EFFECTIVENESS OF MULTILEVEL TEACHING STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AMONG STANDARD VIII STUDENTS

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DECLARATION

I, **NIKHIL KUMAR K.,** do hereby declare that this dissertation entitled, **EFFECTIVENESS OF MULTILEVEL TEACHING STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AMONG STANDARD VIII STUDENTS",**has not been submitted by me for the award of any Degree, Diploma, Title or Recognition before.

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CERTIFICATE

I, **Dr. HASSAN KOYA. M.P.,** do hereby certify that the dissertation entitled,**EFFECTIVENESS OF MULTILEVEL TEACHING STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AMONG STANDARD VIII STUDENTS,** is a record of bonafide study and research carried out by **NIKHIL KUMAR.K.,** of M.Ed Programme (2017-19), under my supervision and guidance, and has not been submitted by him for the award of any Degree, Diploma, Title or Recognition before.

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Quality education in secondary level. To achieve quality education the teacher should be able to decipher the curriculum correctly and disseminate the content to pupils in the most effective manner. The Education commission has emphasized that education is the one and only instrument that can be used to bring about a change towards the social and economic betterment of India. The teaching process in the classroom can be broadly classified into teacher centered method and student centered method.

NEP has laid great stress on developing a student centered and activity based process of learning. But Learning is a process through which child acquire new modes of behavior or change in the existing mode of behavior. Changes in behavior that are brought by physical maturation or growth do not fall under learning. Learning is what we acquire through efforts after birth. We know, we feel and we do and in three domains such as cognitive, affective and psychomotor of behavior, change occur due to learning. In other words we can get new knowledge, form attitude and master in skill through learning. In essence of learning, three basic assumptions are held to be true. First, learning can visualize by a change in behavior. Let’s consider the scenario of secondary schools where the teachers are applying the numerous method of teaching to accomplish a variety of course goals and assisting the students for raising their interest as learners. The teachers use various teaching methods for teaching and learning process.

The importance of education cannot be neglected by any nation. And in today world the role of education has become even more vital. The socio-economic development of a nation is dependent on the quality and type of education that is offered from school level to the research level. Good citizen are the backbone of a nation. It is the duty of the nation that should provide best and quality education to all citizens. It's essential to take correct decisions, and to accept the democratic values I the life .otherwise, it will affect the future development of the country negatively. In the report of the education commission 1964-66 stated that, "the destiny of India is now being shaped in her classrooms"

Multilevel teaching is practiced not only in India but also in different parts of the world. It is not viable to appoint teachers for each class where the admission is between 40and 50 students in a school or class in this type of situation .it becomes essential for a teacher to handle more grades at the same time. In multilevel teaching situation the teacher has to create apt learning climate for individual learning and group learning. "The teacher can assist the students in the learning activities at regular intervals. Multilevel teaching Strategy is where one lesson is taught to an entire group while meeting the individual needs of each child. Multilevel teaching is the process of teaching one primary objective or concept to the class while allowing for varying outcomes for an individual students or a small group of student .in other words Multi grade instruction allows teachers to deliver on grade level, standard based instruction to an entire class, in multi grade instruction teachers adjust the learner outcomes for these who require it. The important duty of a teacher is to make every learner involves in learning activities without wasting student's time.

The school curriculum through the teaching of different subjects, language, mathematics, science, social science aims at the fulfillment of national objectives of education But the main responsibility of imparting citizenship training The Mudaliar commission (1952-53) remarks: through social sciences, the students should acquire not only the knowledge but attitudes and values which are essential for successful group living and civic efficiency. They should endeavor to give the students not only a sense of national patriotism and an appreciation of national heritage, but also a keen lively sense of world unity and world citizenship. The Indian Education Commission (1964-66) likewise emphasizes the same point: An effective programme of social studies is essential in India for the development of good citizenship and emotional integration.

A teacher can adapt suitable teaching strategy in order to acquire the desired target skills by the learners. A model of teaching strategy is a pattern which can be taken the students achieve the curriculum or educational goals. Teaching strategy are just instructional design they describe the process of specifying and producing particular environmental situation which cause the students to interact and actively participating the classroom activities in such a way that specific change occurs in students behavior and knowledge .So the teacher should use appropriate teaching method or teaching strategy to improve the quality of teaching.

Need and Significance

The objectives of the teaching learning process is to bring about definite change in the behavior of the learner which are indicative of his achievement. So

learning is said to have taken place only when the learner is able to perform certain act such as recitation, problem solving.

Multilevel teaching create learning environment that makes the students feel comfortable in the teaching and learning process in the multilevel scenario. Teaching and learning process in the classroom based on multilevel teaching are highly interactive and teach for meaning and understanding .and maximum output, and also students will be able to develop new concept. And the multilevel teaching provide the important aspects of co-operative and collaborative learning situation to the students.

Multilevel teaching is a critical skill for educators. When teachers adjust the learner outcomes for those who require it, students don't become bored from the lack of challenge or disengaged in a lesson that is too difficult or frustrating. Multilevel instruction provides success for each student within rigorous standards and acknowledges diverse student learner characteristics.

In the present scenario it is very important that we recognize and nature all of the different type of human intelligence and learning style. Students' exhibit different learning styles and multiple intelligences, and only by accommodating these various abilities can teachers properly plan and conduct suitable activities and assess what students have learned. So learning styles are inherent personal attributes that determine the preferred teaching and learning method for individual while an intelligence type is an individual's levels of aptitude in various content areas as there is no one individual who is universally intelligent. An understanding of the two concepts is essential for designing suitable teaching methods:

Teacher in a classroom who is responsible for providing opportunities for all learners to achieve their full potential. What happens often in the classroom is that teachers deliver just one opportunity for learning, assuming that this is a norm against which learners will be assessed. Sometimes they even give new labels to learners: above-average, below-average; as it relates to the perceived norm. And yet, every teachers should know that each and every learner in the class is different, learns in different ways, has different interests and learning style, talents and strengths, and may experience barriers at different levels and in different areas. Every learning situation involves an interaction between a learners. The difficulty is that not all learners in the class are capable of completing the same task at the same time. This is particularly true in the multilevel context where learners are at different age and ability levels. A teacher who expects all learners to complete the same task promotes an exclusive classroom environment, because only some learners get the opportunity to engage in a positive learning experience.

Multilevel teaching strategy is highly connected with teaching profession and this teaching strategy to create an engaging classroom environment for student and enjoyable work day for teachers. Effective teachers use multilevel teaching techniques to keep students actively in the learning process. The multilevel teaching strategy is more helpful for checking academic performance and it help to develop student achievement in each subjects. Understanding and supporting multi-level instruction is a great way of accomplishing this. Multi-level instruction is the process of teaching one primary objective or concept to the class while allowing for varying outcomes for an individual student or a small group of students.

Statement of the Problem

The present study is titled as "EFFECTIVENESS OF MULTI LEVEL TEACHING STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AMOMG STANDARD VIII STUDENTS".

Operational Definitions of Key Terms

The definitions of key term in the statement of problem is given in the following part

Effectiveness

Effectiveness is the quality of being a power to produce consequences in the achievement. The term Effectiveness stands for the outcome of the study when the influence of one factor is dependent on the presence or absence of another factor

Multilevel teaching strategy

Classify students on the basics of diversity such as multiple intelligence and learning style

Achievement in Social science

Achievement in social science indicate the extent to which the learner has internalized the related learning material the ability of the learner in grasping and applying the concepts of a particular unit in social science by fulfilling the objective of the unit

Variables

This study is aimed at finding the Effectiveness of multilevel teaching strategy on achievement in social science

Independent variable

Multilevel teaching strategy and Existing Method of teaching

Dependent Variable

Achievement in Social science

Objectives

The following are the objectives formulated for the study

I. To compare the mean pretest scores of experimental and control group for total sample.

II. To compare the mean post test score of experiment and control group for total sample and sub sample based on gender.

III. To compare the mean gain score of students belonging to experimental and control group for total sample and sub sample based on gender.

IV. To study the Effectiveness of Multilevel Teaching Strategy on Achievement in Social Science among Standard VIII students.

Hypotheses

I. There will be significant difference in the mean pre-test scores of the experimental and control group.

II. There will be significant difference in the mean scores of the post-test of the experimental and control groups for total sample and sub sample based on gender.

III. There will be significant difference in the mean gain scores of the experimental and control groups for total sample and sub sample based on gender.

IV. There will be significant effect of Multilevel teaching strategy on Achievement in social science of standard VIII pupils.

Methodology

The purpose of the study is find out "Effectiveness of Multilevel Teaching Strategy on Achievement in Social Science among Standard VIII Students"

Method

Experimental method was used for the study

Design of the study

By taking the major objectives of the study into account, the investigator formulated "Quasi Experimental design" in which the experiment involves a comparison of the Effectiveness of Multilevel Teaching Strategy with that of Existing Teaching Method. The study was conducted Pre -test, Post-test, Nonequivalent group Design (Best 1992)

O_1x O_2

O_3 C O_4

Where,

O_1, O_3	**-**	**pre-tests**
O_2, O_4	**-**	**Post-tests**
X	-	Application of experimental treatment
C	-	Application of control treatment

Sample for the study

The sample of the study consist of 30 students in Experimental Group and 28 in the Control Group. The sample both Experimental and Control Group were two divisions of standard VIII students drawn from Pavandoor H.S.S, Pavandoor.

Tools used

1. The investigator developed lesson transcripts for teaching through "Multilevel Teaching Strategy"
2. The investigator developed lesson transcripts for teaching through "Existing Teaching Strategy"
3. Achievement test in Social Science
4. Multiple Intelligence Test (Nikhil.K & Koya.H.M.P,2019)
5. Learning Style Inventory (Nikhil.K & Koya.H.M.P,2019)

Statistical Techniques Used

In the present study, the collected data were analyzed using the following statistical techniques.

1. Test of Significance of Different between Means for Large and Small Independent Sample

For the present study, test of significance of difference between means for large and small independent samples where used to compare the relevant variables between the experimental and control group.

2. Single Factor ANCOVA

To examine the Effectiveness of Multilevel Teaching Strategy over the Existing Method of Teaching on the Achievement in Social science of Standard VIII pupils, single factor ANCOVA with pre-experimental status as covariate is used. Analysis of covariance serves the purpose of statistically removing the effects of extraneous variable from the dependent variable.

Scope and Limitations of the Study

The main purpose of present study was to test the Effectiveness of Multilevel Teaching Strategy on Achievement in Social Science among standard VIII pupils. The study was conducted on a sample of VIII standard students of two divisions.

- Multilevel Teaching Strategy is an instructional strategy which is designed to keep the pupil highly motivated and interested.
- It is expected that the new strategy will help to improve the achievement of whole class achievers.

- It provides an opportunity to blend different methods in teaching and learning process.
- It can be extended up to university level and will helpful for other subjects also.
- The results of the present study will help to empower teacher competencies.
- It is expected to understand the contents in Social science quickly.

Limitations

Limitations are some controls or restrictions present during the time of the research. It decides the boundaries of the study even with the due efforts by the investigator .They are

- The problem is being studied specifically to the Social science subject only.
- The study is limited only to the sample collected by the investigator.
- The topic selected was a small unit and study was limited to Social Science only
- Shortage of time has necessitated the investigator to limit the study to one independent variable only.
- Requires resourceful teachers.
- The study was confined to a small sample of two class divisions of standard VIII.
- The topic selected was a small unit and study was limited to Social science only.

Organization of the Report

The content of the research work is summarized under 5 chapters. Each chapters is sub divided into different units as found bellow.

Chapter I contains brief introduction discussing the need and significance of the study undertaken followed by the statement of the problem, hypotheses formulated ,specific objectives ,a brief discussion of the methodology and scope and limitations of the study.

Chapter II includes the brief theoretical overview of the variable, studies related to the variable and a summary of review of related literature pertaining to the research topic.

Chapter III gives a detailed description of the method adopted for the study, the sample, tools and techniques used, sample for the study, data collections of data and the statistical techniques used for analysis.

Chapter IV Presents the analysis and interpretation of data in detail.

Chapter V **i**ncludes major findings of the study and conclusions along with certain suggestions for further research.

Chapter II

REVIEW OF RELATED LITERATURE

- Theoretical Overview of Multilevel Teaching Strategy
- Studies Related to Multilevel Teaching Strategy
- Conclusion

REVIEW OF RELATED LITERATURE

Meaning of Review of Literature

Before undertaking the research study, the investigator has visited the libraries in order to collect more information related to the present study. The review of related literature gives a clear and definite idea about the problem on which the investigator is carrying her research. For this the investigator has referred to the studies done by the researchers earlier related to the present study which gives as idea to make the problem of the present study, specific and relevant and also gives an idea about the methodologies adopted for different studies and objectives of the studies, major findings of the study which hel ps an investigator to sharpen the problem and state specific objectives and to select suitable methodologies and to utilize proper tools and techniques for the study and also to get an idea about the major findings of the study.

The review of research help another researcher handled a similar problem. And Reveal new sources of data which the researcher may not have known. Hence review of related literature is an important stage of research study, which the investigator has to finish well in time before conducting the research.

The Review of related literature in the present study has been classified into the following headings.

A. Theoethical overview of multi level teaching strategy

B. Studies related to multi level teaching strategy

Theoethical Overview of Multi level Teaching Strategy

Teachers in a multilevel classroom teach "individually all at once" (Dorta, in Bingham et al. 123). All instruction is planned to accommodate a range of learning, teaching, and assessment methods in which students can engage according to their own developmental needs along the continuum of learning. Differentiated instruction allows teachers to meet students' cognitive and developmental needs, as well as to accommodate their intelligence and learning styles. Planning for differentiated instruction, using instructional methods that are student centred and developmentally and culturally appropriate, is planning for success. Due to the wide range of learners in the multilevel classroom, learning tasks are generally open-ended and have a continuum of expectations. Multilevel classroom teachers.

- Observe what each learner can do in order to plan for learning and teaching.
- Provide a variety of learning tasks representing the multiple intelligences and allowing for student choice.
- Plan open-ended tasks that can offer different developmentally and culturally appropriate challenges for a range of students.
- Allow for flexibility with timelines.
- Teach goal-setting skills for establishing achievable expectations

Multi-level instruction is the process of teaching one primary objective or concept to the class while allowing for varying outcomes for an individual student or a small group of students. In other words, multi-level instruction allows teachers to deliver on-grade level, standards-based instruction to an entire class, but when appropriate, to respond to any student who may require instruction whether below or

beyond the current learner objective.The teacher addresses one primary objective or concept to the class while allowing for varying outcomes for an individual student or small group of students. Thus, while the majority of students achieve the objective of the lesson, some may achieve either more challenging objectives or less challenging (but highly relevant) learner objectives at the same time.The term multi level classrooms refers to student centered classrooms in which students learn across two or more grades.

Reasons for Establishing Multilevel Classrooms Decisions to create multilevel classrooms are based on pedagogical and/or demographic considerations .Some schools/divisions/districts choose multilevel programming for philosophical reasons. These deliberately formed multilevel classrooms emphasize a continuum of learning, rather than maintaining grade differences. Multi level teaching means Classify students on the basics of diversity such as multiple intelligence and learning style.

Multilevel Teaching: Meaning and Definition

Multilevel teaching -Gurgenidze (2012) defines mixed ability relating to multilevel class in this way: ´Mixed Ability level teaching is related to working together with students who have different personalities, skills, interests and learning needs.´ and another definition taken from www.English Club Center/Teaching multilevel class defined it in this manner ´´Multilevel teaching is a Group of students who learn and study together in one room, despite having varying levels of abilities and/or literacy backgrounds.

Multi-level teaching is where one lesson is taught to an entire group while meeting the individual needs of each child. Multilevel teaching is an effective approach to instruction and requires less time than separate instruction. Younger students benefit from being exposed to more advanced skills and older students benefit from demonstrating their skills to younger students. Multilevel teaching is the process of teaching one primary objective or concept to the class while allowing for varying outcomes for an individual student or a small group of students. In other words, multi-level instruction allows teachers to deliver on-grade level, standards-based instruction to an entire class, but when appropriate, to respond to any student who may require instruction whether b Multilevel instruction is a critical skill for educators. When teachers adjust the learner outcomes for those who require it, students don't become bored from the lack of challenge or disengaged in a lesson that is too difficult or frustrating. Multi-level instruction provides success for each student within rigorous standards and acknowledges diverse student learner characteristics .Multilevel instruction was originally designed as a means of providing appropriately adjusted instruction for gifted students. Educators quickly found that multilevel instruction processes can and should be followed for every student for whom the stated, on-grade level curricular objectives may need to be adjusted.

Classroom Management in Multilevel Classes

Class management, in multilevel context, is also a major area of attention; it considers space, need of student seating arrangements, group's organizations, etc.

a) Space organization

Classroom should be managed in such form; proper space should be available to every student. It should always be kept in mind that if more than one grade students are sitting in one room and if they are not working in a multilevel group, there should a clear cut demarcation among them during the classroom transaction. This should also be seen that students have sufficient space for group learning or using self-learning materials.

b) Seating-arrangements

Seating arrangement is also a part of space organization but it should be treated as a separate issue in multilevel context. Children of two or more grades are sitting in one room and they are receiving common instructions. So they are combination of classes. Hence seating may be grade-wise in horizontal rows or in grade-wise vertical rows. This arrangement should be made according to the need and requirement of the curriculum. Normally, students sit in back to back rows. This type of seating arrangements should be discouraged. Multilevel classroom needs flexibility in seating arrangements, a well-decorated classroom with easy access to self-learning materials kept in the room. Optimum use of the classroom is also required in such types of classrooms with proper space for children's self-learning. .

c) Proper lighting and flow of natural air

Adequate light should be there in the classroom. Inadequacy of light affects the pace of learning. Similarly, lack of natural air also affects the health of children. Thus, the classroom should be airy.

Benefits of Multilevel Teaching

Multilevel classrooms are built on the premise that diversity is not a challenge to be overcome, but an asset and a resource that promotes learning. In reality, all classrooms are diverse. By the time students are eight years old, their academic performance in a single-grade classroom may span three or more years. In addition, students bring to the classroom a wide range of learning approaches, developmental stages, aptitudes, interests, experiences, cultural backgrounds, and personalities. Thus, there are no homogeneous classrooms. The natural varied composition of a multilevel classroom has specific advantages for learners.

- Multilevel programming recognizes that each student is at a different stage of learning and focuses on the developmental stage of the learner; of necessity, the focus moves to individual learning along a continuum. This minimizes competition because students recognize and accept that each student is at a different place in his or her learning. Students learn to set personal learning goals, assess themselves, and reflect on their own learning.

- Multilevel classrooms provide opportunities for students to gain self-knowledge as they interact with older and younger peers. Throughout life, people rarely operate in groups that are systematically separated by age. The range of social relationships students build in a multilevel classroom more closely reflects the diverse social situations individuals encounter in workplaces, communities, and families. In fact, just as the youngest child in a family typically passes developmental milestones earlier than his or her siblings did through watching and listening to older siblings, younger

students learn from the wider knowledge base of older classmates and from their modelling of skills and behavior. Benefits of Multilevel Classrooms Independent In the multilevel classroom, though, a student's position relative to her or his classmates changes each year. Students with strong leadership skills in their own age group enter the classroom as the youngest students and learn valuable skills in following leadership. Students who are less assertive or who require more support or guidance have opportunities to share their learning with younger students and experience themselves as leaders.

- Multilevel classrooms allow for continuous progress. All learners can be challenged. In a multilevel environment, students do not need to spend time on concepts and skills they have already mastered. Students who have not attained specific learning outcomes by the end of a school year have the opportunity to achieve them the following year. In multilevel classrooms, all students are expected to attain the learning outcomes, and time becomes a variable that can help them do so.

Studies Related to Multilevel Teaching Strategy

Review of related literature to multilevel teaching strategy

Sarwari (2018) done a research study "Effective Multilevel Teaching of English in Large Resourced Classes at an Afghan Public University "the study was qualitative in nature. The findings showed that Teaching in difficult conditions and struggling with the challenges in all classes, especially in my large, multilevel

classes, has always made me to think of seeking effective ways to cope with the challenges in order to offer quality teaching. Seeking practical solutions to the challenges that I have encountered resulted from reflections on my teaching in connection to the existing opportunities and challenges.

Certain and Guarino (2011) have conducted a pilot survey entitled "Effective multilevel teaching techniques on attending rounds ". The result showed that Attending were divided about whether teaching to multiple levels posed a challenge. Trainees reported that the teaching they received was usually appropriate to their level of training

Gordon (2010) carried out a case study entitled "A case study on multi-level language ability grouping in an ESL secondary school classroom. The findings showed that the participants of this study indicate that their overall experience in the multi-level classroom is both positive and negative. Although they are generally quite content in the multilevel classroom, they nevertheless have moments when they would prefer a more homogeneous level environment. The positive factors include their appreciation for the use of first or shared languages in peer mentoring which scaffolds their learning and creates ideal conditions for some of them to engage in self-directed learning; however, they note that not everyone engages in self-directed learning.

Jiang and Xueli (2016) has developed journal entitled "Multi-level Practical Teaching System Based on Graduation Design "Graduation design has a very important role in training high quality talents in the university. This paper put forward a multi-level practical teaching system based on graduation design .The

construction method of this system is to take the school of management of Xiamen University of Technology as an example, and to analyze professional achievements from experimental course, courses design, professional internships, college students innovative project, academic competition and teachers scientific research, and then to convert these professional achievements.

Ram and Vipin (2013) investigated the effect of audiovisual aids on achievement in physics in relation to creativity. The result showed that the achievement scores in physics of students through audiovisual aids was significantly higher than those who were taught through conventional method.

Laura and Martin (2012) conducted a research study entitled “Effective multilevel teaching techniques on attending rounds: A pilot survey and systematic review of the literature” Survey method was used in the research .The result was Attending were divided about whether teaching to multiple levels posed a challenge. Trainees reported that the teaching they received was usually appropriate to their level of training.

Shafqat and Sadaf (2011) has conducted a research study entitled “A Study of The Effectiveness of Teaching Physics through Project Method on Academic Achievement of Students at Secondary Level Case Study”.The Effectiveness of Teaching Physics through Project Method on Academic Achievement of Students at Secondary Level A Case Study. The main objective of the study is the aim of this study was to examine the effect of teaching Physics through project method on academic achievement of secondary schools students in the subject of Physics. In this study, an achievement test pre-test and post-test covering eight chapters were

used as measuring instrument. Depending upon pre academic achievement test scores, eighty science students of 10th class were divided into two equal groups named as experimental group and control group. The experimental group was taught through project method and the control group was taught by traditional lecture method. Both the groups were taught for a period of six weeks 40 minutes period per day. The Post test was administered at end of treatments. The marks obtain in Pretest and Posttest of both groups served as data of this study. The analysis of data revealed that on whole, experimental group 4 showed better performance than controlled group. Furthermore the experimental group performed significantly better than control group in learning domain knowledge, comprehension, and application and skill developments. The major finding of the study is Teaching Physics through Project method was more effective as compared to traditional lecture method at secondary level.

Khan (2010) has conducted a research study entitled "A study of Effectiveness of Modular Teaching in Biology at Secondary Level". The main aim of the study To investigate the relative effectiveness of modular teaching on the academic achievement of secondary students in biology. The main objective of the study is to determine the role of modular teaching in the academic achievement of students of biology at secondary level and To determine whether the modular teaching is more effective than traditional methods. The study was experimental type. Equivalent group study design was used. The collected data of both groups were analyzed and interpreted using mean, standard deviation and t-test, and conclusions were drawn. The Major finding of the study is Modular learning group perform significantly better than the group taught by traditional method of teaching.

Vebriantoa and Osmanb (2011) examined the effect of multiple media instruction in improving students' science process skill and achievement. The quasi experimental method can be used to design a non-equivalent control group to identify the science process skills and increase student achievements. Science Process Skills tests and Achievement tests are the tools used. The findings revealed that there are significant differences in the students' performance in SPS and Science achievement between those who undergo the ICT and environmental modules with those who undergo conventional teaching strategy

Aksan (2011) found out the effect of Computer Assisted Instruction in teaching ionic compounds on pre service elementary science teachers' academic achievement and permanent learning. The study consists of two groups an experimental group was applied 35 and control group to whom traditional method was applied 35. In accordance with the post-test results of experimental and control group students' academic achievement of the experimental group teacher candidates to whom topics were taught by the use of CAI was higher than those in control group in which traditional instruction method was administered. Additionally, according to the permanency test results, it was seen that learning in experimental group was more effective and permanent.

Kumar (2014) examined the effectiveness of Multimedia Instructional strategy and Modular Instructional strategy on the achievement in English of secondary school students. The study was experimental in nature and was sample of 500 students of class IX.Instructional Strategies were taken as independent variable whereas Achievement as a dependent one. The results showed that F ratios were

significant for the main effect of Instructional Strategies. The inter correlation coefficient between the variables of Instructional Strategy and Achievement

Meera and Nirupama (2011) conducted a research study entitled Effectiveness of peer tutoring in developing English vocabulary.in the present study the investigator made an attempt to find out the effectiveness of peer tutoring in the vocabulary of higher secondary students. The research was conducted on 30 sample of student's from two different classes. The quasi experimental method can be used to design a non-equivalent group design and the pretest and posttest. The result was the experimental group showed best vocabulary development.

Conclusion

The review of related literature indicates that limited studies have been conducted in Indian scenario. Majority of the studies on multi level teaching has been investigated in foreign language. The investigator could not locate any study related to Multi level learning strategy in Social science .Social science is always a challenging subject of secondary school students. So being a promising method it is necessary to investigate

Chapter III

METHODOLOGY

- Variables
- Objectives
- Hypothesis
- Design of the study
- Tool used for the study
- Sample used for the study
- Data collection procedure
- Statistical techniques used for the Analysis

METHODOLOGY

Methodology is the technique or procedure adopted in a research study or investigation .The key factor for the success of research work depends largely upon the suitability of methods, tools and techniques that the researcher follow to gather adequate data .The method should always be appropriate to the problem under investigation, feasible, pre-planned and well understood.

The main purpose of the present study is to investigate the Effectiveness of Multilevel teaching strategy over the existing Method of Teaching on the Achievement in Social science of standard VIII pupils. This warrants the description of the variables, tools, selection of sample for the collection of data, experimental procedure and statistical technique for the analysis of data

Variables

The experimental research , the relationship between two types of the variables namely independent and dependent variable are studied .independent variables are the causes while dependent ones are effects another category of variable which is equally important is of the intervening variables all these three kinds of variables identified for the study are

Independent variable

The independent variable selected for the study was two methods of teaching Multilevel teaching Strategy and existing method of teaching. The experimented

group was taught through Multilevel teaching strategy and control group was taught through existing method

Dependent variable

Achievement in Social science VIII standard pupils was treated as the dependent variable.

Control variable

The variable controlled for the present study was the initial status of the students in the Nature of the research

Table 1

Independent, Dependent and Control Variable

Independent variable	Dependent variable	Control variable
Method of Teaching	Achievement in social science	1. Nature of school 2. Class 3. Subject to be taught 4. Duration of the instructional phase 5. Teacher

Objectives

The objectives formulated for the present study are presented below to get an idea regarding the nature and scope of the experiment. They are as follows:

I. To compare the mean pretest scores of experimental and control group for total sample.

II. To compare the mean post test score of experiment and control group for total sample and sub sample based on gender.

III. To compare the mean gain score of students belonging to experimental and control group for total sample and sub sample based on gender.

IV. To study the Effectiveness of Multilevel Teaching Strategy on Achievement in Social Science of Standard VIII Students.

Hypotheses

I. There will be significant difference in the mean pre-test scores of the experimental and control group.

II. There will be significant difference in the mean scores of the post-test of the experimental and control groups for total sample and sub sample based on gender.

III. There will be significant difference in the mean gain scores of the experimental and control groups for totel sample and sub sample based on gender.

IV. There will be significant effect of Multilevel teaching strategy on Achievement in social science of standard VIII pupils.

Design of the study

The present study has been conducted by employing the true Experimental design.

According to Best & Khan (1996) The Experimental design is the blue print of the procedure that enables the researcher to test hypotheses by reaching valid conclusion about relationship between independent and dependent variables. Selection of a particular design is based on the purposes of the experiment, the type of variables to be manipulated and the conditions or limiting factors under which it is conducted .The design deals with such practical problems as how subjects are to be assigned to experimental and control groups, the way variables are to be controlled, how observations are to be made, and the type of statistical analysis to be employed in interpreting data relationship.

Research Design selected

The design selected for the present study was the Quasi Experimental with pre- test and post- test Nonequivalent group design. Due to the inconvenience in random assignment of subjects in the experimental and control groups, intact classroom groups were selected for the study. The design of the study is illustrated as follows.

O_1 x O_2

O_3 C O_4

Where,

O_1, O_3	-	pre-tests
O_2, O_4	-	Post-tests
X	-	Application of experimental treatment
C	-	Application of control treatment

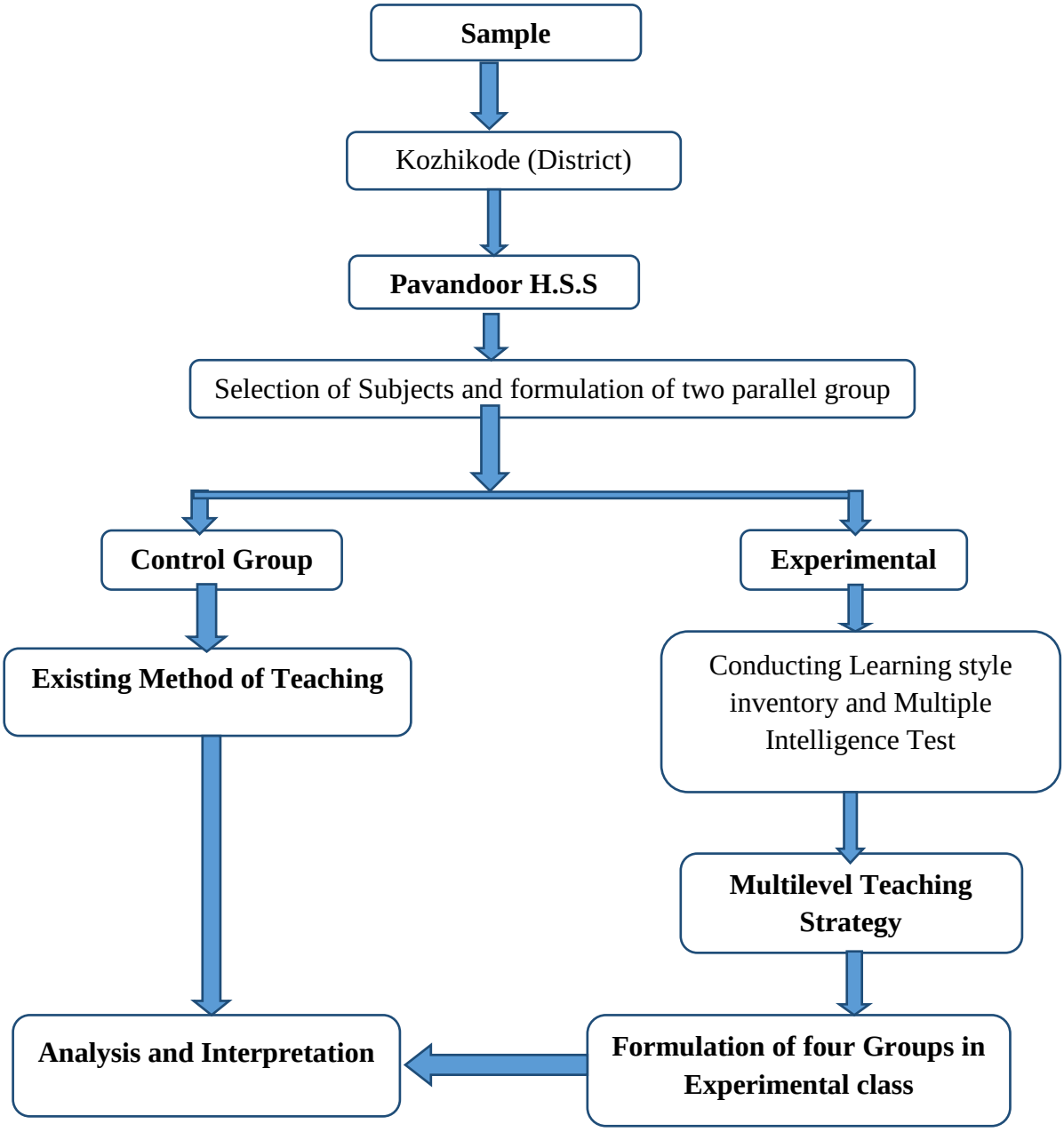

Figure 1

Graphical Description of the study

The design comprised of four stages .The first stage involved pre-testing of all the students of the two groups on achievement in social science. The test second stage researcher conducted two tests such as learning style inventory and multiple

intelligence test in the experimental class and formed four groups based on learning style and intelligence of the learners. And the third stage involved the experimental treatment, which consisted of teaching all the two units of social science subject in standard VIII. Experimental group was taught some lessons by Multilevel Teaching Strategies for 15 periods the control group was taught the same lesson by the existing method of teaching. For 15 periods .In the fourth stage the students were post –tested on achievement in social science.

Two class divisions from same school were treated as experimental and control groups. Experimental group was taught some lessons by Multilevel Teaching Strategies for 15 periods and each period duration of 40 minutes. The control group was taught the same lesson by the existing method of teaching .for 15 periods of the same duration. Since the design selected for the present study was pre-test, post-test non-equivalent group design, prior to introduce two teaching methods, both groups were administrated the same achievement test.

Tool Used for the Study

The tools used for the present study and description of them are presented in this section. Tools used for the present study as follows;

1. The investigator developed lesson transcripts for teaching through "Multilevel Teaching Strategy"
2. The investigator developed lesson transcripts for teaching through "Existing Teaching Strategy"
3. Achievement test in Social Science

4. Multiple Intelligence Test (Nikhil.K & Koya.H.M.P,2019)

5. Learning Style Inventory (Nikhil.K & Koya.H.M.P,2019)

Description of tools

Lesson transcript for the instructional strategy in "Multilevel Teaching strategy"

The Multilevel Teaching Strategy was introduced as a new method of instruction. Based on Multilevel Teaching Strategy the investigator prepared 15 lesson transcripts. The duration of each lesson transcripts was expected to be 40 minutes. Each lesson was prepared by following format.

Lesson Plan Format of Multilevel Teaching Strategy

I. Focus

Focusing on the theme of the lesson

II. Learning objectives

There are learning outcomes written in terms of pupil behavior which the teacher was supposed to realize within the given period of time for a particular lesson.

III. Developmental stage

Phase I - Planning

In this phase the teacher plan the lesson by keeping the learning objectives in mind. This section includes the facts, Resources used to teach the lesson. The section based on multiple intelligence and learning style

Phase II - Setting the class

In this time teacher formed the classroom situation and organizing the classroom seating arrangement.

Structural Activities

It includes face–to-face instruction, Imitative Discussion, Activity based learning, Evaluation and Follow up activities

There are two columns in each lesson plan. First column deals with multilevel activities and second column deals with response. Multilevel activities progresses through three segments.

Phase III - Face to Face instruction

In this type of instruction the teacher introduces the lesson to students and will have a direct interaction with students. It is an interesting session to initiate children's attention. It may be in 3 forums such as teacher -whole class interaction, teacher-student interaction and student –student inter action.

Phase IV - Initiative Discussion

Teacher organize the classroom discussion .With the active participation of students

Phase V- Activity Based Learning

Teacher plan and organizing suitable activities based on student learning style and multiple intelligence

Phase VI - Evaluation

Teacher Evaluate the student performance in classroom teaching and learning process

Phase VII - Follow Up Activity

The teacher gives one or two follow up activities after the end of teaching and learning process in classroom

Lesson transcript based on Multilevel teaching strategy is shown in Appendix I & II.

Classroom Grouping Based on Multiple Intelligence and Learning Style of the Students in Multi level Teaching Strategy

Based on their learning style preference and multiple intelligence sutdents were classified and the following four groups.

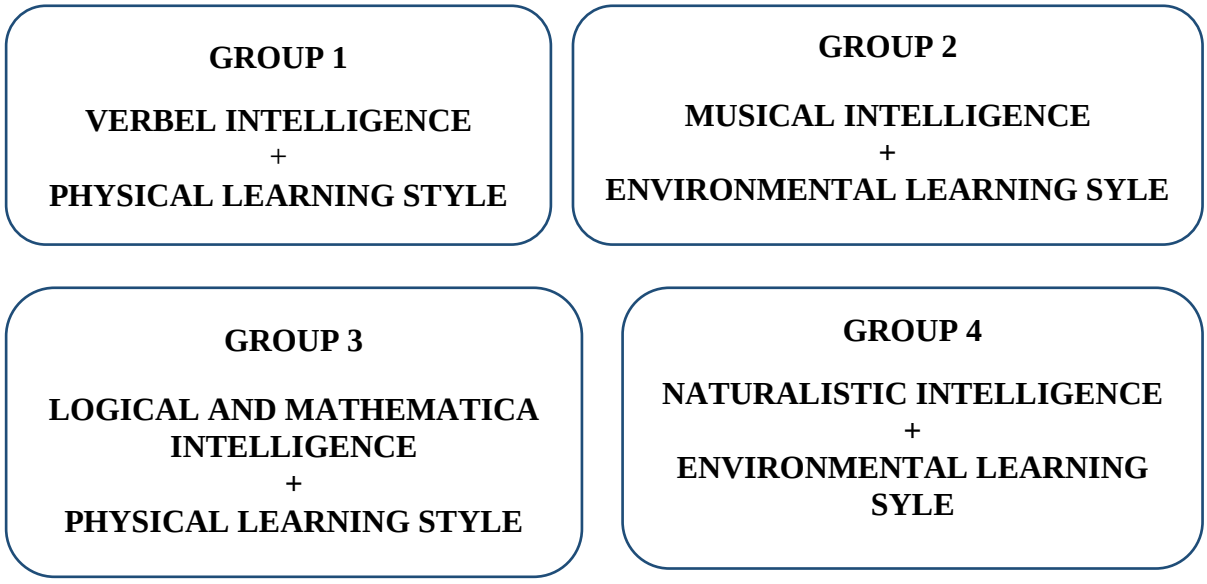

Figure 2

Classroom Grouping in Multi Level Teaching Strategy

In present study Multilevel teaching stragegy was organised on the basis of Learning style and multiple intelligence of students. So Multilevel teaching implies differentiated instruction provide by the teachers for cognitive and developmental needs of the learners, as well as to accommodate their intelligence and learning styles.

Multiple Intelligence Test

The tool is prepared by the investigator with the assistance of her supervising teacher .The procedure followed in the construction of the tool is described below.

Planning of the Test

The first step in the construction of the test .the investigator selected four types of intelligence and the Experimental Group students were classified as Verbal Intelligence, Logical and Mathematical intelligence, Musical Intelligence and Naturalistic Intelligence on the basics more scores obtained in Multiple Intelligence Test

Multiple intelligence test and response sheet is shown in Appendix VI

Multiple Intelligence

An Intelligence is the ability to solve problems or to create products that are valued within one or more cultural settings (Howard Gardner). The theory of Multiple Intelligence differentiates human intelligence in to specific “Modalities” rather than seeing intelligence as dominated by a single general ability.

A. Verbal Intelligence

Ability to use words and language. These learners have highly developed auditory skills and are generally elegant speakers. They think in words rather than pictures.

B. Logical & Mathematical Intelligence

Ability to use reason, logic and numbers. These learners think conceptually in logical and numerical patterns making connections between pieces of information. Always curious about the world around them, these learners ask lots of questions and like to do experiments.

C. Musical Intelligence

Ability to produce and appreciate music. These musically inclined learners think in sounds, rhythms and patterns. They immediately respond to music either appreciating or criticizing what they hear. Many of these learners are extremely sensitive to environmental sounds (e.g. crickets, bells, dripping taps).

D. Naturalistic intelligence

Naturalist intelligence designates the human ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations). This ability was clearly of value in our evolutionary past as hunters, gatherers, and farmers; it continues to be central in such roles as botanist or chef.

Learning Style inventory

The tool is prepared by the investigator with the assistance of her supervising teacher .The procedure followed in the construction of the tool is described below.

Planning of the Inventory

The first step in the construction of the Inventory and based on three responses. Such as Always, Sometimes and Never. The investigator selected four types of Learning Style and the Experimental Group students were classified The students were classified as physical learning style, environmental learning style , sociological learning style and emotional learning style on the basics more scores obtained in learning style inventory .

Learning style inventory is shown in Appendix VII and their response sheet is shown in Appendix VIII.

Learning styles

The term learning style refers to the different ways in which individuals approach learning tasks or receive and process information. More attention will be given to the different learning styles later in the module. The term learning style refers to the different ways in which individuals approach learning tasks or receive and process information. It is simply different approaches or ways of learning.

Rita and Kenneth Dunn define Learning Styles as, “The way in which each learner begins to concentrate, process and retain new and difficult information. That

interaction occurs differently for everyone." [Rita and Kenneth Dunn] When a student's natural tendency and style is triggered, his/her ability to concentrate and make associations improves his chances of transferring information to long-term me

Learners have different styles and learn best when a multi-modal approach is used. Providing information through all of the senses--visual, auditory, tactile and kinesthetic. When we think of the implications of learning styles on instruction, we usually think of how we deliver instruction, such as selecting materials that address modality preferences, e.g. books for visual learners, cassettes for auditory learners, and math manipulates or computers for tactile learners. However, Dunn and Dunn's research into learning styles includes factors in the learning environment. Their research shows that such things as lighting, furniture arrangement, and noise level, time of the class, background sensory stimuli and choices of grouping are part of learning style preferences. These become considerations in how the learning center/classroom is managed.

Room arrangement does not seem to be anything more than an aesthetic issue. But reflection on our own learning experiences remind us that a hard chair, a cold room, the hum or glare of florescent lights,. Just as we offer students alternative materials to match their learning styles, there should be options in the learning environment. Well-lit study carrels provide isolation, quiet and screens out distractions. Parts of the room might be designated as "quiet ones." Informal seating areas with a sofa could be provided for small group discussion or reading for pleasure. Posted class standards developed by the students can be another way to

recognize and respect differences in learning styles. For example, auditory learners often enjoy having music in the background.

Table 2

Different Learning Styles and Learning Elements

Style Area	Style Element	Activities in Classroom
Physical Learning style	Auditory	Mobility
	Visual	Activity
	Tactile	
	Kinesthetic	Project
	Intake	
Environmental Learning Style	Noise Level	Sound
	Light	Light
	Temperature	
	Design	Design
Emotional Learning style	Motivation	Motivation
	Persistence	Responsibility
	Structure	
	Responsibility	Task persistence
Sociological Learning style	Peers	Cooperative and Collaborative
		Peer
	Authority	pair

Lesson Plan Existing Method of Teachiing

Lesson plan of Existing Method of Teaching for the Control Group. Were prepared in Malayalam and English on the basis of newly introduced activity based curriculum of Kerala. Each lesson was prepared by the following format.

I. Identification of curriculum objectives

II. Formation of curriculum competencies

III. Presentation of suitable learning activities

IV. Recording the response of the students

V. Recapitulation and assignment

The method of teaching an experiment group varied from topic to topic based on Multilevel, the teaching method followed the control group was an existing one. Teaching aids available in the school were used in the control group .model lesson plan of existing method of teaching in Malayalam and English

Achievement Test in Social Science

The Achievement test in social science used as pre-test and post-test was constructed by the investigator with the help of supervising teacher .In the present study the achievement test was based on the topics selected for treatment. The major stages in the construction of achievement test in social science are described in the section.

Planning of the test

The preparation of any classroom test involves different stages .The most

primary stage is the planning stage .For this, the investigator studied thoroughly the curriculum, syllabus, and text book of social science for the academic year 2018-2019.For guidance the investigator consulted with subject expert and experienced teachers in social science. The investigator also referred available source book and text books for framing the items for the test .The books referred for the purpose are:

I. Taxonomy of Educational Measurement(Bloom,1979)

II. Essential of Educational Measurement(Ebel and Frisbie,1991)

III. Educational Measurements and evaluation(nuhally,1972)

For the Achievement test in social science the investigator planned to prepare a text consisting of 25 items for time duration of 50 minutes.

Preparation of the test

Items for the Achievement test in social science were prepared on the basis of the major objectives of the taxonomy of the cognitive domain. The first statement in measuring achievement is to establish a clear statement of objectives .The investigator while planning the test will bear in mind the following aspects.

a. Weightage to objectives

Objectives are broad goals and are stated in terms of desired change in student behavior. Items were prepared on the basis of Bloom's taxonomy of educational objectives. The weightage given to the categories of objectives under cognitive domain were

1. Knowledge

2. Understanding
3. Application
4. Analysis
5. Synthesis
6. Evaluation

Table 3

Weightage to objectives

Sl. No.	Objectives	Marks	Percentage
1	Knowledge	3	12
2	Understanding	4	16
3	Application	2	8
4	Analysis	4	16
5	Synthesis	2	8
6	Evaluation	10	40
	Total	25	100

b. Weightage to content

The investigator analyzed and divided the entire content in 3 units and tried to give adequate .

Weightage to each sub units. The weightage give to each subunit to given in table 4.

Table 4

Weightage to content

SI. No.	Content	Marks	Percentage
1	Planning commission, Objectives of planning	4	16
2	Economic planning , Decentralized planning	14	56
3	Five year plan, NITI Ayog	7	28
	Total	25	100

c. Weightage to Difficulty Level

Table 5

Weightage to difficulty level

SI. No.	Difficulty Level	Marks	Percentage
1	Easy	4	16
2	Average	12	48
3	Difficulty level	9	36
	Total	25	100

d. Weightage to form of Questions

Table 6

Weightage to form of Questions

SI.No.	Form of Questions	Marks	Percentage
1	Objectives	5	20
2	Short answer	10	40
3	Essay	10	40
	Total	25	100

Blue Print of Achievement Test in Social Science

The investigator prepared a detailed question wise distribution of marks over specific topics on the basis of the weightage for instructional objectives, content etc. This is called a blue print. The blue print for the Achievement Test in Social science incorporating weightage given to instructional objectives content area and difficulty level are presented.

Based on the Blue print the investigator prepared 15 questions in Social science representing each objectives and subjected to experts scrutiny and criticism.

Table 7

Blue print of the achievement test

Objectives	Knowledge			Comprehension			Application			Analysis			Synthesis			Evaluation			Mark	No questions
Form of questions / Content	O	S	E	O	S	E	O	S	E	O	S	E	O	S	E	O	S	E		
Planning commission, Objectives of economic planning	(1)[5]			(1)[2]									(1)[1]						8	8
Economic planning, Decentralized planning							(1)[4]			(1)[2]			(1)[1]			(1)[5]			12	12
Fiveyear plan , NITI Ayog							(1)[3]						(1)[2]						5	5
Sub total	(1)[5]			(1)[2]			(1)[7]			(1)[2]			(1)[4]			(1)[5]				
Total	**5**			**2**			**7**			**2**			4			**5**			25	25

Note: the No. inside the bracket indicate marks and outside the No. of marks.

Item writing

For item analysis the procedure suggested by Ebel and Frisble (1991) was used .The selected answer sheets were arranged in the descending order of the magnitude of the scores. The scores obtained by upper 27 subjects (27%) and lower group 27 subjects (27%) were taken as the upper group and lower group respectively. For the selection of the items in the final test, Difficulty Index and Discriminating Power of each item were found out.

(a) Difficulty Index

The following formula suggested by Ebel (1991) was used to calculate the difficulty index of each items.

$$\text{Difficulty Index} = \frac{U+L}{N}$$

U = The number of correct answers in the upper group.

L = The number of correct answers in the lower group.

N = The number of subjects in each group.

(b) Discriminating Power

The higher the average discrimination Index for items in a test the more variable the score are likely to be and more reliable the scores are expected to be (Ebel, 1991)

Formula used for calculating the Discriminating Power is the following.

$$\text{Discriminating Power} = \frac{U-L}{N}$$

U = The number of correct answers in the upper group

L = The number of correct answers in the lower group.

N = The number of subjects in each group.

The difficulty index and discriminating power of each item are given the Table.

Table 8

Item Analysis Data of Achievement Test in Social science with Difficulty Index and Discriminating Power

Item No.	Number of correct responses in upper groups (U)	Number of correct responses in lower groups (L)	D.I=U+L/2N	D.P=U-L/N	Remarks
1	15	8	0.71875	0.4375	Accepted
2	15	9	0.75	0.375	Accepted
3	16	11	0.53125	0.3125	Accepted
4	15	5	0.625	0.625	Accepted
5	16	10	0.8125	0.375	Accepted
6	15	9	0.75	0.375	Accepted
7	15	8	0.71875	0.4375	Accepted
8	16	7	.42	.33	Accepted
9	12	4	.296	.296	Rejected
10	13	3	.296	.37	Rejected
11	16	9	0.78125	0.43	Accepted
12	16	10	0.8125	0.375	Accepted
13	16	9	0.78125	0.43	Accepted
14	15	6	0.624	0.624	Accepted
15	14	3	.294	294	Rejected
16	15	9	0.75	0.375	Accepted
17	16	11	0.53215	0.3125	Accepted

Item No.	Number of correct responses in upper groups (U)	Number of correct responses in lower groups (L)	D.I=U+L/2N	D.P=U-L/N	Remarks
18	16	7	.42	.33	Accepted
19	15	7	.41	.30	Accepted
20	15	6	0.624	0.624	Accepted
21	16	9	0.78125	0.43	Accepted
22	16	9	0.78125	0.43	Accepted
23	15	8	0.71875	0.4375	Accepted
24	16	11	0.53215	0.3215	Accepted
25	15	5	0.625	0.625	Accepted
26	16	7	.42	.33	Accepted
27	16	14	0.9375	0.125	Rejected
28	16	9	0.78125	0.43	Accepted
29	15	12	0.84375	0.1875	Rejected
30	16	11	0.53215	0.3125	Accepted

Selection of items for the final test

Items having the difficulty level between 0.4 and 0.74 (Lord, 1952) and discriminating power more than 0.3 are readily selected. Thus the investigator prepared the final test with 25 items or questions from the test .The time duration fixed for the test was one hour.

Validity of the test

A test said to be valid when it measures what it intended to measure. Validity is an in dispensable characteristics of measuring devices .The validity of attest may be defined as the accuracy with which it measures what it is intended to measure or

as the degree in which it approaches in fallibility in measuring what it purports to measure .According to Arya (1972) There are four types of validity –content validity, predictive validity, concurrent validity and construct validity.

Validity of the present test

The investigator established the content validity by the proper analysis of the content and objectives and by the preparation of the Blue print. The investigator ensured face validity by constructing with expert teachers and eliminating unnecessary item according to their suggestions. The investigator established the criterion related validity of the test by taking the external criteria as school marks of a unit test in Social science. The validity co-efficient was found to be 0.64 indicating test is valid.

Reliability of the test

Reliability of the achievement test in social science was established using the split half method. To establish reliability, the scores obtained by the same sample upon which the validity established was used. For this purpose the 25 items in this test were divided into three part.

Sample used for the study

As it was an experimental study the investigator felt that it would be difficult to conduct the experiment if the sample is too large .Therefore two intact class divisions of standard VIII pupil were selected as sample, one for the experimental and the other for the control group where the two different teaching

method were employed .The school was Pavandoor Higher secondary school, Kakkur (Experimental and Control group

The Experimental Group consisted 30 students (21 boys and 9 girls) and Control group consisted 28 students (18 boys and 10 girls).

Table 9

Details of Initial Sample Selected for the Study

Experimental Group			Control Group Total		
Boys	Girls	Total	Boys	Girls	Total
21	9	30	18	10	28

Data Collection Procedure, Scoring and Consolidation of Data

a) Execution of the experiment

After obtaining the permission from the head of the respective school, arrangement was made to collect the data from schools.. Before starting the experiment both Experimental and control group were given the same pretest to measure the initial status of subjects. After the pretest the investigator conducted Learning style inventory and Multiple Intelligence test in the Experimental group and formed four groups in experimental group based on the intelligence test and learning style inventory. After that the Experimental group was taught through Multi level teaching for 15 periods (of duration of 50 minutes) and the control group was taught the Existing Method of Teaching for the same topic was selected from Social science.

After Completion of the lesson, both experimental control group was given the same achievement test as posttest .The scores on these test was used for determining the Effectiveness of Multi level teaching over Existing method of Teaching.

b) Scoring and consolidation of Data

The answer sheets of the pre-test and post-test which are correct in all respects were scored according to the correct answer. Scores of pre-test and post-teat of experimental group and control group were tabulated separately. The scores obtained for the selected variables were then consolidated for final analysis

Statistical Techniques used for Analysis

The present study demands the use of following statistical techniques.

a) Test of Significance of Difference Between Two Means:

For the present study, test of significance of difference between means for large and small independent samples were used to compare the relevant variable between experimental and control groups (Garret, 1981).

The statistical technique was mainly used to test whether the experimental and control groups differ in pre-test, Achievement and Gain Scores without controlling the effect of the Covariates, for the large sample. The following formula suggested by Garret (1981) for large sample was used

$$t = \frac{M_1 - M_2}{\sqrt{\frac{SD_1^2}{n_1} + \frac{SD_2^2}{n_2}}}$$

Here M_1 , $M_2$are the Means , SD_1^2, SD_2^2 , are the Standard Deviation and N ,N_2 are the sample size of the group.The difference between Means is said to be significant, depending upon whether the 't' value exceeds the table value set for 0.01 and 0.05 level of significance.

For small sample, the following formula suggested by Garret (1981) was used

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\left(\frac{(N_1 - 1)S_1^2 + (N_2 - 1)S_2^2}{N_1 + N_2 - 2}\right)\left(\frac{1}{N_2} + \frac{1}{N_2}\right)}}$$

In the above formula, $\bar{x}_1$, $\bar{x}_2$ denoted the Means σ_1^2, σ_2^2 are the Standard deviations and N_1, N_2 are the sample size of the groups.

The difference between the Means is said to be significant depending upon whether' value exceeds the tabled value of't' for N_1+N_2-2 degrees of freedom at 0.05 level and 0.01 level of significance.

b) Analysis of Covariance (ANCOVA)

To examine the Effectiveness of Multilevel Teaching Strategy over the Existing method of teaching on the achievement in Social Science among standard VIII pupils, single factor ANCOVA with one covariate is used .Analysis of covariance serves the purpose of statistically removing the effects of extraneous variable from the dependent variable .In the present study ANCOVA is employed to

remove statistically the effect of confounding variables, the initial status of the subjects measured in terms of pre-test.

Analysis of covariance uses the principle of partial correlation with analysis of variance. The effect of the relevant variables are partialed out and the resulting adjusted means of the post-test scores are compared. Analysis of covariance is a method of analysis that enables the researcher to equate the pre-experimental status of the group in terms of relevant known variables (Best and Kahn, 2001) .ANCOVA serves the purpose of statistically removing the effect of extraneous variable (Ferguson 1986). ANCOVA is an important method of analyzing the experiments carried under condition that otherwise would be unacceptable (Ferguson, 1996).

Before proceeding to ANCOVA the data used for analysis is subjected to a thorough examination with a view to know whether the data is sufficient to satisfy the major assumptions suggested by Winer (1977,Ferguson(1996)to carry over the ANCOVA procedure .It is examined that the data is seen satisfied with the following assumptions

- The dependent variable which is under measurement should be normally distributed in population.
- The treatment groups should be selected at random from the same population.
- Within groups, Variances must be approximately equal.
- The contribution of variance in the total sample must be additive.
- The regression of the final scored on initial scores should be basically the same in all groups.

Chapter IV

ANALYSIS AND INTERPRETATION

- Preliminary Analysis
- Comparison of Means
- Analysis of Co-variance

ANALYSIS AND INTERPREATIONS

The main purpose of the present study was to find out the Effectiveness of Multilevel Teaching Strategy on Achievement in Social science among Secondary school students. The statistical analysis of the data has been done to reflect on the specific objectives kept for the study. The collected and tabulated data were analyzed using the statistical technique of‘t’ test and single factor ANCOVA.

Objectives of the Study

I. To compare the mean pretest scores of experimental and control group for total sample.

II. To compare the mean post test score of experiment and control group for total sample and sub sample based on gender.

III. To compare the mean gain score of students belonging to experimental and control group for total sample and sub sample based on gender.

IV. To study the Effectiveness of Multilevel Teaching Strategy on Achievement in Social Science among Standard VIII pupils

Hypotheses

I. There will be significant difference in the mean pre-test scores of the experimental and control group.

II. There will be significant difference in the mean scores of the post-test of the experimental and control groups for total sample and sub sample based on gender.

III. There will be significant difference in the mean gain scores of the experimental and control groups for total sample and sub sample based on gender.

IV. There will be significant effect of Multilevel teaching strategy on Achievement in social science of standard VIII pupils

Preliminary Analysis

The statistical properties of the variable in the study and the comparison of the mean scores of the relevant variables for the experimental and control group were done and presented in this section.

Important statistical constants

As part of preliminary analysis important statistical constants like mean, median, mode, standard deviation,skewness and kurtosis for the pre-test, post-test and gain scores were examined separately for experimental and control groups and is pointed in Table respectively.

Table 10

Statistical Constants of Achievement in Social Science for Experimental Group

SI. No.	Variables	Mean	Median	Mode	S.D	Skewness	Kurtosis
1	Pre-test	9.900	10.000	8.00[a]	3.133	-.146	.203
2	Post-test	17.47	18.00	21	4.183	-.617	-.035
3	Gain scores	7.57	7.00	7	2.208	-.579	.337

Table 11

Statistical Constants of Achievement in Social Science for Control Group

SI. No.	Variables	Mean	Median	Mode	S.D	Skewness	Kurtosis
1	Pre-test	9.39	10.00	10	2.820	-.177	-.935
2	Post-test	12.57	12.50	12	3.746	-.075	-.085
3	Gain scores	3.18	3.00	3	2.510	-.097	.745

Comparison of Means

In this section, comparison of the mean scores of Achievement in social science for experimental and control groups, in the pre-test, post-test and gain scores for total sample were attempted .Also the mean scores of Boys and Girls for post-test and gain scores were attempted and presented below.

a) Comparison of Mean Pre-test scores of Achievement in Social Science for Experimental and Control Groups

The mean scores of experimental and control groups on the pre-test were compared and studied using the test of significance of difference between means of large independent samples. The comparison was done for the sample in each of the experimental and control groups.

The mean and standard deviation of pre-test scores of both of the group were found out and subjected to the test of significance out difference between means. The data and results of the t-test are presented in the Table 12

Table 12

Test of Significance of the Mean scores Pre test between Experimental and Control Group for Total Sample

Experimental Group			Control Group			t- value	Level of significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
9.900	3.1332	30	9.3929	2.8197	28	.646	NS

It can be seen from table 12 that the obtained‘t’ value is below the limit set of 0.05 level at significance. So there was no significant difference found in the mean pre-test scores of experimental and control group for the Achievement test in Social Science.

It can be inferred from the‘t’ test that the performance of the experimental and control groups are similar in case of their pre-experimental status of Achievement measured in terms of pre-test.

b) Comparison of Mean post test scores of Achievement in Social Science for Experimental and Control Group

The mean performance of the experimental and control groups on the post scores were studied and compared using the test of significance of difference between means of large independent sample. The comparison was done for the total sample in the experimental and control groups

The Mean and Standard Deviation of the post test of both the groups were found out and subjected to the test of significance of difference between means. The data and result of 't' test bare presented in Table 13.

Table 13

Test of Significance of the Mean scores of post-test between Experimental and Control Group for Total sample

Experimental Group			Control Group			t value	Level of Significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
17.4667	4.1831	30	3.1786	2.510	28	4.683	0.05

Table 13 shows that the obtained 't' value is above the limit set for 0.05 level of significance ,so there exist a significance difference in the Mean Post-test scores of Experimental and Control Group.

It can be learned from the result of the 't' test that the performance of the experimental and control groups is different in the case of their post experimental status of Achievement in Social Science measured in terms of a post-test.

c) Comparison of the Mean Gain scores of Achievement in Social Science for Experimental and Control Groups

The mean scores of experimental and control groups on the gain scores were studied and compared using the test of significance of difference between means of large independent samples .The comparison was done for the total sample in the experimental and the control groups.

The mean and standard deviation of the gain score of both the groups were found out and subjected to the test of significance of difference between means. The data and results of the t-test presented in Table 14.

Table 14

Test of Significance of the Mean Scores of Gain Score Between Experimental and Control Groups

Experimental Group			Control Group			t-value	Level of significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
17.4667	4.1831	30	3.1786	2.5100	28	7.081	0.01

The obtained t-value as shown in Table 14 for the mean gain scores is greater than tae tabled value required for significance at 0.01 level. This suggests that there is significant difference in the mean gain scores of experimental and control groups. So the gain performance of the experimental and control groups are dissimilar

High mean gain score for the experimental group over the control group for the total sample is noticed .This revealed the superiority of the experimental group over the control group in the case of gain scores.

d) Comparison of Mean post-test scores of Achievement in Social Science for Boys between Experimental and Control groups.

The mean performance of boys of experimental and control groups in the post-test were studied and compared using the test of significance of difference

between means of small independent sample. The data and results of the t-test are presented in Table 15.

Table 15

Test of Significance of the Mean Scores of Post-test between Boys of Experimental and Control Group

Experimental Group			Control Group			t-value	Level of significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
17.8095	4.3659	21	12.6842	3.9306	19	3.886	0.01

Table 15 reveals that the 't' value for the mean post-test scores of Achievement in Social Science for boys between experimental and control groups ,is greater than the tabled value required for significance at 0.01 level.

This significant 't' value indicates that the mean post test scores of boys of the experimental and control groups are not similar. This revealed the boys of experimental group achieved more than the boys of control group in case of post test scores.

e) Comparison of Mean post-test scores of Achievement in Social Science for Girls between Experimental and Control Groups

The mean performance of girls of experimental and control groups in the post-test were studied and compared using the test of significance of difference between means of small independent samples. The data and results of the t-test are presented in Table 16.

Table 16

Test of Significance of the Mean Scores of post-test between Girls of Experimental and Control Groups.

Experimental Group			Control Group			t-value	Level of significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
16.6667	3.8405	9	12.333	3.535	9	2.490	0.05

The obtained 't' value as shown in Table 16 for mean post-test scores of Achievement in Social Science for girls between experimental and control groups. Is greater than the tabled value required for significance at 0.05 level. it can be inferred from the table that the mean post-test scores of girls of the experimental and control groups are dissimilar .This indicate that the girls of the experimental group achieved more than the girls of control group.

f) Comparison of Mean Gain Scores of Boys between Experimental and Control Groups.

The mean performance of boys of experimental and control groups in the gain scores were studied and compared using the test of significance of difference between means of small independent sample. The data and results of the test are presented in Table 17.

Table 17

Test of Significance of the Mean Gain Scores between Boys of Experimental and Control Groups

Experimental Group			Control Group			t-value	Level of significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
7.8095	2.24987	21	3.6842	2.80976	19	5.149	0.01

The table 17 shows the 't' value for the mean gain scores of boys between experimental and control groups, is greater than the tabled value required for significance at 0.01 level .This indicate that the mean gain score of boys of the experimental and control group are dissimilar .This significant 't' value reveals the superiority of boys of experimental group over the boys of control group in case of gain scores.

g) Comparison of Mean Gain Scores of Girls between Experimental and Control Groups

The mean performance of girls of experimental and control groups in the gain scores were studied and compared using the test of significance of difference between means of small independent sample. The data and results of the test are presented in Table 18**.**

Table 18

Test of Significance of the Mean Gain Scores between Girls of Experimental and Control Groups

Experimental Group			Control Group			t-value	Level of significance
M_1	σ_1	N_1	M_2	σ_2	N_2		
7.0000	2.12132	9	2.1111	1.26930	9	5.933	0.01

From the above table 18 reveals the‘t’ value for the mean gain scores of girls between experimental and control groups, is Greater than the tabled value required for significance at 0.01 level .This indicates that the mean gain scores of girls of the experimental and control groups are dissimilar .This significant‘t’ value reveals the girls of experimental group achieved more gain scores than the girls of control group in case of gain scores.

Summary of the Mean Comparison to Total Samples

The result of the t-test conducted for comparison of the mean pre-test, post-test and gain scores for total sample between experimental and control groups were summarized and present in Table 19.

Table 19

Summary of t-value for the Pre-test and Gain Scores for Experimental and Control Group (Total Sample)

Variable	t-value
Pre-test	.646
Post-test	4.683
Gain scores	7.081

The results show that the t-values in table -19 indicates the t-value obtained for pre-test is not significant. This implies that the experimental and control groups were similar in case of their performance in the pretest.

The t-value obtained for post-test is found significant .it can be inferred from the result that multilevel teaching strategy differentiates the experimental group and control groups. From the comparison the advantage of the experimental group is evident.Table-19 also suggested that the obtained‘t’ value for the gain scores for the total sample is found to be significant.

Analysis of Covariance

One factor ANCOVA was used to determine the effect of Multilevel Teaching Strategy on Achievement in Social Science of standard VIII Students. The procedure of ANCOVA, data and results are given in this section of analysis. Here it is made a comparison of effectiveness of multilevel teaching strategy on the achievement in social science over the existing method of teaching.

To determine the effectiveness of multilevel teaching strategies on the achievement in social science at secondary school level, the pre-test and post-test scores of experimental and control groups were subjected to statistical analysis of covariance. For the single factor ANCOVA ,two levels of method of teaching (multi level teaching and existing method) as independent variable, is incorporated with one covariate namely the pre-experimental status of the sample measured in terms of a pre-test .Achievement in Social Science is considered as the dependent variable.

Before proceeding to ANCOVA the data used for analysis is subjected to a thorough examination with a view to know whether the data is sufficient to satisfy the major assumptions suggested by Winer (1977), Ferguson (1996),to carry over the ANCOVA procedure. It is examined that the data is seen satisfied with the following assumptions.

1. The dependent variable, which is under measurement, should be normally distributed in the population.
2. The treatment groups should be selected at random from the same population.
3. Within groups, variance must be approximately equal.
4. The contributions of variance in the total sample must be additive
5. The regression of the final scores on initial scores should be basically the same in all groups.

For this purpose the sum of squires variance along with the corresponding degrees of freedom and the ‘F’ ratio were calculated .The summary of analysis of

co-variance for achievement scores are dependent variables with pre-test scores as covariate is given in Table 20.

Table 20

Summary of Single Factor ANCOVA for Achievement scores as Dependent Variable with Pre test scores as Covariate

Sl. No.	Source variation	Sum of squares	df	Mean squares	F-value	Level of significance
1	Group	271.993	1	271.993		
2	Error	308.622	55	5.611	48.472	0.01
3	Total	580.615	56			

The obtained F-ratio was tested for significance. Since the table value of F ratio for df (1,55) is 6.8 at 0.01 level of significance, the obtained F-ratio is highly significant (F=48.472)is greater than the tabled value at 0.01 levels of significance .The significant F-ratio shows that the means of post test scores of pupils in the experimental and control groups differ significantly after they have been adjusted for difference in the pre test scores .There exists a significant difference in the post test score after adjusting pre-test score using pre-test score as covariate.

It reveals that from the covariance analysis that after a linear adjustment was made for the effect of variation due to the differences in the pre-experimental status in achievement in social science as measured by the Co-variant (pre-test), there exist statistical difference between the two groups of teaching methods.

Comparison of Adjusted Mean

Scores of achievement of experimental and control are compared by pre-test as covariate .since the 'F' value was significant at 0.01 level. Adjusted Mean Comparison were made.

Table 21

Adjusted Mean Comparison of Experimental and Control Groups

Adjusted Mean	Experimental Group	Control Group
	17.20	12.85

Adjusted F-value is 48.472 is significant at 0.01 level with degrees of freedom 1/55.further the adjusted mean scores of achievement of experimental group is17.20 is significantly greater than control group which is 12.85.The absolute difference between adjusted mean of Experimental and control groups is 4.35.Thus the hypothesis that there will be significant Effect of Multi Level Teaching Strategy on Achievement in Social Science of standard VIII pupils is accepted .Hence it can be concluded that the Experimental Group is superior in their Achievement in Social Science over Control Group.

Chapter V

SUMMARY, CONCLUSION AND SUGGESTIONS

- Study in Retrospect
- Major Findings of the Study
- Tenability of Hypothesis
- Conclusion
- Educational Implications
- Suggestions for further research

SUMMARY, CONCLUSION AND SUGGESTIONS

This chapter gives an overview of the significant aspects of the stages of conducting the study, the important findings, tenability of hypothesis their educational implications and suggestions for further research.

Study in Retrospect

The various aspects related to the different stages of the present study like the problem, variable, objectives, hypothesis, and methodology are given in a nutshell.

Restatement of the Problem

The problem of the present study was stated as “EFFECTIVENESS OF MULTI LEVEL TEACHING STRATEGY ON ACHIEVEMENT IN SOCIAL SCIENCE AMOMG STANDARD VIII STUDENTS”.

Variables Selected for the Study

The independent, dependent and control variables selected for the study are the following:

Independent variable

Multilevel teaching strategy and Existing Method of teaching

Dependent Variable

Achievement in Social science

Objectives of the Study

The following are the objectives formulated for the study

I. To compare the mean pretest scores of experimental and control group for total sample.

II. To compare the mean post test score of experiment and control group for total sample and sub sample based on gender.

III. To compare the mean gain score of students belonging to experimental and control group for total sample and sub sample based on gender.

IV. To study the Effectiveness of Multilevel Teaching Strategy on Achievement in Social Science Of Standard VIII pupils

Hypothesis of the Study

I. There will be significant difference in the mean pre-test scores of the experimental and control group.

II. There will be significant difference in the mean scores of the post-test of the experimental and control groups for total sample and sub sample based on gender.

III. There will be significant difference in the mean gain scores of the experimental and control groups for total sample and sub sample based on gender.

IV. There will be significant effect of Multilevel teaching strategy on Achievement in social science of standard VIII pupils.

Methodology

The methodology of the present study is briefly discussed in this section.

- **Design of the study**

By taking the major objectives of the study into account, the investigator formulated "Quasi Experimental design" in which the experiment involves a comparison of the Effectiveness of Multilevel Teaching Strategy with that of Existing Teaching Method. The study was conducted Pre -test, Post-test, Nonequivalent group Design (Best 1992)

O_1x O_2

O_3 C O_4

Where,

O_1, O_3	-	Pre-tests
O_2, O_4	-	Post-tests
X	-	Application of experimental treatment
C	-	Application of control treatment

Sample for the study

The sample of the study consist of 30 in the experimental group and 28 in control group. The sample for both experimental and control groups were two

divisions of standard VIII students drawn from the Pavandoor H.S.S, Pavandoor.

Tools used for the study

a) The investigator developed lesson transcripts for teaching through "Multilevel Teaching Strategy"

b) The investigator developed lesson transcripts for teaching through "Existing Teaching Strategy"

c) Achievement test in Social Science

d) Multiple Intelligence Test (Nikhil.K & Koya.H.M.P,2019)

e) Learning Style Inventory (Nikhil.K & Koya.H.M.P,2019)

Statistical Techniques Used

In the present study, the collected data were analyzed using the following statistical techniques.

1. Test of Significance of Different between Means for Large and Small Independent Sample

For the present study, test of significance of difference between means for large and small independent samples where used to compare the relevant variables between the experimental and control group.

2. Single Factor ANCOVA

To examine the Effectiveness of Multilevel Teaching Strategy over the Existing Method of Teaching on the Achievement in Social science of Standard VIII pupils, single factor ANCOVA with pre-experimental status as covariate is used.

Analysis of covariance serves the purpose of statistically removing the effects of extraneous variable from the dependent variable

Major Findings of the Study

The major findings of the study are given briefly in this section. For analysis seven comparison of means and one ANCOVA were done

a) Comparison of Mean Pre-test scores of Achievement in Social Science for Experimental and Control Groups

No significant difference between mean pre-test scores of experimental and control groups were noticed .Both of the groups were found equivalent in terms of pre-test scores.t-value of test of significance for pre-test scores is given in the Table 22

Table 22

t-value of the Test of Significance of Difference between Experimental and Control Groups for pre-test Scores

SI.NO	Variable	Sample	t-value
1.	Pre-test	Total	.646

b) Comparison of the Mean Post-test Scores of Achievement in Physics of Experimental and Control Groups for Total Sample ,Boys and Girls

Significant difference in the mean post-test scores between experimental and control groups for total samples, boys and girls were obtained .The obtained t-value are presented in Table 23.

Table 23

t-value of Test of Significance of Difference between Experimental and Control Groups for Post-test Scores.

SI. No.	Variables	Sample	t-value
1	Post-test	Total	4.683
2	Post-test	Boys	3.886
3	Post-test	Girls	2.490

c) Comparison of the Mean Gain Scores of Achievement in Social Science of Experimental and Control Groups for Total Sample, Boys and Girls

The obtained t-value for the gain scores of total sample, boys and girls are found to be significant .The t-values are presented in Table 24.

Table 24

t-values of the Test of Significance of Difference between Experimental and Control Groups for Gain Scores

SI. No.	Variable	Sample	t-value
1	Gain scores	Total	7.081
2	Gain scores	Boys	5.149
3	Gain scores	Girls	5.933

Analysis of Covariance for Achievement in Social Science

One factor ANCOVA was used to study the Effectiveness of Multilevel teaching strategy over the existing method of teaching. From the covariate analysis it can be inferred that when linear adjustment is made for the effect of variation due to difference in the pre-experimental status of the subjects, there is statistically significant difference between two groups. The 'F' value obtained by covariate analysis is presented in the Table 25.

Table 25

Summary of ANCOVA for Achievement in Social Science

SI.NO	Dependent Variable	Sample	F-value
1	Achievement in Social Science	Total	48.472

Comparison of Adjusted Mean:

After the significant 'F' value is obtained, to examine the Effectiveness of Multilevel teaching strategy over the existing method of teaching, adjusted means of comparison were used. 't' value for adjusted means is presented in the Table 26.

Table 26

Summary of Adjusted Mean Comparison

	Experimental Group	Control Group
Adjusted Means	17.20	12.85

From the adjusted means comparison , it can be concluded that there exist a significant difference between two methods of teaching-Multilevel teaching strategy and existing method of teaching. By the comparison of adjusted means we can clearly say that Multilevel teaching strategy is highly effective than the existing method.

Tenability of Hypothesis

Tenability of the hypothesis was, examined in the light of the major findings of the study.

- **The first hypothesis status that, there will be significant difference in the mean pre-test scores of the experimental and control group.**

It was found that the difference in the mean pre-test scores of experimental and control groups is not significant. Thus the first hypothesis is rejected.

- **The second hypothesis states that ,there will be significant difference in the mean scores of the post-test of the experimental and control groups for total sample and sub sample based on gender**

Significant difference between the experimental and control groups in mean post-test scores for total sample and subsample based on gender were noticed. Hence the second hypothesis is fully substantiated.

- **The third hypothesis states that, there will be significant difference in the mean gain scores of the experimental and control groups for total sample and sub sample based on gender**

The difference in the mean gain scores of experimental and control groups for total sample, boys and girls were found to be significant. Thus the third hypothesis is accepted complete.

- **The fourth hypothesis states that, pupils taught through multilevel teaching strategy will significantly differ in Achievement in Social Science than pupils taught through the existing method of teaching.**

The 'F' value is found to be highly significant between experimental and control groups for total sample. From this we can concluded that the multilevel teaching strategy is more effective than the existing method of teaching social science VIII standard pupils .Hence this hypothesis is fully substantiated.

Conclusions

Among seven mean comparison, six values were found to be significant. Only the mean comparison between pre-test scores of experimental and control groups was not significant. The values obtained by test of significance of difference between means of experimental and control groups for post-tests and gain scores for total sample and sub samples formed on the basis of gender were highly significance. Hence, we can conclude that the pupils taught through the new method of teaching Multilevel teaching strategy have achieved more than that of the control group.

The result of analysis of covariance also indicates the high performance of experimental group. The obtained t-value after the adjusted mean comparison was highly significant. From the above objectives we can safely conclude that Multilevel teaching strategy is an effective method of teaching over existing method of teaching on achievement in social science.

This study investigated the students' learning outcome from multilevel teaching had made a change in achievement and attitudes towards these approaches. The results showed significant differences in the achievement test scores in favour of multilevel teaching. In addition, the results indicate that there is a significant difference in the students' achievement in favour multilevel teaching strategy over the existing method of teaching .These results imply some suggestions to teacher educators and instructional designers in using different teaching approaches as students may prefer one over the other.

Educational Implications

The present study reveals that the using of Multilevel teaching strategy in learning is effective for the proper understanding and meaningful learning of the students. It also holds several implications for instructional interventions such as teaching students how to be more aware of their learning processes and products as well as how to regulate those processes for more effective learning. As students become more skilled at using multilevel teaching strategies, they gain confidence and become more independent as learners. Independence leads to ownership as students realize they can pursue their own intellectual needs.

Multilevel Teaching Strategy-Effective for the proper understanding of the content

The present study revealed that the use of Multilevel Teaching Strategy is effective for the proper understanding and meaningful learning of the content. Multilevel teaching strategy provides maximum freedom of learner expressions. Opportunity to discus, interact, speak, listening, observing, communicate etc. The different roles of the learner provide maximum clarity to the content taught and since the method is very democratic.it is helpful in developing social interpersonal skills.

Develop the Cooperative and Collaborative skills

Participating Multilevel teaching strategy in an educational environment may lead to modification of behavior in all aspects of learners including team spirit, communication, and imagination, co-operation, self-reflection, creativity, appreciating the academic content and inter-dependence

Easy Attainment of Multi-faceted Objectives

It enhanced the goal of attainment of higher order objectives. In the conventional methods, the content is achieved in cognitive domain. The new curriculum envisages attainment of multifaceted objectives such as concept domain, process domain, attitude domain and creativity domain. And meditative effort is needed to design an Multilevel teaching strategy in social science to include all the levels of problems as per objectives of the curriculum.

Easy Way to Effective Learning

The present study revealed that the use of Multilevel Teaching Strategy is effective for the proper understanding and meaningful learning of the content. And this strategy is alternative method for effective learning. It is also indicate that students of different learning styles different ability levels can be brought to optimum level, if Multilevel teaching strategy is utilized in an effective way

Develop Analytical Skill of the Learners

From this research, learners manifest high potential to take on multilevel teaching strategy more especially in regard to learner self-regulation exhibited. Multilevel teaching is help to increase learners' levels of knowledge construction in order to create analytical skills in them.

Enhance Learners Achievement

Multilevel Teaching strategy help to enhance Social Science process skill and Social Science achievement could be improved and the learners can be transformed into global learners. So Multilevel Teaching Strategy can be considered as one of the new initiatives in pedagogical approaches by integrating in social science education.

Suitable for classroom of 21st century

Today classroom are mainly based on unhealthy competition which adversely effects the social relationship of students. Multilevel teaching strategy may be suggested as a strategy to curb this unhealthy competitive mentally and to inculcate co-operation among students and students in multilevel classroom is given freedom

to discover, ask questions etc. A variety of learning experiences can be provided in this teaching strategy where the pupil learns to construct his own knowledge though direct experience of the learners. And the multilevel situation the students to successfully faced the new situation. It means multilevel teaching strategy are essential for the 21st century

Suggestions for Further Research

Every educational research has its own limitations and shortcomings, and the current research is no expectation as it focus on the use of multilevel teaching strategy in relation to teaching Social science in secondary School level.so for the continuation of the current study the researcher puts forward the following suggestions

- Studies similar to current study need to be conducted by potential researchers in other subject like Mathematics, language and Physics.
- The experiment can be conduct on CBSE school students
- The present study was restricted to the rural sample. The experiment can be tried out on urban school children.
- The study can be extended to different sample like tribal schools

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APPENDICES

APPENDIX-1

LESSON TREASRIPT BASED ON MULTI LEVEL TEACHING STRATEGY -1

Dr HASSAN KOYA M.P.
Assistant Professor

NILHIL KUMAR.K
M.Ed. Student

Preliminary Details

Name of the Teacher	:	Nikhil kumar .K	Standard: VIII
Subject	:	Social Science	Duration: 1 Hour
Unit	:	Economic planning in India	Strength:30
Topic	:	Milestones in Economic planning	
Name of the School	:	Pavandoor H.S.S	

Focus	:	Economic planning in India
Learning Objectives	:	Understanding the evolution of planning
	:	Understanding the need of Economic planning

1. Developmental stage

Phase I	:	**Planning**
Content	:	Evolution of economic planning
Facts	:	The objectives of economic planning are decides on the basis of the needs of the society.

Economic growth indicates the increase in output of goods and services produced in the Country

The father of Indian planning is M. visvesaraia

Resources : Paper Script, Power point presentation, social science text book

Phase II : Setting the class

Teacher formed 4 groups based on Intelligence and Learning style of a student in Multi Level Teaching Strategy

Group 1

Verbal Intelligence +Physical learning style

Group 2

Musical Intelligence + Environmental learning style

Group 3

Logical and Mathematical Intelligence +Sociological learning style

Group 4

Naturalistic intelligence +Emotional learning style

Phase III : Face to Face Teaching

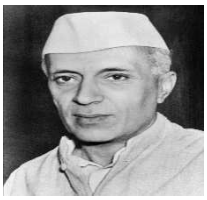
Structured Activity	Response
Teacher Enters the class The teacher had a friendly inter action with the students asking questions from previously taken lessons. Student answer them. Then teacher shows the PowerPoint presentation to the students	

Phase IV :- Initiative Discussion

Teacher then hand over different paper script having description and images of India's economic planning in different groups

---

Model of paper script 1



Drain theory

People's plan

Father of Economic planning

- Bombay Plan'(1944) prepared by a group of industrialists
- 1938, National Planning Committee was formed under the leadership of Jawaharlal Nehru
- Karachi Conference (1931) of the Indian National Congress was how to overcome the British exploitation and stunted development
- The first industrial policy (1948) formulated in independent India strengthened economic development through planning

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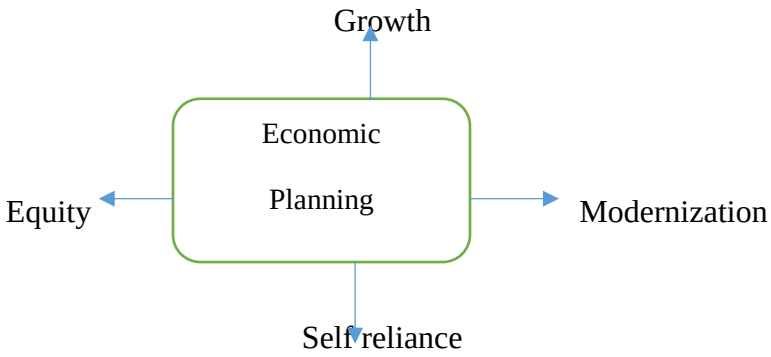
Model of paper script 2

Economic Planning of India

Economic planning was initiated in India even before the

country got independence. You have studied the 'Drain theory' of Dada Bhai Naoroji, in earlier classes. The main agenda for discussion in the Karachi Conference (1931) of the Indian National Congress was how to overcome the British exploitation and stunted development. In 1938, National Planning Committee was formed under the leadership of Jawaharlal Nehru. It was followed by 'Bombay Plan'(1944) prepared by a group of industrialists who assembled in Bombay for the economic development of India. The 'Peoples Plan' prepared by the renowned social activist, M.N Roy also helped in shaping India's planning. The first industrial policy (1948) formulated in independent India strengthened economic development through planning. The 'Father of Indian planning, M.Visvesvaraia, who authored the famous 'Planned Economy for India' in 1934 gave clear direction to economic planning. The Indian Cabinet which met in 15th March 1950 passed a resolution to establish the Planning Commission of India.



Model of paper script 3

First Five Year Plan 1951-56 Overall development of agriculture Second Five Year Plan 1956-61 Industrial development Third Five Year Plan 1961-66 Self-sufficiency in food , self-sufficiency in economy Fourth Five Year Plan 1969-74 Self-reliance and sustained growth Fifth Five Year Plan 1974-79 Removal of poverty Sixth Five Year Plan 1980-85 Improvement in infrastructure

in agriculture and industry. Seventh Five Year Plan 1985-90 Modernization and increase in employment,

In 1938, National Planning Committee was formed under the leadership of Jawaharlal Nehru. It was followed by 'Bombay Plan'(1944) prepared by a group of industrialists who assembled in Bombay for the economic development of India. The 'Peoples Plan' prepared by the renowned social activist, M.N Roy also helped in shaping India's planning. The first industrial policy (1948) formulated in independent India strengthened economic development through planning.

Model paper script 4

Bombay Plan'(1944) prepared by a group of industrialists

In 1938, National Planning Committee was formed under the leadership of Jawaharlal Nehru

Peoples Plan' prepared by the renowned social activist, M.N Roy also helped in shaping India's planning.

Economic growth indicates the increase in output of goods and services produced in the country.

The objective of equity will be attained when all citizens receive basic necessities of life such as food, clothing, shelter, education, drinking water, health protection and righteous distribution of wealth. Ensuring equity

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Teacher ask them to read soundly

After that ,teacher asks them have a discussion on the mail points given in the paper scripts

After the discussion of the groups teacher gives small explanation

Phase V :- Activity based Learning

Teacher provide different and suitable activities for each group with the help of paper script and Social science text book

Activity A Four group 1

The teacher asked to prepare oral presentation on the topic History of India's Economic planning

Activity B for Group 2

The teacher Asked to prepare Rhyming on the topics Economic planning of India

(Making information's or study notes in to a rhyming is a easy way to remember or memories the information for the learners)

Activity C for Group 3

Teacher ask to prepare a Time line Based on the topic Economic Planning of India

Activity D For Group 4

Teacher asked to prepare Questions and Answer on the topic Milestones in Economic planning

Phase VI Evaluation Teacher Evaluate each group works and asking questions in whole class. **Phase VII Follow up activity** Prepare a photo album based on the topic Evolution of economic planning of India	

APPENDIX-II

LESSON TRANSCRIPT BASED ON MULTI LEVEL TEACHING STRATEGY -2

Dr HASSAN KOYA M.P.
Assistant Professor

NILHIL KUMAR.K
M.Ed. Student

Preliminary Details

Name of the Teacher	:	Nikhil kumar .K	Standard: VIII
Subject	:	Social Science	Duration: 1 Hour
Unit	:	Economic planning in India	
Topic	:	പഞ്ചവത്സരപദ്ധതി	Strength: 28
Name of the School	:	Pavandoor H.S.S	

Focus : പഞ്ചവത്സരപദ്ധതി

Learning objectives

- പഞ്ചവത്സരപദ്ധതികൾ ഇന്ത്യയുടെ വികസനത്തിന് ചെലുത്തിയ സ്വാധീനം മനസ്സിലാക്കുന്നതിന്
- കേന്ദ്രീകൃത ആസൂത്രണവും വികേന്ദ്രീകൃത ആസൂത്രണവും വേർതിരിച്ച് മനസ്സിലാക്കുന്നതിന്
- വികസനത്തിനെ സംബന്ധിച്ച കാഴ്ചപ്പാടുകൾ രൂപീകരിക്കുന്നതിന്

1. Developmental stage

Phase I : Planning

Content : പഞ്ചവത്സരപദ്ധതി കേന്ദ്രീകൃത ആസൂത്രണവും വികേന്ദ്രീകൃത ആസൂതണവും

Facts

- ദേശീയതലത്തിൽ പദ്ധതികൾ ആസൂത്രണം ചെയ്തു നടപ്പാക്കിയിരുന്ന പദ്ധതിയാണ് കേന്ദ്രീകൃത ആസൂത്രണം
- പ്രാദേശികതലത്തിൽ പദ്ധതികൾ ആസൂത്രണം ചെയ്തു നടപ്പിലാക്കുന്ന പദ്ധതിയാണ് വികേന്ദ്രീകൃതാസൂത്രണം എന്ന് പറയുന്നത്.

Resources

- ലാപ്ടോപ്പിന്റെ സഹായത്തോടെ ചിത്രങ്ങൾ കാണിക്കുന്നു.
- സാമൂഹ്യശാസ്ത്ര പാഠപുസ്തകം
- വികേന്ദ്രീകാസൂത്രണവുമായി ബന്ധപ്പെട്ട ഫ്ലോചാർട്ട്

Phase II : Setting the class

അധ്യാപകർ വിദ്യാർത്ഥികളുടെ ബുദ്ധിയുടെയും പഠനശൈലിയുടെയും അടിസ്ഥാനത്തിൽ നാലു ഗ്രൂപ്പുകളായി തിരിക്കുന്നു.

Group 1

Verbal Intelligence +Physical learning style

Group 2

Musical Intelligence + Environmental learning style

Group 3

Logical and Mathematical Intelligence +Sociological learning style

Group 4

Naturalistic intelligence +Emotional learning style

Phase III : Face to Face Teaching

Structured Activity

അദ്ധ്യാപകർ ക്ലാസ്സിൽ പ്രവേശിപ്പിച്ച് കുട്ടികളുമായുള്ള സംഭാഷണത് ശേഷം ലാപ് ടോപ്പിന്റെ സഹായത്തോടെ ചില ചിത്രങ്ങൾ വിദ്യാർത്ഥികളെ കാണിക്കുന്നു.

ഹരിത വിപ്ലവം ധവളവിപ്ലവം നീല വിപ്ലവം

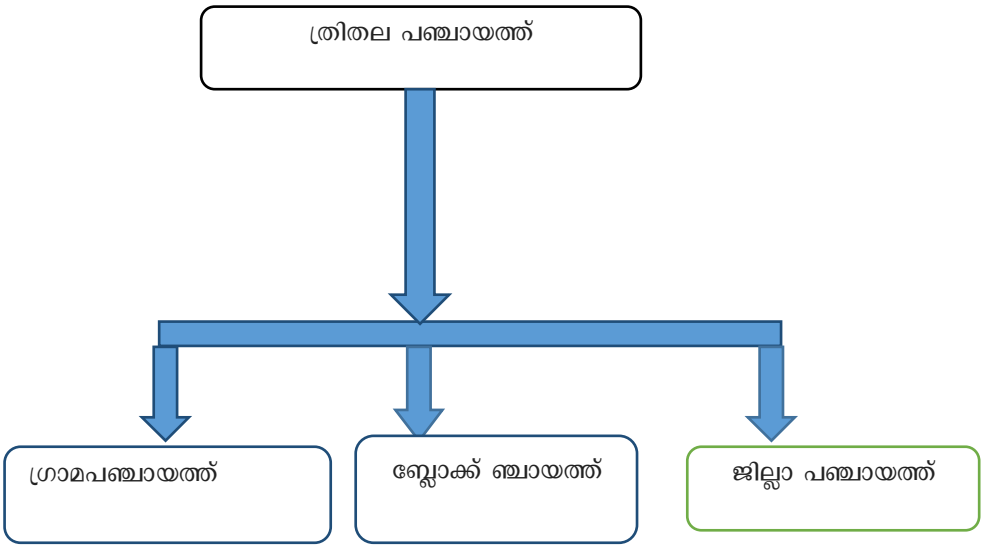
ഈ ചിത്രങ്ങങ്ങൾ എന്തുമായി ബന്ധപ്പെട്ടതാണ് എന്ന്? അധ്യാപകർ കുട്ടികളോട് ചോദിക്കുന്നു കുട്ടികളുടെ മറുപടി ലഭിച്ചതിനുശേഷം

ഇന്ത്യയിലെ കാർഷിക രംഗത്തിലെ വൻ മാറ്റങ്ങൾക്ക് കാരണമായ ഹരിതവിപ്ലവം, പാലും പാലുല്പന്നങ്ങളുടെയും പുരോഗതി ലക്ഷ്യമിട്ടു നടപ്പാക്കിയ ധവളവിപ്ലവം, മത്സ്യ ഉൽപാദനം ലക്ഷ്യമിട്ടു നടപ്പാക്കി എന്നിവയാണ് ചിത്രങ്ങളിൽ സൂചിപിപ്പിക്കുന്നത്.

ഈ പദ്ധതികൾ നടപ്പാക്കിയത് പഞ്ചവത്സരപദ്ധതി കാലത്താണ് എന്ന് അധ്യാപകർ പറയുന്നു.

Phase IV : Imitative Discussion

തുടർന്ന് അധ്യാപകർ വികേന്ദ്രികാസൂത്രണവുമായി ബന്ധപ്പെട്ട ഫ്ലോചാർട്ട് കാണിക്കുന്നു.



അതിനുശേഷം 73, 74 ഭരണഘടനാ ഭേദഗതിയുടെ അടിസ്ഥാനതതൽ 1993 ൽ പഞ്ചാ യത്തീരാജ് സംവിധാനം നിലവിൽ വരാൻ കാരണമായി എന്ന് അധ്യാപകർ പറയുന്നു

Phase V : Activity Based Learning

അധ്യാപകർ ഓരോ ഗ്രൂപ്പിനും യോജിച്ച പ്രവർത്തനങ്ങൾ നൽകുന്നു.

പ്രവർത്തനം ഗ്രൂപ്പ് 1

പാഠപുസ്തകത്തിൽ നല്കിയിരിക്കുനന ഇന്ത്യയിൽ നടപ്പാക്കിയ പഞ്ചവത്സരപദ്ധതി കളും അവയുടെ ലക്ഷ്യങ്ങളും സംബന്ധിച്ച പട്ടിക വിശകലനം ചെയ്ത് അവതരിപ്പിക്കാൻ ആവശ്യപ്പെടുന്നു.

പ്രവർത്തനം ഗ്രൂപ്പ് 2

ഹരിത വിപ്ലവത്തിന്റെയും ധവളവിപ്ലവത്തിന്റെയും ഫലമായി ഇന്ത്യ കൈവരിച്ച പുരോ ഗതി എന്ന വിഷയത്തിൽ ചർച്ച നടത്തി ചർച്ചയുടെ പ്രശസ്ത ഭാഗങ്ങൾ അവതരിപ്പിക്കാൻ ആവശ്യപ്പെടുന്നു.

പ്രവർത്തനം ഗ്രൂപ്പ് 3

ത്രിതല പഞ്ചായത്തിന്റെ ഉത്തരവാദിത്വങ്ങൾ പട്ടികപ്പെടുത്താൻ ആവശ്യപ്പെടു ന്നു.

പ്രവർത്തനം ഗ്രൂപ്പ് 4

നിങ്ങളുടെ പ്രദേശത്തിന്റെ വികസനത്തിനായി തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ എന്തെല്ലാം പ്രവർത്തനങ്ങളാണ് ചെയ്തത് എന്ന് ചർച്ച നടത്തി റിപ്പോർട്ട് തയ്യാറാക്കാൻ ആവശ്യപ്പെടുന്നു

Phase VI :Evaluation

വിദ്യാർത്ഥികളുടെ പ്രവർത്തനങ്ങൾ അധ്യാപകർ വിശകലനം ചെയ്ത് അധ്യാപകർ പാഠഭാഗം അവസാനിപ്പിക്കുന്നു.

Phase VII : Follow up Activity

പഞ്ചവത്സരപദ്ധതികൾ ഇന്ത്യയുടെ വികസവത്തിൽ വരുത്തിയ സ്വാധീനം എന്ന വിഷയത്തിൽ വിവരണം തയ്യാറാക്കാൻ ആവശ്യപ്പെടുന്നു.

APPENDIX - III

Lesson Transcript Based on Constructivist Method

Dr. M.P.Hassankoya
Assistant Professor

Nikhil Kumar.K
M.Ed. Student

Preliminary Details

Name of the Teacher	: Nikhil Kumar.K	Standard : VIII
Subject	: Social Science	Duration : 1 Hour
Unit	: Economic planning in India	Strength : 28
Topic	: Milestones in Economic planning	
Name of the school	: Pavandoor H.S.S	

Unit : ഇന്ത്യയും സാമ്പത്തിക ആസൂത്രണവും

Learning Objectives:

- സാമ്പത്തിക ആസൂത്രണത്തിന്റെ ലക്ഷ്യങ്ങൾ മനസ്സിലാക്കുന്നതിന്
- സാമ്പത്തിക ആസൂത്രണം എന്നാൽ എന്താണെന്ന് മനസ്സിലാക്കുന്നതിന്
- ആസൂത്രണത്തിന്റെ ആവശ്യകത മനസ്സിലാക്കുന്നതിന്
- സമൂഹത്തിന്റെ പൊതുവായ ആവശ്യങ്ങളുടെ അടിസ്ഥാനത്തിൽ ആണ് സാമ്പത്തിക ആസൂത്രണത്തിന്റെ ലക്ഷ്യങ്ങൾ നിർണയിക്കുന്നത്

Resources

സാമൂഹ്യശാസ്ത്രം പാഠപുസ്തകം, ഫ്ളോചാർട്ട്

Learning Experience

Introductory	Response
അധ്യാപകൻ ക്ലാസ്സിൽ പ്രവേശിച്ച് കുട്ടികളുമായി സൗഹൃദ സംഭാഷണത്തിൽ ഏർപ്പെടുന്നു.	
തുടർന്ന് അധ്യാപകൻ കുട്ടികളോട് ഉപജില്ലാ കലോത്സവം നിങ്ങളുടെ വിദ്യാലയത്തിൽ വെച്ച് നടത്തുന്നു എങ്കിൽ അതിന് എന്തെല്ലാം ആസൂത്രണം ആണ് വേണ്ടത് എന്ന് അധ്യാപകൻ ചോദിക്കുന്നു.	

കുട്ടികളുടെ മറുപടി ലഭിച്ചതിനുശേഷം ഉപജില്ലാ കലോത്സവം സുഗമമായി നടക്കുനനതിന് ഇങ്ങനെ ഒട്ടേറെ കാര്യങ്ങൾ മുൻകൂട്ടി ആലോചിച്ച് തീരുമാനിക്കേണ്ടതുണ്ട്.	
ഇതുപോലെ ഏതു കാര്യത്തിനും ആസൂത്രണം വളരെ പ്രധാനപ്പെട്ടതാണ്	
''ലഭ്യമായ വിഭവങ്ങൾ ഉപയോഗിച്ച് സമൂഹത്തിന്റെ സാമ്പത്തിക ലക്ഷ്യങ്ങൾ നേടാൻ നടത്തുന്ന മുന്നൊരുക്കത്തെയാണ് സാമ്പത്തികാസൂത്രണം'' എന്ന് പറഞ്ഞുകൊണ്ട് അധ്യാപകൻ പാഠ ഭാഗത്തിന് ഒരു ആമുഖം നൽകുന്നു.	
പിന്നീട് അധ്യാപകൻ ആസൂത്രണത്തിലെ ലക്ഷ്യങ്ങൾ എന്തെല്ലാം എന്ന് വിവരിക്കുന്നു. ഫ്ളോചാർട്ട് കുട്ടികളെ കാണിക്കുന്നു.	
Development Activity	
സാമ്പത്തികാസൂത്രണം എന്ന പാഠഭാഗവുമായി ബന്ധപ്പെട്ട ചോദ്യങ്ങൾക്ക് ഉത്തരമെഴുതാൻ ആവശ്യപ്പെടുന്നു.	
ക്രോഡീകരണം	
സ്വാതന്ത്ര്യം ലഭിക്കുന്നതിന് മുമ്പ് തന്നെ സാമ്പത്തിക ആസൂത്രണത്തിന് ഇന്ത്യയിൽ ഇതിന് തുടക്കം കുറിച്ചിരുന്നു.	
ഇന്ത്യയുടെ സാമ്പത്തിക ആസൂത്രണത്തിന് വ്യക്തമായ മാർഗനിർദ്ദേശം നൽകിയ എം. വിശ്വേശ്വരയ്യ ഇന്ത്യയുടെ സാമ്പത്തികാസൂത്രണത്തിന്റെ പിതാവ് എന്ന് അറിയപ്പെടുന്നു.	
എം.എൻ. റോയിയാണ് ജനകീയ പദ്ധതി ആരംഭിച്ചത് എന്നീ വിവരങ്ങൾ പറഞ്ഞ് അധ്യാപകൻ പാഠഭാഗം ക്രോഡീകരിക്കുന്നു	
Concluding activity	
ചേരുംപടി ചേർക്കുക ദേശീയ ആസൂത്രണ കമ്മിറ്റി – എം.വിശ്വേശ്വരയ്യ ജനകീയ പദ്ധതി – 1950 സാമ്പത്തികാആസൂത്രണത്തിന്റെ പിതാവ് – എം.എൻ. റോയ് ആസൂത്രണകമ്മീഷന്റെ രൂപീകരണം – 1938	
Follow up Activity	
ഇന്ത്യയും സാമ്പത്തികാസൂത്രണവും എന്ന വിഷയത്തിൽ ലഘുവിവരണം തയ്യാറാക്കുക.	

APPENDIX- IV

FAROOK TRAINING COLLEGE

CALICUT

ACHIEVEMENT TEST IN SOCIAL SCIENCE-STANDARD VIII (DRAFT)

Dr HASSAN KOYA M.P.
Assistant Professor

NILHIL KUMAR.K
M.Ed. Student

വിട്ടഭാഗം പൂരിപ്പിക്കുക

1. ആസൂത്രണകമ്മീഷൻ നിലവിൽ വന്നത് ..... വർഷത്തിലാണ്?
2. ലഭ്യമായ വിഭവങ്ങൾ ഉപയോഗിച്ച് സമൂഹത്തിന്റെ സാമ്പത്തിക ലക്ഷ്യങ്ങൾ നേടാൻ നടത്തുന്ന മുന്നൊരുക്കത്തെ ..... എന്ന് പറയും?
3. പ്രധാനമന്ത്രി അധ്യക്ഷനായി ദേശീയതലത്തിൽ പദ്ധതികൾ ആസൂത്രണം ചെയ്തു നടപ്പിലാക്കുന്ന പദ്ധതിയാണ്.....?
4. രാജ്യത്തെ മൊത്തം സാധനങ്ങളുടെയും സേവനങ്ങളുടെയും ഉൽപ്പാദന വർദ്ധന വിനെ ..... എന്ന് പറയും?
5. ഒരു പ്രത്യേക മേഖലയ്ക്കു മുൻഗണന നൽകി അഞ്ചുവർഷം കൊണ്ട് ലക്ഷ്യം നേടുന്ന പദ്ധതിയാണ് ..... ?
6. ഒന്നാം പഞ്ചവത്സരപദ്ധതി പ്രധാന പരിഗണ നൽകിയത് ..... മേഖലയ്ക്കാണ്?
7. അത്യുല്പാദന ശേഷിയുള്ള വിത്തിനങ്ങൾ ജലസേചന പദ്ധതികൾ, രാസവളം, കീടനാശിനികൾ, കുറഞ്ഞ പലിശയിൽ സാമ്പത്തിക സഹായം എന്നിവ ഉപയോഗപ്പെടുത്തി കാർഷിക ഉല്പാദനത്തിൽ വരുത്തി ഗണ്യമായ പുരോഗതിയാണ് .....?
8. ത്രിതല പഞ്ചായത്തുകളാണ് ഗ്രാമപഞ്ചായത്ത് ബ്ലോക്ക് .....?
9. പ്രാദേശിക തലത്തിൽ പദ്ധതികൾ ആസൂത്രണം ചെയ്തു നടപ്പിലാക്കുന്ന പദ്ധതിയാണ് .....?
10. ലഭ്യമായ വിവഭവങ്ങൾ ഉപയോഗിച്ച് ഇന്ത്യയുടെ മാനവശേഷി പ്രയോജനപ്പെടുത്തി കൃഷിയിലും വ്യവസായത്തിലും സ്വയം പര്യാപ്തത കൈവരിക്കുക എന്നതാണ് ..... ന്റെ ലക്ഷ്യം?

11. ആസൂത്രണത്തിന്റെ ലക്ഷ്യങ്ങളിൽ വിട്ടഭാഗം പൂരിപ്പിക്കുക?

വളർച്ച, സ്വാശ്രയത്വം ..... ആധുനികവൽക്കരണം

12. നീതി ആയോഗിലെ അംഗങ്ങളുടെ എണ്ണം ..... ആണ്?

13. നീതി ആയോഗിലെ അനൗദ്യോഗിക അംഗങ്ങളാണ് .....?

14. ഇന്ത്യയിലെ എല്ലാ പൗരന്മാർക്കും അടിസ്ഥാന ആവശ്യങ്ങളായ ആഹാരം, വസ്ത്രം, പാർപ്പിടം, വിദ്യാഭ്യാസം, കുടിവെള്ളം, ആരോഗ്യരക്ഷ തുടങ്ങിയവ നിറ വേറ്റുകുയം സമ്പത്തിന്റെ വിതരണം സാധ്യമാവുകയം ചെയ്യുക എന്നതാണ് ..... ന്റെ ലക്ഷ്യം?

ചേരും പടി ചേർക്കുക

15.	സാമ്പത്തിക ആസൂതണം	1961 – 1956
16.	ഒന്നാം പഞ്ചവത്സരപദ്ധതി	എം.എൻ.റോയ്
17.	വികേന്ദ്രിത ആസൂത്രണം	വികസനം
18.	ജനകീയ പദ്ധതി	ത്രീതല പഞ്ചായത്ത്
19.	ഇന്ത്യയുടെ ആസൂത്രിത ലോകസമ്പദ് വ്യവസ്ഥ	എം. വിശ്വേശ്വരയ്യ
20.	ദേശീയ ആസൂത്രണസമിതി	ബോംബെ പദ്ധതി
21.	നീല വിപ്ലവം	പാലും പാലുൽപ്പന്നങ്ങളും
22.	ഇന്ത്യയിലെ ഒരു സംഘം തൊഴിലാളികൾ രൂപിക രിച്ച പദ്ധതി	ജവഹർലാൽ നെഹ്റു
23.	ധവള വിപ്ലവം	മത്സ്യമേഖല
24.	ചോർച്ചാ സിദ്ധാന്തം	ദാദാഭായ് നവറോജി
25.	പന്ത്രണ്ടാം പഞ്ചവത്സരപദ്ധതി	2012 – 2017

ശരിയുത്തരം തിരഞ്ഞെടുത്ത് എഴുതുക

26. ഇന്ത്യൻ ആസൂത്രണത്തിന്റെ പിതാവ് ആര്?

. (എ) എം.എൻ. റോയ് (ബി) എം. വിശ്വേശ്രയ്യ (സി) ജവഹർലാർ നെഹ്റു

27. ആസൂത്രണകമ്മീഷന് പകരമായി 2015 ജനുവരി 1-ന് നിലവിൽ വന്ന പദ്ധതി ഏത്?

(എ) നീതി ആയോഗ് (ബി) പഞ്ചവത്സരപദ്ധതി (സി) പഞ്ചായത്തിരാജ്

28. ആസൂത്രണ കമ്മീഷന്റെ അധ്യക്ഷൻ ആര്?

(എ) മുഖ്യമന്ത്രി (ബി) പ്രധാനമന്ത്രി (സി) രാഷ്ട്രപതി

29. നീതി ആയോഗിന്റെ അധ്യക്ഷൻ ആര്?

(എ) പ്രധാനമന്ത്രി (ബി) ഗവർണർ (സി) രാഷ്ട്രപതി

30. നീതി ആയോഗ് നിലവിൽ വന്ന വർഷം

(എ) ജനുവരി 1 (ബി) ഫെബ്രുവരി 5 (സി) ഫെബ്രുവരി 1

APPENDIX- V

FAROOK TRAINING COLLEGE

CALICUT

ACHIEVEMENT TEST IN SOCIAL SCIENCE-STANDARD VIII (FINAL)

Dr HASSAN KOYA M.P.
Assistant Professor

NILHIL KUMAR.K
M.Ed. Student

വിട്ടഭാഗം പൂരിപ്പിക്കുക

1. ആസൂത്രണകമ്മീഷൻ നിലവിൽ വന്നത് ..... വർഷത്തിലാണ്?

2. ലഭ്യമായ വിഭവങ്ങൾ ഉപയോഗിച്ച് സമൂഹത്തിന്റെ സാമ്പത്തിക ലക്ഷ്യങ്ങൾ നേടാൻ നടത്തുന്ന മുന്നൊരുക്കത്തെ ..... എന്ന് പറയും?

3. പ്രധാനമന്ത്രി അധ്യക്ഷനായി ദേശീയതലത്തിൽ പദ്ധതികൾ ആസൂത്രണം ചെയ്തു നടപ്പിലാക്കുന്ന പദ്ധതിയാണ്.....?

4. രാജ്യത്തെ മൊത്തം സാധനങ്ങളുടെയും സേവനങ്ങളുടെയും ഉൽപ്പാദന വർദ്ധന വിനെ ..... എന്ന് പറയും?

5. ഒരു പ്രത്യേക മേഖലയ്ക്കു മുൻഗണന നൽകി അഞ്ചുവർഷം കൊണ്ട് ലക്ഷ്യം നേടുന്ന പദ്ധതിയാണ് ..... ?

6. ഒന്നാം പഞ്ചവത്സരപദ്ധതി പ്രധാന പരിഗണ നൽകിയത് ..... മേഖലയ്ക്കാണ്?

7. അത്യുല്പാദന ശേഷിയുള്ള വിത്തിനങ്ങൾ ജലസേചന പദ്ധതികൾ, രാസവളം, കീടനാശിനികൾ, കുറഞ്ഞ പലിശയിൽ സാമ്പത്തിക സഹായം എന്നിവ ഉപയോഗപ്പെടുത്തി കാർഷിക ഉല്പാദനത്തിൽ വരുത്തി ഗണ്യമായ പുരോഗതിയാണ് .....?

8. ത്രിതല പഞ്ചായത്തുകളാണ് ഗ്രാമപഞ്ചായത്ത് ബ്ലോക്ക് .....?

9. ആസൂത്രണത്തിന്റെ ലക്ഷ്യങ്ങളിൽ വിട്ടഭാഗം പൂരിപ്പിക്കുക?

   വളർച്ച, സ്വാശ്രയത്വം ..... ആധുനികവൽക്കരണം

10. നീതി ആയോഗിലെ അംഗങ്ങളുടെ എണ്ണം ..... ആണ്?

11. നീതി ആയോഗിലെ അനൗദ്യോഗിക അംഗങ്ങളാണ് .....?

12. ഇന്ത്യയിലെ എല്ലാ പൗരന്മാർക്കും അടിസ്ഥാന ആവശ്യങ്ങളായ ആഹാരം, വസ്ത്രം, പാർപ്പിടം, വിദ്യാഭ്യാസം, കുടിവെള്ളം, ആരോഗ്യരക്ഷ തുടങ്ങിയവ നിറ വേറ്റുകുയം സമ്പത്തിന്റെ വിതരണം സാധ്യമാവുകയം ചെയ്യുക എന്നതാണ് ..... ന്റെ ലക്ഷ്യം?

ചേരും പടി ചേർക്കുക

13.	ഒന്നാം പഞ്ചവത്സരപദ്ധതി	എം.എൻ,.റായ്
14.	വികേന്ദ്രിത ആസൂത്രണം	വികസനം
15.	ജനകീയ പദ്ധതി	ത്രീതല പഞ്ചായത്ത്
16.	ഇന്ത്യയുടെ ആസൂത്രിത ലോകസമ്പദ് വ്യവസ്ഥ	എം. വിശ്വേശ്വരയ്യ
17.	ദേശീയ ആസൂത്രണസമിതി	ബോംബെ പദ്ധതി
18.	നീല വിപ്ലവം	പാലും പാലുൽപ്പന്നങ്ങളും
19.	ഇന്ത്യയിലെ ഒരു സംഘം തൊഴിലാളികൾ രൂപിക രിച്ച പദ്ധതി	ജവഹർലാൽ നെഹ്റു
20.	ധവള വിപ്ലവം	മത്സ്യമേഖല
21.	ചോർച്ചാ സിദ്ധാന്തം	ദാദാഭായ് നവറോജി
22.	പന്ത്രണ്ടാം പഞ്ചവത്സരപദ്ധതി	2012 – 2017

ശരിയുത്തരം തിരഞ്ഞെടുത്ത് എഴുതുക

23. ഇന്ത്യൻ ആസൂത്രണത്തിന്റെ പിതാവ് ആര്?

. (എ) എം.എൻ. റോയ് (ബി) എം. വിശ്വേശ്രയ്യ (സി) ജവഹർലാർ നെഹ്റു

24. ആസൂത്രണ കമ്മീഷന്റെ അധ്യക്ഷൻ ആര്?

(എ) മുഖ്യമന്ത്രി (ബി) പ്രധാനമന്ത്രി (സി) രാഷ്ട്രപതി

25. നീതി ആയോഗ് നിലവിൽ വന്ന വർഷം

(എ) ജനുവരി 1 (ബി) ഫെബ്രുവരി 5 (സി) ഫെബ്രുവരി 1

APPENDIX-VI

FAROOK TRAINING COLLEGE

MULTIPLE INTELLIGENCE TEST

Dr .M.P. HASSAN KOYA
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Farook Training College

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Farook Training College

വിദ്യാർത്ഥിയുടെ പേര് .....

വയസ്സ്.....ക്ലാസ്സ്.....

ക്ലാസ്.....ആൺകുട്ടി/പെൺകുട്ടി

നിർദേശങ്ങൾ:

താഴെപ്പറയുന്ന ഓരോ പ്രസ്താവനയും ശ്രദ്ധാപൂർവ്വം വായിച്ച് ശേഷം അവ നിങ്ങളെ സംബന്ധിച്ചിടത്തോളം എത്ര മാത്രം ശരിയാണെന്ന് തീരുമാനിക്കുക. നിങ്ങൾ പ്രസ്താവനയോട് പൂർണമായും യോജിക്കുന്നുണ്ടെങ്കിൽ നിങ്ങളുടെ പ്രതികരണം ഇതിന്റെ കൂടെ തന്നിരിക്കുന്ന പ്രതികരണ കോളത്തിൽ (✓) എന്ന് രേഖപ്പെടുത്തുക. അല്ലെങ്കിൽ (X) എന്ന് രേഖപ്പെടുത്തുക.

ഉദാഹരണം:

1. പുസ്തകങ്ങൾ വായിക്കാൻഞാൻ ഇഷ്ടപ്പെടുന്നു. (X)
2. ഞാൻ ദിവസവും പത്രം വായിക്കാറുണ്ട്. (✓)

Sl. No.	പ്രസ്താവന	പ്രതികരണം
	SECTION 1	
	വിവിധ ഭാഷകൾ എനിക്കിഷ്ടമാണ്.	
	പര്യായപദങ്ങൾ കണ്ടെത്തുന്നത്, അക്ഷരങ്ങൾ കൊണ്ടുള്ള കളികൾ എന്നിവ എനിക്ക് വളരെ ഇഷ്ടമാണ്.	
	പദപ്രശ്നങ്ങൾ ഞാൻ ഇഷ്ടപ്പെടുന്നു.	
	പാഠഭാഗങ്ങൾ ഓർമിക്കാൻ ഞാൻ കുറിപ്പുകളാക്കി എഴുതി വെക്കുന്നു.	

	എഴുതാൻ എനിക്ക് വളരെ ഇഷ്ടമാണ്.	
	മറ്റുള്ളവരുടെ മുമ്പിൽ സംസാരിക്കുവാൻ എനിക്ക് വളരെ താല്പര്യം ഉണ്ട്.	
	പുസ്തകങ്ങളും മാഗസിനുകളും വെബ്സൈറ്റുകളും വായിക്കുന്നതിൽ ഞാൻ ആസ്വദിക്കുന്നു.	
	പ്രസംഗങ്ങളിലും സംവാദങ്ങളിലും പങ്കെടുക്കാൻ എനിക്ക് വളരെ താൽപര്യമുണ്ട്.	
	SECTION 2	
	പാട്ടുകൾ ഞാൻ ഇഷ്ടപ്പെടുന്നു.	
	കവിതകളും നാടൻ പാട്ടുകളും ആലപിക്കാൻ എനിക്ക് വളരെ താൽപര്യമുണ്ട്.	
	പാട്ടിന്റെ വരികൾ ഓർമ്മിച്ചെടുക്കാൻ എനിക്ക് വളരെ വേഗം കഴിയും.	
	പഴയ സിനിമാ ഗാനങ്ങളാണ് എനിക്ക് ഏറ്റവും ഇഷ്ടം.	
	പാഠഭാഗങ്ങൾ കവിതാ രൂപത്തിലാക്കി പഠിക്കുന്നതാണ് എനിക്ക് താല്പര്യം.	
	നാടകത്തേക്കാൾ സംഗീത പരിപാടികളാണ് എനിക്ക് താല്പര്യം.	
	എനിക്ക് വളരെ വേഗത്തിൽ താളങ്ങൾ മനസ്സിലാക്കാൻ സാധിക്കും.	
	താളാത്മകമായി പ്രവർത്തിക്കാൻ എനിക്ക് ഇഷ്ടമാണ്.	
	SECTION 3	
	ഞാൻ മനസ്സിൽ ആശയങ്ങൾ ഊഹിക്കും.	
	മാപ്പുകൾ, അറ്റ്ലസുകൾ എന്നിവ തിരിച്ചറിയാൻ എനിക്ക് വളരെ വേഗത്തിൽ സാധിക്കും.	
	ഗണിത സൂത്രവാക്യങ്ങൾ എനിക്ക് വേഗത്തിൽ മനസ്സിലാക്കാൻ കഴിയും.	
	ഗ്രാഫുകളും പട്ടികകളും നിർമിക്കാൻ എനിക്ക് വളരെ ഇഷ്ടമാണ്.	
	എത്ര പണവും എണ്ണിത്തിട്ടപ്പെടുത്താൻ എനിക്ക് സാധിക്കും.	
	പ്രശ്നപരിഹാരം എനിക്ക് എളുപ്പമാണ്.	
	കണക്കുകൂട്ടലുകൾ എളുപ്പത്തിൽ ചെയ്യാൻ എനിക്ക് സാധിക്കാറുണ്ട്.	
	ബുദ്ധിമുട്ടേറിയ കണക്കുകളും പ്രശ്നങ്ങളും പരിഹരിക്കാൻ ഞാൻ വീണ്ടും വീണ്ടും ശ്രമിക്കും.	

	SECTION 4	
	പരിസ്ഥിതി പ്രശ്നങ്ങൾ എനിക്ക് വളരെ പ്രധാനപ്പെട്ടതാണ്.	
	പൂന്തോട്ടം പരിപാലിക്കുന്നത് എനിക്ക് വളരെ ഇഷ്ടമാണ്.	
	സാധനങ്ങൾ അടുക്കി വെക്കാൻ എനിക്ക് താല്പര്യം ഉണ്ട്.	
	ഞാൻ മൃഗങ്ങളെയും പക്ഷികളെയും ഇഷ്ടപ്പെടുന്നു.	
	പാഴ് വസ്തുക്കൾ പ്രകൃതിക്ക് ദോഷം വരുന്ന രീതിയിൽ ഞാൻ ഉപേക്ഷിക്കാറില്ല.	
	ദേശീയ ഉദ്യാനങ്ങൾ എനിക്കു വളരെ ഇഷ്ടമാണ്.	
	ദേശീയ ഉദ്യാനങ്ങൾ സംരക്ഷിക്കേണ്ടത് എന്റെ ഉത്തരവാദിത്വമാണ്.	
	ജന്തുശാസ്ത്രവും പരിസ്ഥിതി ശാസ്ത്രവും എനിക്ക് വളരെ താല്പര്യമുള്ള വിഷയങ്ങളാണ്.	

APPENDIX-VII

FAROOK TRAINING COLLEGE

LEARNING STYLE INVENTORY

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നിർദ്ദേശങ്ങൾ

താഴെകൊടുത്തിരിക്കുന്ന ഓരോ പ്രസ്താവനയും ശ്രദ്ധാപൂർവ്വം വായിക്കുക. ഓരോ പ്രസ്താവനയ്ക്കും. **1. എല്ലായ്പോഴും, 2. ചിലപ്പോൾ മാത്രം, 3. ഒരിക്കലുമില്ല** എന്നിങ്ങനെ മൂന്നുവീതം പ്രതികരണങ്ങൾ കൊടുത്തിരിക്കുന്നു. ഓരോ പ്രസ്താവനയും നിങ്ങളെ സംബന്ധിച്ചിടത്തോളം എത്രമാത്രം ശരിയാണെന്ന് തീരുമാനിക്കുക. പ്രതികരണം പ്രത്യേകം കടലാസിൽ ഓരോ പ്രസ്താവനയുടെയും നമ്പറിനു നേരെയുള്ള കോളത്തിൽ (✓) ചിഹ്നം രേഖപ്പെടുത്തുക. എല്ലാ പ്രസ്താവനകൾക്കും പ്രതികരണം രേഖപ്പെടുത്താൻ മറക്കരുത്

മാതൃക:

ഞാൻ പതിവായി സ്വമേധായ പഠനം നടത്തുന്നു

എല്ലായ്പ്പോഴും	ചിലപ്പോഴൊക്കെ	ഒരിക്കലുമില്ല

1. ലഘുപരീക്ഷണങ്ങൾ സ്വയം ചെയ്തു നോക്കുന്നത് ശാസ്ത്രതത്വങ്ങൾ മനസ്സിലാക്കാൻ എനിക്ക് സഹായകമാവാറുണ്ട്.
2. നിത്യജീവിതത്തിലെ വസ്തുതകളും, സംഭവങ്ങളുമായി പാഠഭാഗങ്ങൾ ബന്ധിപ്പിച്ചാണ് ഞാൻ പഠിക്കാറുള്ളത്.
3. മറ്റു പുസ്തകങ്ങൾ വായിച്ചു സ്വയം നോട്ടുകൾ തയ്യാറാക്കുന്നത് ആയാസകരമായി എനിക്ക് തോന്നാറുണ്ട്.
4. അധ്യാപകൻ ക്ലാസിൽ കാണിച്ചു തരുന്ന പരീക്ഷണങ്ങൾ നിരീക്ഷിക്കുമെങ്കിലും അവ വിവരിച്ചു തരുന്നതാണ് എന്റെ പഠനത്തെ സഹായിക്കുന്നത്.

5. പുസ്തകത്തിൽ പാഠഭാഗങ്ങൾ വായിക്കുന്നതിനേക്കാൾ അദ്ധ്യാപകൻ ക്ലാസ്സിൽ അവതരിപ്പിക്കുന്നത് കേട്ടു മനസ്സിലാക്കുന്നതാണ് എനിക്ക് കൂടുതൽ എളുപ്പം.

6. പ്രഭാഷണങ്ങളും ചർച്ചകളും ശ്രദ്ധിച്ചു കേൾക്കുന്നത് എന്റെ പഠനത്തെ എളുപ്പമാക്കുന്നു.

7. പഠനത്തിനിടയ്ക്ക് കുറച്ചുസമയം വിശ്രമിക്കുന്നത് എന്റെ പഠനത്തെ ഫലപ്രദമാക്കാറുണ്ട്.

8. പാഠ്യ വിഷയങ്ങളുമായി ബന്ധപ്പെട്ട ചിത്രപ്രദർശനങ്ങൾ, പരീക്ഷണങ്ങൾ എന്നിവ നിരീക്ഷിച്ചാലും എന്റെ പഠനം എളുപ്പമാകാറില്ല.

9. നിശബ്ദമായ അന്തരീക്ഷത്തിൽ വളരെ പെട്ടെന്ന് പഠിക്കാൻ എനിക്ക് കഴിയുന്നുണ്ട്.

10. ഫലപ്രദമായി പഠിക്കുവാൻ കസേരയിലിരുന്ന് പഠിക്കുന്നതിനാണ് എനിക്ക് താല്പര്യം.

11. പഠനസമയത്ത് പഠനമുറിയുടെ കതകും, വാതിലും ഞാൻ തുറന്നിടാറില്ല.

12. പാട്ട്കേട്ടാണ് ഞാൻ പഠനം നടത്താറുള്ളത്.

13. മങ്ങിയ പ്രകാശത്തിൽ പഠിക്കുമ്പോൾ ദീർഘനേരം പഠിക്കാൻ എനിക്ക് കഴിയാറില്ല.

14. തണുപ്പുള്ള സമയങ്ങളിൽ പഠിക്കാൻ എനിക്ക് മടി അനുഭവപ്പെടാറുണ്ട്.

15. ശ്രദ്ധിച്ചു പഠിക്കുമ്പോൾ മറ്റൊരു ശബ്ദവും എനിക്ക് ശല്യമാവാറില്ല.

16. ഫാനിനു ചുവട്ടിലിരുന്ന് പഠിക്കുന്നത് എന്റെ പഠനം എളുപ്പമാക്കാറുണ്ട്.

17. മറ്റുള്ളവർ നിർബന്ധിക്കുന്നത് കൊണ്ടാണ് ഞാൻ പഠിക്കുന്നത്.

18. അദ്ധ്യാപകൻ ഏൽപ്പിക്കുന്ന പഠനകാര്യങ്ങൾ കൃത്യമായി ചെയ്തു തീർക്കാൻ എനിക്കു കഴിയാറുണ്ട്.

19. ചർച്ചകളിലൂടെയും പ്രവൃത്തികളിലൂടെയുമുള്ള പഠനരീതി എന്റെ പഠനസമയം നഷ്ടപ്പെടുത്തും.

20. സുഹൃത്തുക്കളുമായിരുന്നു ചർച്ച ചെയ്തു പഠിക്കുമ്പോൾ എളുപ്പത്തിൽ പഠിക്കാൻ എനിക്ക് കഴിയുന്നുണ്ട്.

21. സുഹൃത്തുക്കളുടെ പഠന രീതിയിൽ നിന്നും വ്യത്യസ്തമായ ഒരു ശൈലിയിൽ പഠിക്കുന്നതാണ് എനിക്ക് താല്പര്യം.

22. സുഹൃത്തുക്കളുമായി ഒരുമിച്ചിരുന്ന് പഠിക്കുമ്പോൾ എന്റെ പഠന രീതിയിലുള്ള കുറവുകൾ ഞാൻ മനസ്സിലാക്കുന്നു.

23. പഠനത്തിൽ മിടുക്കരായ കുട്ടികളുടെ പഠനക്രമങ്ങൾ എന്നെ സ്വാധീനിക്കാറുണ്ട്.

24. പഠനകാര്യത്തിൽ മറ്റുള്ളവരുടെ പഠനശൈലി അനുഭവിക്കുന്നതിനേക്കാൾ സ്വന്തം ശൈലി ഉപയോഗിച്ചു പഠിക്കാനാണ് ഞാനിഷ്ടപ്പെടുന്നത്.

25. അന്നന്നു പഠിച്ചു തീർക്കാനുള്ള പാഠഭാഗങ്ങൾ മുഴുവൻ പഠിച്ചു തീർക്കാതെ ഞാൻ എഴുന്നേൽക്കാറില്ല.

26. കഴിഞ്ഞ പരീക്ഷകളിൽ കിട്ടിയതിനേക്കാൾ കൂടുതൽ മാർക്ക് ലഭിക്കുന്നതിനായി ഞാൻ നന്നായി പഠിക്കാറുണ്ട്.

27. നന്നായി പഠിക്കണമെന്ന മാതാപിതാക്കളുടെ ആഗ്രഹത്തിനൊത്ത് എനിക്ക് ഉയരാൻ കഴിയാറുണ്ട്.

28. പഠനത്തിനിടയ്ക്ക് വരുന്ന ഇടവേളകളിൽ ആദ്യം പഠിച്ച കാര്യങ്ങൾ മറക്കാൻ ഇടയാക്കുമെന്നാണ് എന്റെ അനുഭവം.

29. അധ്യാപകരുടെ നിർദ്ദേശങ്ങൾ കൃത്യമായി പാലിക്കണമെന്ന് എനിക്ക് നിർബന്ധമുണ്ട്.

30. ഒറ്റയിരുപ്പിനു പാഠഭാഗങ്ങൾ പഠിച്ചു തീർക്കാൻ എനിക്ക് ബുദ്ധിമുട്ടാണ്.

31. പ്രയാസകരമായ ഒരു പഠന പ്രവർത്തനത്തിന് പരിഹാരം കണ്ടെത്തേണ്ടി വരുമ്പോൾ എന്റെ കാഴ്ചപ്പാടാണ് എനിക്ക് പ്രാധാനം.

32. പഠനകാര്യത്തിൽ സ്വന്തം ശൈലി ഉപയോഗിക്കാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു.

APPENDIX-VIII

FAROOK TRAINING COLLEGE

LEARNING STYLE INVENTORY

RESPONSE SHEET

Dr .M.P. HASSAN KOYA
Assistant Professor
Farook Training College

NILHIL KUMAR.K
M.Ed. Student
Farook Training College

വിദ്യാർത്ഥിയുടെ പേര് : .....

വയസ്സ് :. ..... ക്ലാസ്സ് : .....

ആൺകൂട്ടി /പെൺകുട്ടി :

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