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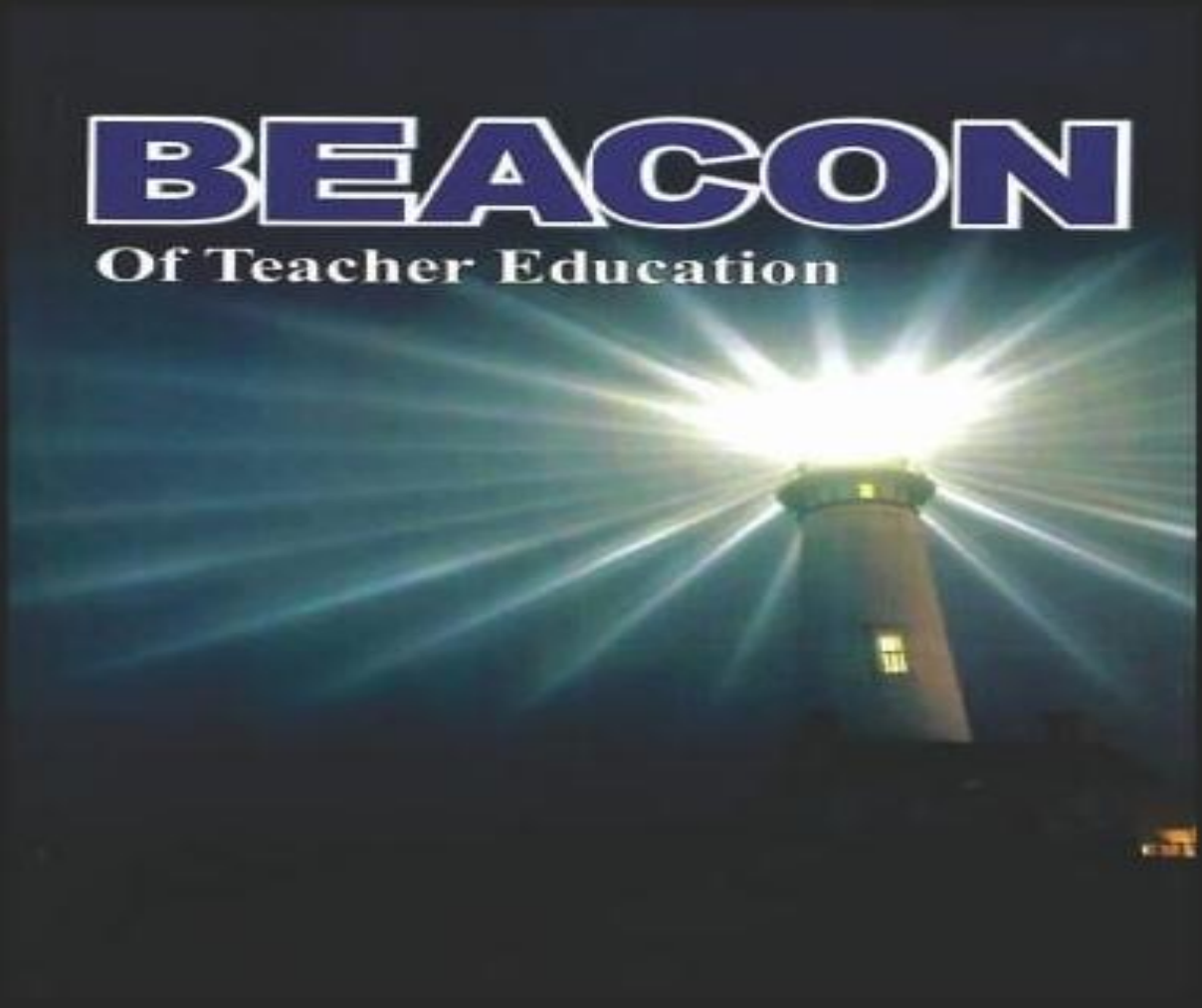

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Of TEACHER EDUCATION

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Editorial

Education is the cornerstone of progress, and in today's rapidly changing world, it has become more vital than ever before. As we strive to create inclusive, innovative, happy, cooperative and effective learning environments, one tool that stands out in its ability to shape the future of education is research. Research in education empowers us to understand, adapt and improve our teaching practices, providing the evidence-based foundation necessary for meaningful educational transformations.

Research has always played a pivotal role in human advancement, but its significance in the field of education cannot be overstated. By collecting and analysing data, researchers uncover insights into the complex dynamics of education, enabling educators and policymakers to make informed decisions. One of the most significant contributions of research in education is its potential to promote equity in learning.

In this context, it gives us immense pleasure to publish our college's annual research journal, 'BEACON' of teacher education. I am extremely thankful to all members of the Peer Review Committee, and all the stakeholders who have made this journal possible. I would also like to give my special thanks to all the known and unknown hands responsible for the compiling and editing of this research journal.

Dr Suvidyaa Mahesh Sarvankar
I/C Principal & Chief Editor

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1.Experiential Learning: Exploring The Importance Of Differentiated Teaching Strategy

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Abstract
The emphasis of experiential learning is on active participation, reflection, and application of information in practical contexts. It is founded on the idea that experiences are the best way to learn new things. Students should learn by observation and reflection on experiences that may be studied, examined, and validated in real-world contexts as part of the teaching and learning process. By giving them content that is directly meaningful to them, experiential learning engages students in critical thinking, problem-solving, and decision-making. Successful experiential learning requires teachers to use a variety of teaching strategies that take into account the different learning preferences and needs of their students.

Key Words: **Experiential Learning, Differentiated Teaching Strategy, Effective learning**

Introduction:
Experiential learning is a pedagogical strategy which is based on Gandhi's philosophy that involves students in practical, active learning activities. Students who participate in experiential learning gain useful skills, a deeper knowledge of concepts and ideas, and the ability to apply what they have learned to actual circumstances. However, for experiential learning to be successful, teachers must employ a varied teaching approach that takes into account the various learning requirements and preferences of their pupils. In this study, experiential learning among FY B.Ed. students is examined to identify the significance of diversified teaching strategies.

Experiential Learning
Experiences are the real source of attaining knowledge. The teaching and learning process should be experiential in nature where the children learn to observe and reflect on the experiences. These experiences would help in learning the concepts which can be explored, examined and verified in real life situations. It is based on psychological and scientific principle.
Experiential learning is a student-centered approach that emphasizes active engagement, reflection, and application of knowledge in real-world situations.
Experiential learning is the process of critical reflections on experiences which also involves the opportunities for debriefing and consolidation of idea and skill through feedback, reflection and the application of the idea to new situations.
Experiential learning engages students in critical thinking, problem solving and decision making the content that is personally relevant to them. The approach of Experiential Learning is a powerful tool of teaching and learning process. This incorporated various different learning strategies and approaches of teaching. In other words, it is the blend of various teaching learning strategies such as activity based, cooperative learning, constructive approach of learning and experimentation. This approach provides the learner to work

in the real world and encourages them to reflect upon the experience gained to develop new skills, attitude or new ways of thinking.

Differentiated Teaching Strategy:

Differentiated teaching strategy refers to the use of different teaching methods in the teaching learning process which helps a teacher to make the learning engaging, effective and interesting. In other words, when a teacher uses a variety of teaching methods in the classroom, it is known as a differentiated teaching strategy. For example game based learning, cooperative learning, role playing and conducting surveys etc.

Differentiated teaching strategy makes the learning interesting and participatory. It also helps the learner to understand the content well and furthermore it also helps the learner to retain the information for a longer time. Learners develop self-confidence, self-esteem, social skills, decision making ability, critical thinking skills and problem solving skills. Therefore, differentiated teaching strategy makes the teaching learning process more effective.

Objectives of the study:

- To investigate the role of the differentiating teaching strategies among F.Y B.Ed. Students.
- To develop a positive attitude and perspective among F.Y B.Ed. Students towards the differentiated instructional strategies.
- To examine the role of experiential learning strategies among F.Y B.Ed. Students towards the differentiated instructional strategies.

Need of the Study:

The student teachers are equipped with different teaching skills in teacher education institutions which help them to become efficient teachers. So, the students must realise the importance of using differentiated teaching strategies through experiential learning. It would facilitate the identification of the gap between the traditional approach of teaching and Experiential Learning strategy. Direct participation of student teachers in the teaching learning process will be helpful in imbibing the importance of using differentiated teaching techniques. This study will also be helpful in developing a positive attitude and perspective towards teaching.

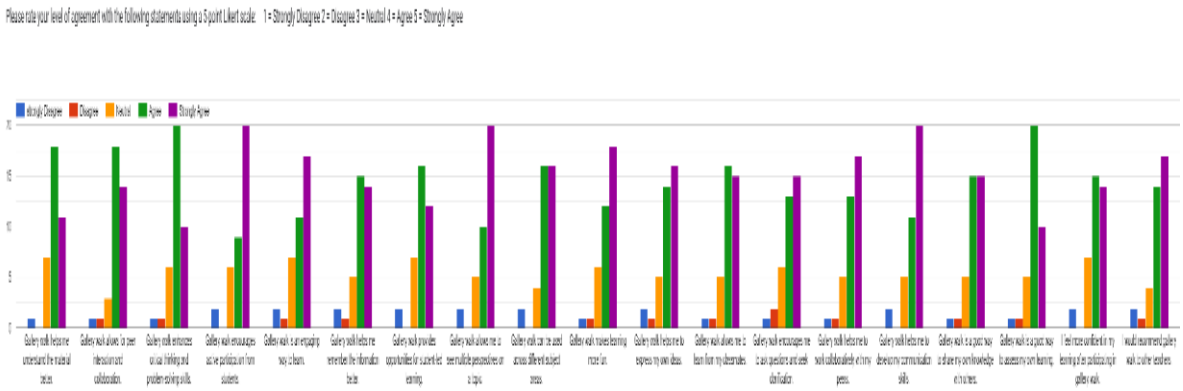
Research Methodology:

Descriptive Research Methodology is adopted using Survey design to collect data and mean methodology used to analyses the data.

Procedure of the study:

The study was conducted on 100 students of F.Y. B.Ed. students of Nirmala Memorial Foundation College of Education. A Google form created to collect the data. The questionnaire consisted of two sections. The first section collected demographic information such as age, gender and qualifications and the second section consisted of 20 likert-scale items to assess the students' perception of the importance of differentiated teaching strategies. A literature review of differentiated teaching strategies and experiential learning guided the design of the survey items. The items examined students' perceptions of differentiated teaching strategies in terms of relevance, effectiveness, and impact.

The student teachers have been exposed to differential teaching strategies by using those strategies in learning the content of Gender School and Society, (F.Y .B.Ed. Sem-1 Subject). The students reflected the impact of those strategies in the teaching learning process. This experiential learning helps them to explore the importance of using differential teaching strategies in the classrooms.



Discussion and Findings

The results of this study support the argument that a differentiated instructional strategy is a critical factor in promoting effective learning. The results indicate that students perceive a differentiated instructional strategy as important in improving their learning experiences and overall performance in the classroom.

The study also highlights the need for teacher education programs to incorporate differentiated instruction strategies into their curricula to prepare teachers for diverse classes. Teachers must be trained to effectively use differentiated instruction strategies to meet the diverse needs and preferences of learners.

Findings also suggest that experiential learning can be an effective means of promoting differentiated instructional strategies. When students engage in hands-on, active learning experiences, they are more likely to have personalised learning experiences that meet their individual learning needs and preferences. This, in turn, can lead to better learning outcomes for students

Conclusion

According to the survey findings, differentiated teaching strategies are perceived by FY B.Ed. students as important strategies for the effective teaching learning process. The results of the study highlight the importance of experiential learning for teacher education programs to develop a positive attitude and perspective among future teachers to incorporate differentiated teaching strategies to meet the needs of diverse classrooms. Additionally, teachers must be trained to use differentiated teaching strategies effectively to meet the needs and preferences of students by using experiential Learning

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2. Role of Health and Nutrition in Women Empowerment

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Abstract: The fundamental right to the highest attainable standard of health, including physical, mental and social well-being has been recognized in many global, regional and national declarations and charters. There is now substantial evidence that healthy populations are a foundation for sustainable social, economic and environmental development and for peace and security, and vice versa. However, despite many advances over the previous decades, large numbers of disadvantaged people still suffer ill health, with thousands dying every day from preventable causes. Women and children from underserved communities bear a particularly high burden of preventable disease and death. Post 2015 discussions have noted that improvements in population health will require

Keywords: Nutrition, Malnutrition, Women's Empowerment.

Introduction

Nutrition is crucial for the fulfilment of human rights – especially those of the most vulnerable children, girls and women, locked in an intergenerational cycle of multiple deprivations. It constitutes the foundation for human development, by reducing susceptibility to infections, reducing related morbidity, disability and mortality, enhancing cumulative lifelong learning capacities, and adult productivity. It is critical to prevent under nutrition, as early as possible, across the life cycle, to avert irreversible cumulative growth and development deficits that compromise maternal and child health and survival, achievement of optimal learning outcomes in education and gender equality.

Underlying Causes

There is plenty of evidence that the lower status of women in society is among the basic underlying causes of maternal malnutrition and women's poor health.

Lower status of women is well reflected in the fact that many societies prefer boys to girls, offer better education and job opportunities to men, pay women less for the same work, and often see them in less prestigious jobs with very little access to decision-making. In the poor rural areas of developing societies, women have a higher share of illiteracy, overwork, under nutrition as well as loss of traditional support systems and the burden of heading the household due to accelerating male migration.

Women's status defines their position in society. It is both their standing as well as the perception in society as to where they actually belong.

Women's status categories:

Women's status is often characterized through a set of social, political and economic indicators: They are as follows.

1. The group of **political indicators** consists of:

(a) legal entitlements;
(b) participation in the political process;
(c) authority through holding offices either via election or by appointment.

2. Indicators of **economic position** include: (a) participation in labour force;

(b) job security;
(c) wage rates; and
(d) education and specialization.

3. Indications of **social position** are:

(a) marital relations;
(b) maternity benefits;

(c) divorce, child custody and child care. Historically, poorer women have had to work and have received few societal benefits. Interestingly enough, what is known about women is based on records and thoughts of men. It was only in the 18th century that women began to organize themselves around the issues of their own concerns. Their situation at that time has been described as fragile, domestic and dependent.

Important progress in the last ten years includes the following.

First, the state of knowledge and information on the conditions of women in the world has improved dramatically.

Second, the role and contribution of women to national development, family life and societal welfare is now much better documented and understood. In other words, the links between women's status and national development are clearer now. Therefore, women and women's advocates can be much more effective in defining women's issues and placing them on the national and international agenda.

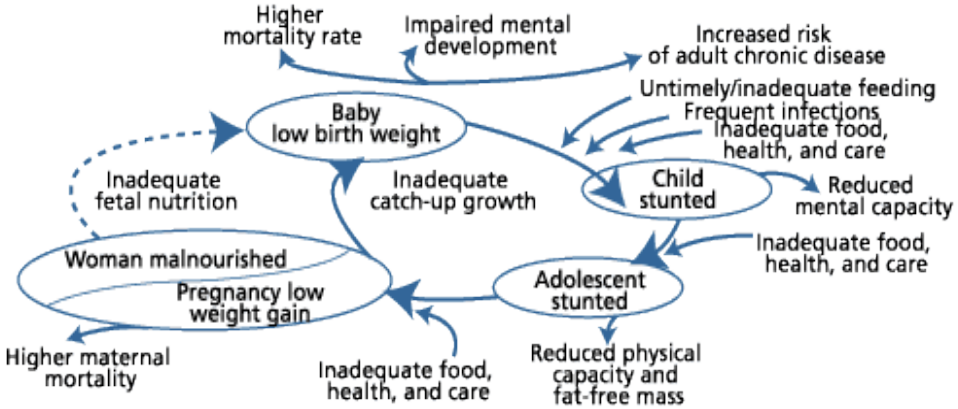
Third, substantial experience has emerged in numerous countries in dealing with women's issues from a variety of perspectives. Already, good beginnings have been made in many countries, and through persistence and hard work, much more could be achieved.

Malnutrition, defined as ill health caused by deficiencies of calories, protein, vitamins, and minerals interacting with infections and other poor health and social conditions, saps the strength and well-being of millions of women and adolescent girls around the world. [In this brief, the term malnutrition will refer to conditions of nutritional deficiency, including under nutrition and micronutrient deficiencies, though malnutrition actually also relates to problems of nutritional excess.]

Although malnutrition's effects on this group have been recognized for decades, there has been little measurable progress in addressing the specific nutritional problems of women and adolescent girls. Ignorance about the symptoms of malnutrition, such as the lethargy and depression caused by iron deficiency, may be dismissed as "normal" or unimportant, further exacerbating the problem.

Adequate nutrition, a fundamental cornerstone of any individual's health, is especially critical for women because inadequate nutrition wreaks havoc not only on women's own health but also on the health of their children. Children of malnourished women are more likely to face cognitive impairments; short stature, lower resistance to infections, and a higher risk of disease and death throughout their lives (see Figure 1).

Poor Nutrition throughout the Life Cycle



Source: Adapted from the ACC/SCN-appointed Commission on the Nutrition Challenges of the 21st Century.

Malnutrition poses a variety of threats to women. It weakens women's ability to survive childbirth, makes them more susceptible to infections, and leaves them with fewer reserves to recover from illness. HIV-infected mothers who are malnourished may be more likely to transmit the virus to their infants and to experience a more rapid transition from HIV to full-blown AIDS. Malnutrition undermines women's productivity, capacity to generate income, and ability to care for their families.

Addressing women's malnutrition has a range of positive effects because healthy women can fulfill their multiple roles — generating income, ensuring their families' nutrition, and having healthy children — more effectively and thereby help advance countries' socioeconomic development. Women are often responsible for producing and preparing food for the household, so their knowledge — or lack thereof — about nutrition can affect the health and nutritional status of the entire family. Promoting greater gender equality, including increasing women's control over resources and their ability to make decisions, is crucial. Improving women's nutrition can also help nations achieve three of the Millennium Development Goals, which are commonly accepted as a framework for measuring development progress. This brief discusses the importance of improving women's nutrition and suggests policy options for achieving positive change.

How Nutrition Affects Women

Women are more likely to suffer from nutritional deficiencies than men are, for reasons including women's reproductive biology, low social status, poverty, and lack of education. Socio cultural traditions and disparities in household work patterns can also increase women's chances of being malnourished. Globally, 50 percent of all pregnant women are anemic, and at least 120 million women in less developed countries are underweight. Research shows that being underweight hinders women's productivity and can lead to increased rates of illness and mortality. In some regions, the majority of women are underweight: In South Asia, for example, an estimated 60 percent of women are underweight.

Many women who are underweight are also stunted, or below the median height for their age. Stunting is a known risk factor for obstetric complications such as obstructed labour and the need for skilled intervention during delivery, leading to injury or death for mothers and their new-borns. It also is associated with reduced work capacity.

Adolescent girls are particularly vulnerable to malnutrition because they are growing faster than at any time after their first year of life. They need protein, iron, and other micronutrients to support the adolescent growth spurt and meet the body's increased demand for iron during menstruation. Adolescents who become pregnant are at greater risk of various complications since they may not yet have finished growing. Pregnant adolescents who are underweight or stunted are especially likely to experience obstructed labor and other obstetric complications. There is evidence that the bodies of the still-growing adolescent mother and her baby may compete for nutrients, raising the infant's risk of low birth weight (defined as a birth weight of less than 2,500 grams) and early death.

Iron Deficiency and Anemia

Iron deficiency and anemia are the most prevalent nutritional deficiencies in the

world. The body uses iron to produce hemoglobin, a protein that transports oxygen from the lungs to other tissues in the body via the blood stream, and anemia is defined as having a hemoglobin level below a specific level (less than 12 grams of hemoglobin per deciliter of blood [g/dl] in non-pregnant women; less than 10 g/dl in pregnant women).Most women who develop anemia in less developed countries are not consuming enough iron-rich foods or are eating foods that inhibit the absorption of iron. However, malaria can also cause anemia and is responsible for much of the endemic anemia in some areas. Other causes of anemia include hookworm and schistosomiasis, HIV/AIDS, other micronutrient deficiencies, and genetic disorders.

Anemia affects about 43 percent of women of reproductive age in less developed countries. Women are especially susceptible to iron deficiency and anemia during pregnancy, and about half of all pregnant women in less developed countries are anemic, although rates vary significantly among regions. Iron deficiency and anemia cause fatigue, reduce work capacity, and make people more susceptible to infection. Severe anaemia places women at higher risk of death during delivery and the period following childbirth. Recent research suggests that even mild anemia puts women at greater risk of death.

Iodine Deficiency

Failing to meet the body's iodine requirements impairs mental functioning and can cause goiter (a swelling of the thyroid gland) and hypothyroidism, a condition marked by fatigue and weakness. Among adolescent girls, iodine deficiency may cause mental impairments, impede physical development, and harm school performance. Although programs to iodize salt have reduced the prevalence of iodine deficiency disorders dramatically in the past 10 years, there is still wide variation in household access to iodized salt, ranging from 80 percent in Latin America to 28 percent in Central and eastern Europe. At least 130 countries have serious pockets of iodine deficiency disorders.

Vitamin A Deficiency (VAD)

VAD, which can cause growth retardation and impaired vision, remains a significant public health issue among populations that do not consume enough vitamin A, which is found in animal products and certain fruits, including mangos. Severe VAD causes blindness; less severe VAD impairs the immune system, making people more susceptible to infection and putting them at increased risk of death. Concurrent infection with parasites and illnesses such as diarrhea, as well as having several pregnancies too close together, can exacerbate VAD. Pregnant women are especially vulnerable to VAD. In Nepal, for example, where VAD is prevalent in some communities, as many as one in 10 pregnant women experience night blindness due to VAD.

How Women's Nutrition Affects National Economies

Malnutrition in women leads to economic losses for families, communities, and countries because malnutrition reduces women's ability to work and can create ripple effects that stretch through generations. Countries where malnutrition is common must deal with its immediate costs, including reduced income from malnourished citizens, and face long-term problems that may be related to low birth weight, including high rates of cardiac disease and diabetes in adults.

Illnesses associated with nutrient deficiencies have significantly reduced

the productivity of women in less developed countries. It is difficult to determine exactly what proportion of those losses are due to maternal malnutrition, but recent research indicates that 60 percent of deaths of children under age 5 are associated with malnutrition and children's malnutrition is strongly correlated with mothers' poor nutritional status. Problems related to anemia, for example, including cognitive impairment in children and low productivity in adults, cost US$5 billion a year in South Asia alone. Illness associated with nutrient deficiencies has significantly reduced the productivity of women in less developed countries. A recent report from Asia shows that malnutrition reduces human productivity by 10 percent to 15 percent and gross domestic product by 5 percent to 10 percent. By improving the nutrition of adolescent girls and women, nations can reduce health care costs, increase intellectual capacity, and improve adult productivity.

Conclusion

Adequate nutrition is important for women not only because it helps them be productive members of society but also because of the direct effect maternal nutrition has on the health and development of the next generation. There is also increasing concern about the possibility that maternal malnutrition may contribute to the growing burden of cardiovascular and other non-communicable diseases of adults in less developed countries. Finally, maternal malnutrition's toll on maternal and infant survival stands in the way of countries' work toward key global development goals

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3. Development of Learners by various Dimensions of Sustainable Development

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Abstract:
Each individual is different in various aspects of their life which includes physical, social, Intellectual and emotional and environmental as well. They have different needs as differences present among them, but it is not paid due attention in our education system. They all are considered as same pearls of a single necklace or sailors of the same boat. It is very important for teacher to know the individual difference present in students. If it is not paid attention, child gets deviates from the regular teaching learning process. Teacher should understand the intelligence of each child and accordingly teacher has to use various methods, techniques and approaches in his/her teaching process. There are various ways of serving different learners with the use of group learning methods, task based methods, activities based method etc. These all together encompasses elements of Cooperative learning, a way to reach to leaner and help them in constructivism of knowledge. In the present study, the researcher has presented theoretical perspective of Cooperative learning and its benefits in the classroom learning in the light of Sustainable Development.

Key Words: Individual Difference, Sustainable Development, Cooperative Learning, Constructivism

Backdrop

In present education system learners are viewed as possessing single learning style or intelligence but in reality they are not exposed to other styles of learning which makes them recognised in other dimensions too. Exposing learner to single learning style restricts the development of students and also makes them stick to the use of single intelligence. To explore their skills and to make them globally competent, it is important to expand their potentialities and their intelligence in all dimensions. Learners do not possess only the quotient of intellect but they also have intelligence to deal with emotional imbalance or with social interactions effectively. If learners are provided with such opportunities where they develop other intelligence also then it would not be difficult for any learner to make their recognition in the society.

Initial concept of intelligence presented that learner possess a single intelligence which deals with the cognitive domain but now in the modern concept learners are not viewed only for their cognitive ability but also for their intelligence in various dimensions like interpersonal relationship, ability to recognise natural entities, creative ability and many more. With this concept, one of the psychologists, Dr.Haward Gardner has given the theory of Multiple Intelligence where each learner is viewed for his innate intelligence and then enhancing the level of possessed intelligence through environmental exposer in teaching learning. This theory has its practical applicability in school where with the acceptance of this concept learners are developed as a whole individual which leads to the attainment of the major goal of our education system i.e. Overall Development of Learners. Many school adopted Continuous and Comprehensive Evaluation to reach to the goal but without making them experienced for such

environment how can we evaluate their performance. Every child is a star with some or the many hidden abilities; the role of education is to bring it out so this is one way of knowing learners with different perspectives.

Now a day's people are talking about various pedagogical approaches and techniques to cater students need, in which participatory approach and constructivist approach has taken core area of application. Cooperative learning is also a way to reach out to the constructivism. There are basically three learning situations which can be designed within a classroom- Individualistic learning, Competitive learning and Cooperative learning. In Indian education the individualistic and competitive learning situations are predominantly focused upon. In these situations students are made to learn individually and then subjected to competition within the four walls of the classroom. In such a scenario somewhere we are focusing only on academic success and not overall excellence. As of now when the focus is shifting towards child centred education and constructivism, educationists have started taking note of cooperative learning and its inclusion in the transactional process.

Theoretical Perspective of Education for Sustainable Development:

Learning Objectives provides guidance on using Education for Sustainable Development to support progress towards the Sustainable Development Goals. They require the knowledge, skills, values and attitudes that empower them to contribute to sustainable development. Including early childhood care and education, primary and secondary education, technical and vocational education and training and higher education. The core concerns of teaching and learning and should not be considered as an add-on to the existing curriculum. Mainstreaming ESD requires integrating sustainability topics into the curricula, but also sustainability-related intended learning outcomes. "Curricula need to ensure that all children and young people learn not just foundation skills, but also transferable skills such as critical thinking, problem solving, advocacy and conflict resolution, to help them become responsible global citizens" From the development of sustainability curricula it is expected to "improve the capacity of our education systems to prepare people to pursue sustainable development" The Maurice Ile Durable policy was introduced in 2008 with the objective of making Mauritius a world model of sustainable development by 2020. Education is one of its five pillars, with a multi-stakeholder working group put in place to integrate ESD into all levels of education. The goal is to reorient the education system towards sustainability, build capacity at all levels and strengthen awareness of key issues. As Mauritius reports, ESD is now 'part of the National Curriculum Framework and because of the Maurice Ile Durable societal project, ESD is being addressed by many formal and non-formal institutions or organizations'. As a result of this policy, different ministries such as the Ministry of Environment and Sustainable Development and the Ministry of Education and Human Resources Development have come to cooperate more closely for a more integrated approach. Now already a UNESCO Climate Change Education for Sustainable Development pilot country, Mauritius could become an exemplar country for ESD when the Maurice Ile Durable policy is fully implemented. "Togo – Quality Education for a Sustainable Future "In Togo, the educational policy framework (Lakalaka) is grounded in national culture and includes a new, ESD-oriented curriculum entitled Quality Education for a Sustainable Future."Finland – Reforming the national core curricula for pre-school and basic education "Finland is reforming the national core curricula for pre-school

and basic education to support and promote sustainable development and well-being following the value basis of education, where the necessity of a sustainable way of living and eco-social understanding is emphasized. The aim is to support all students in developing the knowledge, skills, values and attitudes that promote their ability to understand the importance of a sustainable future. "Manitoba, Canada – Profile of successful leadership "In Manitoba, ESD is a priority action area of the government and has been embedded in the overall purpose of primary and secondary education. It is now government policy 'to ensure that all Manitoba's children and youth have access to an array of educational opportunities such that every learner experiences success through relevant, engaging and high quality education that prepares them for lifelong learning and citizenship in a democratic, socially just and sustainable society'. This statement is included in the mission of the provincial Ministry of Education and Advanced Learning. In response to this policy commitment, ESD has been integrated into the curriculum from kindergarten up to 12th grade with specific learning outcomes identified in science, social studies, health and physical education. Building the capacity of educators and school leaders, as well as dedicated funding to ensure the development of sustainability practices, principles, programmes and partnerships, helps schools to embed sustainability into their classrooms, operations and management. The German Curriculum Framework for Education for Sustainable Development (ESD) contains topics, competencies and concrete examples for primary education, all subjects of secondary education and vocational training. It is the result of the joint initiative of the Standing Conference of the Ministers of Education and Cultural Affairs and of the Federal Ministry for Economic Cooperation and Development, in cooperation with the 16 German federal states and civil society. The GAP's Priority Action Area 1, "Advancing policy", calls for "integrating ESD into curricula and national quality standards" For facilitating the needed curriculum change, some actions are of central importance. A significant driver for changes in curriculum and teaching practice can be the increase in student demand for a sustainability-centred education. Therefore, this demand should be monitored more closely Across all levels and types of education, curriculum change should be further advanced to involve more ESD-relevant content, learning objectives and learning practices. Kindergartens, schools and institutions of TVET and higher education should not only offer individual courses, but should ensure that all learners can develop the knowledge, attitudes and competencies needed to respond to sustainability challenges.

Theoretical Perspective and Classroom Implications

Cooperative learning is a systematic pedagogical strategy in which small teams each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of the team is responsible not only for learning what is taught but also for helping the team learn, thus creating an atmosphere of achievement, Students work through the assignment until all group members successfully understand and complete it. In cooperative learning, it is believed that learning best occurs through reflecting inquiry with others who help the learner negotiate his or her own degree of potential under the best condition. In cooperative learning setting, students are encouraged to discuss challenging tasks and take part in problem solving activities in well-designed heterogeneous teams with the intention of subjecting them to diverse ideas and thus developing in them habits of minds such as

objectivity and critical thinking. Cooperative learning makes students not only learn through experience but to feel and internalize different solution and strategies for facing and tackling problem in well-designed meaningful context set by the teacher who plays the role of an integrative rather than dominating teacher. Cooperative setting helps students feel more value in comparison with the situation in traditional system of teaching. They have the liberty to form their teams, assign one another roles, assess their partner, and even in some methods of cooperative learning negotiate the course objectives with teachers. Students are provided with different challenging activities, which encourage them to learn different solution to the problem at hand via critical thinking in a meaningful and reciprocal interaction. They also have opportunities to feel and enjoy the results of their shared learning in class wide discussion.

In the ideal classroom all the three learning patterns i.e. Competitive, Individualistic and Cooperative learning should be appropriately used. All students should learn how to work cooperatively with others, compete for fun and enjoyment and work on their own. No aspects of teaching are more important than the appropriate use of different learning patterns. But, unfortunately, most students perceived school as predominantly competitive enterprises as for the past half century, competitive and individualistic learning patterns have dominated our education system. Competitive and individualistic learning situations instil in learners such value systems which form a part of the hidden curriculum beneath the surface of school life i.e. when students are exposed to such learning, the unknowingly, indirectly, involuntary acquired such values which are not a part of real school curriculum to be followed for the all-round development of the students.

Whenever students engaged in competitive efforts for the example, they learn the value of Commitment to getting more than others. In such type of learning Success depends on beating, defeating and getting more than other people, what is important is winning, not mastery or excellence. Students were thought that others are a threat to one's success. The values which students inherently learn when they are exposed to Individualistic experiences are Commitment to one's own self-interest. For such type of students success depends on one's own efforts. The pleasure of succeeding is personal and relevant to only oneself.

In contrast to these, the values inherently taught by cooperative efforts are commitment to own and other's success and well-being as well as to the common good. Success depends on joint efforts to achieve mutual goals. Facilitating, promoting and encouraging the success of others is a natural way of life. They thought the potential of other as a contributor to one's success.

Cooperative learning has all the essential ingredients that can bring about a qualitative change in education because it is based on new paradigm of teaching which considered that knowledge is constructed, discovered, transformed and extended by students. Education is a personal transaction among students and between teachers and students as they work together and that teacher efforts are aimed at developing students' competencies and talents. It assumes teaching to be a complex application of theory and research. Hence, it equally takes into consideration the cognitive as well as the affective domains of learning. It lays emphasis on the mastery of knowledge, comprehension, application analysis synthesis and evaluation of materials under cognitive domain as well as takes into account all the five major categories of affective domain which includes the manner in which we deal with things

emotionally, such as feelings, values, appreciation, enthusiasm, motivation and attitudes.

The importance of cooperative learning goes much beyond maximizing outcomes such as achievement, positive attitudes towards subject areas, and the ability to think critically, although these are worthwhile outcomes. The elements of cooperative learning viz. teamwork through positive interdependence, communication, effective coordination, and division of labour by exhibiting individual accountability are keystone which characterizes most real life setting. The same is true about our school as school is considered to be a miniature society. It is time for schools to reflect the reality of adult life. Incorporating cooperative learning experiences in the classroom will both reinforce the skills necessary to cope with future courses and provide students with the qualifications that will make them employable.

As the Chinese proverb suggests:

"When I here I forget, when I see I remember, When I do I learn"

Adults and children learn by "doing" and it makes sense that instructor need to offer opportunities for students to participate in cooperative learning tasks.

Conclusion

One way in which educators could expand the amount of time learners are exposed to cooperative learning would be to implement it in the each class for a full year or any other learning area to allow time for the positive effects to become more noticeable. Another and likely more effective approach would be for the Education Department to implement cooperative learning programmes in schools by inviting schools to participate in pilot projects and by organizing workshops for teachers to conduct cooperative learning in their schools. Furthermore, in large classes it is often better to group the learners due to financial constraints, and lack of learning material. The key is to change the educational culture as a whole so that cooperative learning becomes the norm for all learners in all learning areas. The result would undoubtedly have a ripple effect beyond the walls of the school itself for example adolescents usually spend a lot of their free time with friends. Usually they learn to get along. In learning, team building can occur. This is an important social aspect needed to get tasks accomplished. Each day in business and industry, people are required to work together to get the job done. All too often the task is too large for a single individual to accomplish. Therefore, cooperative team building can have positive effects in school, but also build cooperative skills that will assist the learner later in life.

On 25 September 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development (UN, 2015). This new global framework to redirect humanity towards a sustainable path was developed following the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil in June 2012, in a three-year process involving UN Member States, national surveys engaging millions of people and thousands of actors from all over the world. At the core of the 2030 Agenda are 17 Sustainable Development Goals (SDGs). The universal, transformational and inclusive SDGs describe major development challenges for humanity. The aim of the 17 SDGs is to secure a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future. The goals cover global challenges that are crucial for the survival of humanity. They set environmental limits and set critical thresholds for the use of natural resources. The goals recognize that ending poverty must go hand-in-hand with strategies that build economic development. They address a range of social needs including education, health, social protection and job

opportunities while tackling climate change and environmental protection

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4.Study of Social Media Engagement among the Student Teachers in relation to background variables and its factors

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Abstract
The use of social media is incomparably on the rise among students, influenced by the globalized forms of communication and the post-pandemic rush to use multiple social media platforms for education. The time spend by an individual on social media has a long-term effect on behaviour. When it comes to student teachers, they have greater responsibilities as they are going to mould the behaviour of coming generations. So, a thought came in mind what level of social media engagement these students have? When student teachers are engaged in social media, which factors affects behaviour? Does the student teacher use social media as daily habitual activity? Survey method to assess the level of **Social Media Engagement** among the student teachers in relation to background variables and its factors is used by modifying Social Media Engagement Scale For Adolescents (SMES-A) of (Xiaoli Ni , Xiaoyi Shao , Yangwen Geng , Ran Qu , Gengfeng Niu , Yuping Wang) was as per the convenience

Key Words: Social Media, Engagement, Social Media Engagement, Student Teachers

Introduction:

Social Media allows students to convey their views by posting photographs, articles, and videos. Social media helps to improve student's performance by giving them assignments and allowing them to gather data through online mode to make their assignments. Social media represents various Internet tools, technologies or apps that emphasize the social communication, collaboration, and creative expression on the Internet. With the rapid spread of smartphones, social media has become an indispensable tool for maintaining social connections, browsing news, and entertainment, especially among young people.

Youngsters spend almost one-third of their Internet time on social media. Even social media use could lead to increased self-objectification, body image bias, or eating problems in youth. Moreover, intensive social media use could cause negative emotions in adolescents, such as depression and anxiety, through the mediating effects of self-esteem and social comparison.

The Concept of social media

The term "Social media" has been defined differently from various perspectives. According to Bryer and Zavatarro, "Social media are technologies that facilitate social interaction, make possible collaboration and enable deliberation across stakeholders". These technologies, according to them, include blogs, wikis, media (audio, photo, video, text) sharing tools, networking platforms (including Facebook), and virtual worlds. Social media promotes self-directed learning, which prepares students to search for answers and make decisions independently. When reinforced in a classroom setting, these social media skills can be guided and refined to produce better learning outcomes and critical awareness

Social Media Engagement

When it comes to usage of social media, always it is thought from the point of view of frequency of its use, hours spend so on. But when it comes to engagement, then various factors are to be looked over which leads to investment of an individual in social media. Similarly, these factors are affecting an individual's behaviour. Hollebeek (2011) defines this as the level of a customer's cognitive, emotional, and behavioural investment in specific brand interactions. Social media engagement is a relative psychological perception experienced by individual interaction to social media. We could understand that engagement refers to interactions between three constructs (Cognitive, Affective, Behavioural) in a measurement of social media at the least.

The cognitive aspect refers to the understanding and comments on certain objects or issues, which could present individual perception in the mind; the emotional aspect is related to the positive or negative emotions to the objects or issues, which could project individual affective involvement; and the behavioural aspect refers to the daily habitual activity involved in the objects or issues, which could unconsciously surround individual everyday life.

Need of the Study

Using social media, teachers can improve technological ability & students' involvement in studies. It also provides a good sense of collaboration in the classroom while making better communication skills with students. Though social media, as the name suggests, is expected to keep people connected, probably this social connection is only superficial, and not adequately deep and meaningful to help individuals feel emotionally attached to others. The psychological effects of social media on student life need to be studied in more depth to see whether social media really acts as a social support for students and whether students can use social media to cope with negative emotions and develop positive feelings or not. In other words, knowledge of the potential effects of the growing use of social media on students' emotional well-being can bridge the gap between the alleged promises of social media and what it has to offer to students in terms of self-concept, self-respect, social role, and coping strategies (for stress, anxiety, etc.) When student teachers are engaged in social media, which factors affects behaviour? Do the student teachers understand comment on certain issue? Does the student teacher show positive or negative emotions? Does the student teacher use social media as daily habitual activity? These and some more questions are to be answered through this research.

Statement of the Problem

Study of Social Media Engagement among the Student Teachers in relation to background variables and its factors

Objectives of the study

1. To assess the level of social media engagement among the student teachers
2. To find out the level of social media engagement among the student teachers in relation to its factors (Behavioural, Affective and Cognitive)
3. To find out the level of social media engagement among the student teachers in relation to background variables (First year and Second year)
4. To compare the level of social media engagement among the student teachers in relation to background variables (First year and Second year)

Hypothesis of the Study

1. The level of social media engagement among the student teachers is moderate.
2. The level of social media engagement among the student teachers in relation to its factors (Behavioural, Affective and Cognitive) is moderate.
3. The level of social media engagement among the student teachers in relation background variables (First year and Second year) is moderate
4. There is no significant difference in the level of social media engagement among the student teachers in relation to background variables (First year and Second year

Research Design

- **Methodology:** Quantitative method was used for the present study by using Survey method to collect relevant data for the study.
- **Population**: The population of the present study comprised of the Student teachers studying in first year and second year (B.Ed)teacher education college of Ulhasnagar
- **Sample Size**: The sample size for the present study was decided 200 student teachers (100 of first year and 100 of second year B.Ed)studying in teacher education college of Ulhasnagar region.
- **Tool used for the study:** To find out the level , **Social Media Engagement Scale For Adolescents (SMES-A)** of (Xiaoli Ni , Xiaoyi Shao , Yangwen Geng ,Ran Qu , Gengfeng Niu , Yuping Wang) was modified as per the convenience by the researcher.The scale consisted 15 items(statements) in its three-factor (affective, behavioural, and cognitive) structure. Each factor had 5 statements and each item scored on a five-point Likert scale: 1 = "strongly disagree," 2 = "disagree," 3 = "undecided," 4 = "agree," 5 = "strongly agree."

Procedure of data collection

Google form was created in order to collect relevant data for the present study. Google form link was shared through WhatsApp groups to the student teachers of first year and second year

Statistical Analysis:

Based on following score range, the collected data is analysed and categorised in to three levels i.e., High, Moderate and Low for social media engagement among the student teachers

Table showing range

Sr.No	Score Range	Levels
1	51to 75	High
2	25 to 50	Moderate
3	0 to 24	Low

Analysis of the data

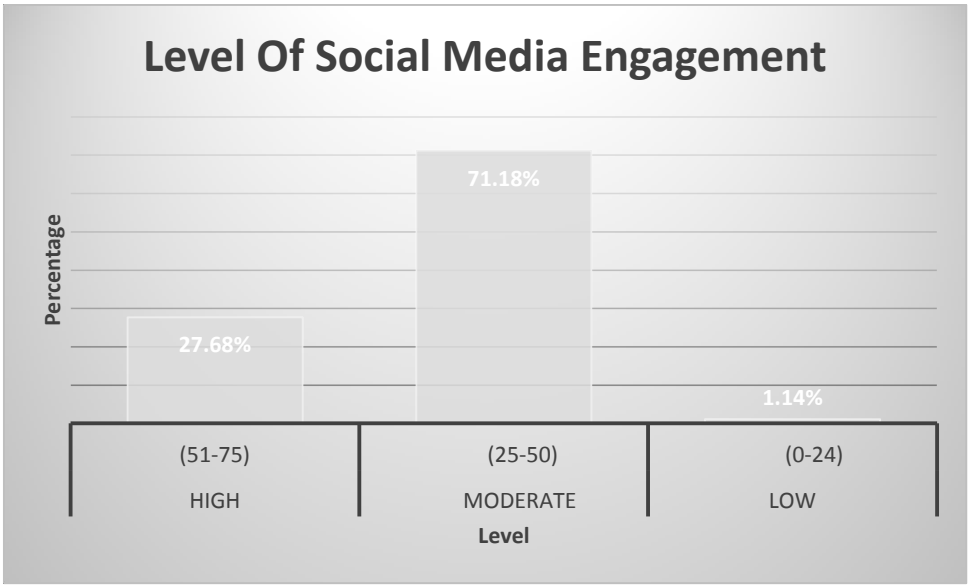
Objective 1. To assess the level of social media engagement among the student teachers

Hypothesis 1: The level of social media engagement among the student teachers is moderate.

Table No. 1 showing level of social media engagement among the student teachers

SME (Score Range)	High (51-75)	Moderate (25-50)	Low (0-24)
N= 177	49(27.68%)	126 (71.18%)	2(1.14%)

Interpretation:
It can be observed from the Table 1 that the level of social media engagement among the student teachers is Moderate (71.18%). Hence the Hypothesis stating that the level of social media engagement among the student teachers is moderate is accepted.



Graph 1 showing level of social media engagement among the student teachers
Objective 2 To find out the level of social media engagement among the student teachers in relation to its factors (Behavioural, Affective and Cognitive)

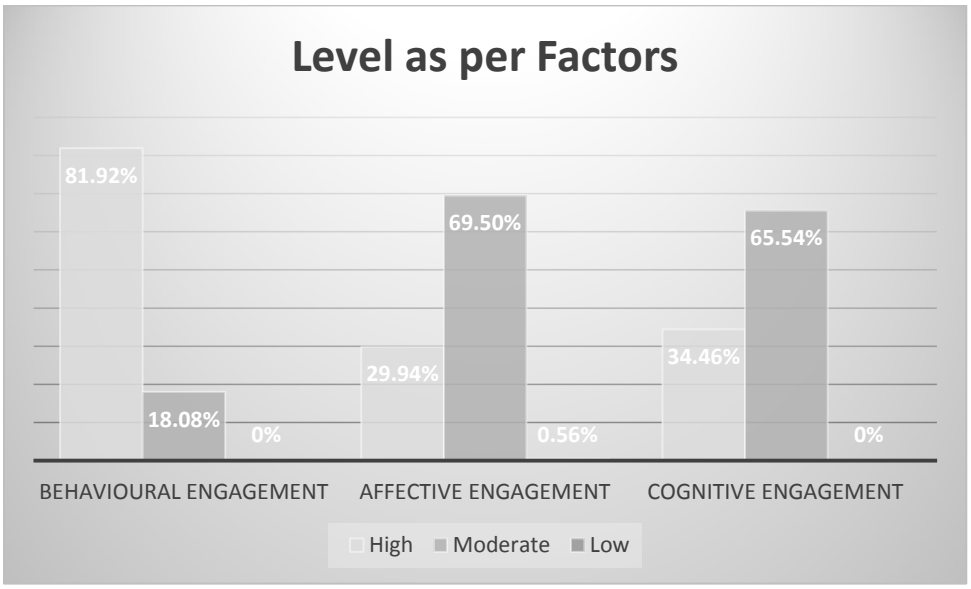
Hypothesis 2: The level of social media engagement among the student teachers in relation to its factors (Behavioural, Affective and Cognitive) is moderate

Table No. 2 showing level of social media engagement among the student teachers in relation to its factors (Behavioural, Affective and Cognitive)

N=177

SME based on Factors	High (16-25)	Moderate (06-15)	Low (0-5)
Behavioural engagement	145 (81.92%)	32 (18.08%)	0
Affective engagement	53 (29.94%)	123 (69.50%)	01 (0.56%)
Cognitive engagement	61 (34.46%)	116 (65.54%)	0

Interpretation:
It can be observed from the Table 2 that the level of social media engagement among the student teachers in relation to its Behavioural factor is **(81.92%)** which is high, Affective factor is **(69.50%)** which is moderate and Cognitive factor is (**65.54%) which** is moderate. Hence the hypothesis is accepted for Affective and Cognitive factor, where as it is rejected foe behavioural factor



Graph 2 showing level of social media engagement as per factors

Objective 3 To find out the level of social media engagement among the student teachers in relation to background variables (First year and Second year)

Hypothesis 3 The level of social media engagement among the student teachers in relation background variables (First year and Second year) is moderate

Table No. 3 showing level of social media engagement among the student teachers in relation background variables (First year and Second year)

SME based on background Variable	SME Level (ScoreRange)	N	Mean	High (51-75)	Moderate (25-50)	Low (0-24)
Year	First year	90	45.48	24 (26.66%)	65 (72.23%)	01 (1.11%)
	Second Year	87	46.95	25 (28.73%)	61 (70.12%)	01 (1.15%)
	Total	177				

Interpretation:

It can be observed from the Table 3 that the level of social media engagement among the student teachers in relation background variables for First year (72.23%) and Second year (70.12%) is moderate. Hence the Hypothesis is accepted

Objective 4 To compare the level of social media engagement among the student teachers in relation to background variables (First year and Second year)

Hypothesis 4 There is no significant difference in the level of social media engagement among the student teachers in relation to background variables (First year and Second year)

Table No. 4 showing comparison of level of social media engagement among the student teachers in relation background variables (First year and Second year)

Background variable	Criteria	N	Mean	t-calculated	t-tabulated	Remarks
Year	First Year	90	45.48	1.14	1.65	Not significant
	Second Year	87	46.95			
	Total	177				

Interpretation:

It can be observed from the Table 4 that the calculated "t" value 1.14 is less than tabulated "t" value is 1.65 at 0.05 level. There is no significant difference in in the level of social media engagement among the student teachers in relation to background variables (First year and Second year) so the hypothesis is accepted

Findings

- The level of social media engagement among the student teachers is Moderate (71.18%).
- The level of social media engagement among the student teachers in relation to its
  - ✓ Behavioural factor is **(81.92%)** which is high,
  - ✓ Affective factor is **(69.50%)** which is moderate and
  - ✓ Cognitive factor is (**65.54%) which** is moderate.
- The level of social media engagement among the student teachers in relation background variables for First year (72.23%) and Second year (70.12%) is moderate.
- There is no significant difference in the level of social media engagement among the student teachers in relation to background variables (First year and Second year) so the hypothesis is accepted

Conclusion:

- The level of social media engagement (SME) overall is moderate as the student teachers are to some extent knowing the effects of using more social media.
- Affective engagement refers to the increase in positive or negative emotions when the individual uses social media; a high score indicates a high degree of affective engagement

in social media. The study has proved it true

- Behavioural engagement refers to the behaviour of habitually or unconsciously using social media, the higher the score, the higher the degree of behavioural engagement. The results showed that the level is moderate
- Cognitive engagement refers to the individual cognitive bias of positive social media use; a high degree of cognitive engagement means that the individual would be more inclined to be involved in online social interaction. As per our research it is moderate.
- There is no difference in the social media engagement (SME) among first year and second year student teachers .it may be due to inclination of student teachers towards its usage.

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5.Prospective teachers perspectives on the teaching profession

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Abstract:
Teachers' perception toward their vocation plays a crucial part in the improvement of today's educational system since they have an impact on both their teaching methods and their students. The internet has opened up the world of information to the generation we now refer to as the "cyber generation." Teachers must therefore have a positive attitude toward the teaching profession in order to meet this challenge. Unfortunately, the majority of educational institutions have turned into businesses, which has an impact on teachers' perceptions. Since teacher training colleges produce school instructors, the perception of teacher eventually influences the quality of education. It is well acknowledged that teachers directly influence the calibre of teacher education system.

This research aims to investigate prospective teachers' perspectives on the teaching profession. The study's data have undergone a quantitative analysis. The study's conclusions showed that gender and the sorts of colleges have an impact on prospective teachers' perspectives regarding the teaching profession.

Key words: Prospective Teachers' Perception Toward Teaching Profession, Gender and Types Of College.

Introduction:
The perspective of an individual affects their ability to advance as an individual, an institution, and a country. The progress of the nation is significantly influenced by the level of education. Teachers, who are essential to providing high-quality education, provide this crucial function.

For an institution to function and improve, teachers' favourable perception toward their jobs is essential. According to studies, a positive perception toward work has a favourable impact on one's efforts and performance at work. Similar to how poor work attitudes among employees are linked to absenteeism and staff turnover. (Dee et al., 2006; Kushman, 1992) Any discipline's teaching and learning process is significantly influenced by the personality and actions of the teachers. because they produce the future teachers who will guide and build our nation, teacher training institutions (also known as B.Ed colleges) have a significant impact on developing nations. The development of specific teaching skills, which are essential for the teaching profession, is another benefit of teacher training.

The future of our nation is fashioned in her classroom, as we like to say. Furthermore, given that these classroom instructors are graduates of teacher education programmes, our nation's future is ultimately shaped by teacher educators and their perspectives on the teaching profession. Surprisingly, the B.Ed. colleges are the most underappreciated group in the overall enterprise of teaching profession. Therefore, the purpose of this study is to examine prospective teachers' perception toward the teaching profession who are trained in B.Ed. colleges.

Statement of the problem:
The problem selected by the researcher is 'Prospective teachers' perspectives on the teaching profession.'

Operational Definition:

- ***Prospective teachers'-*** B.Ed. students completing their B.Ed. course in aided and unaided B.Ed. colleges affiliated to the University of Mumbai.

- **Perspectives on the teaching profession**- It is the prospective teachers' feeling, opinion, or perception of the teaching profession and the factors related to it, such as the economic and social status of the teacher, the teaching-learning process, sincerity to the profession, rewards in teaching, and the future of the teaching profession (which may be positive, negative, or neutral).

Aim of the study:

The broad aim of the study is to study perception of prospective teachers towards teaching profession of studying in B.Ed. colleges affiliated to the University of Mumbai.

Objectives of the study:

The following objectives will guide the researcher:

1. To examine how different types of institutions affect prospective teachers' perception regarding the teaching profession.
(a) Aided B.Ed. colleges (b) Unaided B.Ed. colleges
2. To study how prospective teachers' perception toward the teaching profession fluctuate based on gender.

Hypothesis of the study:

1. There is no significance difference in prospective teachers' perception regarding the teaching profession on the basis of types of institution
(a) Aided B.Ed. colleges (b) Unaided B.Ed. colleges
2. There is no significant gender difference in prospective teachers' perception toward the teaching profession.

Design of the study:

Methodology of the study:

The descriptive research method will be the one employed by the researcher in this investigation. The researcher's proposal for the current study is to examine prospective teachers' perception toward the teaching profession.

Sample:

A total of 120 prospective teachers from Mumbai University-affiliated aided and unaided B.Ed colleges were consider. The researcher will employ a random sample strategy for the sake of the current study.

Tool of the study:

The investigators in the current study used a pre-made form to assess prospective teachers' perception regarding the teaching profession. Thampan, V.(1997), created the tool. This tool has a total of 24 items—12 positive and 12 negative—that must be assessed on a five-point scale.

Scope and Delimitation of the study:

The focus of the current study is on prospective teachers' perception on the teaching profession.

With regard to their types of B.Ed. colleges (Aided/Unaided) and gender of prospective teachers from B.Ed. colleges affiliated to the University of Mumbai were assessed independently for their perception regarding the teaching profession.

Findings and Discussion:

1. Based on the different types of institutions, there are significant differences in the perception of prospective teachers about the teaching profession. The prospective teachers studying at aided B.Ed. colleges have a positive perception toward the teaching profession because their mean is higher than that of unaided B.Ed. colleges.

This is comparable to Zeenat Zahoor's (2013) study, in which she discovered that government school teachers had a more positive attitude about their career than teachers at private schools (Unaided schools).

2. The perceptions regarding the teaching profession among prospective teachers from B.Ed. colleges varied significantly by gender. Since female prospective teachers have a higher mean score than male prospective teachers, they have a more positive perception about the teaching profession.

   In a study conducted by K.S. Kanti, (2011), it was found that female teachers had more positive attitude toward their careers as teachers than male teachers.

Conclusion:

The way teachers feel about their jobs affects not only how they teach but also how their students learn. They therefore play a vital part in determining whether students have positive or negative attitudes toward any subject. With the changes in society today, a lot of B.Ed. colleges have emerged, and the quality of education is being compromised. Therefore, the primary goal of the study is to evaluate the perspectives of prospective teachers who are trained in such B.Ed. colleges who will mould our society in future.

The study's findings make it abundantly evident that some prospective teachers have a negative view toward the teaching profession when it comes to the kinds of institutions and gender that may have an impact on our society's future. Therefore, as a responsible stakeholder in our society, we must carefully consider developing a programme that will enhance all teacher's positive perception towards teaching profession, regardless of their gender and institution type.

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6.Study the difficulties faced by students of 7th standard semi-English medium while studying general science

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Abstract: - According to Sarva Shiksha Abhiyan, it is compulsory for all students in the age group of 6 to 14 years to get primary education. All parents in India send their children to school according to their means. In Zilla Parishad schools, in Municipal schools, students get excellent marks up to 4th standard. On the strength of these marks, they get admission in any semi-English, English medium school. As entering the semi-English medium school, students want to learn two subjects, mathematics and science, through English medium. Since they have learned in Marathi medium till 4th, what problems do students face while studying general science as compared to mathematics? What measures do teachers take to overcome it? Also what is their overall effect? This research paper enlightened to study all these aspects.

Key Words: -Students, Semi English Medium and General Science.

Introduction: -

In future students will have to become doctors, engineers or 1.T. sector. If they want to make a career in these fields, they have to take science subjects at the higher secondary level. In all the above areas, even though they have to pass the CET, they are required to have certain marks in the science subjects. If they do not have these specific marks then the students have got good marks in CET as well as in JEE, but if they do not have these specific marks in science then they do not get admission in reputed institutions. Therefore, parents pay attention to science from the elementary level. Since all these examinations are conducted through English medium, parents put their children in Semi English class even if they have learned in Marathi medium till 4th class, so that it should be easier for them to appear such type of competitive examinations. Although students in 5th standard have studied most of the concepts in general science, what problems do students face while learning science subjects in English language? Why do the problems come? For that which remedies run by teacher? What is the overall effect? The subject presented for this study was taken by the researcher.

Need for research: - Students who have learned up to 4th standard in Marathi medium and whose mother tongue is Marathi have English language limitations, so there are many shortcomings in their writing and pronunciation. What are these shortcomings? Why these shortcomings? What are its causes? What do they do to overcome these problems? What measures do teachers take? What effect do they have on students? It felt necessary to know this and out of that need the present subject was taken for research.

Importance of Research: - What are the difficulties faced by the students of Semi English Medium in the progress of study of Science subject in English Medium? How do those difficulties affect their progress? What do the students themselves do to overcome these difficulties? What do teachers do? What measures are planned? What is the effect of these measures? The importance of this research study is to find out and shed light on it.

Research Objectives:

1. To find out the problems encountered while studying general science subjects in English medium in Semi English medium.
2. Semi-English medium students to find out the causes the problem encountered in the study of general science subjects in English medium.
3. Semi-English medium students to explore the efforts made by the students to solve the problems encountered in the progress of general science subject studies through English medium.
4. To find out the solutions implemented by the teachers to solve the problems encountered in the progress of general science subjects through English medium students.
5. Semi-English medium students to explore the efforts made by their parents to solve the problems encountered in the progress of general science subject studies through English.
6. To explore the efforts made by the school to solve the problems encountered in the progress of the study of general science subject in semi English medium students through English medium.

Assumptions of research:-

1. In general, all the semi-English medium students have the same problems in their progress while studying general science subjects in English medium.
2. In general, all semi-English medium students have the same reasons for problems in progressing general science subject study through English.
3. Measures taken by teachers, parents and schools are helpful to these students.

Scope and limitations of the present research: -

Scope:-Students up to 4th standard who have learned through Marathi medium and all students who have taken admission in Semi English medium in 7th standard.

Limitations:

- 1, The research is limited to Akola city only.
- The research is limited to three schools in Akola. students, supervised study,
- The research is limited to students studying in Semi English medium and studying in 7th standard. The present research is limited to the academic year 2018-2019.

Method of research: - The survey method was used as the present research is related to the current situation. The tool used for this research is questionnaire. 3 Semi English medium schools have been selected for the present research. Out of which 10 science teachers, 10 parents and 90 students were limited by random method. Information was collected through questionnaires. The collected information was analysed and interpreted as follows.

Analysis and interpretation: - The analysis and interpretation of the collected information was done with the help of percentage.

Conclusion

- Students find general science concepts difficult to understand teacher's speed and language style.
- *Some words in general science do not make sense.
- There are spelling mistakes in the writing.
- *Mother tongue influences on student’s writing.
- *Students do not have confidence in writing the answer to the question.
- Most of the students are of the opinion that the teacher tries to explain again and again.

- *According to most of the teachers, having to study the science subject in English at once creates a lack of confidence in the students
- According to all the teachers, in teaching all the students are taught according to their speed, according to their comprehension ability, by understanding their difficulties.
- *According to most headmasters, special classes for students, supervised study, personal guidance, all as well as lessons are taken.
- According to most parents, children are provided with all the books they need for general science subjects, private tutoring classes as well as guidance at home. English medium students are asked to study with semi English medium children.

Recommendations: -
Students should focus on general science subjects. If in doubt, ask the teacher right away.

1. Students should focus on understanding.
2. Students should practice reading and writing difficult science concepts. Reading should not be done in the mind, but should be read in such a way that the voice itself can be heard.
5. Answer questions confidently, without fear that other students will tease you if you miss the answer.
6. Students should focus on pure and accurate reading and writing.
7. Teachers should teach according to the pace of the students and emphasize on explanation in teaching.
8. Teachers should organize various programs for students on discussion; reading and writing based on general science topics in the school club in the school and involve English medium students in it.
9. Encourage students to speak English in school and try to build their confidence.

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7. A Study of Effectiveness of Constructivist Approach for Enhancing Achievement in Chemistry among 9th Standard Students.

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Abstract

The study is focused to find out the effectiveness of constructivist approach for enhancing achievement in chemistry among 9th std students. The investigator used randomized pre-test/post-test design in which the samples are randomly assigned subjects to experimental and control group. The samples of the present study are consisting of 60 Standard IX students of High school. Out of 60 students, 30 students were chosen randomly for Experimental group and 30 students for Control group. The achievement test was prepared, standardized by the investigator and administered to the samples in the pre-test and post-test. The main findings of the study are; there is significant difference in the post test scores of control and experimental group. The achievement scores of the samples in the experimental group are better than the control group and it proved that constructivist approach is an effective teaching strategy than the chalk and talk method for the achievement in Chemistry.

Keywords: Constructivist Approach, Achievement in Chemistry.

Introduction

Science is the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence. Science refers to a system of acquiring knowledge through observation and experimentation to describe and explain natural phenomena. Chemistry in one of the core subjects of science and it has the composition, structure, properties, and reactions of matter, especially of atomic and molecular systems. The main aim of the science education is to make a meaningful understanding of Science theories, concepts, equations, laws, principles etc. Teaching Science focuses on providing students with opportunities to get an experience and to develop their cognition. Learning is the product of self-organization and reorganization of existing ideas. This learning is possible through different approach, strategies and methods.

Need and Significance of the Study

The constructivism provides a perspective on teaching and learning science in classrooms, with a view to improving the effectiveness of science teaching in enhancing students' learning. The core view of constructivists on learning science suggests that students construct their knowledge strongly influenced by social environments. They learn science through a process of constructing, interpreting and modifying their own representations of reality based on their experiences. Therefore, constructivists acknowledge social dimension of learning such as the classroom and learning community whereby students make meaning of the world through both personal and social processes.

Objectives of the Study

1. To find out the level of achievement

in Chemistry between control group and experimental group in the pre-test.
2. To prepare a lesson plan to teach atomic structure for the samples in the control group
3. To prepare a constructivist approach lesson plan to teach atomic structure for experimental group
4. To find out the level of achievement in Chemistry between control group and experimental group in the post test.
5. To find the significant difference in the mean scores of achievement in Chemistry between control group and experimental group in the post test.

Hypothesis of the Study

1. There is significant difference in the mean scores of achievement in Chemistry between control and experimentalgroup in the pre-test.
2. There is significant difference in the mean scores of achievement in chemistry between pre-test and post scores of the samples in the control group.
3. There is significant difference in the mean scores of achievement in chemistry between pre-test and post of the samples in the experimental group.
4. There is significant difference in the mean scores of achievement in Chemistry between control and experimentalgroup in the post test

Data Analysis

The data is first tabulated and then analysis statistically by using the mean, Standard Deviation and various method. **Statistical technique: Mean, S.D and paired sample t-test are used.**

Data Interpretation

Table 1: t- test showing the mean scores of achievement in Chemistry in pre-test between control and experimental group.

	Group	N	Mean	Standard deviation	t value	P value	Result
Pre-test	Control	30	52.06	6.36	0.54	0.58	N.S
	Experimental	30	51.01	6.42			

Analysis: The mean scores of achievement in chemistry in pre-test for control group is 52.06 and experimental group is 51.01

Table 2: Paired sample t test showing the difference in the mean scores of achievement in Chemistry in post-test between control and experimental group.

	Group	N	Mean	Standard deviation	t-value	P value	Result
Post-test	Control	30	71.94	4.97	5.89	0.00	Sig
	Experimental	30	78.21	7.54			

Analysis: The mean scores of achievement in chemistry in post-test for control group is 71.94 and experimental group is 78.21

Findings of the Study

1. There is no significant difference in the mean scores of achievement in Chemistry between control and experimental group in the pre-test.
2. There is significant difference in the mean scores of achievement in chemistry between pre- test and post scores of the samples in the control group
3. There is significant difference in the mean scores of achievement in chemistry between pre- test and post of the samples in the experimental group.
4. There is significant difference in the mean scores of achievement in Chemistry between control and experimental group in the post test.

Educational Implication of the Study

The study helps the teachers to understand and implement the constructive approach in teaching chemistry and to help the students to have mastery level of learning. Teachers may get awareness of using the different methods, approaches, strategies to teach chemistry subject in an interesting manner. The teachers will realize the chalk and talk method will not bring the expected or fruitful result in the achievement of chemistry.

Conclusion

The study proved that the constructive approach influences in the learning and achievement of chemistry among the standard IX students. When the students wanted to have a mastery level of learning, the chalk and talk method alone will not useful. There are other approaches, strategies to be adopted by the teacher to enhance the learning and attainment especially in Chemistry. This can be done through constructivist approach of teaching. Hence, the study suggests the science teachers to adopt and implement constructivist approach in teaching Chemistry.

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8.Creating an Equitable Mathematics Classroom

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Abstract

Fairness in education can only be achieved if teachers, instructional strategies, and student individualized needs are supported. Equity is described by NCTM as "setting high standards and providing strong support for all students." Students are more likely to embrace and comprehend the value of mathematics in their education if they can learn and advance their mathematical knowledge in equal environments. This essay examines the qualities of a fair learning environment in mathematics classes and examines the degree to which teachers consistently use fair practices in their classrooms. We also want to see how equity affects how people study and comprehend mathematical ideas.

Keywords: ***Mathematics Education , Equity, High Expectations, Support,***

INTRODUCTION

Mathematics is a language and a science of models. In many countries, mathematics is one of the core subjects taught in schools up to the secondary level. Up until the tenth grade, it is a required subject in India. Additionally, it is crucial for both daily life and the study of other subjects. In the modern world, everyone needs to be proficient in mathematics. The study of mathematics is regarded as a difficult and challenging endeavor. Any person who lacks adequate math skills could find himself in a challenging and uncomfortable situation. Without sufficient mathematical skills, a person cannot make wise financial or other life decisions. Mathematical literacy is used frequently from basic mall shopping to making more specialized decisions, we require the help of numbers. Thus, the competency in using necessary numbers in daily life is imperative.

Mathematical proficiency includes the development of:

- **Conceptual understanding-** comprehension of mathematical concepts, operations, and relations
- **Procedural fluency** -skill in carrying out procedures flexibly, accurately, efficiently, and appropriately
- **Adaptive reasoning** -the capacity for logical thought, reflection, explanation, and justification
- **Strategic competence** -the ability to formulate, represent, and solve mathematical problems
- **Productive disposition** - habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy

(https://dpi.wi.gov/sites/default/files/imce/math/files/Instructional_Practice_Guide_Math_9-12.pdf)

From the above, it can be concluded that Mathematics is very important, not only as a school subject, but also to develop problem solving skills, critical thinking, and reasoning abilities. The Mathematical concepts remain same for everyone, yet some students find it more difficult than others to understand them. One of the possible reasons is that all

learners are not exactly same, as everyone comes from different background and has different experiences as well as perceptions. Mathematics learning is affected by various aspects of an individual ‘s life. Some of these aspects are socio-economic and psychological barriers. Socio-economic factors include family income, gender, locality, educational qualification of parents and kind of peer group among others. Psychological factors include anxiety, mental health, self-esteem, comfort with self-learning, impact of peer group, etc. Taking these aspects into consideration, it becomes essential for teachers to think about equity at the forefront in a math classroom. Addressing equity and access includes both ensuring that all students attain mathematics proficiency and increasing the numbers of students from all racial, ethnic, linguistic, gender, and socioeconomic groups who attain the highest levels of mathematics achievement.

A teacher is responsible for meeting all the needs of all the learners. Creating an equitable classroom ensures that each of the students can be successful regardless of race, culture, gender, religious affiliation, or learning differences.

Towards Equitable Mathematics:

When considering how inequitable mathematics instruction affects students, math trauma and math phobia in our culture are only the tip of the iceberg. All students can do math as well as of embracing the subject as a fun one. Having a variety of viewpoints improves students' understanding of math and letting students' voices and experiences shine in math classes is an essential first step in helping students rediscover their humanity. Giving students the chance to critically think about mathematics, share their ideas with others, and develop new understandings is necessary for realizing this vision. Along with giving students a chance to critically think about mathematics it is essential for teachers to change the students’ perceptions about themselves and the mathematics subject.

A lesson is created in a traditional math classroom with the intention of students demonstrating proficiency after the teacher establishes an instructional objective. These lessons include guided notes, examples created by the teacher, and questions that are posed to the class, with the correct answers being affirmed and the incorrect ones being corrected. This instructional model (Figure 1) is targeted and effective, but it neglects equity and unintentionally places many students in the role of observers of mathematics.

With time and experience, this position starts to shape a student's perception of themselves in relation to the subject, which is frequently one of disinterest, inadequacy, and alienation.

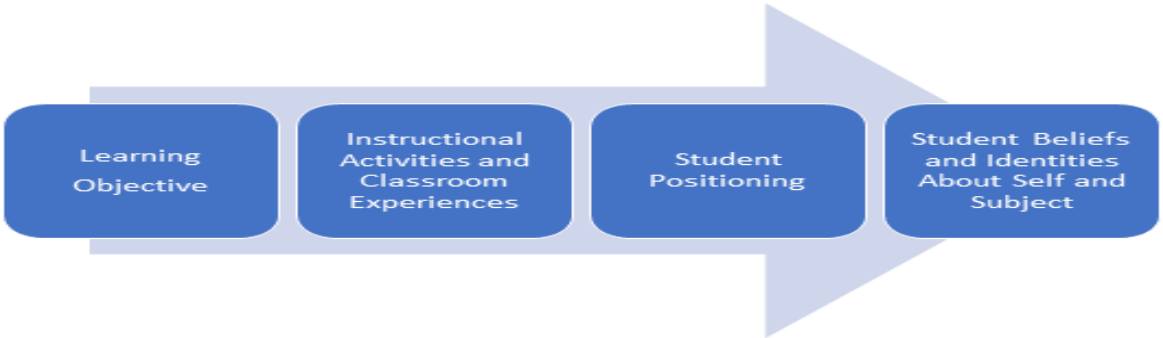

Figure 1: How instructional and classroom experiences lead to student identity about self and subject.

This instructional progression's structure places the teacher in the role of the expert and the student in that of the receiver. As a result, students who can provide accurate answers quickly are seen as smart or capable, which causes other students to have a negative opinion of their mathematical ability. Critically, when students from different backgrounds are asked to think and reason like their teachers rather than applying what they are learning to their own lives, these negative outcomes are frequently amplified.

We cannot put off thinking about student identities if we want to change these results and work toward more equitable and humanizing mathematics instruction. Instead, we should think about the dispositional outcomes we want students to develop and where they stand in relation to these goals. The objectives of equity and sense of self are at the forefront of this type of backwards design, as shown in Figure 2.

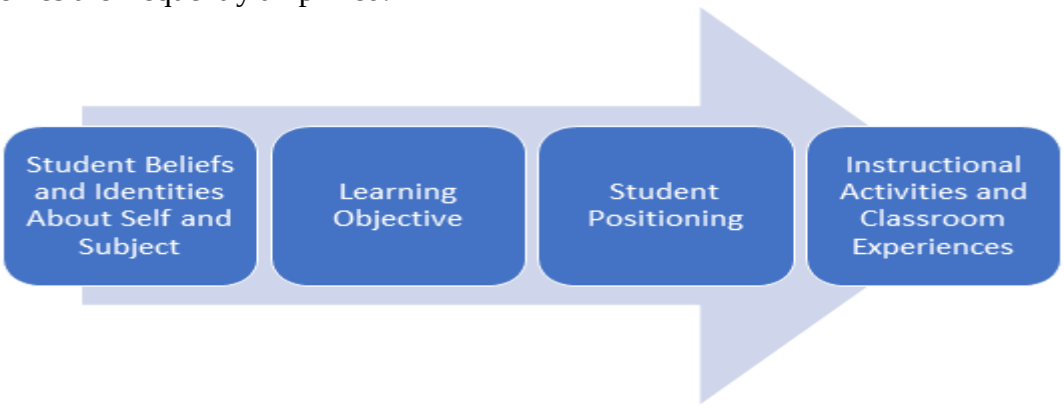

Figure 2: Beginning with the end in mind by starting with equity and sense of self and subject.

https://www.ascd.org/blogs/equity-by-design-student-centered-planning-in-mathematics

Equity And Equitable Classroom

"Equity does not mean that every student should receive identical instruction; instead, it demands that reasonable and appropriate accommodations be made as needed to promote access and attainment for all students." (NCTM, 2000, p. 12).

Practices that support access and equity require comprehensive understanding. These practices include, holding high expectations, ensuring access to high-quality mathematics curriculum and instruction, allowing adequate time for students to learn, placing appropriate emphasis on differentiated processes that broaden students' productive engagement with mathematics, and making strategic use of human and material resources. Considering human resources, the role of teachers is of utmost importance.

Components of an Equitable Mathematics Classroom

Though a lot of importance is given to instructions given by teachers in the classroom, Instruction works together with the following to create equitable teaching and learning:

- Teacher Knowledge Factors:
- Motivational Factors
- Managerial Factors
- Curricular Factors
- Environmental Factors

The above factors will surely create a math learning culture and a happy atmosphere in the math classroom.

Teaching with equity in the math classroom helps support students from all backgrounds and learning styles

Teachers Role To Establish Equity In The Math Classroom.

- **Knowing the students and adapting to their differences.**

Teachers need to comprehend their students' learning styles. Lesson planning should consider students' multiple intelligences and preferred learning preferences that encourage independent thought. Teachers will be able to address the needs of each student and impart knowledge equitably if they keep these learning strategies in mind. Howard Gardner argues that because students think differently, they learn, remember, perform, and understand in various ways. Teachers must adopt the policies, practices, and use of an equitable method of classroom management in order to foster equity in the classroom. Teachers can get rid of complaints of favoritism that might come up in class when students see that the system is in place.

Using effective teaching strategies in the classroom.

Teachers can have a greater impact on how mathematics is taught to all students by implementing effective teaching strategies. The following are some of the top educational tactics:

- Teacher clarity
- Give Feedback
- Direct instruction
- Classroom instruction
- Space Vs mass practice

- Understanding the culture of the school and students**.**

  Teachers can significantly contribute to the academic success of each learner by honoring their culture and embracing them as individuals. Following the rules contributes to the creation of a secure and supportive learning environment where all students feel supported and at home. collaborating with community stakeholders and school administrators. All involved leaders must make a sincere effort to promote equity in schools. Teachers should make deliberate efforts to use appropriate resources and employ fair tactics. To ensure that justice is faithfully administered, communication is just as crucial as progress monitoring. Teachers will be more likely to have the desired plan for doing justice if they are given reasonable deadlines and achievable goals.

- **Staying aligned with the vision and mission.**

  There will be efforts to offer equitable resources, practices, and continuing education when equity is one of the missions. The schools will take various types of supports at various levels of intensity to adapt to the needs of the whole child in a proactive and responsive manner. These include the knowledge, abilities, and practices that students need to succeed after high school, such as social, emotional, behavioural, and academic skills. To meet the needs of every learner, there will be a fair multi-level support system. This may include advanced students, IEP students, bilingual students, and students learning English as a second language or another language. All learners will benefit from this in terms of academic success and equity. It also aids in eliminating performance gaps. Fair mathematics instruction.In order to increase equity in mathematics, educators should think about the following strategies to enhance pupil learning while upholding high standards.

- Offer support for the cognitive and affective needs of each student.
- Increase student participation using active and collaborative learning techniques with relevant examples.
- Counteract implicit bias, stereotype threat, and microaggressions.
- Increase marginalized students' sense of belonging.
- Recognize that all students are unique individuals with distinct stories, aspirations, prior knowledge, and challenges.

CONCLUSION:

Teaching with equity in mind is now necessary. One will start to notice how equitable teaching affects student learning if well-established pedagogical research is considered. Teachers should take the time and get to know the students, comprehend the school culture, collaborate with leaders, and continue to be aligned with the institutes vision and mission for academic achievement. Teachers should make the decision to practice equity and recognize the achievements of all students. Teaching future educators about equity in the classroom and how implementing it might create positive changes in education might be a good idea if we want to create an educational system where classrooms and teachers strive for equity. Information is power in this situation. Positive change might start to happen if educators are taught how to implement equity in the classroom and have access to it.

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9.Climate change: Impacts on Maharashtra

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Abstract
Climate Change: periodic modification of Earth's climate brought about as a result of changes in the atmosphere as well as interactions between the atmosphere and various other geologic, chemical, biological and geographic factors within the Earth system.

Keywords: Greenhouse Gases, Deforestation, Solar Activities.

Climate change has occurred for as long as the earth has existed. It happens anytime earth's climate patterns change and remain in place for a measurable amount of time. This has notably manifested itself in natural cycles of cooling and warming. Before human causes started to shift the global climate, five main factors interacted with one another as climate changes occurred. These five factors include: -

1.Atmosphere (air) 2. Biosphere (living things) 3.Cryosphere (ice and permafrost)

4.Hydrosphere(water) 5.Lithosphere (earth's crust and upper mantle)

Causes of Climate Change

The brightness of the Sun continues to increase as the star ages and it passes on an increasing amount of this energy to Earth's atmosphere over time.

Fossil-fuel combustion, deforestation, rice cultivation, livestock ranching, industrial production and other human activities have increased since the development of agriculture and especially since the start of the Industrial Revolution.

Greenhouse Gases

Greenhouse gases in the atmosphere, such as carbon dioxide, methane and water vapor, absorb infrared radiation emitted from Earth's surface and reradiate it back, thus contributing to the greenhouse effect.

Ice sheets, sea ice, terrestrial vegetation, ocean temperatures, weathering rates, ocean circulation are influenced either directly or indirectly by the atmosphere and influence it in important ways.

Periodic changes in Earth's orbit and axial tilt with respect to the Sun (which occur over tens of thousands to hundreds of thousands of years) affect how solar radiation is distributed on Earth's surface.

Tectonic movements, which change the shape, size, position and elevation of the continental masses and the bathymetry of the oceans, have had strong effects on the circulation of both the atmosphere and the oceans.

Human societies have changed adaptively in response to climate variations, although evidence abounds that certain societies and civilizations have collapsed in the face of rapid and severe climatic changes.

The complex feedbacks between climate components can produce "tipping points" in the climate system, where small, gradual change in one component of the system can lead to abrupt climate changes.

The history of life has been strongly influenced by changes in climate, some of which radically altered the course of evolution.

The most familiar and predictable phenomena are the seasonal cycles, to which people adjust their clothing, outdoor activities, thermostats and agricultural practices.

Solar Activity

Solar activity, as mentioned above, does play a role in the earth's climate. While the sun does go through natural cycles, increasing and decreasing the amount of energy that it emits to the earth, it is unlikely that solar activity is a major contributor to global warming or climate change. Since scientists began to measure the sun's energy hitting our atmosphere, there has not been a measurable upward trend.

Deforestation

Deforestation and climate change often go hand in hand. Not only does climate change increase deforestation by way of wildfires and other extreme weather, but deforestation is also a major contributor to global warming. According to the Earth Day Network, deforestation is the second leading contributor to global greenhouse gasses. Many people and organizations fighting against climate change point to reducing deforestation as one of, if not the most, important issues that must be addressed to slow or prevent climate change.

Human Activity

According to the Environmental Protection Agency, the most significant contributor to climate change in the United States is the burning of fossil fuels for electricity, heat, and transportation. Of these factors, transportation in the form of cars, trucks, ships, trains, and planes emits the largest percentage of CO2–speeding up global warming and remaining a significant cause of climate changes

Immediate Effects of Climate Change

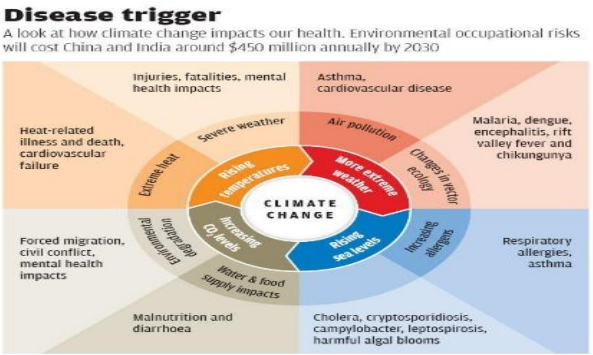
From melting glaciers to more extreme weather patterns, people everywhere are beginning to take notice of the real impacts of climate change. While some nations around the world are taking action with initiatives such as the Paris Climate Agreement, others are continuing business as usual–pumping millions of tons of carbon into the atmosphere year after year. While the long-term consequences are still to be seen, for now, climate change continues to cause extreme weather as well as safety and economic challenges on a global scale.

Long Term Impact of Climate Change

The long-term impact of climate change could be absolutely devastating to the planet and everyone and everything living on it. If the world continues its current trajectory, then we are likely to see increasing effects on everyday life.

Health

There are many ways in which climate change could impact people's health. Depending on age, location, and economic status, climate change is already affecting the health of many and has the potential to impact millions more. According to the Centre for Disease Control and Prevention, climate change-related health risks may include:



Heat-related illness: - Injuries and fatalities from severe weather, Asthma & cardiovascular disease from air pollution, Respiratory problems from increased allergens, Diseases from poor water quality Water & food supply insecurities, Negative Impact in Ecosystems

Ecosystems are interconnected webs of living organisms that help support all kinds of plant and biological life. Climate change is already changing seasonal weather patterns and disrupting food distribution for plants and animals throughout the world, potentially causing mass extinction events. Some studies estimate that nearly 30% of plant and animal species are at risk of extinction if global temperatures continue to rise.

Water & Food Resources

Climate change could have a significant impact on food and water supplies. Severe weather and increased temperatures will continue to limit crop productivity and increase the demand for water. With food demand expected to increase by nearly 70% by 2050, the problem will likely only get worse.

Sea Levels Rising

Rising sea levels could have far-reaching effects on coastal cities and habitats. Increasing ocean temperatures and melting ice sheets have steadily contributed to the rise of sea levels on a global scale. At current rates the National Oceanic and Atmospheric Administration estimate sea levels to rise by at least 8 inches by 2100, potentially causing increased flooding and decrease in ocean and wetland habitats.

Shrinking Ice Sheets

While contributing to rising sea levels, shrinking ice sheets present their own set of unique problems, including increased global temperatures and greenhouse gas emissions. Climate change has driven summer melt of the ice sheets covering Greenland and Antarctica to increase by nearly 30% since 1979.

Ocean Acidification

The ocean is one of the main ways in which CO2 gets absorbed. While at first glance that may sound like a net positive, the increasingly human-caused CO2 is pushing the world's oceans to their limits and causing increased acidity. As pH levels in the ocean decrease, shellfish have difficulty reproducing, and much of the oceans' food cycle becomes disrupted. [21]

Impact of Climate change on Maharashtra

Maharashtra ranks among the world's top 50 regions at risk of damage to the built environment due to climate change. Maharashtra state is reeling from the impacts of climate change, and particularly from frequent droughts in rural areas and floods in urban areas. The frequency of droughts in semi-arid regions of Marathwada and Vidarbha is now once in every five and six years respectively. The state government is gradually recognising that in order to meet citizens' basic development needs, it must integrate climate change concerns into its development planning and implementation processes.

Due to climate change, Maharashtra experiences erratic weather conditions – floods in some parts of the state and droughts in others. This affects the agriculture sector, whose contribution to the state's economy is about 12 per cent of gross state value added. In 2019, according to an estimate, unseasonal rains wiped out crops in an area of 94.5 lakh hectares (9.4 million hectares). It is estimated that the total economic cost of the loss was more than □ 5,000 crore (S$100 million) in 30 of the 36 districts of the state Drought has also affected agriculture in drought prone regions of Maharashtra such as Vidarbha and Marathwada. To deal with the

situation, in December 2014, Jalyukt Shivar Abhiyaan (Water Conservation Mission) was launched. Its objective was to make the state drought-free by 2019 and it focused on deepening and widening streams, constructing cement and earthen stop dams, working on nullahs and digging farm ponds. Through all such water conservation structures, the mission aimed to make 5,000 villages free from water scarcity every year. Nevertheless, after five years, in 2019, the Maharashtra government had to declare drought in 20,000 villages across 26 districts of the state. Of these, eight districts in the Marathwada region were among the worst affected.

Unseasonal rainfall, unwanted floods and droughts have caused a decline in agricultural production, which, in 2018-2019, resulted in an estimated eight per cent decline in the crops' real gross state value added. The decline in crop production, due to drought or damage to standing crops because of excessive precipitation, increases the financial pressure on farmers. Many of them take loans from banks or individuals promising to return the principal amount with interest after selling their crops. However, when the crop fails, these farmers fall into debt. Some then sell or mortgage their land and migrate to the nearby city while a few, unfortunately, take extreme measures and commit suicide. It is estimated that, between 2015 and 2018, about 12,021 farmers from Maharashtra committed suicide.

It is not only the rural areas that are experiencing the impact of climate change. Mumbai, the capital of Maharashtra, is also severely affected. In 2019, Mumbai received the maximum rainfall in its recorded history during the official monsoon season from June to September 2019. The city recorded a total rainfall of 3,670 millimetres from 1 June to 30 September 2019, which was more than the previous record of 3,452 millimetres set in 1954. In 2019, Mumbai also witnessed five 'extremely heavy rain' days, when the rainfall crossed over 204 millimetres within 24 hours. The International Panel on Climate Change, an intergovernmental body set up by the United Nations in 1988 to study the impact of climate change, in its 2018 report, highlighted that an increase in global warming from 1.5 degree Celsius would make the coastal cities of the world, including Mumbai, more vulnerable to sea floods.

Further, in a research paper published in Nature Communications, Scott A Kulp and Benjamin H Strauss from the United States-based research institute, Climate Central, argue that, by 2050, the projected rise in sea levels would be high enough to threaten lands which are currently home to about 150 million people. The worst affected Asian countries from the sea rise will be China, Bangladesh, India, Vietnam, Indonesia, Thailand, the Philippines, and Japan. The whole of Mumbai has been listed by the authors in the paper as one of the vulnerable coastal areas

Conclusion

In the coming days, the impact of climate change will be more threatening to the populace and will severely affect Maharashtra's economy. Its impact on the agriculture sector is likely to further increase migration from the rural areas to various cities across Maharashtra. Such migrants will put additional burden on city infrastructure. To overcome such a situation and deal with the challenges of climate change, the first step is to recognise the problems climate change creates. Unfortunately, despite the severe impacts already seen, such as death and economic losses, climate change is yet to be recognised as an imminent threat to the state. Second, development projects in Maharashtra have to be planned without degrading the city's environment. There is a need to save the existing mangrove forests and increase the tree cover in

Mumbai, as they check sea floods and salinity. Third, as recommended by the MSAAPCC report, the government must create mass awareness about the threat of climate change. There is a need to train people to use new technologies and inculcate a civic attitude among the people.

Our Future ? due to Climate change…..

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10.Professional Skills Development of English Language Teachers in Ratnagiri Nagar Parishad Schools through TAGs Training

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Abstract :-
Teachers are major catalyst performing an enabling role for learners who are at the central to any education system. A skilled and reflective teacher can harness a child's potential towards creativity, ambition and achievement. Innovative and needs oriented in – service teacher training can yield skilled and reflective teachers with high level professional skills. Therefore the central government and state government should organize these types of trainings. The modern approach to learning demands use of technology, language proficiency and effective communication skill to cater the advanced needs of learners. The teachers should be able to reflect on their own teaching, share their experiences with the similar professionals, prepare their lesson plans as per the objectives of the content. This is possible only through the time to time teacher training programmes.

The English language teachers in Ratnagiri Nagar Parshad schools were not able to communicate confidently in English in their classrooms. They had little bit knowledge of using technology in teaching - learning process. They used traditional teacher centred methods which were devoid of learners' participation. But the initiative of TAGs training lent them an opportunity for developing their profession skills within a short span of time.

Key Words:- Professional skills, TAGs, Ratnagiri Nagar Parishad

Introduction:-

The State Government of Maharashtra issued the Pragat Shikshan Maharashtra Government Resolution (GR) in 2015. The GR was landmark resolution in the state education environment as it laid the foundation for MSCERT sakshamikaran, clearly highlighting the government's vision and commitment to improving the quality of the education system. The GR facilitated the creation of quality circle of dedicated, committed and creative teachers by inculcating the habit of self- learning amongst teachers, using technology based support systems and demanded driven training as per their needs. The tri - party partnership with government's underlined intent in the form of the Pragat Shikshan Maharashtra GR, Tata trust's objective of bringing about systematic change and the British Council's expertise in English language teaching took a form of an initiative project 'Tejas '(Technology enabled Education through Joint Action and Strategic initiative) represents a transition from the traditional cascade model of teacher training to a more sustainable internally supported approach which promotes holistic professional development through local communities of practice. This project aimed at developing teacher training model to provide appropriate Continuous Professional Development opportunities for teachers. This was to be achieved through a combination of face to face training, online learning through e moderated and self – access courses, teacher activity groups(TAGs) at the cluster level. All of these

elements of the project aimed at improving the teachers' professional understanding and practice and impact their learners' success.

Professional development should be based on the notion of teacher as learner and reflective practioner. (Schon, 1987). The teacher education and professional development of teacher should be focused on the needs of students in a particular school community. Teacher's professional development should be seen as a collaborative activity as well as an individual activity. The particular needs of individual teacher may be met by professional development. However this should take place in the context of collegial support team, building collaborative planning at school level, interaction and research. The more highly skilled, motivated and effective are English teachers, the more effective learning outcomes will be for students in English classrooms.

Need for Continuous Professional Skills Development:-

1. To know about different ways of teaching foreign language like English to meet wide range of needs of the learners.
2. To emphasis on the exclusive use of the target language in the classroom it requires teachers to have strong language skills.
3. The emphasis on collaborative learning and student self -directed learning require teachers to be able to act as facilitators, guides, counsellors and resources in addition to serving as language experts.
4. Teachers need to be able to use a variety of new technologies that could support instruction.

Keeping the above needs of teaching profession in mind the Tejas project introduced TAGs meetings at block level and cluster level. The meetings are nothing but the organization of different activities that facilitated learning different teaching skills, techniques, strategies and using technology in English teaching. The book was designed for the trainees.

The TAGs resource book contained following components:-

Section1:Language development
Section 2: Learning by reading
Section 3 Learning by watching
Section 4: Reflection and Action planning

All of these components helped the teachers in Ratnagiri Nagar Parishad schools to develop their professional skills.

Fifty teachers were selected for the training. The tenure of the training was 3 years and the meetings were expected to be held once in the month. The book included different activities regarding language development, lesson plan, and reflection on self – lessons, sharing innovative teaching practices etc. The teachers were given thorough training from the year 2018 to 2021. After the completion of training teachers were found to be competent in using technology in lessons, having effective communication skill, using child centred teaching styles, reflecting on their own lessons, using vocabulary in different situations and sharing their best practices with similar professionals.

The researcher wanted to assess the level of professional skills development happened during training in order to ascertain its effectiveness and make some recommendations in this regard. Hence the researcher has selected this topic.

Tejas project: - The Tejas project refers to Technology enabled Education through Joint Action and Strategic initiative. It was a joint initiative delivered through a partnership between the Government of Maharashtra, Tata Trust and British Council. It aimed to improve the quality of English teaching and learning in primary schools across the state. Under this initiative the main focus was capacity building of the state so that it could provide

appropriate Continuous Professional Development (CPD) opportunities to teachers. This was to be achieved by a blend of activities such as face to face trainings, online learning through e-moderated and self - access courses and Teacher Activity Groups (TAG) at the cluster level.

Aims of TAGs were as following:-

1. To gain more confidence to communicate effectively in English especially in the classroom
2. To learn new ideas and teaching techniques that can be used in lessons.
3. To help teachers to be better able to reflect on their teaching and make action plans to implement new ideas in their lessons.
4. To take responsibility for their own professional development.

The teachers of English language in Ratnagiri Nagar Parishad schools were given training by the concerned authority from Panchayat Samiti Ratnagiri during the year 2018 to 2021. The major focus during the training was on developing professional skills of the teachers, enabling them to use technology in their teaching. At the end of the program remarkable change was noticed in the professional skills of these English language teachers.

Need and Significance of the Study:-

The quality of professional's work depends on his professional skills. These skills make the work need oriented and economic. As far as the teacher's job is concerned he needs to be aware of increasing needs of the learners. His methods, techniques, and teaching strategies must fulfill the objectives of education. In teaching profession a teacher needs effective communication skill, potential to think of innovative ideas and implement them in his lessons, a skill of using technology, different assessment techniques, language fluency and so on. But English language teacher in Ratnagiri Nagar Parishad schools were not competent enough to use technology in their lessons. They were not confident enough to use English in their classrooms. They would usually go with traditional methods. Therefore they needed to be trained in using technology and advancing their professional skills. The Government of Maharashtra offered them an opportunity in the form of TAGs training through Tejas project. From the above points of view it was necessary to assess how far this training affected teachers in the sense of uplifting their professional skills.

Importance of the Study:-

This study would help the teachers to know about the different ways of enhancing professional skills. It would also help the state government to know what went good and what needs to be added in upcoming such training programmes.

Statement of the problem:-

Professional Skills Development of English Language Teachers in Ratnagiri Nagar Parishad Schools through TAGs Training.

Operational definitions of the key terms :-

Professional skills:

A set of abilities that can be helped one become successful in his job based on habits and personality traits.

English language teacher:

The teachers who teach English language in schools.

TAGs -

Here it refers to Teachers Activity Groups. These groups were formed at cluster level under the project of Tejas. (Technology enabled Education through Joint Action and Strategic initiative) to deliver training in teaching of English.

Objectives of the research:-

1. To assess the level of professional skills developed among English language teachers.
2. To assess the effectiveness of TAGs training with respect to skills development in Ratnagiri Nagar Parishad School teachers.

Assumptions of study:-

1. The researcher, in this study assumed that advanced trainings and initiatives taken for teachers affect their professional skills positively.
2. The teachers in Marathi medium schools usually do not have English language proficiency.

Hypothesis of the study:-

There is no significant difference in the development of professional skills and language proficiency of teachers after having received TAGs training.

Variables:

Independence variable - TAGs training program

Dependent variable:- Attainment of professional skills and language proficiency in teachers

Scope of the study:-

1) The researcher has studied advanced professional skills in teachers in this research.

2) The researcher has incorporated 22 primary schools of Ratnagiri Nagar Parishad in this study.

3) This study is carried out on 50 teachers.

Limitations of the study:-

1) This study is limited to Ratnagiri Nagar Parishad schools only.

2) The researcher has studied professional skills regarding English language teachers.

Research Method:-

The researcher adopted descriptive survey method for the study. The data is collected from the selected teachers through developed questionnaire schedule.

Research design:-

The researcher used Single Group research design in his study.

Population of the study:-

All fifty English language teachers working in 22 Ratnagiri Nagar Parishad schools was the population of this research.

Sampling:-

The researcher selected 50 English language teachers through purposive sampling method.

Tools:-

The development of professional skills is measured by rating scale which has 42 items each to be rated on 5 points scale.

Table No. 1

Sr. No.	Level of Professional development	Mean	't' value
1	High level Professional development	16.75	3.79
2	Low level Professional development	14.5	

Level of Professional development among teachers in Ratnagiri Nagar Parishad Schools.

Analysis :-
From the above table No. 1 it is evident that the computed value is more than table value. Hence null hypothesis is rejected and the research hypothesis, there is significant difference in the development of professional skills after TAGs training is accepted.

Interpretation:-The TAGs training had great positive impact on the professional skills development of English teachers in Ratnagiri Nagar Parishad schools.

Conclusions:-

1. The components of TAGs training book are helpful to increase the professional skill level of teachers.
2. Teachers want different avenues to develop their professional skills.
3. The teachers in Ratnagiri Nagar Parishad schools were benefited by the training.

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11.Socio-Psycho-Physical Adjustment of secondary School Teachers

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Abstract
Teacher is a social engineer. He or she has to do various duties for well-being of students and for professional development of self. The present study is conducted on randomly selected 50 male and 50 female secondary school teachers in Raigad district. Survey method is used. The Mangal Teacher Adjustment Inventory tool is used for study. It is found that female teachers are doing more Socio-Psycho-Physical Adjustment compared to their male counterparts.

Key Words:- Socio-Psycho-Physical, Adjustment, Secondary School Teachers.

Introduction
Today's teacher need to maintain various relation in school environment. He is social engineer having good psychological capacity and physically fit. Teachers are working hard for development of self and also of students.

Need and Significance of the Study
The researcher being Teacher-Educator going to a different school for lesson observation found that every secondary school teacher has to do Socio-Psycho-Physical, Adjustment. What type of Socio-Psycho-Physical, Adjustment does a teacher need to do? Keeping these questions in mind, this research is an attempt to systematically find out the Socio-Psycho-Physical, Adjustment of secondary school teachers in Raigad district.

Statement of the Problem
The problem for research is therefore stated as follows: -
Socio-Psycho-Physical Adjustment of secondary School Teachers

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:-

Socio-Psycho-Physical
Psychophysical relates to the relationship between one's internal (psychic) and external (physical) worlds. Psychophysical may refer to: Psychophysics, the sub--discipline of psychology dealing with the relationship between physical stimuli and their subjective correlates.

Adjustment
The act or process of adjusting

Secondary Schools Teachers
A person who teaches to the students of Secondary sections. (1^{st} to 8^{th} STD)

Aim of Research
Aim of research is to find the Socio-Psycho-Physical Adjustment of secondary School Teachers in Raigad district.

Objectives

1. To study Socio-Psycho-Physical Adjustment among male secondary school teachers in Raigad district.
2. To study Socio-Psycho-Physical Adjustment among female secondary school teachers in Raigad district
3. To compare Socio-Psycho-Physical Adjustment among male and female secondary school teachers in Raigad district.

Hypothesis

- The research hypothesis is a prediction or hypnotized relationship to be tested by scientific methods.
- H0: There is no significant difference between means of Socio-Psycho-Physical Adjustment of male and female secondary teachers in Raigad District.

Limitations of the Study

- Study limited to Socio-Psycho-Physical Adjustment of Secondary School Teachers in Raigad District.
- The study was limited to 100 secondary school teachers in Raigad District.

Selection of Research Method

Researchers selected a descriptive research method to study Socio-Psycho-Physical Adjustment of Secondary School Teachers.

Research Design

Secondary teachers in Raigad district are selected for the study and the descriptive survey method is used. Socio-Psycho-Physical Adjustment is calculated.

Population

Here, all secondary school teachers in Raigad district are population.

Sample of Study

The present study is conducted in Raigad district. 100 secondary 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.

Socio-Psycho-Physical Adjustment a standardized inventory

The data of the research is collected with the help of an inventory. To study the Socio-Psycho-Physical Adjustment a standardized inventory developed by Dr S.K.Mangal was used.

Scoring procedure

The Mangal Teacher Adjustment Inventory has 49 items, each to be rated on the three-point scale. The items are related to Socio-Psycho-Physical Adjustment.

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, 12 items are such where the response 'yes' shows adjustment. For the remaining 37 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 98 and the minimum obtainable score was 0.

Procedure Of Data Collection

In this study, for the data collection the schools were approached personally to get in this study, for the data collection, secondary school teachers in Raigad district of Maharashtra were selected. The

schools were selected by simple random sampling and approached personally to get permission for research. The teachers were approached after a short introduction.

Analysis And Interpretation of Data

Objective No 1:-To study Socio-Psycho-Physical Adjustment among male Secondary School Teachers.

Table No 1

Table showing Socio-Psycho-Physical Adjustment of Male secondary school teachers

Category	Score Range	Response	Percentage
Very Good	165 and above	0	0%
Good	136-164	18	36%
Average	106-135	18	36%
Poor	77-105	10	20%
Very Poor	76 and below	4	8%
Total		50	

Observation

1. 0 male teachers scored 165 and above.
2. 18 male teachers scored between 136-164
3. 18 male teachers scored between 136-164
4. 10 male teachers scored between 77-105
5. 4 male teachers scored between 76 and below.

Findings

1. 0 male teachers scored 165 and above indicate that 0% of male teachers have very good Socio-Psycho-Physical Adjustment.
2. 18 male teachers scored between 136-164 indicate that 36% of male teachers have good Socio-Psycho-Physical Adjustment.
3. 18 male teachers scored between 136-164 indicate that 36% of male teachers has average Socio-Psycho-Physical Adjustment.
4. 10 male teachers scored between 77-105 indicate that 20% of male teachers have poor Socio-Psycho-Physical Adjustment.
5. 04 male teachers scored between 76 and below indicate that 8% male teacher has very poor Socio-Psycho-Physical Adjustment.

Objective No 2:-To study Socio-Psycho-Physical Adjustment among female Secondary School Teachers.

Table no 2

Table showing Socio-Psycho-Physical Adjustment of Female Secondary School Teachers

Category	**Score Range**	**Response**	**Percentage**
Very Good	155 and above	0	0%
Good	127-154	22	44%
Average	98-126	20	40%
Poor	71-97	6	12%
Very Poor	70 and below	2	4%
Total		50	

Observation

1. 0 female teachers scored 155 and above
2. 22 female teachers scored between 127-154.
3. 20 female teacher scored between 98-126.
4. 06 female teachers scored between 71-97
5. 02 female teachers scored 70 and below.

Findings

1. 0 female teachers scored 155 and above indicate that 0% of female teachers have very good Socio-Psycho-Physical Adjustment.
2. 22 female teachers scored between 127-154. indicate that 44% of female teachers have good Socio-Psycho-Physical Adjustment.
3. 20 female teachers scored between 98-126.indicate that 40% of female teachers have good Socio-Psycho-Physical Adjustment
4. 06 female teachers scored between 71-97 indicate that 12% of female teachers have poor Socio-Psycho-Physical Adjustment
5. 02 female teachers scored between 70 and below indicate that 04% of female teachers have very poor Socio-Psycho-Physical Adjustment

H0: There is no significant difference between means of Socio-Psycho-Physical Adjustment of male and female teachers in Raigad District.

Objective No 3:-To compare Socio-Psycho-Physical Adjustment among male and female secondary school teachers in Raigad District.

Table no 3
Table showing comparison of Socio-Psycho-Physical Adjustment of Male and Female Secondary School Teachers

Measure	Male	Female	Significance
N	50	50	t=1.96 at 0.05
M	132.6	122.4	
σ	0.59	0.45	
D Means	0.40		t=2.58 at 0.01
t	2.87		
df	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 2.87 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 Socio-Psycho-Physical Adjustment of male and female teachers in Raigad District.
2. We accept H1. There is a significant difference between the means of Socio-Psycho-Physical Adjustment of male and female teachers in Raigad District.

Conclusion

1. There is a significant difference between the means of Socio-Psycho-Physical Adjustment of male and female teachers in Raigad District
2. Female teachers are showing more Socio-Psycho-Physical Adjustment compared to male teachers.

3. Few teachers have very poor Socio-Psycho-Physical Adjustment.
4. Not a single male and female teacher has very good Socio-Psycho-Physical Adjustment.

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