ It enhances self confidence, self efficiency and Long-term retention.
- ❖ It is a psychological method. It is a meaningful learning and it is a scientific method
- ❖ It develops scientific attitude.
- ❖ It develops the habit of intelligent hard work.
- ❖ It helps in understanding because the student knows how a particular formula has been framed.
- ❖ Since it is a logical method so it suits teaching of mathematics, language, science etc .
- ❖ It is a natural method of making discoveries, majority of discoveries have been made inductively.
- ❖ It does not burden the mind. Formula becomes easy to remember.

Conclusion

The above methods are called child centered method. This method has many advantages which makes learning interesting. With the help of its innovative ways, it can invoke creativity in both teacher and students so that they can apply it in order to teach or learn. Learning also become much more easier with the help of these methods which can help improve our educational system and educational

quality. This is a must because we need to keep up our innovative ways in best teaching-learning process. Innovative methods of teaching can help high school students get the most out of their education.

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