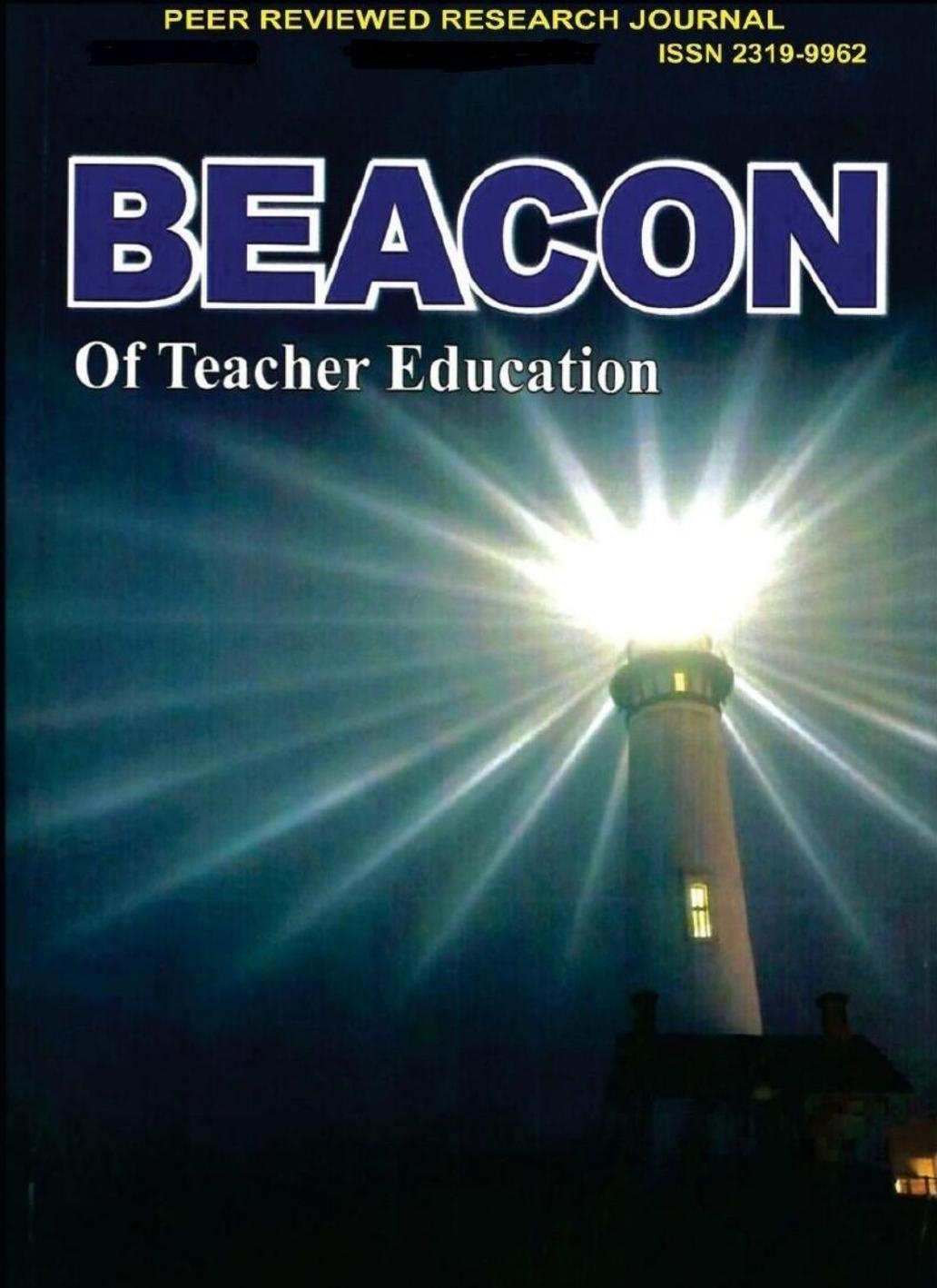


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# BEACON

Of Teacher Education



**Government College of Education (CTE) Pannel,  
Dist. Raigad (Maharashtra), Pin 410 206.**

# BEACON

Of TEACHER EDUCATION

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Of Teacher Education December 2019

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Printer, publisher and Editor Dr. Raamaa A. Bhoslay, Principal, Government college of Education, Panvel has printed this annual at **Banthia Offset, Panvel and published the same at 115, Chandrabhaga, Apt. 3<sup>rd</sup> floor, Kapad Bazar, Panvel.**

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#### Editorial

It gives us immense pleasure to publish our college's annual research journal, 'Beacon'. The world is changing at a very rapid pace, especially during these testing times of a global pandemic and the innovative teaching techniques adopted in the field of Education are changing even more rapidly. We are experiencing a paradigm shift in the field of Education and Research. Knowledge and Technology have a very important role to play today more than ever. During this pandemic, not being able to implement traditional teaching methodologies has led to thoughtful innovations in the 'Online Education' space. E-learning is playing a significant role in today's situation. 2020 has witnessed several big changes, one of them is the 'New Education Policy 2020'. It marked a start of a new era in the field of Higher Education in India when Ministry of Human Resource Development presented a new Interdisciplinary and Multi-disciplinary approach towards education. It is after 34 years, that India is witnessing a monumental change in the education policy. Inspired by this new approach, our research journal provides a platform for sharing innovative ideas and opens up vast possibilities of interdisciplinary research. I am positive that this journal will be a productive and unforgettable milestone in the progress of Govt College of Education, Panvel. This pandemic has enabled our college to adopt various online learning methods and has this inspired a new way of interaction among all the stakeholders. I hope this journal will initiate similar interaction among scholars. I am extremely thankful to all the stakeholder who have made this journal possible. I would also like give my special thanks to all the known and unknown hands responsible for the compiling and editing of this research journal.

**Dr. Raamaa Bhoslay**  
Principal

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## **1 A study of the effectiveness of Dramatization method to teach abstract historical concept for students of standard VI.**

Dr. Jayprabha Asore  
Nerul, Navi Mumbai

### **INTRODUCTION**

A systematic, written account of events, particularly of those affecting a nation, institution, science, or art, and usually connected with a philosophical explanation of their causes; a true story, which relate simply the facts and events of each year, in strict chronological order; from biography, which is the record of an individual's life; and from memoir, which is history composed from personal experience, observation, and memory.

It is the branch of knowledge dealing with past events. A continuous, systematic narrative of past events as relating to a particular race, country, period, person, etc., usually written as a Chronological account; chronicle, it may also be referred to as the aggregate of past events. It is the record of past events and times, especially in connection with the human race.

### **NEED OF STUDY :**

The need for this study was felt because the students interest in learning more about the history and culture of Ancient India was noticed to be declining. Therefore in order to make the learning more interesting and meaningful the Role Play was designed, conducted and interpreted by the students themselves.

### **SELECTION OF PROBLEM :**

There are many students who lack motivation and produce very little work. Many student are low performing who are not engaged in active learning and do not seem interested in History.. Pupil enjoy doing and learning about History. Hence dramatization or Role Play helps pupil to focus on the subject and creates curiosity to learn more.

### **STATEMENT OF PROBLEM :**

A study of the effectiveness of Dramatization method to teach abstract historical concept for students of standard VI.

### **OBJECTIVES :**

1. To identify the problem faced by student while learning through traditional method.
2. To develop an activity for students while learning.
2. To compare the effectiveness of the treatment.

### **HYPOTHESIS :**

Null hypothesis : There is no significant difference in pre-test and post test.

### **ASSUMPTION**

- a. Students should have knowledge about different kingdoms of the past.

- b. Students should be aware about the basic chronology in studying history.
- c. Students should be able to understand the stories related to kings and rulers.
- d. Students should at least know that history is a subject that tells us about the causes and consequences of events.

### SCOPE

The students of standard VI of MES School, Belapur, Navi Mumbai are included in the research.

### LIMITATIONS

- a) The research is limited only for students of standard VI-A of MES School, Belapur, Navi Mumbai
- b) The research is limited to effectiveness of Dramatization as a teaching methodology.

### SAMPLE

- a) The researcher has selected only 25 students of standard VI-A from MES School, Belapur, Navi Mumbai

### TOOLS OF DATA COLLECTION

There are various tools and techniques available for data collection in research.

They are classified as:

- 1) Inquiry term.
- 2) Observation
- 3) Achievement test
- 4) Psychological test.

An Achievement Test is a test of developed skill or knowledge. The most common type of achievement test is a standardized test developed to measure skills and knowledge learned in a given grade level, usually through planned instruction. Achievement Tests are often contrasted with tests that measure aptitude, a more general stable cognitive trait.

Achievement Test scores are often used in an educational system to determine what level of instruction for which a student is prepared. High achievement score usually indicate a mastery of great level material and the readiness for advanced instruction. Low Achievement scores can indicate the need for remediation or repetition of a country grade.

### TEACHING MATERIAL USED.

For an effective lesson, the research makes proper use of certain teaching materials like a White board and a Text Book, for ensuring whether the lecture was effective and the students had understood the lesson.

### REASON OF SELECTING THE TOPIC AND STANDARD.

Students know and are keen to learn History. So in History they must know that it is a collection of events and happenings

of the past rulers and kings. Their basic knowledge of History is there. Researcher has selected this topic for making the base clear of the rise and fall of the Mauryan Kingdom for the students of Avalon Heights International School .

#### **LESSON PLAN ACTIVITY.**

According to the **Herbartian Approach**, there are five pointers for writing a lesson plan.

They are as follows :-

##### **1. Preparation.**

Here the learners are prepared for receiving new knowledge, once they are mentally prepared, than they are able to receive the subject matter easily. In this step, nothing new is learned, the relevant old knowledge is marshalled, and the pupil is made ready to receive the new.

##### **2. Presentation.**

At this step the teacher presents the learning material before the students. Sometimes he uses narration, question-answer method, exposition, and explanation, verbal illustrations, maps, pictures, drawing board etc. all this so that the learners are able to grasp it.

##### **3. Comparison and Association.**

The teacher here tries to compare the newly learnt matter with the already learnt. This step is related with the task of strengthening the acquisition of newly learnt subject matter. It is based on the

assumption that the child grows in knowledge through comparison and association.

##### **4. Generalization.**

It means to arrive at some formula, principles or laws. As far as possible, the teacher should teach in such a way, that the students are themselves able to draw out conclusions. The conclusions made by students may also be wrong or incomplete. The teacher should help them correct and incomplete them. This step involves reflective thinking because the knowledge acquired in presentation is systematized and that leads to generalization.

##### **5. Application.**

The Knowledge acquired is applied to different situations and thus more knowledge is provided to the learners. If knowledge is not applied in the discovery of further facts, it might lose half of its value. The more the application of subject matter, the greater is the learning. Thus we can say that practice, recapitulation, previous knowledge testing and home assignments are all ways of application. This steps tests the validity of the generalization arrived at, by the pupils.

**Class Activity** : - In the present research, the investigator started her presentation with the help of a set induction. After the topic was introduced, the presentation began, with the help of various pictures

and the previous knowledge as well as the class environment was also explored.

At the end, a time limit was given for student to prepare a Role play/Skit on any one major incident that was significant in The Mauryan Kingdom. The class was divided into two groups and each got a chance to choose an incident, write dialogues, choose characters and then enact the scene.

Finally an assignment sheet was given to the pupils, in which students had to fill in by ticking the correct choice and thereby defining the importance and Effectiveness of Role play in teaching History.

#### **Actual Implication and Remedies.**

For actual implications and remedies, the research takes experimental method and the researcher has the single-group method:

$$Xi \text{---} O \text{---} Xii$$

Where, Xi denotes the pre-test.

Where O denotes the treatment.

Where Xii denotes the post-test

The total action research conducted in the school can be roughly divided into 3 stages. The first begin pre-test phase, followed by the treatment given accordingly and finally the post-test phase. Now let us discuss each of these phases, briefly.

#### **PRE-TEST.**

The action research begins with a pre-test, conducted by the researcher on the selected topic; in this case, it was the Effectiveness of Role play as a teaching strategy for History was tested. Certain questions, which involved, the topic's definition and some exercises were incorporated in the questionnaire, wherein the sample students could solve the given questions. The students were not informed about the test or the topic before-hand. On the spot, they had to write the test, within a given period of time. Questionnaires were distributed and the students began to solve and after the time was over the solved questionnaire was collected back.

#### **Actual Treatment.**

After the students have submitted their questionnaires, the researcher come out of the class and corrects them, to find out the result of the pretest. While correcting, the researcher observes that the students were confused between the two concept indicating that none of these concept were actually known by them. So, the researcher accordingly plans a treatment for the sample, so that their concept is made clear regarding the selected unit.

The researcher prepares a chart which clearly indicates the meaning of concepts. During the class, the students

were also shown some chart in which sentences were written to shown the difference in the sentence. The researcher uses a flash card, to make the students come an solve some exercises related to the demonstrated topic.

Finally, assignment was given to the students which were completed at home.

### **POST-TEST.**

After the researcher feels convinced about the students' perception on the topic, she makes the same sample face the post-test, having the same sample which was used for the pre-test. Time limit, questionnaire, place and sample all remained unchanged. It is found that students complete their papers sooner than what time they took in the pre-test.

### **MAJOR FINDINGS**

Researcher deals with the interpretations of the analysis regarding the pre-test and post-test .On calculating the average of the tests; it was found that the hypothesis was rejected, as the sample had displayed a marked improvement in their post test. So, now the significance of such a situation will be sought.

Besides that, it will also be seen how the research is useful to the various factors of education within the school. Some suggestions or recommendations have also been provided for better utilization of the research by the school, management, principal, teacher and the students as well.

Finally, some suggestions, which provide scope for further research has also been provided. These suggestions might throw light on the path of the future researchers, who would like to carry out their research on topics related to this research.

So, we see that the data was collected and after analysing and interpreting, the major findings are given as under.

The researcher finds out that, teaching quality has a direct impact over student's performance. The researcher finds out that, when a lesson is demonstrated, the teacher has to start from nil, i.e. she has to assume that his target students might be totally unaware even of the basics-she cannot take them for granted.

She always has to make use of interesting tools of teaching like games; pictorial representation etc. which will leave an effective impact upon the students and thus would learn better.

### **RECOMMENDATIONS :**

Certain recommendations can be made on line with this topic to the school, principal, teachers and students and to the management as well.

Let us briefly see what the recommendations can be :

- 1) For school:-The school can try to

- make incorporation of new projected training aids, which will allow the students to arouse their audio-sensory organs.
- 2) For Principal:-The teachers should be given enough scope by principal, to experiment with new modes of teaching and make a break-through from the traditional methods.
  - 3) For Teachers : - The teachers should always be aware of the area of difficulty in understanding among the students regarding the topic.
  - 4) For students :- Even as it may sometime seem to the students that a particular topic is known, they should not take the present lecture for granted. They have to participate both physically and psychologically in attending the lecture.
  - 5) For management: - It should allow and encourage the teaching staff, led by the principal to bring in innovations in the method of teaching.
- 1) To find out the difficulties of students in understanding parts of speech.
  - 2) To find out the difficulties of students in understanding phrases.
  - 3) To find out the difficulties of students in understanding adjectives.
  - 4) To find out the difficulties of students in identifying adjective phrases.
  - 5) To find out the difficulties of students in transforming adjectives in to adjective phrases.
  - 6) To find out the difficulties of students in transforming adjective phrases in to adjectives.

**SUMMARY :**

After the action research is conducted, it can be very well be summarized that, despite students reach higher class after clearing various lower promotion tests, they still remain ill equipped in some of the basic or fundamental lessons.

Once the teacher understands correctly, what the students know correctly and wrongly, his task will become easier. But if the teacher has no idea about the students' background about the concerned topic, his effort will be nothing more than aiming in the dark. This will be an utterly useless demonstration. It may thus be concluded that, an effective lesson may occur with significance and energy only if the teacher is well aware of his students' prevailing situation and background.

**SUGGESTION FOR FURTHER RESEARCH :**

Despite an effort made to find out the difficulty of secondary school students in writing Phrases, yet there still lies much scope for further research. Some suggestions can be kept in mind during the attempt for further. They are:

## **2 A study of the interactive effect of co – operative learning and learning styles on academic achievement in social studies of secondary school students**

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### **Abstract**

The research study aimed to study the effect of interaction between co-operative learning in independent learning style v/s dependent learning style and participant learning style v/s avoidant learning style on students' social study educational achievement number. The quasi-experimental non-equivalent control group design was used for the study. The tool used for data collection was learning style inventory of Grasha and Richmann (2001). The sample for the present study comprised of 200 students from secondary schools affiliated to the SSC Board in Thane city. The sample of the study was selected using a three stage sampling techniques. The inferential statistics t-test, two-way ANOVA and Wolf's formula was used to analyze the data. The results of the study indicated the significant difference of interaction between co-operative learning in independent learning style v/s dependent learning style and Participant learning style v/s Avoidant learning style on student's social study educational achievement score.

**Keywords** : Co-operative learning, Learning style, Academic achievement.

### **INTRODUCTION**

Since the time of the National Curriculum Framework (2005) constructivism and co-operative learning has become important word in the educational system. These words have gained more importance since the implementation of the Right to Children's Free and Compulsory Education Act, 2009. Since the government's decision on March 30<sup>th</sup> 2016, the program of 'ShalaSiddhi' has been introduced and declared as 'SamrudhaShala' in Maharashtra state. With the declaration of this 'SamrudhaShala' co-operative learning has gained more importance in education. Co-operative learning involves students working together in small groups to accomplish shared goals. Successful co-operative learning tasks are intellectually demanding, creative, open-ended, and involve higher order thinking tasks. (Ross and Smith, 1995). The collaborative and co-operative methods is the believed to help the students to remember the knowledge in their long time memory.

Since every student has different

learning preferences, it is important that course material is presented in such way that no student is unfairly disadvantaged. To ensure equal experiences for all students, it is necessary to understand the learning preferences and strategies of the students being taught. Adopting a specific teaching method without considering the diverse needs of the group being taught can result in an inefficient learning outcome for some students. Thus when presenting learning material to students, it is an important that students' learning styles are supported.

According to Grasha and Richmann (1996), "learning style is a personal quality that influences students' ability to acquire information, to interact with peers and teachers and otherwise participate in learning experience." According to him, there are various types of learning styles. Some learners like to learn independently, whereas some learners are dependent on teachers, classmate and parents for learning. Some learners like to participate in group for learning, whereas some learners feel unlikely to participate in class activities. Some students like to learn cooperatively, whereas some learners like to compete with other learners. Therefore the research is aimed to study the effect of interaction between co-operative learning and learning style on students' educational academic achievement.

## REVIEW OF RELATED LITERATURE CO-OPERATIVE LEARNING

Effandi (2010) conducted a study to determine the effects of co-operative learning on student's mathematics achievement and attitude towards mathematics. Snyder (2006) in action research study of classroom of 8th grade mathematics investigated the inclusion of co-operative learning groups. Almanza (1997) study examined a comparison of the effectiveness of co-operative learning in small groups with whole classroom instruction of using the Directed Reading Thinking Activity (DATA) during reading. Pinkeaw (1993) investigated students' view on interaction and learning achievement through co-operative learning method. Burrton (1993) studied the effect of co-operative learning in a physical science course for elementary middle level pre-service teachers. Vijaya (2012) studied the interactive effect of co-operative learning model and student's academic and social self-concept on their academic achievement in environmental studies in students of Std. IX. Ashiya (2011) conducted a study of the relationship between self- regulation and attitude towards co-operative learning of pre-service teacher. Reha (2011) studied the student teachers' attitude towards

co-operative learning in relation to their self-esteem. **Joshi (2009)** submitted a research on a study of effectiveness of co-operative learning on achievement motivation. **Saroj (2007)** attempted to study the effect of co-operative learning strategies on academic achievement in the subject History of std. VII.

### LEARNING STYLE

**Kumari (2015)** studied the thinking and learning style of prospective teachers in relation to their self-efficacy and achievement motivation. **Yograj(2015)** studied the influence of meta-cognition and learning styles on problem solving skill of B.Ed. trainees. **Karthigeyan(2014)** studied choice of school, parental care, teaching strategies and learning styles of secondary school students and their academic performance in English. **Thange (2012)** studied the interactive effects of cooperative learning model and learning styles on academic achievement of environmental studies of 9<sup>th</sup> students. **Gawade (2011)** conducted a co relational study of scientific attitude and learning styles of junior college students. **Nagori (2010)** conducted a comparative study of secondary school student preferences for learning environment on the basis of their learning style. **Choramale(2010)** conducted a study of learning styles of secondary school students' in relation to their prior academic achievement.

**Gudipudi (2009)** conducted a study of learning styles of B.Ed. trainee teachers in relation to their teaching style, self efficacy and personality. **Pandya (2008)** studied college students' preferences for learning environment and teacher behaviour in relation to their learning styles in the context of prevalent teacher orientations and teaching styles. **Pednekar (2008)** conducted a comparative study of study habits of secondary school students' on the basis of their learning styles. **Levent(2016)** conducted a study on the relationship between learning styles of prospective teachers and their parents. **Rehaman (2016)** studied the relationship between study field, learning styles and language learning strategies of university students. **Voughn (2009)** studied learning styles and the relationship to attachment styles and psychological symptoms in college women. **Caspo and Hayen. (2006)** conducted a study on the role of learning styles in teaching and learning process.

### STATEMENT OF THE PROBLEM

"A study of the interactive effect of co – operative learning and learning styles on academic achievement and self motivation in social studies of secondary school students"

## VARIABLES OF THE STUDY

### Independent variables

- A) Co-operative learning teaching method
- B) Learning style

### Dependent variable

- A) Academic achievement

### Co-operative learning teaching method

co-operative learning is defined as the group learning activity in where the learning is based on the interaction with one another in small groups on academic tasks to attain a common goal.

### Learning Style

A learning style is defined as a habitual pattern or a preferred way of acquiring knowledge or doing something. Learning styles includes being (a) independent or dependent, (b) avoidant or participant.

### Academic achievement

academic achievement is taken as the average score of total marks of the students obtained in social study exams namely unit test exam of academic year 2018-2019 of std. VIII of Secondary School Certificate Board (S.S.C)

### AIMS OF THE STUDY

The broad aim of the study is to study "A study of the interactive effect of co – operative learning and learning styles

on academic achivement in social studies of secondary school students".

### OBJECTIVES OF THE STUDY

1. To study the effect of interaction between co-operative learning in independent learning style v/s dependent learning style on students social study educational achievement number.
2. To study the effect of interaction between co-operative learning in Participant learning style v/s Avoidant learning style on students social study educational achievement number.

### HYPOTHESIS OF THE STUDY

1. There is no significant difference of interaction between co-operative learning in independent learning style v/s dependent learning style on student's social study educational achievement score.
2. There is no significant difference of interaction between co-operative learning in participant learning style v/s Avoidant learning style on students' social study educational achievement score.

### RESEARCH DESIGN

#### METHODOLOGY

The researcher decides which of the above types of experimental design should be chosen for the presented research, considering the research objectives and variables. In this research

A study of the interactive effect of co-operative learning and learning styles on academic achievement in social studies of secondary school students” to study the interactive results of the unequal group pre and post-test design in the experimental approach. The present study is causal comparative in that it seeks to examine the interrelationship between the variables namely co-operative learning strategies, learning styles and academic performance on the basis of gender and medium of instructions.

**SAMPLE**

The sample for the present study comprised of 200 students from secondary schools affiliated to the SSC Board in Thane city. The sample of the study was selected using a three stage sampling techniques.

**TOOLS OF THE RESEARCH**

**A) Personal Performa**

In the student Personal Performa, the students were required to write their

personal information such as name, name of school, standard, medium of instructions. It also had instructions for filling up the rating scale.

**B) Learning Style Inventory**

To study learning style of secondary school students are researcher used learning style inventory prepared by Grasha and Richmann (2001). The reliability for learning style inventory prepared by Grasha and Richmann (2001) was established using the Cronbach’s alpha and split half correlation. The reliability of the Marathi tool by Cronbach’s alpha and split half correlation was 0.91 and 0.74, for English tool was 0.75 and 0.61 respectively.

**C) Academic achievement**

An academic achievement of secondary school students was measured by unit test exam result of standard VIII<sup>th</sup> students’ given by school in academic year 2019-2020.

**MAJOR FINDINGS OF THE STUDY**

1. There is no significant difference of interaction between co-operative learning in independent learning style v/s dependent learning style on student’s social study educational achievement score.

Sources of variances	SS	DF	MSS
Among Rows( $SS_r$ )	22644.33	1	22644.33
Among Column ( $SS_c$ )	11.07	1	11.07
Interaction ( $SS_{r \times c}$ )	4332.64	1	4332.64
Within Group ( $SS_w$ )	7519.2	296	25.4
<b>Total</b>	<b>34507.24</b>	<b>299</b>	

$$\begin{aligned} MSS_r &= SS_r \div (df)_r \\ MSS_c &= SS_c \div (df)_c \\ MSS_{r \times c} &= SS_{r \times c} \div (df)_{r \times c} \\ MSS_w &= SS_w \div (df)_w \end{aligned}$$

The obtained 'F' is as follows.

**For co-operative learning**

$$F_r = \frac{MSS_r}{MSS_w} = \frac{22644.33}{25.4} = 9.69$$

**Interpretation**

The tabulated 'F' value for df (1, 296)  
The obtained value of 'F' is significant of 6.83 at 0.01 level and significant of 3.83 at 0.05 level.

The obtained value of 'f' is 879.69, thus the obtained value of 'f' is significant at 0.01 level. Hence the null hypothesis is rejected.

**For an 'independent' v/s 'dependent' learning style**

$$F_c = \frac{MSS_c}{MSS_w} = \frac{11.07}{25.4} = 0.4358$$

**Interpretation**

The tabulated 'F' value for df(1, 296)  
The obtained value of 'F' is significant of 6.83 at 0.01 level and significant of 3.83 at 0.05 level.

The obtained value of 'f' is 0.4358, thus the obtained value of 'f' is not significant at 0.01 levels. Hence the null hypothesis is accepted.

**Interaction between co-operating learning style and independent versus dependent learning style –**

$$F_{r \times c} = \frac{MSS_{r \times c}}{MSS_w} = \frac{4332.64}{25.4} = 170.57$$

**Interpretation**

The tabulated 'F' value for df (1, 296)  
The obtained value of 'F' is significant of 6.83 at 0.01 levels and significant of 3.83 at 0.05 levels.

The obtained value of 'f' is 170.57, thus the obtained value of 'f' is significant at 0.01 levels. Hence the null hypothesis is rejected.

Thus there is a significant difference of interaction between co-operative learning in independent learning style v/s dependent learning style on student's social study educational achievement score.

**Conclusion:**

The hypothesis suggests that the mean of the educational achievement gain score of the students in the experimental group is higher than the average of the educational achievement gain score of the students in the control group. The mean of academic achievement gain score of students having independent learning style is higher than the average academic achievement of students having a

dependent learning style. Therefore, the interplay between co-operative learning and independent v/s dependent learning styles has significantly affected the academic achievement.

**Discussion :**

On the basis of this conclusion, it can be said that a co-operative learning method with an independent learning style learner is more effective than a student with a dependent learning style. Students with independent learning styles also participated in various classes of co-operative learning methods. They were happily involved while studying with each other. They were enthusiastically involved in group work. These students are also good at self-study. Also, students with independent learning styles match

up with their fellow students very easily. However, if they are motivated and guided well, they can get good scores in their academics and can lead to success in various other activities. Depending learning style students had the opportunity to participate in various classes of co-operative learning. But because of the short time required for interdisciplinary study in the classroom, they could not take advantage of this opportunity. Therefore, students with independent learning styles found effective study in various classes of co-operative learning. Also, many studies have shown that students with independent learning styles benefit from different study programs (Pandya 2008), (jadhav 2011).

2. There is no significant difference of interaction between co-operative learning in Participant learning style v/s Avoidant learning style on students' social study educational achievement score.

Sources of variances	SS	DF	MSS
Among Rows(SS <sub>r</sub> )	24447.27	1	24447.27
Among Column (SS <sub>c</sub> )	235.71	2	117.86
Interaction (SS <sub>rxc</sub> )	3534.43	2	1767.22
Within Group (SS <sub>w</sub> )	8200.1	293	29.99
<b>Total</b>	<b>36417</b>	<b>298</b>	

$$MSS_r = SS_r \div (df)_r$$

$$MSS_c = SS_c \div (df)_c$$

$$MSS_{rxc} = SS_{rxc} \div (df)_{rxc}$$

$$MSS_w = SS_w \div (df)_w$$

The obtained 'F' is as follows.

**For co-operative learning**

$$F_r = \frac{MSS_r}{MSS_w} = \frac{24447.27}{29.99} = 15.18$$

**Interpretation**

The tabulated 'F' value for df(1, 293) the obtained value of 'F' is significant of 4.61 at 0.01 level and significant of 3.00 at 0.05 level.

The obtained value of 'f' is 815.18, thus the obtained value of 'f' is significant at 0.01 level. Hence the null hypothesis is rejected.

**For Avoidant v/s Participant Learning Style**

$$F_c = \frac{MSS_c}{MSS_w} = \frac{235.71}{29.99} = 7.84$$

**Interpretation**

The tabulated 'F' value for df(1, 293) The obtained value of 'F' is significant of 4.61 at 0.01 levels and significant of 3.00 at 0.05 level.

The obtained value of 'f' is 7.84, thus the obtained value of 'f' is significant at 0.01 levels. Hence the null hypothesis is rejected.

**Interaction between co-operating learning style and Avoidant v/s Participant Learning Style**

$$F_{rxc} = \frac{MSS_{rxc}}{MSS_w} = \frac{3534.43}{29.99} = 117.85$$

**Interpretation**

The tabulated 'F' value for df(1, 293) The obtained value of 'F' is significant of 4.61 at 0.01 levels and significant of 3.00 at 0.05 levels.

The obtained value of 'f' is 117.85, thus the obtained value of 'f' is significant at 0.01 levels. Hence the null hypothesis is rejected.

**Conclusion :**

This null hypothesis suggests that the mean of the educational achievement of gain score of the students in the experimental group is higher than the average of the educational achievement gain score of the students in the control group. The median of academic achievement gain scores for students with a participant learning style is higher than the average for students with avoidant learning style. Therefore, the interaction between co-operative learning and avoidant v/s participatory learning style has a significant impact on the gain score of students' academic achievement.

**Discussion :**

On the basis of this conclusion, it can be argued that co-operative learning methods had led to students having a participatory learning style more effective than students with avoidant learning styles.

Students with participatory learning styles happily participated in various classes of cooperative learning studies. They are very enthusiastic in the work involved. These students have an emphasis on self-study. Also, students with interactive learning styles match up with their fellow students. If they are motivated and guided well, they can achieve good success. (Jadhav2011). So their academic achievement was good. Students with avoidant learning style do not like to attend class hours. They do not blend in with their fellow students in the classroom. These students do not participate in any activities which involves other learners.

### **SIGNIFICANCE OF THE STUDY**

The findings of the research presented suggest that the co-operative learning and learning styles are related to academic achievement. Therefore, these findings help teachers understand the students' learning style and various co-operative learning methods to be used during teaching learning process. The findings also show that if teachers use co-operative study methods properly for teaching, then students are completely involved and engrossed actively in their studies. This helps students to perform better in their academics and helps them to achieve their goals.

The latent qualities of students are drawn out during cooperative studies such as co-operation, patience, brotherhood, acceptance of leadership, equality, decision ability, creativity. Developing such qualities helps to guide parents in making the right decisions for their child's progress. Teachers have to act as a manager when using co-operative learning methods. This helps in developing excellent management skills among the teachers. It can be used in the management of the school for the progress of the school. The social interdependence skills which are needed to create a healthy and peaceful society can be developed in the students through co-operative learning methods. These skills help students to become responsible citizens and thus they can contribute for the betterment of the society. The use of these methods in teaching helps to increase the scientific attitude of the students. The objectives which are not achieved on a personal level; inter-group interactions helps to achieve them by developing each student's learning ability as they receive instructing in small groups. Co-operative learning also helps in understanding and strengthening the content of the syllabus and through the discussion of the learning process which let students to help one another in their progress.

The co-operative learning methods are thoughtful and instructive in nature, so the student can remember the content for a long time which helps reduce their intellectual stress. The teacher has to discover for the factors that motivate the student's learning. Depending on the factors discovered, the student's learning becomes more dynamic. Each student's study preferences are different, so it is important to present the learning material to the student in such a way that no student will be at education loss. Therefore the learning styles that will be used by the teachers will help to discover the students' conceptual, emotional and psychological domains. The parents and the teachers are aware about the students' way of assessing, interacting and responding to the study environment which acts as the constant indicator for the overall development of the pupil.

The study findings will be used by the curriculum designers to design the study material for students in Class VIII. Accordingly the appropriate content and actions will be included in the syllabus. In other words, the findings of this research are immediately useful for enhancing and improving academic achievement of the students.

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### 3 The Importance of Life Skills

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#### Abstract

In an ever-growing technology and data driven world, much of the focus in education has understandably taken a shift toward STEM-based (science, technology, engineering, and math) initiatives that will prepare students for the coursework and careers of the future. But life skills—how well equipped students are to make good decisions and solve problems in their academic and professional careers as well as their personal lives—should also play a critical role in a well-rounded and comprehensive education.

#### Importance :

In order to change society, it is necessary to develop life skills among the students. Accepting the values of society as per the expectation of the society is called Socialization. According to the changing social system, the norms and values of society are also changing. The family system is also changing. This entire changing environment requires knowledge of coordination. And this knowledge is gained through life skills. Today's student is an ideal citizen of tomorrow. It is essential for an ideal

citizen to have sensitivity, respect, interdependencies, coping the emotions, effective communication, etc. towards others. Students do not get these skills in the curriculum, or they do not seem to have these qualities rooted in their curriculum. Hence we need to implement life skill enhancement programs. These programs help to create an ideal citizen. It is important to develop the feeling of equality, justice, brotherhood, empathy, ability to maintain good relationship, need of self awareness among students. It is seen that the students are reading life skills in their curriculum, only to write answers in their exam. The actual implementation of life skills is not seen among the students. Life skills are not just understood by only reading in curriculum, but how to implement in our day to day life? Is important to understand by students. Today's generation is losing the energy, and the feeling is nullifying. Students are becoming stressed and problematic. As student progress in one direction, they don't know how to deal with various problems in community. The students are getting arrogant and the education system is blamed for this. And so

incorporating these life skills not only provides education, but it is more important to build these life skills in your day to day life.

### **What Is Life Skills-Based Education?**

Think of life skills as the building blocks or framework that allow students to apply the knowledge they acquire in school to real world problems and situations. Also referred to as “soft skills” in a professional context, the ability to think abstractly and approach problems from multiple angles to find practical solutions, and the skill to communicate clearly and effectively are just as important as technical knowledge in a particular field or academic subject.

According to Macmillan Education, “In a constantly changing environment, having life skills is an essential part of being able to meet the challenges of everyday life. The dramatic changes in global economies over the past five years have been matched with the transformation in technology and these are all impacting on education, the workplace, and our home life.”

But life skills go well beyond choosing a major in college or impressing a potential employer in the future. Life skills provide children with important tools for development, such as independent thinking, how to socialize and make new friends, and how to take action in situations

where their parents or teachers may not be around to help or intervene (dealing with a bully or personal insecurities and fears, for example.) Unlike motor skills and basic intelligence, executive function and decision-making skills are not innate but learned.

### **Examples of life skills include :**

- Self-reflection
- Critical thinking
- Problem solving
- Interpersonal skills

### **What are Life skills ?**

Life skills are behaviors that enable individuals to adapt and deal effectively with the demands and challenges of life. There are many such skills, but 10 life skills lay down by WHO are:

1. Self-awareness
2. Empathy
3. Critical thinking
4. Creative thinking
5. Decision making
6. Problem Solving
7. Effective communication
8. Interpersonal relationship
9. Coping with stress
10. Coping with emotions

**Self-awareness** - includes recognition of ‘self’, our character, our strengths and weaknesses, desires and dislikes. Developing self-awareness can help us to recognize when we are stressed or

feel under pressure. It is often a prerequisite to effective communication and interpersonal relations, as well as for developing empathy with others.

**Empathy** – To have a successful relationship with our loved ones and society at large, we need to understand and care about other peoples' needs, desires and feelings. Empathy is the ability to imagine what life is like for another person. Without empathy, our communication with others will amount to one-way traffic. Empathy can help us to accept others, who may be very different from ourselves. This can improve social interactions, especially, in situations of ethnic or cultural diversity.

**Critical thinking** - is an ability to analyze information and experiences in an objective manner. Critical thinking can contribute to health by helping us to recognize and assess the factors that influence attitudes and behavior, such as values, peer pressure and the media.

**Creative thinking** - is a novel way of seeing or doing things that is characteristic of four components – fluency (generating new ideas), flexibility (shifting perspective easily), originality (conceiving of something new), and elaboration (building on other ideas).

**Decision making** - helps us to deal constructively with decisions about our

lives. This can have consequences for health. It can teach people how to actively make decisions about their actions in relation to healthy assessment of different options and, what effects these different decisions are likely to have.

**Problem solving** - helps us to deal constructively with problems in our lives. Significant problems that are left unresolved can cause mental stress and give rise to accompanying physical strain.

**Interpersonal relationship skills** - help us to relate in positive ways with the people we interact with. This may mean being able to make and keep friendly relationships, which can be of great importance to our mental and social well-being. It may mean keeping, good relations with family members, which are an important source of social support. It may also mean being able to end relationships constructively.

**Effective communication** - means that we are able to express ourselves, both verbally and non-verbally, in ways that are appropriate to our cultures and situations. This means being able to express opinions and desires, and also needs and fears. And it may mean being able to ask for advice and help in a time of need. Coping with stress means recognizing the sources of stress in our

lives, recognizing how this affects us, and acting in ways that help us control our levels of stress, by changing our environment or lifestyle and learning how to relax. Coping with emotions means involving recognizing emotions within us and others, being aware of how emotions influence behavior and being able to respond to emotions appropriately. Intense emotions like anger or sadness can have negative effects on our health if we do not respond appropriately.

**Coping with stress** - means recognizing the sources of stress in our lives, recognizing how this affects us, and acting in ways that help us control our levels of stress, by changing our environment or lifestyle and learning how to relax.

**Coping with emotions** - means involving recognizing emotions within us and others, being aware of how emotions influence behavior and being able to respond to emotions appropriately. Intense emotions like anger or sadness can have negative effects on our health if we do not respond appropriately.

In 1997, the World Health Organization determined these ten life skills. Life skills are ten skills by which a person uses his powers and abilities to solve everyday problems and effectively meets the daily needs in positive manner.

In order to develop these skills through co-curricular activities, the textbook board has been designing textbooks since 2006 based on these ten life skills. The syllabus of is based on basic skills. But in reality, the teachers in classrooms do not seem to combine the subject and the life skills. Therefore despite of teaching the textbook based on skill based curriculum for the last ten years, the life skill do not appear to be fully developed in children. Therefore, the researchers have selected the presented research topic. By seeing that the study of textbooks alone was not sufficient for life skill development, hence the researchers have decided to create life skill development program and to find out, how to develop life skills through activities other than teaching. Life Skill do not seem to be adopted in secondary level students.

#### **Why teach Life skills ?**

21<sup>st</sup> century is an Information Technology. The society expects a large contribution from education for the storage and spreading of information. Currently there is a difference between life and education. Many years of schooling is not sufficient for making children independent. For this, the development of life skill should be emphasized. Everyone in the community, from different levels of society, need to face the struggles and stresses. Changing

social values, split family practice, one or two children and burden of growing expectations of parents, the lack of knowledge among the parents about the mentality of children tends to create fear among students. That's why many students appear to commit suicide. Likewise the increasing addiction in students, negative thoughts, lack of confidence, is the reasons to worry. Because of this it is necessary to introduce life skills to the students at the school level.

The teachers are teaching the syllabus from textbooks. But instead of that, by performing various activities it is more important for students to get self-award, to be able to solve everyday problems, to cope with stress and increase the ability of decision making, to tend students for critical thinking and effective communication, hence the life skill enhancement program is essential from these all point of view. Hence instead of depending on syllabus, student needs to give more efforts.

Life skills education contributes to: basic education; gender equality; democracy; good citizenship; child care and protection; quality and efficiency of the education system; the promotion of lifelong learning; quality of life; the promotion of peace.

### **How does Nutspace built Life Skills ?**

Nutspace imparts 21st Century skills in a structured manner helping children become Future ready by using its Proprietary Inventive Thinking Methodology. The programme also builds WHO's 10 Core Life Skills. NutSpace produces original video content, lesson plans, assessments and do-it-yourself exercises cantered on key life skills / 21st century skills. Stories are at the core of every lesson plan for maximum retention.

The programme is delivered in NutSpacecentres, partner schools and digitally through a Mobile App. We are aiming to build a global platform with a million stories spread across multiple genres and styles. Since inception, we have delivered 100+ stories and, 300+ lesson plans across 500+ sessions. Stories will be crowd sourced in different genres across different subjects and topics and can be consumed in several different ways including by creating play lists and gaming.

NutspaceEdTechPvt. Ltd. uses a proprietary methodology called Inventive Thinking™ to build Life Skills as well as 21st Century Skills in Children. Stories lie at the core of the Inventive Thinking™ Methodology. It encourages discussions, critical thinking, problem solving and development of other life skills.

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#### 4 A STUDY OF C.B.S.E. CURRICULUM OF HIGHER SECONDARY LEVEL IN THE CONTEXT OF MATHEMATICS

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##### **ABSTRACT :**

Like the study of evolution, the development of Mathematical ideas in various fields has been growing. Every statement in sociology and theology makes sense only when it has Mathematical support. Curriculum is the most important component of education in achieving life's goals. According to 'National Curriculum Framework 2005' all over India, 'Constructivism' has been adopted while compiling Primary, Secondary and Higher Secondary Curriculum. To analyse the Curriculum of C.B.S.E. at Higher Secondary Level in the context of Mathematics. To study the strength of the components given in the Curriculum of C.B.S.E. in context of Mathematics in view of its usefulness in higher education. Proposed research is related to educational field, that's why researcher has chosen Educational Research Method.

##### **INTRODUCTION :**

Like the study of evolution, the development of Mathematical ideas in

various fields has been growing. The fundamental basis of all the scriptures is Mathematics. Every statement in sociology and theology makes sense only when it has Mathematical support. Thus Mathematics was classified further into Arithmetic, Algebra, Geometry, Trigonometry, Statistics, etc. In short, the science that helps us makes sense of human life is 'Mathematics'. The progress in the field of Mathematics defines the standard norm to reckon the progressive state of all cultures. Mathematics is the language as it meets all the definitions of a system of communication. The Curriculum changes are eagerly kept track of by all textbook related processing units, sub-units concerned with writing and editing as they play a major role in applying those changes. Any changes done without understanding the purpose behind the change would prove fruitless, compromising the foundation of subject knowledge of citizens for an entire decade till the next change comes.

**SIGNIFICANCE OF RESEARCH :**

Curriculum is the most important component of education in achieving life's goals. Mathematical study develops decision-making and critical thinking. In the Mathematical disciplines, students display a distinct learned behaviour. It is called a Mathematical approach or Mathematical attitude. A Mathematical approach means in available time, the available equipment is used fairly in the appropriate proportion.

Mathematical language is the only global language. Languages change according to regions, but Mathematical language does not change. Example :  $2 + 3 = 5$  only. It is standard. Some of the factors given in the Mathematics Curriculum are complicated.

According to 'National Curriculum Framework 2005' all over India, 'Constructivism' has been adopted while compiling Primary, Secondary and Higher Secondary Curriculum. Special attention is given to the students' ability to develop their capacities and develop their abilities, and to understand how students can become more proficient. In this context, various components of Mathematics were set up, and the discussion of these components and its stereotype was kept in mind while dealing with the physical and mental development of the students.

**KEY WORDS:**

C. B. S. E. BOARD, CURRICULUM, MATHEMATICS

**OBJECTIVES OF RESEARCH :**

The following are objectives for the proposed research :

1. To analyse the Curriculum of C.B.S.E. at Higher Secondary Level in the context of Mathematics.
2. To find out the issues in Mathematics subject for 11<sup>th</sup> and 12<sup>th</sup> standard.
3. To study the strength of the components given in the Curriculum of C.B.S.E. in context of Mathematics in view of its usefulness in higher education.
4. To identify the discrepancies in given Curriculum of C.B.S.E. in the context of Mathematics.
5. To suggest innovative activities and measures in the Curriculum for everyday Life-oriented Mathematical examples.
6. To suggest subsequent changes in Mathematics Curriculum in use since 2005.

**ASSUMPTIONS OF RESEARCH :**

1. Mathematics curriculum based on activities develops logical or creative thinking.
2. Modern technology in the studies encourage the students.
3. Curriculum is updated in Mathematics in accordance with changing needs.

**HYPOTHESIS OF RESEARCH :**

Research process is based on hypothesis. The following hypothesis are presented in the proposed research:

1. There is confusion about the Curriculum of C.B.S.E. of Higher Secondary Level in context of Mathematics in teachers.
2. Some of the factors given in the Mathematics Curriculum are complicated.

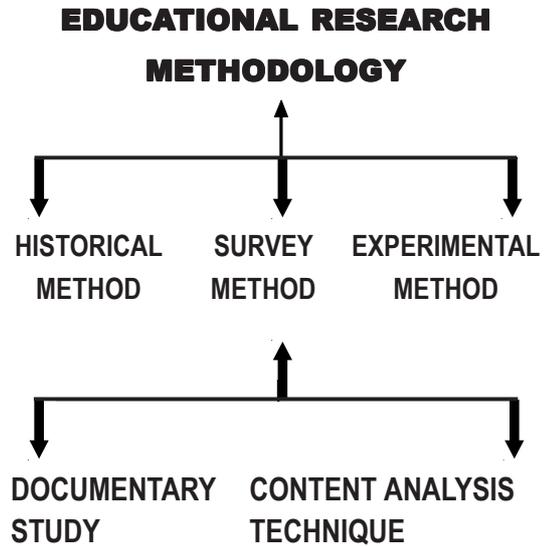
**VARIABLES :**

A variable is a quantity that may change within the context of a problem. Variables are used for the terms in which the values may vary. Variables can be :

Independent Variable	Dependent Variable
Content of the Textbook	Structure of Analysis
C.B.S.E. Curriculum	Reference to Context

**METHOD OF RESEARCH :**

Proposed research is related to educational field, that's why researcher has chosen Educational Research Method.



After selecting the research problem, it is necessary to find out the solution of the problem by analysing it. The research method has to be chosen after the parameters like nature, objectives, hypothesis of the problem are fixed. Researcher's work is to verify the creditability of the theories given in different sciences. Researcher will adopt qualitative method of research for the given subject. Researcher will use documentary method for the given subject.

**POPULATION AND SAMPLE OF RESEARCH :**

To get feedback or information from the entity for research work, those all factors or responders are included in the population. In short, population means the factors covered in the research for study.

**Population- C.B.S.E. Curriculum**

In order to predict the facts of the population, people selected from the population or its small set is called a sample. This set contains all the features of the expected population. Doing research with full population is troublesome and time-consuming. Therefore, the researcher has purposefully selected from the population only **C.B.S.E. Curriculum of Higher Secondary Level in the Context of Mathematics.**

- **Sample – C.B.S.E. Curriculum of Higher Secondary Level in Context of Mathematics.**

**TOOLS OF RESEARCH :**

The various methods of data gathering involve the use of appropriate recording

forms. These are called tools or instruments of data collection.

For this research, the tools that will be used by the researcher are questionnaire and interview.

- **Questionnaire for Teachers**
- **Interview of Experts**

**SCOPE OF RESEARCH :**

1. Analytical study of Mathematics Curriculum of the C.B.S.E. at Higher Secondary Level.
2. Critical Analysis of the Mathematics subject textbook of the C.B.S.E. in Higher Secondary Education.

**DELIMITATIONS OF RESEARCH :**

1. Limited to the textbooks of Mathematics subject based on the C.B.S.E.'s Higher Secondary Level revised Curriculum.
2. Limited to 11<sup>th</sup> and 12<sup>th</sup> standard students at Higher Secondary Level.
3. Limited to students studying Mathematics in Science stream at Higher Secondary Level.

**ANALYSIS OF RESEARCH DATA :  
 CBSE XII MATHEMATICS PART I**

CHAPTER NAME	BASIC VALUES	BASIC UNIT	INTENT TYPE	WEIGHTAGE
RELATIONS AND FUNCTIONS	SCIENTIFIC ATTITUDE	MAHEMATICAL RESONING	ALGEBRA	10 MARKS (10%)

DEFINITIONS & CONCEPTS	INTENT REPETITION	LANGUAGE EASY/ MODERATE/ HARD	APPROPRIATE TO AGE	ACTIVITY BASED EXERCISES	P B L	SUITABLE TO EVALUATION	SUITABLE DIAGRAMS	COMPETENCY	SUITABLE TO OBJECTIVES
TYPES OF RELATIONS									
1. EMPTY RELATION	X	MODERATE	✓	X	X	✓	X	UNDER- STANDING	✓
2. UNIVERSAL RELATION	X	MODERATE	✓	X	X	✓	X	UNDER- STANDING	✓
3. REFLEXIVE RELATION	X	HARD	X	X	X	X	X	KNOWLEDGE	X
4. SYMMETRIC RELATION	X	EASY	X	X	X	✓	X	KNOWLEDGE	X
5. TRANSITIVE RELATION	X	MODERATE	X	X	X	✓	X	KNOWLEDGE	X
6. EQUIVALENCE RELATION	X	MODERATE	X	X	X	X	X	KNOWLEDGE	X
TYPES OF FUNCTIONS									
1. ONE-ONE (INJECTIVE) FUNCTION	X	EASY	✓	X	X	✓	✓	SKILL	✓
2. MANY-ONE FUNCTION	X	EASY	✓	X	X	✓	✓	SKILL	✓
3. ONTO (SURJECTIVE) FUNCTION	X	MODERATE	✓	X	X	X	✓	SKILL	✓
4. ONE-ONE AND ONTO (BIJECTIVE) FUNCTION	X	HARD	✓	X	X	X	✓	SKILL	✓
COMPOSITION OF FUNCTIONS AND INVERTIBLE FUNCTION									
1. COMPOSITION OF $f$ AND $g$ FUNCTIONS ( $g \circ f$ )	X	HARD	✓	X	X	✓	✓	APPLICATION	✓
2. INVERTIBLE FUNCTION	X	HARD	X	X	X	X	X	UNDER- STANDING	✓

DEFINITIONS & CONCEPTS	INTENT REPETITION	LANGUAGE EASY/ MODERATE/ HARD	APPROPRIATE TO AGE	ACTIVITY BASED EXERCISES	P B L	SUITABLE TO EVALUATION	SUITABLE DIAGRAMS	COMPETENCY	SUITABLE TO OBJECTIVES
BINARY OPERATIONS									
1. BINARY OPERATION (BO)	X	EASY	✓	X	X	✓	✓	KNOWLEDGE	✓
2. COMMUTATIVE BO	X	EASY	✓	X	X	✓	✓	UNDERSTANDING	✓
3. ASSOCIATIVE BO	X	EASY	✓	X	X	✓	✓	UNDERSTANDING	✓
4. IDENTITY ELEMENT	X	MODERATE	✓	X	X	✓	✓	UNDERSTANDING	✓
5. INVERTIBLE ELEMENT	X	HARD	X	X	X	X	X	UNDERSTANDING	✓

**FINDINGS/ CONCLUSIONS :**

1. Application based examples are not sufficient.
2. PBL (Project Based Learning) is not incorporated in any unit. No chance of experiential learning for the students.
3. Language could be an issue for students who lack competency in the same.

**SUGGESTIONS :**

1. Curriculum in the textbook should include activity based exercises.
2. The Curriculum should cover a wide variety of questions related to evaluation.
3. The textbook should include pictures in all elements of the curriculum. This

will make it easier for students to evaluate the components.

4. The objectives of the Curriculum should be determined according to the competency of the students, the age and circumstances of the students.

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5. [www.swayamprabha.gov.in](http://www.swayamprabha.gov.in)

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## 5 Crossover learning vs. Classroom Learning Methodology

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### **Introduction :**

Learning in schools and colleges can be enriched by experiences from everyday life; informal learning can be deepened by adding questions and knowledge from the classroom. These connected experiences spark further interest and motivation to learn. An effective method is for a teacher to propose and discuss a question in the classroom, then for learners to explore that question on a museum visit or field trip, collecting photos or notes as evidence, then share their findings back in the class to produce individual or group answers. These crossover learning experiences exploit the strengths of both environments and provide learners with authentic and engaging opportunities for learning. Since learning occurs over a lifetime, drawing on experiences across multiple settings, the wider opportunity is to support learners in recording, linking, recalling and sharing their diverse learning events.

### **Need and Importance of the study :**

Most traditional school / college curricula fail to recognize that learning doesn't stop in the classroom. Neither can learning be divided neatly into

grade levels and age groups. Learning is a continuous process that does not stop when the student is not in school / college.

In light of this fact, many organizations are now pursuing educational reforms to promote lifelong learning. One of the strategies that has been developed is crossover learning.

**Importance :** The researchers felt the need to study this innovative learning methodology for knowing whether is it helping students to develop themselves in their overall growth or not.

**Statement :** ComparativeStudy to assess the perception of students related to crossover learning versus classroom learning methodology.

### **Objectives:**

1. To find out the perception of students about Crossover learning versus classroom learning among B.Ed. students.
2. To find out the perception of students about Crossover learning versus classroom learning among nursing students.
3. To compare the effect of crossover versus classroom learning.

**Key Words :**

1. Impact
2. Crossover learning

**Assumptions :**

1. Perception of crossover learning versus classroom learning among the students may vary from individual to individual.
2. The perception among the students may vary from the type of experience received.

**Research Approach :** Quantitative approach.

**Research Methodology :** Survey.

**Setting :** Selected colleges of Education and Nursing within Mumbai.

**Population :** Students who have had experienced crossover learning strategy in the curriculum through community work.

**Sample :** B.Ed. and Nursing students who fulfill the inclusion criteria.

**Sample Size :** 100

**Sampling Technique :** Non Probability Convenience Sampling.

**Criteria for sample selection :**

**Inclusion criteria :**

1. Willing to participate in the study.
2. Able to access the survey form via internet.

**Tool :** Semi structured questionnaire

**Technique :** Web based interviewing.

**Plan for data Analysis :** Descriptive: frequency and percentage.

**Data Collection :**

The instrument in this study was an online survey that was used to gather data from participants, from within the different teacher education and nursing institutions within Mumbai. Participants consent was approved through emails and what's app and accordingly the link of the tool was forwarded to them. The participants completed this 10 min survey and submitted to the Researcher online itself. The study was conducted in a manner that protected the confidentiality of the participants. Survey items were developed based on an extensive literature review. The study gathered quantitative data to answer the research questions

**Tool :**

This study is carried out to explore the perception of students about crossover learning versus classroom learning strategy in the B.Ed. and Nursing curriculum. Structured questionnaire having yes no questions were included in the tool. Total items in the tool were 14.

**Tool to compare perception of students about Classroom learning versus Crossover**

From the above data it is evident that, both the B.Ed. and nursing students have similar views regarding the comparison between crossover learning and classroom learning.

Statement	B.Ed.				Nursing			
	Classroom Learning		Crossover Learning		Classroom Learning		Crossover Learning	
N = 100	f	%	f	%	f	%	f	%
1 Real-world experiences are provided	10	20	40	80	12	24	38	76
2 Connections between what is happening at school and in the 'real-world'	48	96	2	4	48	96	2	4
3 Able to access tools and environments	25	50	25	50	30	60	20	40
4 Students become more empathetic and tolerant.	16	32	34	68	12	24	38	76
<b>5 Students become sensitized to the surrounding</b>	8	16	42	84	4	8	46	92
<b>6 Environment plays an important role in learning</b>	2	4	48	96	5	10	45	90
7 Increases test scores.	24	48	26	52	22	44	28	56
8 Makes concepts more memorable	13	26	37	74	15	30	35	70
9 Students are able to engage with content in a variety of ways.	4	8	46	92	7	14	43	86
10 Teacher plays a major role in learning	45	90	5	10	35	70	15	30
<b>11 Teacher is available whenever there is difficulty faced by the students.</b>	43	86	7	14	45	90	5	10
<b>12 Helps in team building</b>	3	6	47	94	5	10	45	90
<b>13 Helps to provide feedback to individual / groups</b>	24	48	26	52	22	44	28	56
<b>14 Increases the confidence level of the students</b>	7	14	43	86	12	24	38	76

- 1 When asked which type of learning provides real world experiences, both B.Ed. and nursing students said definitely cross over learning does the same.
  - 2 Both B.Ed. and nursing students believe that cross over learning provides connections between what is happening at school and in the 'real-world'
  - 3 Able to access tools and environments, when asked about this statement 50% of B.Ed. students said crossover provides this whereas 60% of nursing students said classroom learning is able to access tools and environment.
  - 4 When asked whether students become more empathetic and tolerant, there were mixed reactions from both B.Ed. and nursing students for this statement.
  - 5 **Students become sensitized to the surrounding: Majority of the students i.e. 84% from B.Ed. and 92% of nursing students agreed to this.**
  - 6 **Environment plays an important role in learning: 96% of B.Ed. students and 90% of nursing students agreed to this fact.**
  - 7 **Increases test scores: To this students from both the streams had mixed reactions.**
  - 8 **Seventy four percent of B.Ed. students and 70% of nursing students agreed that cross over learning makes concepts more memorable.**
  - 9 Students are able to engage with content in a variety of ways: 92% of B.Ed. students and 86% of nursing students showed agreement to this.
  - 10 When asked whether teacher plays a major role in learning: Majority i.e. 90% of B.Ed. students agreed this for class room learning whereas 70% from nursing students agreed for the same.
  - 11 **Teacher is available whenever there is difficulty faced by the students: 86% of B.Ed. students and 90% of nursing students agreed for classroom learning for this statement.**
  - 12 **Cross over learning helps in team building is agreed by 94% of B.Ed. students and 90% of nursing students.**
  - 13 **Helps to provide feedback to individual / groups: to this statement there was a mixed reaction of the students from both the faculties.**
  - 14 **Increases the confidence level of the students: This statement was agreed by 86% of B.Ed. students and 76% of nursing students about cross over learning.**
- From the above data it is clear that when you compare the exposure given to B.Ed. students and nursing students related to cross over learning and class room learning, the situation and the perception among the students doesn't vary.

**CONCLUSION :**

From this survey the researchers want to bring to the notice two important facts that are, nursing students or B.Ed. students both are faced with class room and cross over learning methodologies. There is very little difference about opinion for both the nursing and B.Ed. students related to cross over and classroom learning.

The second important noticeable fact is that cross over learning is definitely proving to be an innovative and appreciable method of learning in different faculties of learning. This proves that cross over learning can be further more and more been implemented in the teaching learning process to help students gain the required benefits from the education field.

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## 6 SPIRITUAL INTELLIGENCE OF ADOLESCENCE

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### **Abstract :**

Adolescence is the period in which the foundation for future education, major life roles, relationships and working toward long-term productive goals are established. This period is the best time to develop positive emotions and training skills, because adolescents are seeking to find their identity and their future personality at this period. Spiritual intelligence has a significant influence on the quality of life and it is understood that adolescence is a sensitive period, which requires specific training to make a brighter future and be exposed to the difficulties. Spirituality can be viewed as a form of intelligence because it predicts functioning and adaptation and offers capabilities that enable people to solve problems and attain goals.

Spirituality is one of the innermost needs of human, in a way that some experts have considered it to comprise the highest levels of cognitive, moral and emotional development basis and constant efforts of man to respond to questions of life. Spiritual intelligence, as the basis of individual's beliefs, has a major role in various fields. Therefore, the purpose

of the present study is to examine the relationship between Spiritual Intelligence and Adolescence.

**Keywords :** Spiritual Intelligence, Adolescence.

### **INTRODUCTION**

In the last few decades, the importance of spirituality and spiritual growth in man has increasingly attracted the attention of psychologists and mental health professionals to itself. In a way, that World Health Organization in definition of dimensions of man's existence refers to physical, psychological, social and spiritual dimensions and proposes the fourth dimension, spiritual dimension, in the growth and development of human. Spirituality as a constant effort of human to answer the questions of life.

Spiritual intelligence (SI) is that intelligence which is required when we begin to open up to our spirit's journey and to quest for a greater understanding of life. It is what we seek for, to find a higher purpose and a greater sense of self, to become wise by accessing our natural birth right of wisdom. At its deepest level, Spiritual

Intelligence is a mode of response to situations that we encounter every day. Once we realize the truth of the Secretin credo that 'the unexamined life is not worth living', Spiritual Intelligence comes into play. Spiritual Intelligence itself may be understood as a formalized technique for harnessing our strengths and transmuting our weaknesses, once these have been identified as such, into an effective arsenal for realizing the potential inherent in everybody to lead a harmonious and satisfying life. It would not be hyperbolic, therefore, to claim that we need to understand spiritual intelligence in the full amplitude of its signification in order to live by the light of the insights it affords.

According to Zohar & Marshall, SI is described as "The intelligence with which we address and solve problems of meaning and value. The intelligence with which we can place our actions and our lives in a wider, richer, meaning giving context; the intelligence with which we can assess that, one course of action or one life-path is more meaningful than another" (Zohar & Marshall 2000). We use SI to deal with existential problems and to be guided – to live life at a deeper level of meaning – to have an understanding of who we are and what things mean to us and our place in this world. An individual's spirituality can be assessed very well by looking at his relationship with others.

- **Objective of the study :-**  
To study the gender deference and their Spiritual Intelligence.
- **Hypothesis :-**  
There will be no significant deference between the mean scores of spiritual intelligence of male and female students.
- **Methodology :-**  
The researcher used descriptive and Survey method, for present research.
- **Target Group :-**  
Adolescences age group (18-20), i.e. - 11<sup>th</sup> and 12<sup>th</sup> standards students are the sample of present study. 70 subjects (35 male, 35 female) were selected as the sample of the study by using random sampling method. The sample were selected from Aagri School and junior college of Marathi medium from Khanda colony, New Panvel.
- **Research Tool :-**  
Spiritual intelligence scale, prepared and standardized by researcher was used as data collection tool. In this scale, 86 items and 14 dimensions are included. Reliability of the scale by Cronbach alpha coefficient computed 0.888, the Guttman split-half coefficient was 0.881, and

Spearman-Brown Coefficient was 0.882.

➤ **Variable :-**

Independent variable :-  
 Gender - 1) Male 2) Female.  
 Dependent variable:- Spiritual Intelligence.

➤ **Statistical Technique :-**

The descriptive statistical procedure is used .i.e. Mean, SD was computed the 't' test. The raw data is compared to the spiritual intelligence of gender in order to reject or accept hypotheses.

➤ **Analysis :-**

The measure objective of this research is to study the Gender difference and their spiritual intelligence. The sample was distributed in two groups of male and female. Spiritual intelligence scale prepared by researcher was administered. Score were analysed with the help of t-test. Thus the mean, SD, and T value are calculated. It is presented in the below table.

**Table**

Gender	N	Mean	SD	df	t-value	Level of significance
Male	35	379.65	12.0	68	2.73	0.01
Female	35	386.42	8.02			

As shown in the above table, the mean score of male is 379.65 and the mean score of female is 386.42 The t value is 2.73 is significant at 0.01 level. The mean score of male is comparatively smaller than the mean score of female. It clearly shows that there is significant gender difference on spiritual intelli

**Conclusion :-**

Thus, by comparing mean scores, female student's mean scores is higher than the mean of scores achieved by the male students. Hence, the hypothesis were tested and rejected, as the female students were found to have higher in

spiritual intelligence than male students, which shows that gender is affecting variable to spiritual intelligence.

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## 7 Setting Up a Home Laboratory

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### **Abstract :-**

There is absolutely no question that scientific laboratories are setting up their game in order to contribute to the greener world. As far as chemistry teachers are concerned the increasing cost of teaching chemistry has turned out to be a matter of concern. There is often an alternative way to perform an experiment with the help of available resources. Efforts are continuously going on to fabricate alternative methods for chemistry experiments in the best possible way. Chemicals, glassware and equipments form an inseparable part of chemistry laboratory. In terms of green chemistry it becomes essential for the chemistry experiments to be performed in minimum expenses and safer way. With this view in mind one can think of setting up a home chemistry laboratory which can serve as an alternative especially for glass wares and equipment. Such an alternative laboratory is easy to set and it can be done with the help of discarded household wastes, empty chemical containers and broken glasswares. The current work attempts to set up a greener, eco-friendly chemistry home laboratory in the best possible way.

**Keywords :** *scientific laboratories, household wastes, broken glasswares.*

### **Introduction :-**

Laboratory-based learning allows students to experience bioscience principles first hand. In our experience, practical content and equipment may have changed over time, but teaching methods largely remain the same, typically involving; whole class introduction with a demonstration, students emulating the demonstration in small groups, gathering and analysing data, and concluding with a plenary discussion<sup>1</sup>. The scientific laboratories around the world are in a competition to adapt and perform the experiments in a much greener and eco-friendly way. It is arguably also apparent that this will lead to a renaissance of the scientific laboratories. As far as chemistry laboratories are concerned they face a fierce competition together in controlling the wastage of especially chemicals and glassware' and hence efforts are constantly going on to adapt chemistry experiments in a much greener way. Glassware' and other equipment's are a special matter of concern when one thinks from the point of view of the

breakage. In such case s especially the chemistry laboratories devoid of funding may face problems and hence alternatives for glassware' sand equipment's should be developed in order to keep the game on.

### The Discussion :-

Considering the ever increasing need to develop alternative methods for chemistry laboratory experiments the possibles ubstitutes for glasswares and equipments have been developed. The material used is especially the house hold and laboratory waste, butitis something which can be remodeled for a better purpose.

### Experimental :-

We use broken burette knob as control knob for gas and liquids. Eye drop bottles as dropping bottles. Empty ice-cream containers as storage containers. Electric bulbs as a round bottom flasks. Empty plastic container as three neck flask. Empty pill strips as spot tiles. Empty sonpadi box as ice bath. Broken thermometer as glass rod.The easy preparation and handling of the plastic bottles is a crucial factor in their use for experimentation. The bottles can easily be sawed, drilled or cut accordingly to the requirements of the particular experiment. Moreover, it is also possible to melt holes with hot objects in the plastic bottles and to seal them again with hot glue<sup>2</sup>.



### Some experiments we can do using this apparatus:-

- 1) Mosquito repellent bottle as a Hickman head :- The Hickman Distillation Head acts as both an air condenser and a condensate collection vessel for simple fractional distillations. Distillate is removed via syringe or Pasteur pipette. Head has an upper threaded outer joint and a lower inner joint. We can use it to separate two or more soluble liquids of different boiling points at home or in homemade lab.

- 2) Mosquito repellent bottle as a Buchner funnel :- A Buchner funnel is a piece of laboratory equipment used in filtration. It is traditionally made of porcelain, but glass and plastic funnels are also available but using mosquito repellent bottle, we can make our own Buchner funnels at home in no cost.
- 3) Iron pins or Needle as magnetic needle:- Magnetic needle is a laboratory device that employs a rotating magnetic field to cause a stir bar (or flea) immersed in a liquid to spin very quickly, thus stirring it. The rotating field may be created either by a rotating magnet or a set of stationary electromagnets, placed beneath the vessel with the liquid. It can cost upto 200 to 380 rs in India but we can make it in our home in zero cost.
- 4) Mosquito repellent bottle as a powder funnel :- Powder funnels feature a large bore, making them ideal for use with powders, larger particles and viscous liquids. Funnel has molded external ribbing to prevent air lock using mosquito repellent we can make it at home and we can use it for different purpose other than chemical reactions.
- 5) Broken thermometer as a glass rod :- A glass stirring rod, glass rod, stirring rod or stir rod is a piece of laboratory equipment used to mix chemicals. They are usually made of solid glass, about the thickness and slightly longer than a drinking straw, with rounded ends. Cost of one glass rod is 20 to 30 rs but if we have broken glass rod or thermometer we can use it as a glass rod.
- 6) Empty pill stripes as spot tiles :- A spot plate, also called a reaction plate is a laboratory tool made either from ceramics or plastics. Each plate consists of many cavity-like depressions in which only small amount of reactants can be added at a time and we can do small reactions in those plates easily cost of one tile is upto 100 to 200 rs.

**Precautions :-**

Care must be taken while hollo wing out the light bulb. Take care while cutting any box or cutting mosquito repellent bottle<sup>3</sup>.Every individual working in the lab, student, teacher, scientist an attender, laboratory assistant or cleaner becomes responsible for his or her and the laboratory safety<sup>3</sup>. One should work with presence of mind and utmost simple common sense while in the lab such that any mishap should not be handled panicking .Care and cleanliness must be

practiced at all times .No personnel should be indulged in eating, drinking, smoking or any other entertainment activities apart from the work. When working in the lab it is better to wear protective coat<sup>4</sup>.

### **Conclusion :-**

Instead of flinging off the household and laboratory wastes the alternatives mentioned for the glass ware and equipment's serve as a good innovation. Home laboratory is easy to setup.

The results obtained from the Hickman-distillati on head (mosquito repellent bottle) and Hickmandistillati on head (glass) are comparable.

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## 8 Continuous and Comprehensive Evaluation of Primary Teachers at Akola Region

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**Abstract:** - A teacher plays a vital role in shaping the life of a student. The training of teachers is a continuous process. It is not only a skill oriented training but preparation for challenging profession. Main objective of the National Curriculum Framework is to prepare teacher educators and to evaluate the development of teachers.

In recent years, there has been a growing concern for improving the quality of evaluation system. Continuous and Comprehensive Evaluation have been introduced in the new system. There is need to shift from conventional evaluation method to continuous and comprehensive evaluation. This system of evaluation promotes quality, efficiency and accountability in teachers. This paper discuss about continuous and comprehensive evaluation of primary teachers.

**Keywords :** - Continuous and Comprehensive Evaluation, Primary teachers.

**Introduction :-** Yeshwantrao Chavhan Maharashtra Open University aims to upgrade primary teachers. So it provides B.Ed. program for primary teachers. Those teachers who have completed their graduation degree with at least 50% or P. G., D.Ed. degree and served in Z.P. School, Municipal corporation's school or any government recognized institute at least for two years. This B.Ed. course have dynamic syllabus, it is mandatory for all the teachers who have admitted.

Evaluation is the process of determining the worth or significance of a program to determine the relevance of its objectives, the efficacy of design and implementation, the efficiency or resource use and the sustainability of results.

Evaluation helps in formation of appropriate objectives, in planning appropriate learning experiences, in assessing learner's performance with respect to objectives and provides suitable feedback. It helps in taking necessary measures appropriate steps to improve the teaching procedures, in enriching the content, material, learning experiences designed on the basis of feedback.

Continuous and Comprehensive Evaluation refers to a system that covers all aspects of teacher's development. It emphasizes two fold objectives i. e. Continuity in evaluation and assessment of learning.

**Need and Importance :-** To perceive the B.Ed. degree primary teachers have to complete the assignment of first five subjects in the first year. EDU 401- Childhood and its Development, EDU 402- Learning and Teaching, EDU 403- Language of Curriculum, EDU 421- Evaluation and Assessment and the fifth paper having any two subjects from school levels. e.g. English, Math, History, Science, Geography, Hindi, Sanskrit, Commerce etc. If primary teacher have to choose any two methods, it will be difficult to change the methods later on. If the applicant wishes to change the method he/she would be charged with Rs. 5000. Further, for the practical they also have to complete the history of a student, five psychological experiments, syllabus curriculum association verification practical, Content cum methodology part first and second report, statistical analysis of internal test, Year planning, Unit planning and Unit test practical, Critical Understanding of ICT practical, Own search practical. The applicant has to

make two attractive and applicable teaching aids. All these tasks carry marks. There is an additional practical i.e. Yoga Practical is introduced in the first year even this carries marks. The final one is Viva-voce but in the first year it does not carry marks. It is only to mark the attendance of the teachers.

In second year, they have to complete the assessment of remaining five subjects. EDU 422- Contemporary Indian Society and Evaluation, EDU 423- Gender, School and Society, EDU 424- Knowledge and Curriculum, EDU 425- Inclusive Education and EVS 201- Environmental Education (This is Credit Course only not theory paper). Primary teachers have to choose any one optional subject from the following subjects.

1. EDU 426- Educational Technology
2. EDU 427- Child and Education of Child
3. EDU 429-Value Education
4. EDU 430- English for Primary Teachers
5. EDU 433-Communication mode in Education
5. EDU 434-Primary Education and Functions of Teachers on Primary Level
6. EDU 435- Secondary Education and Functions of Teachers on Secondary Level
- EDU 436- Changing the role of Education and action-oriented and EDU 437-

Pedagogy of School Subject: Specific School Subject. Apart from this they also have to complete parents-teachers association, parent's need and desires, five psychological experiments, An interview of a student, Visit to a special school, practical task of optional paper, Microteaching, Lesson Planning, Simulation teaching and demonstration report, Practice lessons, Self and Continuous lessons, Lesson observation and writing a diary, The report of Internship on school level, Work experience, Co-curricular activities, Social Work, or Value education project, Action Research, Portfolio and Environmental Education Project.

The last one is Viva-voce. In second year it is mandatory for all primary teachers. There are three examiners, one is internal examiner, second is University examiner and the third one is external examiner. So, the above tasks have to be completed by all the primary teachers. This term (continuous and comprehensive evaluation) is linked to the CBSE students, but the aim of Y.C.M.O.U. B.Ed. Course is the overall development of teachers. Because of which the co-curricular

activities are added in this course. The evaluation of primary teachers is just like the CBSE students. As a result, the researcher has chosen this continuous and comprehensive evaluation of primary teachers.

### **Statement of the Problem :- Continuous and Comprehensive Evaluation of Primary Teachers**

#### **Definitions of Key Terms**

- **Continuous and Comprehensive Evaluation :-** CCE refers to a system of school-based evaluation of students that covers all aspect of students development. It is a developmental process of assessment which emphasizes on two fold objectives.
- **Evaluation :-** Evaluation the collection of, analysis and interpretation of information about any aspect of a program of education or training as part of a recognized process of judgment its effectiveness, its efficiency and any other outcome it may have.
- **Primary Teachers :-** Primary teachers also known as national school teachers, are involved in the social, intellectual, physical and moral development of pupils in their class. A teacher works with one single class for an entire academic year and is

responsible for teaching a wide range of subjects on the National Curriculum.

**Objectives :-**

1. To learn the primary teacher's attitude towards Continuous and comprehensive Evaluation.
2. To comprehend the various activities conducted by college to evaluate the curricular activities and co-curricular activities of primary teachers.
3. To learn the primary teacher's attitude towards viva—voce.

**Scope and Limitations :** The present study is conducted in Akola Region.

- 1) The study is limited to B.Ed. students (Primary Teachers) of YCMOU, Nasik.
- 2) The study is limited to 85 students (Primary Teachers) who have taken admission in B.Ed. YCMOU, Nasik.
- 3) The study is limited English and Marathi medium.
- 4) Primary teachers included of male as well as female teachers.
- 5) This study is limited to Primary teachers who admitted Academic year 2016-2018 and 2017-2019 of YCMOU, Nasik.

**Methodology :** - The descriptive survey method was used for the Continuous and Comprehensive Evaluation.

**Sample :** - For the purpose of present study the sample of 85 Primary Teachers from Government College of Education, Akola selected by accidental sampling who admitted in Vocational B.Ed. Course.

**Tools used for data collection :-** To collect data from Primary teachers questionnaire was used.

**Data Collection :** The data has been collected from Primary Teachers by Researcher after taking prior permission of the Principal of Government B.Ed. College, Akola. As the Researcher is Co-ordinator of B.Ed. Batch Academic year 2016-2018. Researcher gave necessary directions to fill all items in the questionnaire. To elicit the actual responses it was also announced that their responses will be kept secret and will be used only for research purpose.

**Analysis of data :-** For data analysis simple quantitative statistical procedures was used i.e. percentage.

**Findings of the data:-**

1. All the primary teachers have agreed that the Continuous and Comprehensive Evaluation shows extreme change in the assessment.
2. All the primary teachers have always participated in curricular and co-curricular activities.
3. All the primary teachers have shown considerable interest in classroom

- activities, library activities, workshop activities and seminar activities which are a part of curricular activities.
4. All the primary teachers have taught with great enthusiasm, with the help of advanced methods, various models and techniques, etc.
  5. All the primary teachers have shown a very much interest in cultural and academic activities. In cultural activities, they performed dance, drama, mimicry, etc. which are a part of co-curricular activities.
  6. As per the study, the primary teachers are satisfied with the co-curricular and curricular activities but they have shown a sense of dissatisfaction for the written work that has been assigned by the YCMOU, Nasik. Teachers states that written work creates a burden and is a lot of work for an individual.
  7. All the primary teachers opined that Viva in the course of B.Ed. is good. But the marks allotted to the viva is less. It should be increased.

**Conclusion :-** Apart from curricular activities this evaluation system gives importance to co-curricular activities for overall development of primary teachers. Organization of both type of activities makes the active and brings sound health and physical fitness among them. These activities have theoretical as well as

practical knowledge and provide scope to apply that knowledge into different situations of school.

So Continuous and Comprehensive Evaluation brings out quantitative improvement in evaluation as well as in teaching learning process.

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## 9 MITHI RIVER : PAST AND PRESENT

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### **Abstract**

In my research topic, I focused on how the Mithiriver gets polluted? And what Government takes the measures for the Mithiriver? And how Government cleaning the Mithi river? And also I am looking at the 2005 floods and reasons behind the floods and some solution is also there. Mithi river is an important river in Mumbai. I also look at Mangroves How they work? How mangroves protect us? And what the British Government took measures for Mangroves? Many people don't know about the Mithi river after 2005 citizens of Mumbai know very well about the Mithiriver.

### **Keywords**

*Floods, pollution, river, save the river*

### **Introduction**

The Mithiriver is a sewer on Salsette Island, the Island of city of Mumbai, India. It is a confluence of tail water discharges of the Powai and the Vihar lakes. The sewer is seasonal and rises during the monsoons. The over-flowing lakes also contribute to the sewer flow which is stopped by dam in other times.

The sewer originates from the overflow of vihar lake and also receives the overflow from the powai lake about 2km later. It flows for a total of 17.83 km before it meets the Arabian sea at Mahim creek and has a catchment area of 7295 hectares. It flows through the residential and industrial complexes of powai, Sakinaka, Kurla, Kalina, BKC, Dharavi and Mahim. After the incident of the 26th July 2005 deluge, it has become very important to look after the Mithi River.

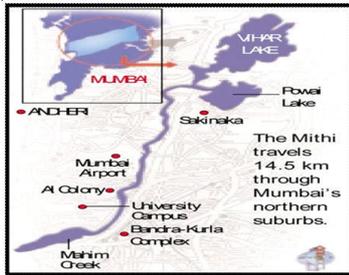
### **Aims and Objectives**

The project aims to know about the Mithiriver. We observing the condition of the Mithi river is very bad so my project aims is to know the past and present situation of the Mithi river and find the solution for the pollution of Mithiriver And where it flows and how it gets polluted and also talk about the floods, damages, etc. I cover the points about the river like history and damages, reasons, effects, etc.

### **Limitation of the study**

The area for the study is limited to the Mumbai, the coastal areas and industrial and residential areas in Mumbai Like

BKC, Mahim creek, Sakinaka, Kalina CST road, Aray colony, Sanjay Gandhi National Park.



CST Road, Kalina - This is a highly polluted area and a heaven for recyclers

### **Methodology/experimental**

The researcher started the study through books the first researcher referred books related to Bombay rivers and the Mithi river. The researcher also referred to books that are related to the history of Mumbai. Then the researcher referred Articles which are related to the concerned topic. After secondary sources, the researcher referred to primary sources, such as Newspapers and Reports.



Under Western Express highway showing septic nature of Mithi River by it's black colour

The water of the Mithi River is polluted to a great extent. The water cannot be used for any domestic or industrial purposes. Besides the various adverse effects of the heavily polluted waters on the people staying in areas adjoining the river banks, it is also ecologically damaging to the flora and fauna in the sensitive ecosystems near the river (e.g. Salim Ali bird sanctuary at Mahim). Therefore a system, continuous monitoring the water quality of the Mithiriver is required. Also, concentrated efforts are required from all concerned to reduce the dumping of industrial and residential wastes in the river waters. There are some suggestions for the Mithiriver. First, we have to clean the river. Mithiriver is a big and beautiful river in Mumbai. We have to maintain the drainage system of the river. As the work of the river increases

the size of the water drain is also going on and pile holes should be there so the water from the floods will go in the holes. This type of method helpful for us and we also focus on Mangrove's preservation. Mangroves are present in Mumbai and take water from rain in the past, but nowadays due to the reclamation of land over the Mangroves. Mangroves get destroyed by us. They save us from floods. All these things are achieved by us then we take responsibility and the state government, Municipal authorities need to work together to achieve this.

### **Conclusion**

The water of the Mithi river is polluted to a great extent and we need to take some measure to prevent this type of water pollution are:

#### **Short Term Measures :**

These include the following,

- I. The immediate closure of all the unauthorized activities which discharge industrial effluents, sludge, oil, and chemicals.
- II. Provide proper garbage collection system to prevent citizens from dumping the garbage into the river.

#### **Long Term Measures :**

Long term measures to minimize pollution in Mithi River include the following.

- I. Plan for sewers on both the banks of Mithi River and provide Sewage treatment plants at various locations. Such plants can be provided wherever proper drainage lines exist today.
- II. Dredge the entire length of the Mithi river bed to improve its carrying capacity.
- III. Provide proper garbage collection stations for the benefit of hutment Dwellers.
- IV. Provide a sewerage system on both the banks of the river so that the sewage is collected and treated at various locations all along the river.
- V. Immediately stop all the unauthorized industries which include scrap dealers, scrap recyclers, waste oil recyclers, etc.
- VI. Provide a proper garbage collection system on both banks of the river so that garbage is not dumped in the river.
- VII. The analysis indicated that the river water after treatment can be reused in industry or for gardening. Both the banks of the Mithi river can be planted with proper vegetation for beautification.

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## 10 Prerequisite Skills for Online Learning: A Reality Check

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### Abstract

The NCTE two-year B.Ed. programme has set the goal of preparing preservice teachers to equip them with growing technologies and help in exploring educational possibilities of technology, learning to interact using ICT and becoming a critical user of ICT. Hence University of Mumbai keeping in mind this bench mark has introduced the Ability course as a part of their practicum component. This course aims to augment skills in the context of the ICT related situation content. This curriculum presents hands on learning and open-ended exploration of ICT applications. Awareness of social, ethical and legal aspects of its use, creation of original content, safe and secure use of ICT, web surfing, using search engines, locating, retrieving and managing content from various resources, creating and participating in discussion forums are some of the features of the ability course. Indeed, this course helps in increasing the abilities of preservice teachers but how much of these abilities are required depends on the existing skills related to ICT among preservice teachers.

The author has carried out task analysis to find out the ICT skills as a prerequisite to learn the said course. Hence the investigator took a sample of 50 preservice teachers who were not exposed to the course from five colleges and administered a test with 18 questions based on the task provided in the syllabus at the entry point. The findings of the study indicated that prospective teachers had to some extent the understanding of the essential prerequisite ICT skills but there is a need to provide ICT courses to student teachers in order to learn more advanced skills that will strengthen their professional capabilities and help them to effectively use ICT in their teaching and learning process and apply the ICT skills learnt in the learning of other courses.

**Keywords :** prerequisite skills, professional capabilities, Ability course.

### Introduction

“Believing in your potential and calling upon your courage to change will fuel your professional growth and help you accomplish goals.” - John Manning

To be competitive, students

increasingly need to engage in ongoing expansion of their skills in areas that complement their academic programs and augment their employability. The knowledge economy demands an elevated level of professional skills from all of its participants if they are going to increase the economic and social benefits for Indians and for society in general. In 1998 Oblinger and Verville made an observation still relevant today: "The problem is not that today's graduates are less skilled than those of previous generations, but those expectations for performance are much higher today than ever before."<sup>1</sup> Thus professional growth comes into the picture. Professional growth is personalized, individualized learning pathways that help each staff member to be their personal best. The time in which we live is hectic and forces people to their own professional growth and to the development of their abilities. Professional growth opportunities will tap into those interests and strengths in support of helping people accomplish their subsequent goal as professionals.

The Government of India has articulated the need to strengthen Indian people so that India can magnetize and retain the extremely skilled people needed to flourish in a knowledge-based economy and to make momentous

contributions to society, both nationally and internationally. Hence universities, employers, teachers and students recognize the importance of professional skills that accompany their disciplinary expertise.

The N.C.T.E. framework (1978 p.7) says that entire teacher education curriculum should be so designed that integration among theory courses takes place and this integrated pedagogical understanding flows into skills development. Teacher education needs to build capacities in the teacher to construct knowledge, to deal with different contexts and to develop the abilities to discern and judge in moments of uncertainty and fluidity, characteristic of teaching-learning environments. The N.C.T.E framework of 2014 lays utmost emphasis on Ability courses. The framework also warns that such integration does not automatically take place in the mind of individual but special efforts have to be made to develop such ability in training.

Education is a condition for development and the teacher is the ultimate definer of its reality. The quality of teacher education is significant if education is to enhance development. Teacher preparation, mentoring and motivation are vital factors in enhancing quality education capable of facilitating meaningful development. It is not,

therefore, surprising that teacher training is on the priority list of national educational programmes in India. Hence one of the missions of teacher education programme is to provide comprehensive Teacher Education Programme through pre-service and in-service training that would produce competent, committed and dedicated teachers to improve the quality of teaching and learning in Indian classrooms. The education and training of teacher is expected to begin and continue as a lifelong process. The concept of skill development has gained great importance due to the growing population of young and employable youths of India. Mere offering education for the sake of award of degree to students' may not carry due importance. It is equally necessary that the educational inputs should be transferred into meaningful employable skills. Hence capacity building of student teachers' through skill development has become a major challenge for our planners. Today we are encouraging skill development and capacity building as the principal purpose of education. It is the right of every learner to apply in practice what he has learned. From this point of view the purpose of learning has a different objective i.e. skill development and capacity building.<sup>2</sup>

The capacities required to be built

among the students in their formative years by the educational institutions are: The capacity for research or inquiry; the capacity for creativity and innovation; the capacity to use high technology; the capacity for developing effective communication skills; and the capacity for moral leadership.<sup>3</sup> Educational Initiatives, for many years, has been focused on building Teacher capacity through student and teacher assessments, training workshops and teacher observation programmes. Problem solving techniques and strategies to make trainees learn to learn themselves are used. Application of knowledge and skills are encouraged through individual and group activities. Providing student teachers with actual hands-on experience implementing a skill-based approach and helping them inculcate the learning into their daily work through appropriate activities.

Hence preparing teachers to use technology in a classroom is an important step for ICT enabled education in the country. Thus, ability course focuses on moving beyond computer literacy and ICT-aided learning, to help student-teachers interpret and adapt ICTs in line with educational aims and principles. It helps to explore ICTs along three broad strands; teaching learning, administrative and academic support

systems, and broader implications for society.

Seeing ICTs as an important curricular resource and an integral part of education, according primacy to the role of the teacher, ensuring public ownership of digital resources created and used in education, taking a critical perspective on ICTs as well as promoting constructivist approaches that privilege participation and co-creation over mere access, are principles that the course helps teachers' explore. The course also help student-teachers to learn integrating technology tools for teaching and learning, developing collaborative networks for sharing and learning, web surfing and creation of content materials, enhancing communication skills etc. The entire syllabus of ability course focuses on workshop mode where students learn through some given contexts. Eg- Ethical issues like hacking, cyber bullying, copyright issues are used to create a discussion forum using BLOG. While exploring the content surfing skills are taught through the content. This is the nature of syllabus. It is a beautifully designed syllabus for student teachers with the following purpose :-

1. Applicability of skills learnt through ability course in the learning of other courses

2. Self-learning using online platform
3. Exploration of various software's for learning different content.

Automatically abilities among the student teachers will be developed through the course. Hence the investigator felt the need to conduct the need analysis to find out how much of the skills are really required and how many skills student teachers already possess for the meaningful execution of the ability course.

### **Need of the Study**

The use of ICT in education adds value to teaching and learning, by enhancing the effectiveness of learning. It adds a dimension to learning. With the inception of ICT in schools and colleges, students found learning in a technology enhanced environment more stimulating and engaging than in a traditional classroom environment. Schools today focus on teaching students by using the latest technology and therefore it becomes mandatory for teacher education colleges to train student teachers by enabling them to effectively use ICT and develop optimal conditions for teaching and learning. Preparing teachers to use technology in a classroom is an important step for ICT enabled education in the country. Hence the purpose of this paper is to ensure

what ICT skills student teachers already possess and which skills can be developed in them through the ability course which they can use it in the profession for better performance and if there are any lacunae those can be trounced by using corrective measures. The main purpose of the study is to focus on the skills that can be developed through the ability course which will always remain an imperative aspect of any skill development course. But when a course is learnt by students there are certain skills required prior to implementation of the course which is called task analysis and that is why task analysis is required to find out the student's preparedness for learning any course. The present syllabus goes beyond basic skills and focuses on advance developing capabilities in ICT and that is why there was a need for finding out answers to the following questions

1. How much is the level of understanding of the following basic skills needed for the ability course?
  - a. Skill of collaboration
  - b. Web surfing and creating skills
- 2) How these skills can be developed in student teachers before implementing a course?

Hence the investigator felt the need to conduct the present study.

### **Aim of the Study**

To find out the level of prerequisite skills possessed by student teachers at the entry point before being trained for ICT course

### **Objectives of the Study**

1. To find out the level of understanding of the below given pre requisite skills among student teachers at the entry point
  - Skill of collaboration
  - Skill of Web surfing and creation
2. To compare the level of understanding of the below given pre requisite skills among student teachers at the entry point
  - Skill of collaboration
  - Skill of Web surfing and creation

### **Hypothesis**

There is no significant difference in the level of understanding of prerequisite skills possessed by student teachers as reflected in their means before being trained for ICT course.

### **Research Design**

In this investigation quantitative method of data collection was used to collect and analyse the data obtained from all the respondents. The investigator developed the questionnaire and got its validation done by experts before being distributed to the targeted group of student teachers. The questionnaire consisted of statements catering to prerequisite skills

of ICT such as Collaborative skills and Web surfing and creation skills which helped the researcher in analysing the level of understanding of these prerequisite skills of ICT among student teachers at the entry level. The investigator further could conveniently enter the statistical findings of the data collected through respondents in order to quantify the results.

### **Sample**

The study engaged 50 Student teachers from five different B.Ed. colleges who were selected through lottery method in order to avoid any biases. The respondents were made to administer the questionnaire. Since the targeted respondents for this study were meant for F.Y.B.Ed. student teachers who had no exposure to the ICT course, the investigator tried to get the responses from these student teachers at the entry level before they were trained for the ICT course which checked their existing ICT skills.

### **Instrument**

A survey questionnaire with a total of 18 items was used as a main instrument in this study to analyse the existing skills among student teachers at the entry level before the exposure to the ICT course. The questionnaire was given to the respondents and were instructed to

read the statements carefully and choose their answers based on 5-point Likert scale ranging from 1= Strongly Agree, 2= Agree, 3= Undecided 4= Disagree, 5= Strongly Disagree. The questionnaire consisted of statements catering to collaborative skills and web surfing and creation skills as prerequisites for ICT learning. The content validity of items was conducted by subject experts.

### **Data Collection procedures**

The investigator modified the questionnaire after receiving the feedback from the experts and then distributed to the target group of respondents. The questionnaire was given to the respondents at the entry level before they received any training for the ICT course to check their existing ICT skills. The investigator personally requested the respondents to fill up the questionnaire. All the completely filled questionnaires were gathered and collected for further data analysis in order to get the output and findings of the research.

### **Data Analysis Process**

All the data collected from the respondents were gathered together to be analysed. The analysis includes both descriptive and inferential analysis. The investigator used descriptive analysis to analyse the mean and mean percentage of the responses. Besides, it is also used

to determine t- test to identify the difference in the level of understanding of prerequisite skills possessed by student teachers before being trained for ICT course.

**Analysis and Interpretation**

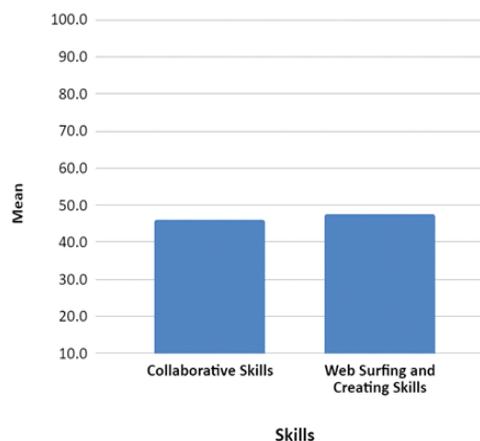
The data was analysed through descriptive and Inferential statistics. The below given table shows the mean difference between the level of understanding of the prerequisite skills among student teachers at the entry point.

**Table 1. Mean difference between Prerequisite skills Collaborative and Web surfing and creating skills**

S.N.	Type of Skills	N	Mean	'P' Value
1.	Collaborative skills	50	46.0	0.
2.	Web surfing and creating skills	50	47.6	78

It is evident from table -1 that the mean of Collaborative skill is 46.0 and Web surfing and creating skills is 47.6, which is less than 50% that indicates that student teachers have some understanding about the prerequisite skills required to learn the ICT course but they require some more understanding to build up proficiency in these skills in order to learn more advanced skills related to ICT. The above table also shows the 'p' value is 0.78 > 0.05. Which indicates weak evidence

against the null hypothesis. Thus the null hypothesis is accepted. Hence it is inferred that there is no significant difference in the level of understanding of pre requisite skills possessed by student teachers before being trained for ICT course. Thus, it can be said that student teachers have almost the same level of understanding of the prerequisite skills before being trained for the ICT course and hence there is a need for teacher educators to do need analysis in order to find out the extent of existing skills of ICT among student teachers. E.g.- Student teachers are aware about the use of BLOG but they do not know how to create a BLOG. This will also help teacher educators to plan more efficiently the strategies to be used while conducting tasks for the ability course and also the time student teachers would take to master these skills.



The above graph also clearly indicates that the mean of collaborative skills is 46.0 and Web surfing and creating skills is 47.6. which is less than 50% that indicates that student teachers have some understanding about the prerequisite skills required to learn the ICT course but they need some more training and practice to gain competency in these prerequisite skills and hence teacher educators can conduct the need analysis so as to understand the strategies that can be employed and time they would need for performing the tasks of the Ability course

#### **Recommendations and Conclusion**

The purpose of this paper aims to bring together the findings of this research that indicates that student teachers have some understanding about the essential prerequisite skills for ICT course but they need some more training and practice to be competent in the prerequisite skills in order to learn more advanced skills through the ability course. It also serves as a need analysis for teacher educators in order to find out how much of the skills are needed that will help in meaningful learning of the ability course. Teacher educators through this kind of need analysis can understand the existing level of understanding of prerequisite skills

in student teachers and accordingly plan to conduct the tasks mentioned in the course using innovative strategies that will help the learners to build the advanced skills of ICT in them and can also apply the knowledge gained in the learning of other courses.

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## 11 Learning styles: Paving a path for learners and instructors

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**ABSTRACT :** Learning, creativity, and innovation are considered as the axis of the activities of all educational and entrepreneur-based institutions. Learning style of students as one of the factors effective in learning and academic progress has always been taken into consideration. By identifying the learning style and rate of creativity of individuals, each style can be a more appropriate teaching method adopted by teachers and also a more correct method of learning by learners. Accordingly, the main goal of the present article is to identify the differences of learning styles of individuals in different academic majors and the rate of individuals in each learning style

**Key Words :** Learning styles,  
Perceptual Learning Styles  
Preferences, Educational practice

### Introduction

Due to their important and serious role in educating the future-making generation, educational institutions are considered as one of the important and fundamental institutions in society. One of the main preoccupations of educational system is to transfer knowledge to the

future generation. Increasing production of knowledge and information; extensive cultural, social, and economic development and changes along with new problems and consequently new expectations for educational system have resulted in teaching the manner of learning and methods of creativity and innovation instead of the transfer of a collection of knowledge and information to individuals.

In the present age, students should apply creative thought skills and correct learning methods to make appropriate decisions and solve the problems of society to cope with changes. *B.F. Skinner an American psychologist* believes that an effective educational system is based on appropriate learning and teaching methods for students. Through familiarity with learning styles, teachers and educational planners can conform planning and educational methods to the learning styles of the learners. Teachers should accept the fact that each student might adopt a special style of learning for different subjects, so they have to adopt an appropriate style and method of learning for each student.

Informing the individual of his learning style can prepare his background knowledge to adopt optimal methods for learning. Learning styles are regarded as one of the crucial factors to be taken into account when designing instruction and learning environments.

**THEORETICAL BACKGROUND**

The field of educational psychology comprises numerous learning style models, all aiming at an improvement of learning. Learning style assessments could contribute to the learner’s intrapersonal knowledge as a part of his/her declarative meta-knowledge.

Accordingly, intrapersonal knowledge is defined as knowledge about the own thinking, memory, and corresponding tendencies (Brown, 1984). Therefore, by knowing about specific preferences a learner unifies, he/she at least fulfills a basic prerequisite to self-regulate his/her learning process and/or environment in a way that suits his/her individual learning preferences.

However, assessing learning styles could not only contribute to the learners’ meta-knowledge and subsequently create the basis for improvement of his/her control mechanisms in a self-regulated learning environment.

**Reid’s (1987) Perceptual Learning Style Preferences**

These are measured by applying his/her *Perceptual Learning Style Preferences Questionnaire (PLSPQ)*, where language learners’ styles are divided into 6 cubes as under :

<b>Visual</b>	<ul style="list-style-type: none"> <li>Learners are most comfortable with pictures, images and graphs while studying and retaining information</li> </ul>
<b>Auditory</b>	<ul style="list-style-type: none"> <li>Learners learn best when hearing the information and, perhaps, listening to the lecture.</li> <li>Learner needs to express verbally what he/she learns, solve problems by talking about them and discusses the material in the class.</li> </ul>
<b>Kinesthetic</b>	<ul style="list-style-type: none"> <li>Learners prefer active participation experiences, for example drama, role-play or moving around. Such students learn best by experience and by being involved physically in classroom experiences.</li> <li>A combination of stimuli, for example an audio tape combined with an activity helps learner understand new material.</li> </ul>

<b>Tactile</b>	<ul style="list-style-type: none"><li>• Learners prefer hands on work, for example, handling materials or taking notes. Working on an experiment in the laboratory is the best way for such students to learn new material.</li><li>• Writing notes or instruction can help such learners to remember information easily and physical involvement in the class plays major role in their retention of the information.</li></ul>
<b>Group</b>	<ul style="list-style-type: none"><li>• Learners prefer studying with others. Group studying make them feel comfortable and it is best way for them to acquire knowledge.</li><li>• Students also value class interaction and class work with other students, and they remember information when they work with two or three classmates. The stimulation of group work will help such learner to understand new information better.</li></ul>
<b>Individual</b>	<ul style="list-style-type: none"><li>• Learners prefer studying alone and they learn best independently.</li><li>• Such students learn new material best when reading it themselves. Progress and achievement is best visible when they learn alone.</li></ul>

### Learning Styles in Educational Practice

The term '*learning styles*' speaks to the understanding that every student learns differently. Individual learning styles depend on cognitive, emotional and environmental factors, as well as one's prior experience. It is important for educators to understand the differences in their students' learning styles, so that they can implement best practice strategies into their daily activities, curriculum and assessments.

Before going further, it is important to remember that there is **no right or wrong learning style**. Each style has advantages and disadvantages. **Knowing your learning style is not meant**

**to limit you, but to expand you – by helping you to work, learn and live more efficiently.**

Teachers who know their students' preferred learning styles can match their teaching styles with students learning styles. This is very important as it effect greatly to the effectiveness of the teaching and learning process. Students' preferred learning styles can help teachers to prepare lesson plan and decide learning activities and teaching strategies based on consideration of variety of their students' learning styles in a particular classroom. Teachers' awareness of their students' learning styles, therefore, can be an effective base in order to create effective, motivating and interesting learning environment for students.

### **Importance of learning style**

It is very important for an individual to know his/her learning style. The reason is that one of the most significant issues in learning to learn, or in becoming effective in the process of learning, is an individual's taking the responsibility for his/her own learning. For this purpose, the individuals should know what their own learning styles are and what characteristics this style has and they should thereby behave according to this style. Every opportunity for learning is a chance for him/her. It is in the learner's hand to use different ways and develop the learning styles to some extent.

Learning style is important for many reasons; however, there are three vital ones. First of all, people's learning styles will vary because everyone is different from one another naturally.

Secondly, it offers the opportunities to teach by using a wide range of methods in an effective way. Sticking to just one model unthinkingly will create a monotonous learning environment, so not everyone will enjoy the lesson. In other words, learning and teaching will be just words and not rooted in reality.

Thirdly, we can manage many things in education and communication if we really recognize the groups we are called to. Of course, we may not know every detail; however, being aware of our

students' learning styles, psychological qualities and motivational differences will help us regulate our lessons appropriately and according to the conditions.

### **The advantages of identifying learning styles :**

The research on learning styles shows that individuals have **another learning style besides the dominant one**. When the individual has more than one learning style, the levels of using it can change. Learning style has cognitive, affective and psychological aspects. Cognitive components are about the internal control of the system of running the knowledge and these can be changed through education. Affective and psychological components affect the preferences of the individual, and suggest answers to both education and teaching strategies.

Learning style gives opportunities to recognize individuals and the differences between them. Learning style has an important place in the lives of individuals. When the individual knows his/her learning style, he/she will integrate it in the process of learning so he/she will learn more easily and fast and will be successful.

Another advantage of the identification of the own learning style by the student is that it will help the student to become an effective problem solver. It is important that individuals receive

education in areas suitable for their learning styles. Knowledge of learning style also provides information to the student as to why he/she has learnt in a different way than others. This has to be part of the learning process to enable the individual to obtain knowledge, which constantly shifts and changes, without any help from others. Briefly, confidence in learning will consistently rise when learners know how to learn.

Learning to learn and grasping knowledge in a suitable manner will lessen the need for an overbearing control by teachers. At this point, teachers guide the students. Those people will identify their aims, unlike those whose learning style preferences are not identified. They know what they want to learn and “how”. This awareness will change their perspectives on learning new things.

**Key findings :**

Learning style, which can be counted as one of the techniques used for recognizing individuals, will especially assist the teachers in getting to know the group of students in front of them and pave the way for them to become much more effective. Research on this subject has suggested that the students who have experienced this learning process and approach will be more successful.

This could have a great impact on learning. To achieve this success, both teachers and students should undertake many responsibilities, but the heaviest responsibility is on the teachers. The teachers should match teaching style and learning tasks to individual learners’ preferred styles and provide a range of input styles and learning tasks so that the learners will sometimes get a task in their preferred style, so that they can improve.

Lastly, the teachers should help the students to move from one less successful style to another by using teaching styles and thinking skills. The teachers should be concrete and practical, concerned with application. They should support the students’ imagination, creativity and exploration of new possibilities. In other words, the teachers should teach them to be critical and challenging.

It is not so difficult to understand the learning styles and recognize them. The important thing is to recognize the students’ learning style. Studying with knowledge of the learning style helps an individual to reach his/her goals quickly. Considering the classroom, one should know that classroom environment is a place full of various stimuli. But it should be remembered that teaching is an art of instruction. The teacher has to maximize the stimuli as much as possible.

Students with these different styles will be affected not only by the stimuli in the classroom but also by the stimuli at home. The goal is to realize learning and to encourage the student to revise outside of school, at home, after eliminating any negative situations. In this way, the student will transfer the learning into the real life.

### **Discussion**

Teachers have to work to provide a high-quality education by heeding the results of the studies. The research studies will assist the teachers in remembering what needs to be done. **The seating plans for individuals with different learning styles are quite important.** Some students with different learning styles shouldn't be seated in noisy places for exams. At the same time too little or too much light among the "visuals" can effect learning negatively.

As for "tactiles", a comfortable outfit, and the attitudes of people from inside and outside affect their approaches to learning. Concerning this, *Dunn and Dunn* explained that "*younger students' perceptual preferences are mostly tactile or physical and that the teacher needs to take this into consideration.*" As a result of their studies on visual and auditory preferences, *Dunn and* suggested that **less than 12%** of the

students in the first level of primary education have an auditory learning preference while **40%** of the students have visual learning preferences. As a result of these findings, it can be seen that a change occurs in the learning of the students with visual and auditory perception in relation to their age. In conclusion, the older the student gets, the clearer his/her visual and auditory learning perception will be.

### **Conclusion**

Many recent studies have focused on learning styles. Teachers or people involved in scientific works should benefit from this research. Teachers and scientists should study the research results and apply the findings in the class environment. If necessary, they can communicate with other people studying in this field. As mentioned before, technological developments provide us with this opportunity. In both pre-service and in-service education, it is vital that teacher candidates be educated as being aware of the learning styles.

The students should also think wisely and, with the guidance of teachers, apply their knowledge. They need to be critical and creative in learning how to learn. To increase the efficiency of learning styles in learning process, firstly, it may be beneficial to explain illustratively how

students benefit from learning styles. In addition, methods-techniques and materials taking the learning styles of students into consideration can be used by the teachers. Teachers can also guide the parents in providing learning conditions suitable for the students' learning styles.

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## **12 A study of Adjustment with Academic and General Environment of the Institution**

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### **ABSTRACT**

Today we live in global world. All human beings are dependent on each other. Students and teachers need to co-operate each other for overall development of students. For that teachers are required to conduct various activities. Apart from teaching they engage in different teaching, record keeping and professional development activities. Adjustments with academic and general environment plays a great role in the teacher's life. The present study is conducted on randomly selected 50 male and 50 female teachers in Raigad district. Survey method is used along with the Mangal Teacher Adjustment Inventory tool. It was found that female teachers are doing more Adjustment with Academic and General Environment of the Institution compared to their male colleagues.

**KEY WORDS:- Adjustment with Academic and General Environment of the Institution, Primary Schools Teachers.**

### **INTRODUCTION**

In today's global world, teachers and students support each other for development of students. Humans (and other animals) regularly adjust to their environment. In psychology, adjustment refers to the behavioral process of balancing conflicting needs or needs challenged by obstacles in the environment. Humans and animals regularly adjust to their environment.

When evaluating adjustment it can be considered in two ways: adjustment as an achievement and adjustment as a process. A teacher can do all duties in the teaching profession as well as manage all the activities with a strong mind only if he or she can adjust easily with academic and general environment.

### **NEED AND SIGNIFICANCE OF THE STUDY**

Every school has different environment and surrounding. Moreover, work culture of every school is different. Work culture

and environment affects development of students, and the role of the teacher in adjusting to the same is utmost importance. Thus, the researcher decided to study adjustment done by primary teachers on academic and general environment.

### **Statement of the Problem**

The problem for research is therefore stated as follows: -

### **A study of Adjustment with Academic and General Environment of the Institution**

#### **DEFINITION OF THE TERMS IN THE STATEMENT OF THE PROBLEM**

In the statement of the problem, there are terms, which are taken for the sake of clarity and also for limiting the scope of research. Operational definitions of terms are as follows:-

#### **Adjustment**

Adjustment refers to the behavioral process of balancing conflicting needs or needs challenged by obstacles in the environment.

#### **Academic Environment**

Academic environment may be defined as one that best prepares students for their future professional life and contributes towards their personal development, psychosomatic and social well-being. A number of diverse factors significantly influence the way students

perceive and experience their education.

#### **General Environment**

A general environment is environment related to school facilities such as classrooms, school-based health supports and disciplinary policies and practices. It sets the stage for the external factors that affect students.

#### **Primary Schools Teachers**

A person who teaches to the students of Primary sections (1<sup>st</sup> to 8<sup>th</sup>std).

#### **Raigad District**

Raigad is a District in Maharashtra.

#### **Aim of Research**

Aim of research is to find Adjustment with Academic and General Environment of the Institution of primary school teachers in Raigad district.

#### **Objectives**

1. To study Adjustment with Academic and General Environment of the Institution of male primary school teachers in Raigad district.
1. To study Adjustment with Academic and General Environment of the Institution of female primary school teachers in Raigad district.
2. To compare Adjustment with Academic and General Environment of the Institution of male and female primary school teachers in Raigad district.

### **Hypothesis**

**H0** : There is no significant difference between means of academic adjustment and general environment of male and female primary teachers in Raigad District.

### **Limitations of the study**

Study limited to Adjustment with Academic and General Environment of the Institution of primary school teachers in Raigad district. The study was limited to 100 primary school teachers in Raigad District.

### **Selection of Research Method**

Researchers selected a descriptive research method to study Adjustment with Academic and General Environment of the Institution of primary school teachers in Raigad district.

### **Research Design**

Primary teachers in Raigad district are selected for the study and the descriptive survey method is used. Adjustment factor with Academic and General Environment of the Institution of primary school teachers in Raigad district are calculated.

### **Population**

Here, all primary school teachers in Raigad district are the population.

### **Sample of Study**

The present study is conducted in Raigad district. 100 primary school teachers are selected using simple random sampling out of which 50 are male and 50 are female.

### **Tool used in the present Research**

To conduct any type of research it is very essential for the researcher to employ the appropriate tool for the purpose of data collection.

### **Adjustment with Academic and General Environment of the Institution standardized inventory**

The data of the research is collected with the help of an inventory. To study the Adjustment with Academic and General Environment of the Institution standardized inventory developed by Dr S. K. Mangal was used.

### **Scoring procedure**

The Mangal Teacher Adjustment Inventory has 65 items, each to be rated on the three-point scale. The items are related to financial adjustment and job satisfaction.

The mode of response to each of the items of the inventory is in the form of 'YES', 'No' or '?' indicating complete agreement, disagreement or neither agreement nor disagreement with the proposed statement respectively. In this

inventory, 02 items are such where the response 'yes' shows adjustment. For the remaining 63 items the response 'no; shows adjustment. In the scoring scheme, it has been planned to assign score 2 for the response indicating adjustment, score 1 for the undecided (?) response and zero for the response indicating lack of adjustment or maladjustment. The maximum score that a respondent could obtain is 130 and the minimum obtainable score was 0.

**Procedure of Data Collection**

In this study primary school teachers in Raigad district of Maharashtra were selected by simple random sampling. 100

teachers are selected by simple random sampling.

**Analysis and Interpretation of Data**

**Objective No 1 :- To study Adjustment with Academic and General Environment of the Institution of male primary school teachers in Raigad district.**

**A. Adjustment with Academic and General Environment of the Institution of Male Primary School Teachers**

**Table No 1**

**Table showing Adjustment with Academic and General Environment of the Institution of Male primary school teachers**

Category	Score Range	Response	Percentage
Very Good	105 and above	6	12%
Good	82-104	14	28%
Average	58-81	24	48%
Poor	36-57	5	10%
Very Poor	35 and below	1	2%
<b>Total</b>		50	

**Observation**

1. 6 male teachers scored 105 and above.
2. 14 male teachers scored between 82 and 104.
3. 24 male teachers scored between 58 and 81
4. 5male teachers scored between 36 and 57.
5. 1 male teacher scored between 35 and below.

**Findings**

1. 06 male teachers scored 105 and above indicate that 12% of male teachers have very good Adjustment with Academic and General Environment of the Institution.
2. 14 male teachers scored between 82 and 104 indicate that 28% of male teachers have good Adjustment with Academic and General Environment of the Institution.
3. 24 male teachers scored between 58 and 81 indicate that 48% of male teachers has average Adjustment with Academic and General Environment of the Institution.
4. 5 male teachers scored between 36 and 57 indicate that 10% of male teachers have poor Adjustment with Academic and General Environment of the Institution.
5. 1 male teachers scored between 35 and below indicate that 2% of male teacher has very poor Adjustment with Academic and General Environment of the Institution.

**Objective No 2 :- To study Adjustment with Academic and General Environment of the Institution among female Primary School Teachers.**

**B. Adjustment with Academic and General Environment of the Institution of Female Primary School Teachers**

**Table no 2**

**Table showing Adjustment with Academic and General Environment of the Institution of Female Primary School Teachers**

Category	Score Range	Response	Percentage
<b>Very Good</b>	113 and above	10	20%
<b>Good</b>	90-112	15	30%
<b>Average</b>	65-89	22	44%
<b>Poor</b>	42-64	2	4%
<b>Very Poor</b>	41 and below	1	2%
<b>Total</b>		50	100%

**Observation**

1. 10 female teachers scored 113 and above.
2. 15 female teachers scored between 90 and 112.
3. 22 female teachers scored between 65 and 89.
4. 02 female teachers scored between 42 and 64.
5. 01 female teacher scored 41 and below.

**Findings**

1. 10 female teachers scored 113 indicate that 20% of female teachers have very good Adjustment with Academic and General Environment of the Institution.
2. 15 female teachers scored between 0 and 112 indicate that 30% of female teachers have good Adjustment with Academic and General Environment of the Institution.
3. 22 female teachers scored between 65 and 89 indicate that 44% of female teachers have average Adjustment with Academic and General Environment of the Institution.
4. 02 female teachers scored between 42 and 64 indicate that 4% of female teachers have poor Adjustment with Academic and General Environment of the Institution.
5. 01 female teacher scored between 41 and below indicates that 2% of female teachers have very poor Adjustment with Academic and General Environment of the Institution.

**H0 : There is no significant difference between means of Adjustment with Academic and General Environment of the Institution of male and female teachers in Raigad District. Objective No 3:-To compare Adjustment with Academic and General Environment of the Institution among male and female primary school teachers in Raigad District.**

**Table no 3**  
**Table showing comparison of Adjustment with Academic and General Environment of the Institution of Male and Female Primary School Teachers**

Measure	Male	Female	Significance
<b>N</b>	50	50	t=1.96 at 0.05
<b>M</b>	85.12	92.82	
ó	0.72	0.56	
<b>D Means</b>	0.16		t=2.58 at 0.01
<b>t</b>	2.75		
<b>df</b>	98		

**Observation :-**

1. The table value of 't' for 98 degrees of freedom at 0.05 and at 0.01 level of significance is 1.96 and 2.58 respectively.
2. The calculated value of 't' is 2.75, which is greater than 1.96 and 2.58 at 0.05 and at 0.01 level of significance.

**Findings**

1. We reject the null hypothesis. There is no significant difference between the means of Adjustment with Academic and General Environment of the Institution of male and female teachers in Raigad District.
2. We accept H1. There is a significant difference between the means of Adjustment with Academic and General Environment of the Institution of male and female teachers in Raigad District.

**CONCLUSION**

1. There is a significant difference between the means of Adjustment with Academic and General Environment of the Institution of male and female teachers in Raigad District
2. Female teachers show more Adjustment with Academic and General Environment of the Institution compared to male teachers.
3. Some teachers have poor Adjustment with Academic and General

Environment of the Institution.

4. Few teachers have very poor Adjustment with Academic and General Environment of the Institution.

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**13 INTERNSHIP IN TWO YEAR B.ED. COURSE – A  
CHALLENGE OR ROUTINE TASK**

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**Abstract :**

In the recent years all over India there has been a drastic change in B.Ed. course. The switch over to one year course to two year B.Ed. course is quite interesting and challenging task. Any teacher education course seeks to train teacher having requisite teaching skills. Practicum approach adopted in the modern teacher education course is to place a student teacher in a classroom situation under the supervision of a qualified teacher. The concept of Internship introduced in the two year B.Ed. course throughout the country is quite challenging one for all the teacher education institutions. The aim of internship program is to incorporate teaching skills among the student teachers. Internship program is an effective way to give training to the student-teachers about real world of work. It give them an opportunity to integrate theory and practice, plan and deliver lessons properly, critically analyze their own and peers teaching styles and improve them in the light of feedback given by supervisors. Through this program they understand the role and

responsibilities of professional teachers. Internship program also give them opportunity to understand different aspects of school program and improve their skills and abilities in teaching profession. An effective and improved internship program is required in developing student-teachers personalities as true professionals in field of education.

**Key words :** - Teacher Education, B. Ed. Internship, Teaching skill, Teacher observation, Learning experiences.

**Introduction : -**

Teaching is the noblest profession. A teacher plays the pivotal role in the process. He is the key person to initiate and support change for educational improvement. He should realize that what they are doing is the noblest. To evolve a teacher to create thirst for knowledge amongst his pupils, he must continue to learn and grow professionally .in order to enable the teacher to act as a catalyst in the process of developing the future citizen; the teacher education programme needs to be revised from time to time. Looking from the post to present that the nomenclature has change from training

to Education but the system is unchanged different commission & committees, Recommended for drastic change in teacher education.

Teacher Education is being made Work Based Learning (WBL) programmes which seem to be encouraged and practised world-wide offering students practical experience in their chosen field of study. Study carried out by Hanney (2005) recommends that students completing foundation or undergraduate degrees experience WBL. Hanney describes WBL as a practice where practical work is often required to mirror professional practice and students are expected to develop the kind of key transferable skills sought by employers such as communication, team working and problem solving. WBL is known as experiential learning, covering an umbrella of variety of models such as apprenticeships, cooperative education, internships, service learning, sandwich placements, shadowing and externships designed to promote student learning outside of the traditional classroom model (Linn 1999). WBL or time of internship is critical in a fast-changing world where student teachers find they need to qualify with academic knowledge and be skilled to manage their own careers.

In order for this practical WBL to be effective it should take place in a real world environment and be of sufficient duration for the individual to be able to demonstrate competency against learning outcomes (Skillset Foundation Degree Frameworks, 2004).

### **Concept of Internship :**

According to the University of Wisconsin-Madison ([www.wisc.edu/](http://www.wisc.edu/)), an internship is a Work Based Learning experience that involves on-the-job training to prepare for a future career in a given field, with the emphasis being placed on the development of skills and knowledge pertaining to that particular field of work. A student-teacher intern is expected to gain experience and knowledge and develop vital teaching skills.

Stretch and Harp (1991) states that an internship is "A supervised discipline-related work experience; Controlled experiential learning where a student receives academic credit while employed by an organisation in a chosen area of interest; A quality work experience, guided and managed by an experienced supervisor, in a position with duties that the student has not previously performed, which will benefit the student in her or his future career goals". An internship is a

formal arrangement designed to provide opportunities for students to study and experience professional career interests in the community.

In 1906, Herman Schneider, a University of Cincinnati engineering professor and dean, founded cooperative education or internships because he recognised that most students need and want to work while attending college and the practical benefits of internships enhanced the entire learning experience (Linn, Howard and Miller 2004). Internship may be of two types – work experience type and dissertation type. In the first type, during the second year the student teachers need to transform the learnt things acquired from the teacher training institute into practice, which may vary from two months to one year. In doing so, they gain work experience. In the second type, the student teachers who are in the last year may opt for dissertation type internship. Wherein, a student teacher shall perform research form of activity for a organization. The student teachers have to select a topic and conduct an investigation and prepare a report which needs to be presented. Either of the types of internship programs is offered to the student teachers in the countries like UK, USA, Germany, France, Nether land, Pakistan, Denmark.

In India, NCERT implemented two year B.Ed. course in the four Regional Institutes of Education since 1999 as per NCTE guidelines. According to Panda “The two-year B.Ed. programme introduced by NCERT in its RIEs has certain special features/characteristics. It provides greater scope for development of sound knowledge on different areas i.e. content knowledge, knowledge on teaching-learning methodologies and knowledge on pedagogy of teaching learning among the trainee teachers. It develops a sound knowledge base for trainee-teachers in content areas, develops skills of trainee-teachers to be competent enough regarding how to transact the content materials to the students of the schools meaningfully. Some of the value related objectives that two-year B.Ed. intends to develop among the trainee teachers are commitment, competence, accountability, dutifulness etc. of the trainee-teachers towards the profession. It intends to bring integrated development of the trainee teachers touching cognitive and non- cognitive aspects of their behaviours. It is primarily practical oriented. It gives stress on practical activities like internal assessment, project works, sessional works, internship in teaching, practice of microteaching skills, community works, practical works relating to work experiences innovative ways for conducting practical activities

related to health and physical education, work experience, fieldwork with community etc.”

### **Significance of Internship :**

The aim of these teacher education programmes is to train teachers to educate and teach effectively in order to facilitate learning in the classroom (Richter et al. 2004:7). Fletcher (1990:41-55) indicate that internship experiences enhance students' selfconfidence, values and attitudes and leads to an increase in student independence, social maturity and interpersonal skills. Parveen and Mirza (2012) emphasised Internship program in Teacher Education is of great significance because it ensures the professional preparation of prospective teachers. It provides them a practical opportunity to develop true understanding of the teaching profession and future prospects of working conditions in that profession.

The internship is a educational experience combining daily experiences in the classroom setting, time allocated to work on assignments and exam preparation, and time spent coaching extracurricular activities. Student-teacher interns follow the calendar of a school and work in partnership with members of the teaching staff. A carefully planned

internship program should fulfil the following aspects.

- 1) Develop professional skills and attitudes
- 2) Offers fruitful exposure on the job
- 3) Understanding the nature of working climate and status
- 4) Securing purposeful relationships with the existing human resources.

An internship is a supervised off-campus working and learning experience, which earns academic credit. Internships give students opportunities to apply and extend the theoretical knowledge acquired in the classroom to practical experiences, while also allowing them opportunities to view and evaluate careers to which their academic interests may lead. Ideal internships establish positive contacts with prospective employers and are key to building professional networks for students (Stretch and Harp 1991:67)

In the RIEs “Two year B.Ed. trains the trainee-teachers properly to meet the multifarious problems of the school or classroom. It provides scope for pedagogical analysis of the content/ units included in its syllabus/ curriculum. This pedagogical analysis becomes helpful for healthy integration of contents, methods, theories, practical, etc. for meaningful transaction. About one

month pre-internship in teaching programme (during Part-1 B.Ed. stage), two-month internship in teaching programme (during Part- 11 B.Ed. stage), post-internship meet, twenty days community work programme (10 days in Part-1 & 10 days in Part-11 B.Ed. stage) etc. are some of the special features of this course. Both the pre- internship and internship programme are supplemented by many other innovative activities like practice of micro teaching skills in simulated classroom situation, orientation of teachers of co-operative schools, multi-cultural placement, substantial field experiences, field observation, team teaching, substitute teaching, demonstration of the lessons, observation of the lessons, taught by subject teachers, preparation, use and exhibition of teaching aids, conducting action research/ case study, participation in both curricular and cocurricular activities of the school, application of skills, getting opportunities for reflection and application of their own experiences in the school situation, development of teaching learning materials, observation of school processes, taking the arrangement classes, peer group observation of teaching, analysis of A student teacher intern is the one who has to practice how to prepare and teach a well-planned, good and effective lesson by learner

centric and interactive methodology. Internships will also allow students to learn about time management, discipline, and effective communication skills.

school experiences etc. along with the practice teaching” (Panda). In the internship there are a number of key persons involved out of which the role of supervisors/mentors and student teachers are the prime ones. According to McIntyre (1997) the mentor is the subject teacher who takes primary responsibility for the professional education in classroom teaching. The mentor teacher is the one who takes the student teacher into his or her classroom as a student-teacher intern. The mentor teacher guides and evaluates the lessons that the student-teacher intern presents. Anderson and Shannon (1988) refers mentoring as a nurturing process in which a skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels and befriends a less skilled or less experienced person for the purpose of promoting the latter’s professional and/or personal development. Roberts (2000) describe mentoring as a complex social and psychological phenomenon which cannot easily be clarified.

A student teacher intern is the one

who has to practice how to prepare and teach a well-planned, good and effective lesson by learner centric and interactive methodology. Internships will also allow students to learn about time management, discipline, and effective communication skills.

**Internship Program NCTE Guidelines :**

According to NCTE, two year B.Ed. curriculum states that “Having gained some experience with the child, the community and schools in Year 1, the second year would offer intensive engagement with the school in the form of School Internship. During the Internship, a student-teacher shall work as a regular teacher and participate in all the school activities, including planning, teaching and assessment, interacting with school teachers, community members and children. Before teaching in a classroom, the student-teachers will observe the school and its classrooms for a week, to understand the school in totality, its philosophy and aims, organisation and management; the life of a teacher; needs of the physical, mental, emotional development of children; aspects of curriculum and its transaction; quality, transaction, and assessment of teaching-learning.

School Internship shall be designed

to lead to the development of a broad repertoire of perspectives, professional capacities, teacher dispositions, sensibilities and skills. Student teachers shall be equipped to cater to diverse needs of learners in schools. Student-teachers are to be actively engaged in teaching at two levels, namely, upper primary and secondary. They should be provided opportunities to teach in government and private schools with systematic supervisory support and feedback from faculty. Internship in schools is to be done for a minimum duration of 15 weeks. This should include an initial phase of one week for observing a regular classroom with a regular teacher and would also include peer observations, teacher observations and observations of interns lessons by faculty. It is important that the studentteachers consolidate and reflect on their teaching experience during and after the school internship. Therefore, along with writing reflective journals during the internship programme, there shall be space for extended discussions and presentations on different aspects of the teaching experience after the internship. For each studentteacher, internship should be conducted preferably in one school for the entire 15 weeks. However, if the institute wants to provide an opportunity to understand the context of teaching in a government and private

school or the dynamics of teaching at elementary and senior secondary levels, this period can be divided into two blocks. Internship may be arranged in two blocks in such a way that teaching in one school at a particular level (for example elementary or senior secondary) during one block, is followed by the teaching in another school or the same school at another level during the second block. Under any circumstances, the student-teacher should not be sent to more than two schools during her/his internship period. Internship should not be reduced to the “delivery” of a certain number of lesson plans, but should aim for meaningful and holistic engagement with learners and the school. Moreover, teaching should not be practiced through the reductionist approach of “microteaching” of isolated “skills” “and simulated lessons”.

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**14 A study of secondary school teachers in relation to their job stress and job satisfaction.**

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**Abstract**

The aim of this study was to investigate the relationship between Job stress and Job satisfaction of secondary school teachers in Ratnagiri district by using standardized tools. Population of study consists of the secondary school teachers of Ratnagiri District, Maharashtra, India. About 600 secondary school teachers randomly selected as a sampling. The survey method was used for the study. Data from acceptable returned questionnaires were analyzed. Used the 'Coefficient of correlation' statistical technique to analyze the data of the present study. Results showed that the Job satisfaction of secondary school teachers *is negatively correlated with their job-stress.*

**Keywords :** Job stress, job satisfaction, secondary school teacher.

**Introduction**

The importance of teacher in the educational process is unquestionable. Of all the human factors in the education system, the teacher occupies the key position and it is only through them that the

ultimate process of education takes place. The teacher today faces new challenges in the education calling for greater effort from teachers. Teachers as a group are not more maladjusted than members of other vocations. Problems of adjustment are common to all groups, but every vocation presents certain problems peculiar to itself. Perhaps the prime condition of satisfactory adjustment is that the teachers have confidence in his own competence and that he respects his vocation. Generally, teaching is not conducive to that growth and maturity of mind that seem so necessary to personal satisfaction and consciousness of worth. Also, it will probably be admitted that teachers would derive greater satisfaction from their work if they could look forward to a long period of promotion and if they could see everywhere about them for evidence of increasing growth and development. Good teachers are those who want to be good teachers, who take risks, who have a positive attitude, who never have enough time, who think of teaching as a forum of painting, who try to give students confidence at the same time

that they push them off balance, who motivate by working within the students incentives systems, who do not trust student evaluations and who listen to students.

Teaching is the most arduous and complex profession in our society and also an important job. Yet teachers are often overworked, underpaid and underappreciated. There is a common bond which unites all teachers, i.e. the desire to help students to reach their maximum potentials as human beings. When they achieve this goal, when they see students grow as a result of their teaching, they know that all the training and hard work have been worth the effort. Thus, teaching is a behaviour, an organized set of cognitive acts or operations of teaching, both overt and covert, which are organized logically and meaningfully. Teaching has a configuration, which can be analyzed, reasoned out, described, explained and can be changed for improvement. These behaviours can be systematically and hierarchically arranged in categories called taxonomy. The effectiveness of teaching is the competent of a teacher, the attributes of instructional process and the teacher impact on pupil behaviour. The growth of all these dimensions of this broad and diverse discipline of teacher education is, like any other discipline, extensive research survey, in search of what really contributes to effective teaching.

Job stress, job involvement and job satisfaction play a vital role in adjustment of teachers in schools. Stress in job or confrontation with reality which is totally different from one's expectations and dreams, gives a teacher the strength for transforming her or himself into a powerful person. The present study is related to study of job stress and job satisfaction of secondary school teachers. Now-a-days, there is a general feeling that the teachers do not have satisfaction in their job. There is the problem of job satisfaction. There is a growing discontentment on the part of the teachers towards their job as a result of which standard and quality of education is falling. It is emphasized by different committees and commissions that high quality personnel, who have the necessary aptitude for teaching and favorable aptitude towards teaching and for proper favorable aptitude of teachers' job satisfaction and job involvement are necessary with less job stress. Therefore, to identify the level of job stress, and job satisfaction among school teachers is the need of hour. The need for the study of adjustment of teacher is not universally emphasized and is the formidable problem which teachers and educationists face in our country. Hence, the investigator attempts to study the Job Stress, and Job Satisfaction of Secondary School teachers in Ratnagiri district.

### Statement of the Problem

“A study of secondary school teachers in relation to their job stress and job satisfaction.”

### Objectives of the study

- 1.0 To see the relationship between job stress and job satisfaction of secondary school teachers in Ratnagiri district
- 1.1 To see the relationship between job stress and job satisfaction of female secondary school teachers in Ratnagiri district
- 1.2 To see the relationship between job stress and job satisfaction of male secondary school teachers in Ratnagiri district.

### Hypotheses of the study

**H<sub>1</sub> Relationship between job stress and job satisfaction.**

H<sub>1.1</sub> There is no significant relationship between job stress and job satisfaction of secondary school teachers.

H<sub>1.2</sub> There is no significant relationship between job stress and job satisfaction of female secondary school teachers.

H<sub>1.3</sub> There is no significant relationship between job stress and job satisfaction of male secondary school teachers.

### Delimitations of the study

Delimitations of research are as under :-

1. The present study is limited only up to Marathi medium secondary school teachers. English/Urdu medium secondary school teachers are not included in it.
2. Research duration was limited up to two years.
3. This study was delimited for two aspects of personality only. Such as job stress and job satisfaction.
4. The present study was delimited to schools comes under Ratnagiri district only.

### Research Methodology

In order to accomplish the objectives of the present study, the *survey method* of research was considered appropriate for gathering data related to the Job stress and Job satisfaction amongst secondary school teachers.

### Sample of the study

In the present investigation, secondary schools are the field of study. There are 321 Marathi medium secondary schools in Ratnagiri district. And near about 3243 teachers are working in these schools. Out of these teachers 18 % means near about 600 teachers has been selected on the basis of stratified random sampling techniques, as a sample for this work.

**Tools to be used**

1. In order to assess the job stress of secondary school teachers the investigator used Occupational Stress Index (OSI) Hindi/English standardized by A.K. Srivastava and A.P. Singh. It contains 46 items and related to different stresses - Overload, role ambiguity, role conflict, group pressure, responsibility, under participation, powerlessness, poor peer relationship etc.
2. P.Kumar and D.N.Mutha. Teachers Job satisfaction Scale (TJSS) Hindi. For higher secondary school teachers.

**Statistical techniques to be used**

Analysis and interpretation of the data has been done in the form of tabulation, percentage, Mean and Standard deviation also used 'Coefficient of correlation'to analyse the data of the present study.

**Analysis and Interpretation of Data**

**Objective no.1.2**

To see the relationship between job stress and job satisfaction of female secondary school teachers in Ratnagiri district.

**A) Relationship between job Stress and job satisfaction of female secondary school teachers in Ratnagiri district**

Table no.1

**Co-efficient of correlation between Job satisfaction and Job-stress of female Secondary School teachers**

Variables	Means	SD's	Coefficient of correlation	Level of Significance
Job Satisfaction	24.73	4.21	- 0.514**	0.01
Job Stress	119.47	16.98		

N = 204,\*\*Significant at 0.01 level

The table no.1 shows that the co-efficient of correlation between Job-Stress and Job satisfaction of female secondary school teachers is -0.514, which is significant at 0.01 level of significance.

So the hypothesis H1.2 "There is no significant relationship between job satisfaction and job stress of female secondary school teachers." is rejected. So it can be interpreted that Job

satisfaction of female secondary school teachers is negatively correlated with their job-stress.

To see the relationship between job stress and job satisfaction of male secondary school teachers in Ratnagiri district.

**Objective no.1.3**

**B) Relationship between job Stress and job satisfaction of Male secondary school teachers in Ratnagiri district**

**Table No. 2**  
**Co-efficient of correlation between Job satisfaction and Job-stress of Male Secondary School teachers**

Variables	Means	SD's	Coefficient of correlation	Level of Significance
Job Satisfaction	22.60	5.08	- 0.606**	0.01
Job Stress	126.15	15.20		

N = 272, \*\*Significant at 0.01 level

The table no.2 shows that the co-efficient of correlation between Job-Stress and Job satisfaction of male secondary school teachers is -0.606, which is significant at 0.01 level of significance. So the hypothesis H1.3 "There is no significant relationship between job stress and job satisfaction of male secondary school teachers." is rejected. So it can be interpreted that Job satisfaction of male secondary school teachers is negatively correlated with their job-stress.

**General Findings of the Research –**

1. Job satisfaction of secondary school teachers is negatively correlated with their job-stress.

2. Job satisfaction of female secondary school teachers is negatively correlated with their job-stress.
3. Job satisfaction of male secondary school teachers is negatively correlated with their job-stress.

**Suggestions for further studies -**

Researchers are never completed. One research opens various new directions for further research. The same is true for present study. Due to paucity of time and resources at the disposal of the investigator, all the aspects of the problem cannot be expected to deal with. Therefore, the present study opens up certain avenues for further research which are briefly given below :

- The same study can be conducted on all the population of the school teachers of Maharashtra.
- Study can be conducted on college lecturers.
- Study can be conducted on teachers of other states.
- Comparative study can be conducted on teachers of different economic classes and castes.

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