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Traditional Methods versus Modern Strategies of Educational Instructions

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Highlights

A qualitative descriptive study to compare the traditional teaching methods with the modern techniques of education.

Abstract

Without a doubt, the 21st century is a revolutionary era of time, the concept of globalization has broadened the vision to recognize needs across societies. The Educational system of any country is the back bone of the progress of its institutes. All these things demand us to change our traditional ways of teaching and adopt new educational strategies to keep up with these contemporary times.

Advance teaching methodology has become a very popular topic since last 50 years to develop the research oriented and problem-based learning and their effective implementation.

The main objective of education is to change the behavior of learners according to the need of society and bringing outstanding development in their personality. This task is possible only by the process of updated formal and informal teaching and learning. A teacher can teach efficiently and save time and his physical energy, if he knows the proper use of latest techniques of teaching according to students' age and academic level.

Modern teaching methods not only helps teachers in their professional growth but also brings innovations in their thinking to make the classroom environment better and prepare students according to the economic, social and technological demand of present and future world.

This article compares the strategy, advantages and disadvantages of different types of traditional and modern teaching methods to help teachers and learner to choose the right teaching and learning method according to the need and abilities of students to get better correspondence with their life and society.

Keywords: *Lecture Method, Assignment Method, Project Method, Inquiry based method, Reception Method, Dicovery Method.*

Introduction

The best curriculum and the perfect syllabus remain dead; if the soul of right method of teaching is not embraced it to bring the positive changes in learners' behavior. Teaching method is the road of reaching pre-determined goals of education; it forms the most important link in the total teaching learning chain. It works as a bridge between goals and purposes of teaching to the results and achievements of the student.

For the achievement of comprehensive educational objectives, such teaching methods are required to apply, which could expose the pupils to gain knowledge, develop cognitive thinking and increase their psychomotor skills of learning. Learners' understanding, critical thinking, practical skills and interests are four key factors of good teaching method.

There is no direct royal road to reach successful teaching; instead, there are many roads serves as highways, byways, narrow lanes, delightful paths and rough ones, which need to be tried for meeting particular needs and aims. The teacher should be able to use permutations and combinations of methods, devices and techniques to make teaching interesting, useful, vital and successful.

According to the requirements of different subjects, there are different methods of teaching, some are suitable for science subjects, and some are good for art and literature teaching etc. Similarly some are adopted to teach at junior level of students and some at senior and higher level but they can easily be divided into modern and traditional methods.

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Some common differences of traditional and modern teaching methods are shown in the following picture.

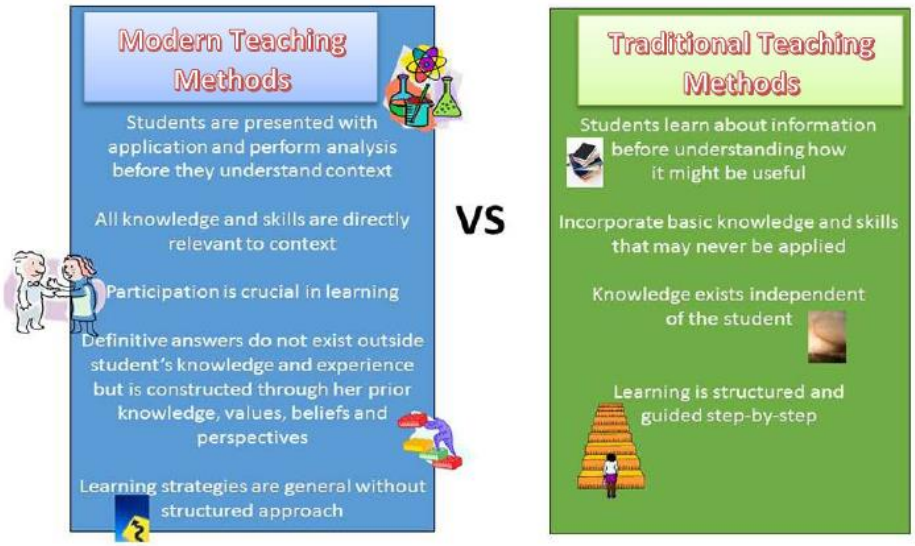

Figure 1

Common types of tradition teaching methods

The lecture method

The lecture is a method of exposition. According to James Michael Lee, "The lecture is a pedagogical method whereby the teacher formally delivers a carefully planned expository address on some particular topic or problem".

Purposes of lecture method

Figure 2

There are following objectives can be achieved by lecture method teaching;

a) To motivate: The teacher can present the outstanding aspects of the lesson effectively in a lecture. He can indicate some of the significant persons' successes and hinders to motivate the students to work hard, and thus arouse the interest for the learning.
b) To clarify: If the pupils are troubled by the some difficulty, the lecture method can be used to clarify it.
c) To review: The teacher can very well guide the pupils by summarizing the main points of a chapter or lesson and indicate some of the important and significant details.
d) To expand contents: Lecture is one of the best ways of presenting addition[1]al material.

[1] http://www.raijmr.com/wp-content/uploads/2017/11/IJRE_2013_vol02_issue_02_25.pdf

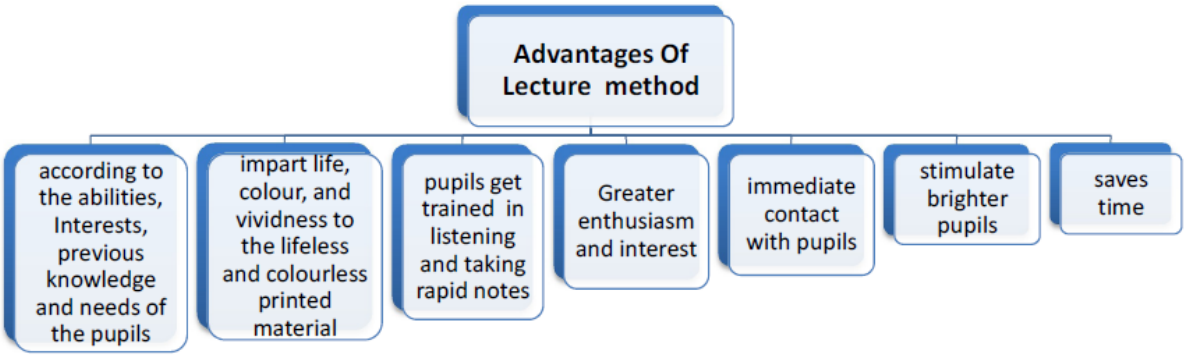

Figure 3

Limitations

a) It makes the learner a passive agent in the learning process.
b) The lecture lessens the opportunity for the pupil to learn by doing as readymade material is presented to the pupils.
c) The lecture is an inefficient teaching tool in the development of attitude formation.
d) The lecture does not guarantee that the pupils will understand its contents.
e) The average student may not have sufficient attention span to attend closely to a long lecture.
f) The lecture can quickly develop a deadening monotony' only an exceptional teacher can stimulate and keep up the interest of the students continuously.

Some guidelines for better utilities of lecture method

a) The teacher should choose the occasions for his lectures with great care. A new chapter, a unit, the presentation of additional material, the summarising of an extensive topic and the classification of a complex problem are some of the best occasions for the use of this method. Sometimes, the teacher can give a hint about some topic to be developed in a later lecture, pupils; thus, can be led to anticipate a lecture with eagerness.
b) Lecture should be carefully planned, on the fines of a development lesson plan.
c) It should be built around one central problem or topic with ancillary sub-problems and topics. Perhaps the best pedagogical basis for good lecture formulation is to pose a problem, delineate the difficulties, present a solution, and finally explain why it is the best solution.
d) It is always best to prepare a synopsis of the lecture, as it is useful for both teacher and the taught to avoids pointless digression and save the pupils from the distraction of taking notes. In this way, the teacher takes the pupils along with him, as the pupil knows the plan of the teacher.
e) The teacher must be very careful about the delivery of the lecture. He must speak clearly and slowly so that the pupils are able to keep pace with him. He should speak naturally and directly. He should talk to his students rather than lecture to a class. A suitable modulation of voice relieves the monotony of the lecture.
f) Frequent but natural change of positions help the speaker to feel at ease and also ensure every member of the class an equal opportunity to hear.
g) Instead of continuous talking by the teacher, lecture should be interspersed with occasional developmental questions to the students.
h) Lecture should make extensive use of verbal imagery and other oral illustrations. The examples and illustrations should be geared to the cultural background and intellectual level of the class.
i) Lecture should be full of humour. It should be enlivened by analogies, comparisons, anecdotes, stories, and incidents that bear upon the topic.
j) Lecturer should utilise concrete illustrative devices such as chalkboards, models, slides, motion pictures and other audio- visual materials, whenever possible.

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k) Lecture should often be followed by a written test to measure the success of the lecture. The success of any teaching device can be known through the learning process. If the pupils have learnt well, the lecture is successful and if not, the teacher can revise his methods.

The assignment method

This method is generally advocated for teaching different subjects to pupils, in the higher Classes. The syllabus is split up into significant units or topics; each unit or topic in its turn is subdivided into learning assignments for pupils. The pupils are usually required to prepare the assignments in writing. It is felt that written assignments help in organization of knowledge, assimilation of facts and better preparation for examinations.

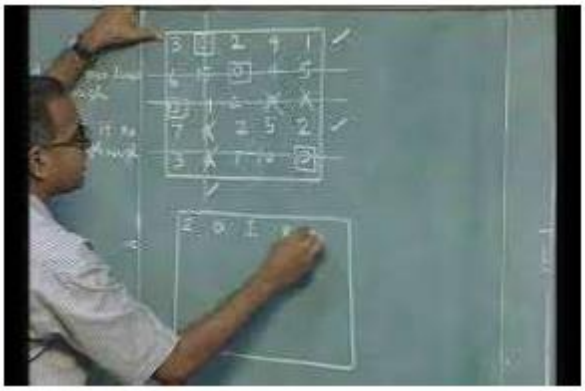

Figure 4

Types of assignments

There are following types of assignments.

a) Preparatory assignments/ common assignment

Common assignment is one on which, every member of the class works. Such an assignment is used in the case of basic learnings of all the students. This assignment is made for circulation purposes i.e., the pupils can be prepared for the next day work, after this preliminary pilot work.

b) The study assignments

Pupils carry on the study individually or in groups, the assignments can vary with the individuals, according to his need and capacity. The assignment can range from a page or paragraph, to a chapter, topic, problem, project, exercise, report, unit, contract or experiment. Small group assignment is differentiated assignment, which is tailored to the needs, interests and abilities of each small group in the class. Thus, in a heterogeneous class, a basic assignment will be given to the slow learners and the same assignment, in an enriched form will be given to the superior students.

c) The revision assignments

This type of assignment is given pupils for providing drill to the work done, checking retention and reproduction of facts and for checking the understanding of the topic. These assignments are worked out in advance, keeping in view the specific objectives of the subject matter being tested.

d) The remedial assignments

These are revised assignments in the light of pupils' reactions to the three types of assignments mentioned above. The purpose of these assignments is to remove weak points and clear misunderstandings.

e) individual assignment

Individual assignment is different and distinct for each pupil. It is designed in accordance with each pupil's achievement level, interests, abilities and needs. Thus, it solves educational problems created by

individual differences in a large group of student.

Criteria of a good assignment

a) It should be definite, clear and interesting.
b) It should be sufficiently challenging to stimulate pupil's interest in it.
c) It should be significantly related to the topic, of which it forms a part. It should lead pupils to meaningful complete learning experiences.
d) It should appeal to the pupil's curiosity or his desire to achieve a well-established interest.
e) It should not be too big i.e. not take more than a' week to prepare it.
f) It should' not take more than two class periods to discuss-it in broad outlines.
g) It should be flexible enough to meet the different range of interests and abilities represented in the group.

Steps of preparing the assignment

a) The syllabus of the subject for a particular class should be divided into suitable units and then a tentative plan for preparatory study assignments should be chalked out.
b) Efforts should be made for developing the pupil's interest to writing the assignment.
c) Broad heads, under which the assignment is to be written, should be outlined.
d) The necessary information, which would help the pupils in working out the assignment, should be given.
e) The class assignment should be short duration so pupils can finish during class time.
f) If pupil write the assignment in the class under the supervision of the teacher, they should be allowed the facilities to consult books and ask questions whenever necessary.
g) The pupils may be given a variety of probable errors, which may occur in the subject to help them in their correction work.
h) The pupils may be asked to correct their assignments at home with the help of sample assignment and common list of errors provided by the teacher.
i) The common errors committed by the pupils should be discussed in a correction class to avoid their recurrence in the tests and exams.

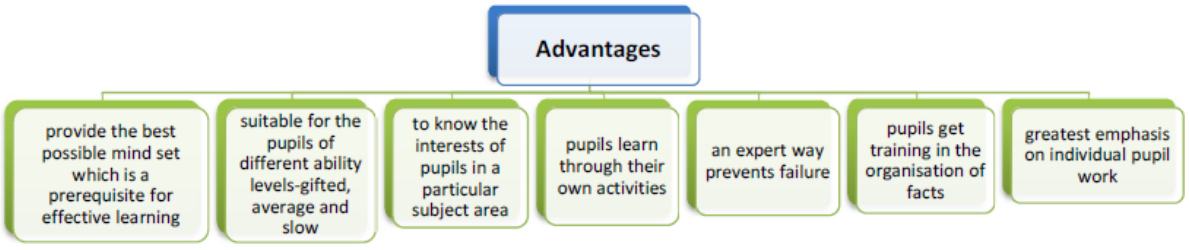

Figure 5.

Common types of modern teaching methods

Project method

A project has been defined as " Project is a significant and practical unit of activity having educational value and aimed at one or more definite goals of understanding; involves investigating and solution of problems and the use and manipulation of physical materials, planned and carried to completion by pupil and teacher in a natural real life manner " (Good, 1973).

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Figure 6

Characteristics of project methods

a) They involve the solution of a problem often though not necessarily, set by the student himself.
b) They involve initiative by the student or group of students, and necessitate a variety of educational activities.
c) They commonly result in the product (thesis, dissertation report, design plans, computer programme, model, oral report).
d) Work often goes on for a considerable length of time, may range from days to years.
e) Teaching staff are involved in an advisory, rather than an authoritarian role at any or all the stages-initiation, conducts and conclusion.
f) Projects are different from usual course exercises in terms of outcomes. An exercise's correct result is same for all the students, whereas in a project, the student is allowed to use different techniques, which can very his answer from other students.
g) Project method of teaching is suitable in the field of higher education, as it demands higher degree of autonomy.
h) It is very close to the research activities, which is an essential part of higher education degree.
i) It provides student, a model of self-education, capable of sustaining in the world of employment, where he is no longer going to be motivated by the incentives of the academic community nor guided by its authority.

The aims of project work

The following are main objectives of a project work:

a) Involvement

At its best, the project approach is characterized by high levels of student activity, interest, enthusiasm, commitment and satisfaction. It therefore, aims to enable the student:

- To commit himself whole heartedly to a piece of work by allowing him to make his own choice of a study topic;
- To select realistically, those educational areas within which he can work;
- To take responsibility for making decisions, which he must later justify;
- To engender enthusiasm for the work being done;
- To gain satisfaction in meeting a challenge over a period of time and producing a result of permanent value and interest to himself and others;
- To be creative, or to develop ideas on a knowledge of the topics and/or on a study of its literature;

b) Skills for individual work

A university graduate is expected to be able to think and work independently. Specific aims will be:

- To develop the student's ability;

- To recognize and define a problem or task;
- To solve a problem or task;

c) Skills for group work

This aim breaks down into discrete steps which are largely governed by the methodology of the subject. The process of solving projects will develop the student's ability:

- To use his initiative and resourcefulness;
- To plan his work;
- To analyse the factors involved in solving a problem, noting any interdependence or constraints;
- To search for sources, collecting data or materials in a systematic manner;
- To select relevant material and reject the remainder;
- To generate material or data by making investigations and analysing the results;
- To synthesise his findings and formulate conclusions;
- To integrate data from a number of sources;
- To be critical;
- To use his common sense, e.g. to be realistic in, seeking further advice or knowing when to stop;
- To present his findings in an appropriate form, and to communicate them clearly.

d) Skills for communication

In scientific and technological areas, the ability to argue logically is intrinsic to the subject's methodology, but it is too often forgotten that the ability to communicate an idea, a theory, a design or the findings of an investigation is not only of great practical importance but also essential to the fullest understanding of the principles or concepts involved.

This characteristic of the project method can easily be lost sight of by staff as well as students where a large part of the time is spent in analyzing numerical data and solving problems mathematically. Specific aims in this area would be:

- To develop oral skills by argument and discussion with colleagues and supervisor;
- To develop written and organizational skills by discussing the problem (together with any limitations of the solution) clearly, logically, and cogently in a formal report/essay/letter of a type published in the technical press;

e) Knowledge

During the early stages of his project, the student probably learns how to make a systematic search of the literature and all other source materials, He acquires knowledge about his topic, device used in his chosen area of study and means by which further data are normally obtained in that discipline. The specific aims are:

- To become familiar with the methodology of his subject and with certain devices, such as the computer, or conceptual tools and statistical analysis, which he will need to use after graduation;
- To deepen his understanding of his subject;
- To become familiar with a number of facts, views or situations;
- To become aware of the costs of or constraints on solving problems in terms or time, materials and labour overheads;
- To learn to locate and use the literature of his subject;
- To acquire factual knowledge relating to his subject;

f) Personal development

A common thread running through the above specific aims is the development or personal qualities such as resourcefulness, Self-confidence, clear thinking and the ability to work with others. In addition, a realistic assessment of one's own capabilities is an essential qualification for successful work in almost any profession. The project can, therefore, leave the student better equipped to face the challenges of professional life by helping him to accept his own limitation and to become aware of when and how to

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seek advice.

g) Selection of subject

It gives the student ultimate responsibility for the choice, cuts out all argument about the student being forced into a mold. However, it is often useful to steer students towards topics which fit in with the research specialties of staff members, simply because teachers being human are more likely to be enthusiastic supervisors for projects that interest them. Different disciplines will involve different constraints on the project selection procedures, e.g. in Physics, choice of problem is subject to students' knowledge of experimental technique and availability of laboratory equipment.

Format of project work

The following steps are involved in complete project work;

- The perception of a problem.
- The definition of a problem and the production of a brief design.
- The definition of the context of the problem and the particular place the problem has within its context.
- The selection and retrieval of appropriate data.
- Process of analysis.
- Conception of solutions.
- Testing and evaluation at each stage of the process.
- Selection of a solution and its development.
- Handling of feedback.
- Use of appropriate communication techniques.
- Evaluation of the process.

Inquiry based teaching method

Inquiry can be viewed in two ways in teaching, one way of viewing it as "teaching content as inquiry", the other way is "teaching through inquiry".

Teaching content as inquiry requires that a teacher understand the nature of content and how knowledge is acquired. Inquiry often begins with the desire to understand nature by thinking about it and forming ideas and explanations. This is followed by an attempt to test one's ideas and to make sense out patterns and relationships through observation and experimentation. The knowledge that is produced is tentative and subject to revision.

Figure 7.

Teaching through inquiry refers to the skills and strategies, purportedly used by teachers, which in turn have been considered by educators to teach. These methods are often incorporated into the instructional process to engage students in questioning, skills, discrepant events, inductive activities,

deductive activities, information gathering, and problem solving.

Furthermore, the inquiry approach to instruction is often aligned with active learning, whereby some believe, it develops critical thinking skills that assist in problem solving and the conceptual development of subject matter.

Generally speaking, inquiry is the process of finding out by searching for knowledge and understanding. Inquiry involves identifying problems, posing questions, and seeking answers. It can be conducted in a variety of ways such as observing nature, predicting, outcomes, and manipulating variables, analyzing situations, and evaluating assertions. Inquiry may involve discussing topics with others, reading printed material, conducting field studies, surveys, and carrying out laboratory investigations, or all of these while attempting to discover new knowledge, to figure things out, and to evaluate products and services. Inquiry teaching may involve many processes or mental activities, the amount of time required to complete these activities varies greatly. Some can be accomplished in one, class period while others may require several months to complete. Most important, these learning activities should begin with students posing their own' questions regarding the topic under study.

The term discovery is often used, synonymously with inquiry. However, these two concepts have different meanings. Discovery appears more limited in scope than inquiry and pertains to the act of figuring out something for one-self "Aha, now I've got it". Teaching as inquiry contains many elements, some of which do not involve figuring out something for oneself. For example, teaching often call upon others, for information to assist them in solving problems. Teacher read professional journals to gather information to gain greater insight into their pursuits and they often inquire, instead of discoveries.

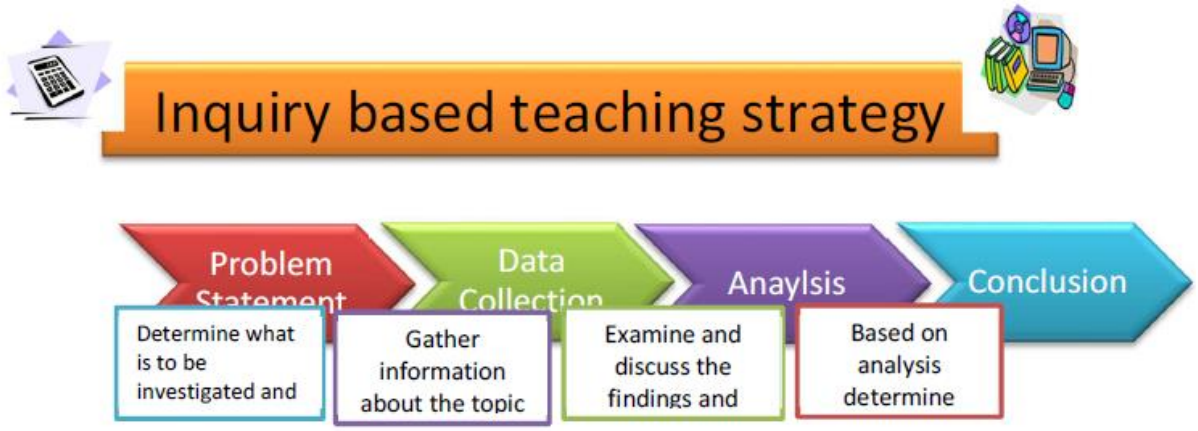

Figure 8.

The inquiry approach requires a skilled teacher who can develop a learning environment that stimulates student curiosity and a desire to investigate. Carefully planned questions can engage thinking and motivate students to seek information. While carefully guided investigative activities can lead students to make discoveries that have personal meaning, the inquiry approach differs from the approach used in many school courses, because it emphasizes active learning as opposed to passive learning.

In contrast to inquiry or discovery learning, reception learning places the student into the position of receiving information that has been organized by others. Consequently reception learning and inquiry learning are on opposite ends on a continuum with regard to what the learner does to acquire information. At one end of the continuum is the less active learner, who receives information gathered and organized by others, at the other end or the continuum is the active inquirer, who poses questions, makes assertions, gathers information, and organizes personal knowledge.

To move toward the inquiry end or the learning continuum, science teachers must acquire new competencies so that they can guide students until their search for answers. The teacher can initiate problem solving at many points along the reception/inquiry continuum. For example, the teacher can

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begin a science course between the two ends of the continuum and move toward a highly inquiry-oriented course as the school year proceeds.

Schwab (1960. P. 9) provides the following guide for science teachers:

- Pose problems and describe methods, which students can use to solve these problems, but leave solutions (which are not presented in the textbook) to the students.
- Pose problems but leave the methods and solutions to the students.
- Leave the identification of problems, methods, and solutions to the students.

The inquiry approach seems ideal for helping students to learn about the science work to understand, explain, and apply knowledge. This active thinking orientation facilitates the study of natural phenomena, objects, events, technological devices, and science/societal issues. It also provides many opportunities for students to present their knowledge and to form deep connections among the ideas they possess so that this knowledge can be used to make important decisions.

Conclusion

Thus, we can say that by traditional teaching methods students learn for a certain time but with modern learning is a lifelong learning. Traditional teaching, learnt a student, how to walk? Whereas by project and inquiry methods of teaching learner learns how to fly. In short, we can distinguish them as follows.

Table 1.

Project or inquiry-based Teaching	Lecture or Assignment based Teaching
Student centred	Teacher centred
Students are actively involved	Students are passively involved
Emphasis on skill building, life skills and values	More emphasis on examinations and results rather than understanding of concepts
Use technology to connect learning	Learn how to use technology
Emphasis on understanding concepts and collaborative learning	Lack of collaboration and group learning
Cross-curricular connections and Linking curriculum with life	Teachers in the mode of knowledge dispensers rather than facilitators
Activity-based learning and learning labs	Regimented classrooms
Technology-driven classrooms	Chalk and talk methods
Collaborative learning, Integration and social responsibility and civic engagement	Improper alignment between objectives, activities and assessments

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