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EDUCATIONAL RESEARCH

VOLUME – XIV

CENTRE FOR INNOVATIONS, RESEARCH AND DEVELOPMENT

(C I R D)

(2016)

SOHAN LAL DAV COLLEGE OF EDUCATION

ISO-9001:2000 certified

Graded A by NAAC (Score 3.54/4.00)

AMBALA CITY – 134002

HARYANA (INDIA)

Premier Institute of Education established in 1939

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ITEMS

FOREWORD

The world has advanced considerably throughout the decades and the need for higher education has been on the rise. It is a powerful tool to build modern, value based, knowledge based, cultural based, peaceful society which can lead the country towards super power in the world. So, there is constant need of updating it through Innovation, Research and Development. Education plays a vital role in the development of any nation.

I am pleased to know that the developments in the educational strategies around the globe, Sohan Lal DAV College of Education has been envisioned to develop into strong centre for providing total quality in Teacher Education. This premier Institute of Education is catering the needs of 21st century of Modern India in Teacher Education. This institute has carved a niche in the field of teacher education by producing teachers, teacher educators, administrators and educationists of great repute. The uncountable benchmarks (like- A+ Grade in NAAC (old Methodology), excellent results in University, selected by UGC for sponsoring Major Research Projects in Environment Education and establishing a centre for Sri Aurobindo Studies) and many more achievements in the field of teacher education reflect collective wisdom of the faculty under the dynamic leadership of Principal Dr. Vivek Kohli.

It is appreciable to note that for advancing Frontiers of Knowledge through research and transmission, Dr. Kohli is releasing "Educational Research" a peer Reviewed (Refereed) Journal regularly through 'Centre for Innovations, Research and Development' (CIRD) of the college.

I am sure this issue would be rich in information as well as in-depth that would lend insight to the researchers, practitioners, policy makers and other professionals involved in the field of teacher education.

I wish the release of the issue a great success.

Dr. Punam Suri
Padam Shree Awardee
President
DAV College Managing Committee
New Delhi

PREFACE

The quality of a nation depends upon the quality of its citizens. The quality of the citizens rests, to a large measure, upon the quality of teacher education. The quality of their education, in turn, revolves round numerous agencies like home, school, community, radio, television and other mass media. But, the most significant and pertinent of all these factors is the competence and the quality of school teachers. So the role of teacher education institutions has become more important and crucial for enhancing quality education in school and subsequently in Higher Education. The higher education can become more meaningful and stronger if it is supported by potential issues, research findings and latest development in education.

In this background, Centre of Innovations, Research and Development (CIRD) of our College promotes and disseminates research by publishing "Educational Research" a Peer-Reviewed (Refereed) Journal. The basic motive of this journal is to address the extraction of educational resources and knowledge processing that ultimately leads to the desired effect on learning and opening new vistas of research to be undertaken. This volume focuses on different aspects of education through theme papers as well as research findings at different levels .

Here, I would like to appreciate and extend my thanks to the efforts of Dr. Sushma Gupta, Coordinator, Dr. Neelam Luthra, Assistant Coordinator and the entire editorial board including Dr. Narender Kaushik, Dr. Satnam Kaur, Dr. Nirmal Goyal, and Dr. Ruchi Manchanda. The efforts of Ms. Gurpreet Kaur in typing the material are very much laudable.

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ACKNOWLEDGEMENTS

"Educational Research" a Peer Reviewed (Refereed) International Journal is one of the most effective media for communicating and disseminating research findings and latest development in education among the academic world around. I am extremely happy to place before you Educational Research Volume – XIV which portraits the changing scenario in Teacher Education depicting Innovative ideological approaches that can be used in spreading environmental awareness, teaching effectively in the era of communication, role of ICT, function of media in Teacher Education institutions etc.

At the outset I thank the Almighty to bless us with opportunity to work in the shadow of august leadership of Hon'ble Dr. Punam Suri**,** Padam Shree Awardee, President, DAV College Managing Committee, New Delhi. I am extremely grateful to him for acting as a constant oasis of ideas and passion in improving quality of life, quality of teacher education and thereby, improving the quality of nation.

I take the opportunity to place on record my sincere gratitude and overwhelming indebtedness to Sh. Rajinder Nath, Senior Vice President, DAV College Managing Committee, New Delhi for his dexterous guidance and valuable suggestions for accomplishing this perspiring task.

I gratefully acknowledge the contribution of Sh. R. S. Sharma, General Secretary, DAV College Managing Committee, New Delhi. He is a man of permanent source of encouragement for us.

I shall even remain grateful to Dr. Satish Kumar Sharma**,** Director (Colleges), DAV College Managing Committee, New Delhi for illuminating dark recesses of our minds with his clear thinking and excellent spirit.

I express my gratitude to Dr. Vivek Kohli, Principal and Editor-in-Chief for his invaluable suggestions and unflinching encouragement in the publication of this Journal.

I am specially thankful to the members of editorial board, Dr. Neelam Luthra, Associate Coordinator, Dr. Narender Kaushik, Dr. Satnam Kaur and Dr. Nirmal Goyal for their significant contribution.

I fumble for words to express my heartfelt gratitude to Dr. Ruchi Manchanda, Ms. Neera and Ms. Somvati for rendering their services as and when required for editing, compiling, and enriching the content of this publication.

I appreciate the hard work done by Ms. Gurpreet Kaur for typing the various drafts of this volume in time.

Once again, I would like to thank all concerned, who helped us in successful completion of this publication.

Coordinator
Dr. Sushma Gupta
(M.Sc. (Zoology), M.Ed., Ph.D. in Education)
Associate Professor in Education

A STUDY OF ATTTTUDE OF SENIOR SECONDARY SCHOOL TEACHERS TOWARDS THEIR EDUCATIONAL ACCOUNTABILITY IN RELATION TO GENDER, AREA AND TEACHING SUBJECT

*Dr.Vivek Kohli **Archana

RATIONALE

Education is generally considered to be the backbone of growth and development of a nation. The teacher is the pivot around which the whole education system revolves. To satisfy the emerging needs of a well structured and dynamic education system and for quality concerns in education, the teacher's accountability has an important role to play. Educational accountability of the teacher is of paramount importance and is used in terms of responsibility, entitlement and obligation. It is just a measuring rod in respect of responsibility fulfilled by the teacher in regard to the job of teaching entrusted to him. Educational accountability is a goal, growth and development oriented activity and is related to the all round development of the students. Educational accountability expects the individual teacher to acquire knowledge skills, capacities and positive attitude. In other words, accountability is a continuous evaluation of a performance of the teacher by some independent and impartial bodies. Keeping in view the above situation, the researcher decided to conduct a research study on attitude of senior secondary school teachers towards their educational accountability.

OBJECTIVES

1. To select a standardized attitude scale to measure attitude of Senior Secondary School Teachers towards Educational Accountability by taking into consideration its internal consistency, reliability and validity.

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2. To construct a Background Questionnaire to have data on the independent variables Gender, Area and Subject of teaching of Senior Secondary School Teachers.
3. To administer the attitude scale and the Background Questionnaire on an appropriate sample of Senior Secondary School Teachers.
4. To organize the data so obtained by scoring the items of the attitude measure on one hand and by considering the levels of the independent variables.
5. To study the relationship between independent and dependent variables by formulating the hypotheses of the investigation.
6. To investigate the relationships by testing the hypotheses using parametric tests of significance of difference between means.
7. To derive generalizations on the basis of the testing of the hypotheses
8. To draw conclusions about the results so obtained by interpreting results.
9. To bring out suggestions for further investigations to be conducted on the basis of the present investigations.

HYPOTHESES

1. There is no significant difference between the male and female teachers of Senior Secondary Schools as far as their attitude towards Educational Accountability are concerned.
2. Rural teachers of Senior Secondary Schools don't differ significantly from their urban counterparts as far as their attitude towards their Educational Accountability is concerned.
3. Science teachers of Senior Secondary Schools don't differ significantly on the attitude scale measuring attitude towards Educational Accountability from their Humanities counterparts.
4. The interaction Gender x Area does not contribute to any significant difference on the attitude scale measuring attitude of Senior Secondary School Teachers towards their Educational Accountability.

5. The interaction Gender x Subject does not contribute to any significant difference on the attitude scale measuring attitude of Senior Secondary School Teachers towards their Educational Accountability.
6. The interaction Gender x Area x Subject does not contribute to any significant difference on the attitude scale measuring attitude of Senior Secondary School Teachers towards their Educational Accountability.

SAMPLE

A random sample of 120 senior secondary school teachers was taken from eight senior secondary schools of Ambala district.

TOOLS USED

The attitude Scale measuring attitude towards educational Accountability constructed and standardized by Dr. B.S Wadhwa and Teena has been chosen for the collection of data.

DESIGN OF THE STUDY

A 2 x 2 x 2 Factorial Design has been used to be study the relationship among the three independent variables(gender, area and teaching subject) and one dependent measure (Attitude towards educational accountability) .

MAIN FINDINGS

1. The data on the attitudinal measure measuring attitude of Senior Secondary School Teachers towards their Educational Accountability has been found to be normally distributed.
2. The homogeneity of variances exists on the eight cell structure with respect to the independent variables Gender, Area and Subject on the attitude measure measuring attitude towards Educational Accountability of the Senior Secondary School Teachers.
3. Male Teachers of Senior Secondary Schools don't differ significantly from their Female counterparts on the attitude measure measuring attitude towards their Educational Accountability.

4. Rural and Urban Groups of Senior Secondary School teachers don't differ significantly on the attitude scale measuring attitude towards educational accountability. It reflects that there may not be any difference between these groups as far as their academic performance is concerned.
5. Science Teachers of Senior Secondary Schools don't differ significantly from their Humanities counterparts as both the groups seem to be equally concerned about their performances with in their performance within their framework.
6. In combination the Independent Variable Gender, Area and Subject have not attributed to any differences on the Attitude Scale measuring their attitude towards their Educational Accountability.

EDUCATIONAL IMPLICATIONS

Educational accountability of the teachers of senior secondary school has been the need of the hour when the teaching community is being underestimated in the present set up of the society. The study was under taken to find out differences if any among Gender, Area and Subject and their interactions on the attitude scale measuring attitude of Senior Secondary School Teachers towards their educational accountability.

The study reveals that there are no significant differences among different groups of senior secondary school teachers with respect to the independent variables Gender, Area and Subject and their interactions on the dependent measure of attitude towards educational accountability, which reflects that all these different groups are equally concerned about the issues of educational accountability whether the teachers are male or female of whether they are from rural or urban backgrounds and whether they teach science and humanities.

As most of the groups of Senior Secondary School Teachers are not very positive in their attitude towards educational accountability, an atmosphere has to be created so that they may like the concept rather they have neutrality about it.

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AWARENESS OF ELECTRONIC-WASTE AMONG THE PROSPECTIVE TEACHERS

* Dr. Sushma Gupta ** Puja Saini

RATIONALE

Environment is very essential for everyone .No one can live without environment. Pollution of various kinds is threatening the environment as well as peace of our life. Industrial pollution, chemical pollution, water pollution etc are imposing an inevitable threat on our existence. The disposal of garbage and untreated chemical effluents in river is destroying our marine vegetation. Above all the use of ICT equipments has increased which has posed a threat to our environment. With the extensive use computers and electronic equipments and people dumping old electronic goods for new ones, the amount of E-waste generated has been steadily increasing. Unfortunately E-waste contains potentially harmful substances such as lead, cadmium and mercury. Regardless of whether its elements are valuable or potentially hazardous, handling and recovery of E-waste can be costly undertaking. These materials can cause damage to the human nervous system and respiratory system. E-waste is one of the fastest growing streams today and it is growing at three times the rate of municipal waste globally. E-waste awareness is the supportive element that should be implemented among the students. There are hundreds of educational institutes in most of the large cities of India but only few of them have waste management system, which requires some land for secondary segregation and composting-which most educational institutes have in plenty and utilized. In addition, attitude to take the initiative in waste management the required awareness also have to do a lots for the absence of such system (Sanjay K. Gupta, 2004).

Thus one of the best ways of preservation is by creating E-waste awareness among society especially students as they are future leaders, future custodians, planners, policy makers and the educators of the environment and its issues (Thapa, 1999). Keeping in view the above situation,

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the researcher decided to conduct a research study on awareness of E-waste among prospective teachers.

OBJECTIVES

1. To study the awareness of Electronic-waste among the prospective teachers.
2. To compare the awareness of Electronic-waste among rural and urban prospective teachers
3. To compare the awareness of Electronic-waste among Science and Arts/Humanities streams prospective teachers.
4. To compare the awareness of Electronic-waste among post-graduate and graduate prospective teachers.
5. To compare the awareness of Electronic-waste among M.Ed, B.Ed and D.Ed prospective teachers

HYPOTHESES

1. There is no significant difference among rural and urban prospective teachers towards the awareness of electronic-waste.
2. There is no significant difference among Science and Arts prospective teachers towards the awareness of electronic-waste.
3. There is no significant difference among post-graduate and graduate prospective teachers towards the awareness of electronic-waste.
4. There is no significant difference among M.Ed, B.Ed & D.Ed prospective teachers towards the awareness of electronic-waste.

SAMPLE

For the present study, the sample of 120 prospective teachers was randomly chosen from different colleges of Ambala City.

TOOL USED

Keeping in view, requirement of the study, the investigator used a tool entitled as Electronic Waste Awareness Scale (EWAS) prepared by Ms Sakshi and Ms Anjali for collection of data from the respondents.

STATISTICAL TECHNIQUES USED

In order to make the inquiry exact, precise and scientific, the collected data was analyzed with the help of Mean, Standard Deviation, ‘t ‘ test.

MAIN FINDINGS

Hypothesis-1

There exists no significant difference between rural and urban prospective teachers towards the awareness of electronic-waste. It was found that the mean scores of urban prospective teachers was greater than the rural prospective teachers on awareness of Electronic-waste but the t- ratio was not significant at .01 level of significance.

Hypothesis-II

There exists no significant difference between Science and Arts prospective teachers towards the awareness of electronic-waste. It was found that the mean scores of Science prospective teachers was greater than the arts prospective teachers on awareness of Electronic-waste but the t-ratio was not significant at 0.01 level of significance.

Hypothesis-III

There exists no significant difference between Postgraduate and Graduate prospective teacher towards the awareness of Electronic-Waste. It was found that the mean scores of Postgraduate prospective teachers were greater than the Graduate prospective teachers on awareness of Electronic-waste but the t-ratio was not significant at 0.01 level of significance.

Hypothesis-IV

There exists no significant difference between M.Ed, B.Ed and D.Ed prospective teacher towards the awareness of Electronic-Waste. It was found that the score of **M.Ed** prospective teachers is greater than the **B.Ed** prospective teachers and the score **of B.Ed** prospective teachers is greater than the **D.Ed** prospective teachers on awareness of Electronic-waste. It indicates that **M.Ed** prospective teachers had better awareness towards Electronic-waste than **B.Ed** prospective teachers and **B.Ed** prospective teachers had better awareness towards Electronic -waste than **D.Ed** prospective teachers.

EDUCATIONAL IMPLICATIONS

The present research has its Educational Implications for prospective teachers, individuals and society.

1. Collaborative campaigns are required to sensitize the prospective teachers so that prospective teachers should pay attention for recycling of electronic goods.
2. Prospective teachers are to be informed of their role in the system through a labeling requirement for items.
3. Prospective teachers should be educated to buy only necessary products that utilize some of the emerging technologies (i.e. lead free, halogen- free, and recycled plastics).
4. Awareness raising programs and activities on issues related to the environmentally sound management (ESM)
5. Health and safety aspects of E-waste in order to encourage better management practices should be implemented.
6. Colleges should have an environment Management System (EMS) in place.
7. On a fortnightly basis Universities should invite enviro-ecological specialists to give “conservational lectures on E-waste and its harmful effects.
8. Universities, colleges should put wall posters with eco-evocative images and relevant factsheets on a number of issues of e-waste.
9. Colleges should celebrate international days such as “environment day” and organize competitions and activities like theatrical plays and declamations, PowerPoint presentations for raising awareness.

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AN ANALYSIS OF THE ERRORS RELATED TO CONCEPTS OF SCIENCE COMMITTED BY STUDENTS OF CLASS IX

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RATIONALE

Science is today regarded as an important subject at both the junior and senior secondary school curriculum (Okeke, 1986; Smith, 1982). Its importance is largely due to the role it plays in the scientific and technological development of a nation. According to Abiodun (1997), science is the bedrock that provides the spring board for the growth of technology. Contributing to the increasing importance and contribution of science to the modern culture, Ukeje (1997) stated that … "*without science there is no growth of a nation, without growth there is no modern technology and without modern technology there is no modern society*". Therefore, any shortcoming in the subject constitutes a drawback in the nation's attainment of scientific and technological. Thus, science helps us to equip with proper intellect, reasoning and seriousness needed to lead responsible life, therefore it is said that a mind trained through study of science is more capable of leading a well disciplined life, and science sharpens our critical thinking skills. Thus, science is as an overall product of human activity in the form of a systematic and organized body of knowledge. So, Science has now become a compulsory subject up to class X in school curriculum because of its multifarious values to the individual as well as to society.

There are a lot of schools around us and a majority of them are up to X class. A close look at the students of these schools reveal that many students of these schools are lagging behind in science and there are numerous reasons for this like the background of students themselves, untrained teachers who are not aware with the modern techniques of teaching science subject etc. After observing these aspects, the researcher felt a great need to thoroughly study the main causes or weakness in science among secondary school students and to find out the possible solution for this problem.

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OBJECTIVES

1. To study the number of errors in science committed by the secondary school students.
2. To study the number of errors in science committed by the secondary school boys students .
3. To study the number of errors in science committed by the secondary school girls students.
4. To compare the number of errors in science committed by the secondary school girls and boys students.
5. To study the type of errors in science committed by the secondary school students.
6. To study the type of errors in science committed by the secondary school boys students.
7. To study the type of errors in science committed by the secondary school girls students.
8. To compare the type of errors in science committed by the secondary school girls and boys students.
9. To analyze the views of teachers about specific errors committed by the students in science.

SAMPLE

For selecting sample the random sampling method was employed. The five schools affiliated to CBSE have been selected and from each school 10 boys and 10 girls of IX class have also been selected randomly from the whole class. Similarly 40 teachers at least 8 from each school have been selected as sample for present study. Like this 100 students and 40 teachers have been selected as sample for the present study.

TOOLS USED

For collection of data, researcher used self-prepared questionnaires both for students and teachers which was based on science curriculum of class IX of CBSE.

STATISTICAL TECHNIQUES USED

When the data collection work is over, data has to be analyzed and interpreted to arrive at some conclusion. For this, statistical method/technique used becomes inevitable. The researcher used question-wise percentage technique.

MAIN FINDINGS

Main Findings Regarding Students

1. Among the total sample size, 31% boys responses are incorrect where as 30% girls responses are incorrect related to the *Mole concept*.
2. Among the total sample size, 27% boys responses are correct where as 35% girls responses are correct related to the concept of *Molecular formula and Chemical formula*.
3. Among the total sample size, 14.5% boys responses are incorrect where as 10.5% girls responses are incorrect related to the concept of *Valency*.
4. Among the total sample size, 33.67% boys responses are correct where as 29.67% girls responses are correct related to the concept of *Isotopes and Isobars*.
5. Among the total sample size, 2% boys responses are incorrect where as 1% girls responses are incorrect related to the concept of *Molecular mass*.
6. Among the total sample size, 43% boys responses are correct where as 41.2% girls responses are correct related to the concept of *Structure of atom*.
7. Among the total sample size, 12.5% boys responses are incorrect where as 15.5% girls responses are incorrect related to the concept of *Atomicity and Atomic number.*

Main Findings Regarding Teachers

1. 65% teachers reported that they take extra class with home work and 35% teachers take extra class with class test to explain *Mole concept t*o the students.
2. 40 % teachers reported that they take extra class with home work, 50% teachers take extra class with class test and 10% take the help of power point presentation to explain *Molecular formula and Chemical formula* to the students.
3. 30 % teachers reported that they give home work, 60% teachers enhance to increase the learning ability and 10% take the help of power point presentation to explain *Valency* to the students.

4. 50 % teachers reported that they take extra class, 50% teachers give examples to explain *Isotopes and Isobars* to the students.
5. 70% teachers reported that they take extra class with home work and 30% teachers take extra class with class test to explain *Molecular mass* to the students.
6. 40 % teachers reported that they take extra class with home work and 60% take the help of power point presentation to explain *Structure of atom* to the students.
7. 60 % teachers reported that they take extra class with home work, 20% teachers enhance to increase the learning ability and 20% take the help of power point presentation to explain *Atomicity* to the students.

EDUCATIONAL IMPLICATIONS

The investigator on the basis of participant observation tried her best to give following remedial measures to the error committed by the IX class students:

For Students

Students should not cram the concepts of science. They should understand the concepts of science by thoroughly studying the text books, references and other related material. Students should be motivated to participate in various co-curricular activities for raising the interest, curiosity, attitude, knowledge towards science.

For Teachers

Teachers should check homework daily, allow the students to ask questions in the class, encourage the students to study science. Teachers should follow play way technique to teach science, take special classes for weak students, regular class tests, and pay more attention to the weak students. They should make proper use of teaching aids, give examples from daily life, do regular practicals related to the curriculum of science.

For Parents

Parents should check the home work regularly and also help their children in their home work. They should keep an eye on the class work, co-curricular activities, peer group and also make the proper and effective time table of their children.

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DEVELOPMENT AND VALIDATION OF PROGRAMMED LEARNING MATERIAL ON YOGA NIDRA AND PRANAYAMA FOR POST GRADUATE STUDENTS

*Dr. Neelam Luthra **Poonam

RATIONALE

If medicine is science of disease, Pranayama is the science of health. Yoga-Nidra is considered as one of the magnificent achievements of the ancient Indian yogis. If one wants to dip in the ocean of higher consciousness, he has to cross the bridge of Pranayama. Yoga texts say that Pranayama is the door to meditation. Its utility has increased manifold in the polluted world today as it is helpful in preventing deficiencies of respiratory system on the one hand and afford calm peace and lightness to the body and mind on the other hand.

Yoga-Nidra helps in relaxation of mind and body. Relaxation is not of only mind but also of consciousness. Yoga Nidra has the capacity of penetration into the depths of the human mind. Yoga Nidra is regarded as a tantric practice, because in tantra, the evolution of mind should become a spontaneous matter. Today, heart disease, cancer and many mental illnesses are successfully being treated through Yoga Nidra. Through Yoga education a teacher can induce Yoga Nidra and Pranayama among his disciples. Programmed learning material on Yoga-Nidra and Pranayama can be of great help in developing the habit of Pranayama and Yoga Nidra among the students.

Keeping in view the usefulness of self-instructional material as an instructional mode and the increasing necessity for such material yoga nidra, the investigator decided to develop linear style programme material on yoga-nidra and pranayama for the P.G. students. Since programme learning material (PLM) ensures cent percent mastery of the subject matter, the programme on yoga nidra and pranayama will certainly motivate the students to attain cent percent mastery of

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the content and further enable them to apply this knowledge in real life situations.

OBJECTIVES

- To develop programmed learning material on yoga-nidra and pranayama for the students of Master of Arts in applied yoga and health.
- To validate the programmed learning material.

HYPOTHESES

1 Sequential organization of the content material produces better learning.

2 A 90x90 validity hypothesis will hold good in the present linear programme which states that 95 percent of the content material will be successfully attempted by the 95 percent students included in the sample.

3 The error rate of programme ranges between 0 to 10 percent.

4 An overall achievement of 90% is expected.

SAMPLE

Target population for the present study consisted of students of Master of Arts in applied Yoga and Health. The experimental sample for try-out of the present programme consisted of twenty students of Masters of Arts in applied Yoga and Health of D.A.V. COLLEGE FOR GIRLS, YAMUNA NAGAR selected randomly.

PROCEDURE

The following four stages were covered systematically while developing the programme:

Planning & Preparation Stage

Keeping in view the assumption about the learner, content outline, behavioural objectives, test items of criterion test, core material pertaining to ‘Yoga Nidra and Pranayama’ were written.

Writing Stage

While writing the frames for a programme, irrelevancies concerning the subject matter were cleared away so that the students could clearly concentrate on the focal information stimuli, essential to attainment of terminal behavior set forth in the behavioral objectives. The programme developed by the investigator was got edited by subject matter expert, programming technique specialist and language expert.

Try-Out Stage

The programme was tried out on individual, small group and final field try-out situations on students of Masters of Arts in applied Yoga and Health of D.A.V. College for girls, Yamuna Nagar. After the final field try-out a criterion test was administered to the students.

Evaluation Stage

On the basis of the student's response on the frames and the score in the criterion test items, the programme has been empirically validated in terms of error rate, programme density, sequence progression, level of performance and students success on the criterion test.

The error rate of the programme was 98.59%; this shows that 98.59% of the students are able to respond on 98.59% of the frames correctly. Cumulative density of the programme was 0.9. Sequence progression chart showed the frames designated by numbers 8,21,41,48 and 49 have relatively greater frequencies of error. Percentage of success in criterion test was 90.8%; which shows the effectiveness of the programme developed by the investigator on "Yoga Nidra and Pranayama".

MAIN FINDINGS

1. Learning seems to hold good as is clear from the error rates of the different tapes of the programmed material i.e. sequences. The error rate of the total linear programme is 1.41%.
2. The Second validity hypotheses (90 X 90) holds good as the successfully attempted material has been found to obey validity hypothesis 90.55 X 90.55.

3. The error rate of linear programme for the self-learning of the subject matter of yoga-Nidra and pranayama has been found to range between 0 and 17.66% which shows that the third hypothesis also holds good.
4. The overall achievement on the basis of criterion test has been found to be 90.8% which is equal to the expected percentage i.e. 90.8%.
5. Sequential organization of the content material produces better learning.
6. A 90x90 validity hypothesis will hold good in the present linear programme which states that 95 percent of the content material will be successfully attempted by the 95 percent students included in the sample.
7. The error rate of programme ranges between 0 to 10 percent.
8. An overall achievement of 90% is expected.
9. From the hypothesis formulated above the first hypothesis is based on the theory of programmed instruction while the other three hypotheses are based on the results obtained through the related studies.

EDUCATIONAL IMPLICATIONS

Implications for students

The students when exposed to programmed learning material as alternative teaching strategies would gain proficiency in the skills which are inherent in the instructional and nutrient effects of a particular model of teaching. For instance through the linear programming model, the students can develop Meta - Cognitive abilities for meaningful learning. They can enrich their inductive thinking by the use of this programme. The results of the present study suggest that linear programme model provides opportunities to students to build richer association, organizing and scaffolding additional conceptual structures in alternative ways. So the student should earn the maximum knowledge through the process of Linear Programmed Learning Material.

Implications for teachers

The programmed material serves as a repertoire of instructional approaches for teachers to tailor the teaching-learning environment in accordance with the predisposition of the learners to achieve a variety of educational objectives. Competence in teaching stems from the capacity of teacher to reach out to diverse learners and to create a rich and multidimensional environment for effective learning. With such type of programme, teacher can develop the cognitive abilities of the students.

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CONSTRUCTION AND STANDARDIZATION OF AN ACHIEVEMENT TEST IN MATHEMATICS FOR THE STUDENTS OF CLASS XI UNDER 10+2 SCHEME

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RATIONALE

Evaluation is a continuous process which underlies all good teaching and learning. Achievement testing in a subject is required for making predictions about the future learning in that subject. The curricula of subjects change from time to time and the achievement tests are therefore, constructed and revised accordingly.

Mervin and Gardner (1962) have emphasized that tests measuring educational development are much more effective predictors of future achievement than content oriented tests as they measure intellectual skills and abilities common to a variety of content areas. It may be true but the worth of construction and standardization of the content oriented achievement testing cannot be overlooked. Achievement testing in different subjects is of much significance from the point of view of teaching and learning of the subject matter.

A class teacher constructs tests to work out the students' performance in a subject. These tests are not standardized for regular use. Most published achievement tests are called standardized achievement tests.

These tests have distinctive characteristics:

- Standardized achievement tests include a fixed set of items designed to measure a clearly

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defined achievement domain, specific directions for administering and scoring the test, and norms based on representative groups of individuals like those for whom the test is designed.

- Equivalent form of standardized achievement tests can be prepared.
- Comparable forms are also provided for some standardized tests. These forms are prepared for the students of different grades.

It is clear from the above considerations that it is important to construct and do standardization of achievement tests as they can be used for many purposes like making assessment and evaluation of the students, finding validity of tests constructed by others and updating the institutional tests. The present study has been undertaken with this aim.

OBJECTIVES

1. Construction of the test items of the achievement test in subject of Mathematics by determining the scope of the test.
2. Administration of the achievement test on a representative sample of the students of XI class of 10+2 scheme.
3. To find the difficulty levels of the items of achievement test.
4. To find the item discriminating powers of the items of the achievement test.
5. To select the items for the final draft of the achievement test.
6. To find the reliability and validity of final draft of the achievement test.

SCOPE OF THE STUDY

The study is concerned with the construction of the achievement test and is confined to limited amount of the subject matter from the syllabus of Mathematics for class XI of 10+2 scheme. The following topics have been selected for the construction of Achievement Test

1) Trigonometric functions,

2) Sets,

3) Circle,

4) Conic Section,

5) Probability.

STATISTICAL TECHNIQUES USED

i) To find the item difficulty the following formula was used:-

Item Difficulty ⇨ $\frac{R}{T}$ x 100=P

where R = the no. of pupils who get the item right and T =Total no. of pupils who try the item.

ii) Item Discriminating power:-

It was found by subtracting [R (L)] the no. of pupils in the lower group (27% pupils with low scores) who get the item right from the [R(U)] no. of pupils in the upper group (27% pupils with high scores) who get the item right.

Item Discriminating power = $\frac{R(U) - R(L)}{\frac{1}{2}T}$

where T= total no. of pupils to be included in the items analysis.

iii) Chi square test was used for the selection short answer type items and matching items

STEPS OF STANDARDIZATION

- Item- Formulation
- Item Selection
- Administration of the test
- Scoring
- Item Analysis
- Reliability
- Validity

MAIN FINDINGS

1. It has been found that the difficulty values of items ranged between 0% to 93%. There are items with very low difficulty while there are certain items with high difficulty values.
2. The item discriminating powers of certain items are very low and others have high IDP values .Items with negative item discriminating powers have been rejected. Five of the sixty four items on the preliminary draft have been rejected.
3. In this way 59 items have been finally selected to work out the final draft of the achievement test in mathematics.
4. The reliability of the achievement test has been found by split half method of finding reliability. The reliability of the half length of the test has been found to be 0.72. The full length reliability of the achievement has been found to be 0.84 which is quite satisfactory. It may be of much significance that the measurements of the achievement in mathematics have been found to be quite satisfactory.
5. The validity has also been found. The criterion related validity has been found to be 0.802. The validity has been found by using another reliable and valid test. The validity of the achievement test has been found to be quite good. The test therefore, satisfactorily measures the achievement of the students of class XI in the subject of mathematics and can further be used to test their achievements in mathematics or for making predictions for making success in the subject.

EDUCATIONAL IMPLICATIONS

Construction and standardization of an achievement test in the subject of mathematics is important from the point of view of measurement and evaluation of the performance of the students of class XI in this subject. Teacher made achievement tests are generally prepared to make assessment in the subject. However, these tests are not standardized. There tests are therefore not very useful and various educational institutions have to conduct entrance tests as they don't rely upon class room tests constructed by teachers. It therefore, shows that there is need to construct standardized achievement test in different subjects and should be available in

the schools so that the teachers are able to make use of these tests for proper evaluation of the students.

The standardized tests are useful and effective as the norms are generally provided with the tests. These tests save time and energy of the teachers which can be utilized for other activities.

The standardized tests are highly reliable and valid measuring instruments which can be used for evaluating the performance of the students on one hand and also for keeping them for constant use.

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COMPARATIVE STUDY OF EDUCATIONAL PHILOSOPHY OF J. KRISHNAMURTI AND SWAMI VIVEKANANDA AND THEIR RELEVANCE IN THE PRESENT INDIAN EDUCATIONAL SCENARIO

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RATIONALE

Today, life is too busy. People have become too much materialist. They spend all their time and energy in earning and spending money. They are always running after money and other things of the world. They don't have peace and prosperity in their lives. They don't even think for the welfare of the others. Creation of new values is one of the objectives of education according to J. Krishnamurti and Swami Vivekananda. The present education system is incomplete to create new values in the child. This is the only reason of all the miseries of this world. Creation of new values among all the human beings with the help of education is the panacea for all the problems and trouble which have made the human life miserable. Today there is a need of spiritual values among the students to make their life peaceful and prosperous. J. Krishnamurti and Swami Vivekananda views have great relevance in the contemporary period. They were the philosophers of international repute and their views are recognized all over the globe by the contemporary philosophers. The perusal of the educational ideas of Swami Vivekananda and J. Krishnamurti will not only bring us closer to their time but also offer us suggestions that can be helpful in solving innumerable problems of modern India. So, the investigator undertook the present study.

OBJECTIVES

- To study the life and works of J. Krishnamurti and Swami Vivekananda.

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- To study the educational philosophy of J. Krishnamurti and Swami Vivekananda.
- To compare the educational philosophy of J. Krishnamurti and Swami Vivekananda.
- To study the relevance of J. Krishnamurti and Swami Vivekananda educational ideas in the present Indian Educational Scenario.

EDUCATIONAL PHLOSOPHY OF J. KRISHNAMURTI AND SWAMI VIVEKANADA

Krishnamurti's philosophy of education was based on truth which everyone himself has to find. He was conscious of the importance of physical development. He did not want to give any place to any ideology in education. He gave importance to curiosity, enquiry, criticism, alertness, awareness and observation or mediation in education. He was an original thinker.

Like other great educators, he was a great supporter of freedom and homely atmosphere. He wanted to create a homely atmosphere in educational institutions. He believed that to make the institution homely not only teachers but also the students are also responsible.

Like other great educators, he had not divided the education into pre-primary, primary, secondary, higher secondary and college divisions. He has talked generally about the whole educational process, not specially about any particular part of that process. He had not expressed any views separately about woman's education. Perhaps he did not differentiate between man and woman's problems. He thought human being as only a human being. Krishnamurti wished to establish a world community. He was a strong supporter of the education for internationalism. He thought nationalism to be a hindrance in world-unity. In his opinion education of patriotism, organized religions and of any ideology creates barriers between man and man, which lead to conflict and war. The difference of caste, colour and creed should not breed superiority or inferiority. The education should not be under the government control. In this way Krishnamurti supports international understanding.

Vivekananda gave his contribution in the field of education. The educational philosophy of Vivekananda emerges from ideals of Vedanta philosophy. For him 'Education is the manifestation of perfection already in man.' According to him, mere literacy or memorization of

facts is not education. He emphasized that man making is the ultimate aim of education. Along with this ultimate aim of education, character building, economic and social efficiency, development of personality etc. are the proximate aims of education according to him.

Swami Vivekananda's philosophy of education involved the essential characteristics of Idealism, Naturalism and Pragmatism like Naturalists, Swamiji emphasized that real education is possible only through nature and natural propensities. Like Idealists, Swamiji insisted that the chief aim of education is to develop the full moral and spiritual nature of the child, the essence of which is already present in him. Like pragmatists he laid great stress on the western industry and science to achieve material prosperity. The fact is that Swamiji's educational philosophy is harmonious sysnthesis of the ancient Indian ideals and modern western beliefs. Hence, whereas on one hand, he emphasized the spiritual development of the child, on the other hand he wanted to prepare him for material advancement and prosperity also. Much in the same way whereas like a great saint Swamiji on one hand preached the gospel of international brotherhood, on the other hand, he advocated to develop intense nationalism and national strength by ceaseless devotion and work by its citizens. Vivekananda laid stress on all round development of the child and women education and mass education side by side. In short, Swamiji was an Idealist at heart. First of all he emphasized spiritual development, then material prosperity after that safety of life.

SIMILAR ELEMENTS IN EDUCATIONAL THOUGHTS OF J.KRISHNAMURTI AND SWAMI VIVEKANANDA

- The aim of physical development
- The aim of vocation
- The aim of social development
- Mere book leaning is no education
- The aim of knowing oneself /self knowledge
- Women education
- University education – mass education

DISSIMILAR ELEMENTS IN EDUCATIONAL THOUGHTS OF J.KRISHNAMURTI AND SWAMI VIVEKANANDA

- **Vedanta**

  Swami Vivekananda propagated the teaching of Vedanta not only in India, but also in Asia, Europe and America, where as J. Krishnamurti did not believe in Vedas.

- **Gurudom**

  Swami Vivekananda believed in Gurudom where as J. Krishnamurti did not believe in Gurudom.

- **Curriculum**

  J. Krishnamurti attached importance to the inclusion of physics, chemistry, zoology, mathematics, technology, vocational education whereas according to Swami Vivekananda all those subjects should be included in the curriculum which affects the spiritual as well as material progress. Swamiji has also emphasized the study of Sanskrit, English and Western science along with mother tongue.

- **Methods of teaching**

  The methods of teaching that J. Krishnamurti emphasized were self study, listening, contemplation, practice and exercise, illustration, lecture, observation, experiment and discussion whereas Swami Vivekananda gave importance to meditation and concentration, guidance and counseling method, debate, celibacy.

CONCLUSION

The educationist J. Krishnamurti was one of those educationists who wanted that the study of nature and peace must be the part of education. No doubt, he has not given a particular scheme of education, yet it is a reality that he had contributed very much in the field of education. His greatest contribution was his emphasis on self-knowledge, self-realization, and faith in one's self, awareness, concentration and attaining perfection. His uniqueness in aims of education lies in bringing about a total and integrated human being through education, furthermore, it will result in peace in entire world. He was a great lover of masses and their education and correlated their betterment with the betterment of world. He never wanted that education should be in the hands of the selected few. Certainly these ideas of J. Krishnamurti have influenced education system. The concept of free and compulsory education is now in cooperated in the very

constitution of the country. J. Krishnamurti was a strong supporter of the education for vocation. In the present system of education vocational training is given to the students.

About a century ago, Swami Vivekananda had envisioned a vision on education and had categorically pointed out that true education is not the amount of information that is put into one's brain. The human mind is not a bottomless dry well, which has to be filled with buckets of information by the teacher. He laid stress on moral and spiritual values. He wanted a man-making education 'by which character is formed, strength of mind is increased, the intellect is expanded, and by which one can stand on one's own feet'. Swamiji emphasized need of following points in education system.

- Role of teacher
- Spirituality
- Accessibility of knowledge
- Plural attitude

Both the teacher and the student are active participants in the teaching leaning process. The teacher should look upon the student not as a mere physical being but as a living and dynamic mind. The teacher should facilitate this process of self –discovery. Teacher should not try to fill the mind with information and knowledge only. Instead he should attempt to unfold the creativity within by stimulating and strengthening the mind. The teacher has to carefully nurture the conviction and faith in the mind of the students. Needless to say, teacher requires faith, patience, perseverance and firm conviction. Swamiji enlightened that human peace and happiness depends not on the wealth they possess, or the power they wield, or the scholarship they have acquired, but by living a life of renunciation and having the awareness that they are part of the entire universe and that all constitute one family.

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A STUDY OF AN OPINION OF TEACHER- TRAINEES TOWARD SOCIAL NETWORKING

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RATIONALE

Social networking is communication among members of the social community through, computer network infrastructure to support and serve social purposes. It is a means of grouping of individuals into specific groups, like small rural communities or a neighborhood subdivision. A social networking service is an online service, platform or site that focuses on building and reflecting of a social network or social relations among people. Although social networking is possible in person, especially in the workplace, universities and high schools, yet it is most popular online service which unites people of diverse cultures. When it comes to online social networking, websites are commonly used. These websites are known as social sites. A social network service consists of a representation of each user (often a profile), his/her social links and a variety of additional services. How teacher trainees in colleges of education perceive social network is a matter of concern of the investigation.

OBJECTIVES

1. Construction of the preliminary draft of the Likert type attitude scale to measure attitude of teacher trainees toward social networking.
2. Administration of the preliminary draft of the attitude scale on the sample of teacher trainees.
3. To make selection of the items for the final draft of the attitude scale using internal consistency criterion of r.

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4. To find reliability of the final draft of attitude scale using Split half method & Spearman Brown formula.
5. To find the validity of final draft of attitude scale using contrasted group method.
6. To study the significant difference between the mean attitude scores of male and female Teachers Trainees towards Social Networking.
7. To study the significant difference between the mean attitude scores of science and humanities Teachers Trainees towards Social Networking.
8. To study the interaction between Gender X Subject in relation to the attitude of Teachers Trainees towards Social Networking.

HYPOTHESES:-

1. There is no significant difference between the mean score of male Teachers Trainees and their counterpart of the opinionnaire measuring opinion towards Social Networking.
2. There is no significant difference between the mean score of Science Teacher Trainees and their Humanities counterpart on the opinionnaire measuring opinion towards Social Networking.
3. The interaction Gender X Subject does not contribute any significant difference on the Opinionnaire measuring opinion towards social networking.

SAMPLE

A random sample of 60 teacher trainees was selected from 250 teacher trainees of Sohan Lal D. A. V. College of Education, Ambala city for the purpose of administration of the preliminary draft of attitude scale to measure attitude towards social networking and for the purpose finding internal consistency along the preliminary draft of the measure.

TOOL USED

For the collection of data, the investigator developed and standardized an attitude scale to measure attitude of teacher trainees toward social networking.

MAIN FINDINGS

1. Internal consistency along the opinionnaire has been found to be gratifying and quite satisfactory as 32 items out of 60 items have been found to have part whole correlations $r_{pw} \geq 0.310$. It may also be mentioned that out of the 32 items which have been selected, sixteen items have been positive and the rest of sixteen items have been negative. Thus items have been finally selected on the basis of the criterion $r_{pw} > 0.310$. Thirty two items have been finally selected to form Likert type attitude scale to measure the opinion/attitude of teacher trainees towards Social Networking.
2. Split half (odd- even) method of finding reliability of the opinionniare has been used to find reliability. Summed scores on odd numbered items have been correlated with the summed scores of even numbered items to find reliability of the half length of the 32 item attitude scale.
3. Split half reliability of opinionaire/attitude scale has been found to be very high. The reliability of the half length scale has been found to be 0.7211. The reliability of full length scale using Spearman Brown formula has been found to be 0.88 which is quite high. It shows that the 32 items attitude scale to measure opinion/attitude towards Social Networking is highly reliable measure of attitude.
4. As no standard attitude scale/opinioneire to measure opinion/attitude towards Social Networking was available, contrasted group method of finding the validity has been used. Two known groups one favouring Social Networking and the other not favouring Social Networking were selected on the basis of the following item (Question)-

   Do you love/ hate Social Networking? (Love/Hate)
5. With ($N_1 = 45$ $N_2 = 15$) the subjects who loved Social Networking ($N_1 = 45$) were found to be high scorers, while these who hated the concept of Social Networking were low scorers. The value of t – ratio was found to be significant which showed that the attitude measure/opinionnaire was valid (effective) measure of opinion towards Social Networking
6. It has also been found that the variables sex and subject in combination show significant differences on the attitude measure. Male science teacher trainees differ significantly from female science teacher trainees. This result may be attributed to the differences in

exposure of the concept of Social Networking. However the results need further corroboration in order to have more confidence.

EDUCATIONAL IMPLICATIONS

The Likert type opinionnaire constructed and standardized can be effectively used for the measurement of opinion of the teacher trainees toward Social Networking. The study reveals that the teacher trainees have their responses on the positive side (agreement side). The concept of social networking is quite useful as this medium is more an interactive in approach. Effective communication is due to Social Networking. Social Networking is also a means of problem solving in different areas associated with education. The different items of the attitude measure also reflect the educational benefits of Social Networking like:

- Social Networking has the potential for developing manpower. Social Networking makes a man alert and active.
- Social Networking serves as a good medium for developing friendship.
- Social Networking is of much significance as it is a rapport building exercise.
- Social Networking develops the spirit of enquiry.

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A STUDY OF THE ATTITUDE OF SENIOR SECONDARY SCHOOL TEACHERS TOWARDS TIME MANAGEMENT IN RELATION TO GENDER, AREA AND TYPE OF SCHOOL

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RATIONALE

Time Management is the act or process of planning and exercising conscious control on the amount of time spent on specific activities especially to increase efficiency or productivity. Time Management may be aided by a range of skills, tools and techniques used to manage time when accomplishing specific tasks, projects and goals complying with a due date. This set encompasses a wide scope of activities, and these include planning, allocating, setting goals, delegation, analysis of time spent, monitoring, organizing, scheduling and prioritizing. Initially, Time Management referred to just business or work activities but eventually the term broadened to include personal activities as well. Time Management is a designed combination of processes, tools, techniques and methods. Usually Time Management is a necessity in any project development and it determines the project completion time and scope.

Time Management is a quantitative and civilized process in the light of changes and developments that need time investment in the managing process in order to achieve its goals properly. Time Management is used in the form of time table in the school. To make the teaching and learning process effective and useful, the school has to be provided with a suitable time table in view of the needs of the pupils and teachers. Thus time represents one of the most prominent management aspects . The present investigation is therefore , concerned with the study of attitude of Senior Secondary School Teachers towards Time Management using a standardized Likert type attitude scale to measure their attitude in relation to gender , area and type of school .

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OBJECTIVES

1. To select an attitude scale to measure the attitude of teachers towards Time Management.
2. To draw a random sample of 120 Senior Secondary School teachers.
3. To organize the data concerning independent variables and the dependent measures of attitude.
4. To study the relationship between independent and dependent variables.
5. To make an interpretation of the results using the data and to arrive at the conclusions of the investigation.
6. To make suggestions for further investigations.

HYPOTHESES

1. There is no significant difference between male and female teachers in their attitude towards Time Management.
2. There is no significant difference between the rural and urban teachers in their attitude towards Time Management.
3. There is no significant difference between the government and the private teachers in their attitude towards Time Management.
4. The interaction gender x area does not contribute to any significant difference on the attitude scale measuring attitude towards Time Management .
5. The interaction area x type of school does not contribute to any significant difference on the attitude scale measuring attitude towards Time Management .
6. The interaction gender x type of school does not contribute to any significant difference on the attitude scale measuring attitude towards Time Management .

7. The interaction gender x area x type of school does not contribute to any significant difference on the attitude scale measuring attitude towards Time Management .

SAMPLE

The investigator selected the random sample of 120 Teachers from Government and Private schools of Ambala District for the collection , organization and analysis of the data .

TOOL USED

The attitude scale measuring attitude towards Time Management constructed and standardized by B.S. Wadhwa and Neelam Insan has been chosen for the collection of data .

DESIGN OF THE STUDY

A 2 x 2 x 2 Factorial Design has been used to be study the relationship among the three independent variables(gender, area and type of school) and one dependent measure (Time Management) .

MAIN FINDINGS

1. It has been found that Male Teachers of Senior Secondary Schools don't differ significantly from their Female counterparts on the attitude scale measuring attitude towards Time Management.
2. Senior Secondary School Teachers from rural areas differ from their urban counterparts significantly on the attitude scale measuring attitude towards time management.

3. On the attitude scale measuring attitude of Senior Secondary School Teachers towards Time Management, the hypothesis of no significant difference between the Govt. Senior Secondary School teachers and private Senior Secondary teachers cannot be rejected at .05 level.

4. The interaction gender x Area shows significant differences on the attitude scale measuring attitude towards Time Management. ($F=4.617$, $P<.05$).

   On the interaction Gender x Area the following are the results of testing of the hypothesis.

   (a) The hypothesis of no significant difference between male rural Senior Secondary School Teachers and male urban Senior Secondary School Teachers can be rejected at .05 Level.

   (b) The hypothesis of no significant difference between means of scores of senior secondary school teachers male Rural and female Rural senior secondary school teachers cannot be rejected at .05 level.

   (c) The hypothesis of no significant difference between male rural senior secondary school teachers and female urban senior secondary school teachers cannot be rejected at .05 level.

   (d) The hypothesis of no significant difference between means of attitude scores of Male Urban and Female Rural cannot be rejected at .05 level.

   (e) The hypothesis of no significant difference between means of scores of Male Urban and female Urban cannot be rejected at .05 Level.

   (f) The hypothesis of no significant difference between Female Rural Senior Secondary School teachers and Female Urban Senior Secondary School teachers can rejected at .05 level.

5. The interaction Gender x Type of School has not contributed any significant difference. So the hypothesis of no difference among the means on this interaction cannot be rejected.

6. The Interaction Area x Type of School has not contributed any significant difference. So, the hypothesis of no difference among the means on this interaction cannot be rejected.

7. The interaction Gender x Area x Type of School has not contributed any significant difference. So, the hypothesis of no difference among the means on this interaction cannot be rejected.

EDUCATIONAL IMPLICATIONS

The present investigation is concerned with the relationship between independent variables Gender , Area and Type of School and the dependent measure attitude of senior Secondary School Teachers Time Management . The problem is quite useful from educational point of view . Teachers with positive attitude towards Time Management can display management qualities and can also guide the students properly. Time Management has become a necessity of life . How necessary and important it is for the Senior Secondary School Teachers is reflected in the responses given by them in the attitudinal measure .

The present study has shown that Urban Teachers of senior Secondary Schools are more positive and inclined towards Time Management in comparison to Rural Teachers of Senior Secondary Schools .

Time Management is used in the form of time table in the school. It puts the teachers and students to do planning in advance and preparation for various courses and activities .Time Management is an effective means which inculcates efficacy in any endeavor. It is a means of self improvement. Time Management is a time saving device .

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A STUDY OF GRAMMATICAL ERRORS IN ENGLISH COMMITTED BY STUDENTS OF VIII CLASS AND THEIR REMEDIAL MEASURES

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RATIONALE

English is gaining importance day by day and without proficiency in this language it would be difficult to progress in the world of globalization and technology. English has its unique importance for growing India. Every language has its own grammar whether it is one's own mother tongue or a second language that one is learning, the grammar of the language is important. Knowledge of grammar is perhaps more important to a second language learner than to a native speaker. For the last several years, the teaching of Grammar has been the subject of criticism. People believe that there is no correlation between the teaching of grammar and the pupil's improvement in the writing of English. Although we spend nearly one third of the time meant for the study of English on the teaching of Grammar in our schools, yet the results are quite unsatisfactory. A large number of pupils fail to construct a simple sentence in English. Indian students studying in traditional schools cannot be expected to write naturally with ease and grace on matter relating to their interest. Inspite of all efforts, the students commit a large number of grammatical errors such as in the use of tenses, subject-verb agreement, punctuation marks, articles, use of verbs etc.

After the review of related literature, the investigator observed that a very less number of studies have been conducted on grammatical errors in English. So, the investigator got interested in this problem.

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OBJECTIVES

1. To study the errors committed by the students in English grammar such as in subject-verb agreement, articles, use of tenses, punctuation marks & use of verbs.
2. To enable the students to write on their own.
3. To suggest remedial measures for better learning.

HYPOTHESES

1. There is no significant difference in the number of errors committed by boys and girls of VIII class.
2. There is no significant difference in type of errors committed by boys and girls of VIII class.

SAMPLE

A random sample of 100 students studying in VIII class was selected from two senior secondary schools of Ambala. Out of 100 students, 50 were boys and 50 were girls.

TOOL USED

For the study of errors committed by VIII class students, the investigator prepared a questionnaire and employed it for the collection of necessary data. The remedial measures were also developed by the investigator for VIII class students to increase their knowledge of English Grammar.

STATISTICAL TECHNIQUES USED

1. Descriptive statistics namely mean and S.D. were calculated.
2. t-test was applied to measure significance of difference between the means.

MAIN FINDINGS

1. There is no significant difference in the number of grammatical errors committed by boys and girls of VIII class.
2. There is no significant difference in the types of errors committed by boys and girls of VIII class. But, in general the students committed more mistakes in articles as compared to subject-verb agreement, use of correct Tense, Punctuations and use of Verbs.

EDUCATIONAL IMPLICATIONS

The study carried out has great importance as there is growing realization of focusing attention on the development of writing correct English. The present study can be helpful for secondary school teachers to identify the grammatical errors committed by students of VIII class. With the help of remedial teaching the error rate can be minimized as well as writing and speaking of English language can be improved. The study can help the teacher to plan some remedial teaching programme to reduce the grammatical errors in English. The curriculum can also be planned in a systematic way by knowing the difficulties of students.

The teachers can also use the remedial measures given in this study for improving teaching-learning process. The use of instructional aids such as computers, smart class technique, audio-visual aids etc. can be helpful to create interest of student for better learning.

The findings of the study can be useful for teacher training institutions, teacher educators, researchers and school teachers. They can find some suggestive information to make their teaching effective while teaching English subject. Thus, the findings of the present study have direct implications for students and teachers and for curriculum planners.

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VALUE PATTERN OF TEACHERS WORKING IN PRIVATE SCHOOLS OF AMBALA DISTRICT IN RELATION TO THEIR SEX, AGE AND EXPERIENCE

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RATIONALE

Values are important if any change is to be expected in an individual. It is the values of individuals to themselves, to their fellows, and to their surroundings, which determine the decisions they take and utilities they conduct. All educational philosophies therefore, essentially stress values. All the educational commissions have advocated inculcation of moral and spiritual values. Values are considered as potent determinants of human behaviour. Values are that which guide human behaviour and put meaning into their existence. Values form the central pole around which people organize their desires and ambitions and fashion and their idiom of life.

Several educationists in India and abroad stress the importance of promoting values in education in the present age, which is failing the crises of character in the different sphere of life. Rabindranath Tagore, Sri Aurobindo, and Swami Vivekanand stressed the importance of educational, social, moral and spiritual values in all the educational institutions of India. Radha Krishnan and Rabindra Nath Tagore are the modern examples of great teachers who influence not only their students but everyone with their philosophy value-oriented education.

The dire need of hour is that we should give a serious thought as what type of value-oriented act may be conducted at our home, school and social environment. Parents, teachers and

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society must work in union to humanize the life of child. Keeping these thoughts in mind, the researcher decided to choose this topic for research.

OBJECTIVES OF STUDY

1. To study the value pattern of teachers working in Private schools of Ambala District in relation to their Sex.
2. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Aesthetic Values.
3. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Teoretical Values.
4. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Religious Values.
5. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Political Values.
6. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Social Values.
7. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Economic Values.
8. To study the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Hedonistic Values.
9. To study the value pattern of teachers working in Private schools of Ambala District in relation to their Experience.
10. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Aesthetic Values.
11. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Teoretical Values.
12. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Religious Values.
13. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Political Values.

14. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Social Values.
15. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Economic Values.
16. To study the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Hedonistic Values.
17. To study the value pattern of teachers working in Private schools of Ambala District in relation to their Age.
18. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Aesthetic Values.
19. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Teoretical Values.
20. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Religious Values.
21. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Political Values.
22. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Social Values.
23. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Economic Values.
24. To study the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Hedonistic Values.

HYPOTHESES

1. There is no significant difference between the value pattern of teachers working in Private schools of Ambala District in relation to their Sex.
2. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Aesthetic Values.
3. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Teoretical Values.

4. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Religious Values.
5. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Political Values.
6. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Social Values.
7. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Economic Values.
8. There is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Hedonistic Values.
9. There is no significant difference between the value pattern of teachers working in Private schools of Ambala District in relation to their Experience.
10. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Aesthetic Values.
11. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Teoretical Values.
12. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Religious Values.
13. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Political Values.
14. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Social Values.
15. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Economic Values.

16. There is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Hedonistic Values.
17. There is no significant difference between the value pattern of teachers working in Private schools of Ambala District in relation to their Age.
18. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Aesthetic Values.
19. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Teoretical Values.
20. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Religious Values.
21. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Political Values.
22. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Social Values.
23. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Economic Values.
24. There is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Hedonistic Values.

SAMPLE

The sample of the present study consisted of 200 teachers selected randomly from Private schools of Ambala District. Moreover, the teachers having more than 8 years experience of teaching are considered as more experienced teachers and teachers above 40 years as aged teachers.

TOOL USED

In this study for the purpose of data collection, the tool used was **"A New Test for Study of Values"** constructed and standardized by **"Km. Shashi Gilani."** The present test measures

seven types of values i.e. Aesthetic, Teoretical, Religious, Political, Social, Economic and Hedonistic.

MAIN FINDINGS

1) It was hypothesized that there is no significant difference between the value pattern of teachers working in Private schools of Ambala District in relation to their Sex. After analysis and interpretation of data it was found that the data supports the assumption and the researcher was forced to accept the hypothesis.
2) It was hypothesized that there is no significant difference between the value pattern of male and female teachers working in Private schools of Ambala District on the basis of their Aesthetic Values, Teoretical Values, Religious Values, Political Values, Social Values, Economic Values, Hedonistic Values. After analysis and interpretation of data it was found that the views of male and female teachers in a Private School are similar regarding the aesthetic values, teoretical values, political values, economic values and hedonistic values but the that male and female teachers working in Private School have different Ideologies regarding religious values and social values.
3) It was hypothesized that there is no significant difference between the value pattern of teachers working in Private schools of Ambala District in relation to their Experience. After analysis and interpretation of data it was found the data supports the assumption and the researcher was forced to accept the hypothesis.
4) It was hypothesized that there is no significant difference between the value pattern of more and less experienced teachers working in Private schools of Ambala District on the basis of their Aesthetic Values, Teoretical Values, Religious Values, Political Values, Social Values, Economic Values, Hedonistic Values. After analysis and interpretation of data it was found that the views of more and less experienced teachers are similar regarding Aesthetic Values, Religious Values, Political Values, Social Values, Economic Values and Hedonistic Values but they have different views on Teoretical Values .
5) It was hypothesized that there is no significant difference between the value pattern of teachers working in Private schools of Ambala District in relation to their Age. After analysis and interpretation of data it was found the data supports the assumption and the researcher was forced to accept the hypothesis.

6) It was hypothesized that there is no significant difference between the value pattern of young and aged teachers working in Private schools of Ambala District on the basis of their Aesthetic Values, Teoretical Values, Religious Values, Political Values, Social Values, Economic Values, Hedonistic Values. After analysis and interpretation of data it was found the views of both the teachers are similar regarding Aesthetic Values, Teoretical Values, Religious Values, Political Values, Economic Values and Hedonistic Values but they have different views on Social Values.

EDUCATIONAL IMPLICATIONS

Values are deeply related with our life span, they are concerned with aims of our life and they direct us to move and behave in various life situations. Education plays a very important and significant role in shaping the value system of the individuals from the very beginning of one's life. Value education is also a part of life that is why values and education are inseparable; values are embodied in educational practice. Therefore, on the basis of value judgment, education develops a sense of discrimination among individual between right and wrong good and bad fair and unfair, altruism and sadism etc. and all these values are learned in teaching learning situations from nursery to higher level ladder of education.

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DEVELOPMENT AND EMPIRICAL VALIDATION OF LINEAR PROGRAMME ON QUALITATIVE RESEARCH METHODOLOGY FOR THE STUDENTS OF M.Ed. CLASS

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RATIONALE

The complexity of modern education requires the application of all our understanding of instructional techniques so that the limited number of teachers will be able to provide the most thorough instructions possible for ever increasing number of students. In this, emphasis is laid on the provision for individual differences through self-pacing, small step presentation, active responding and immediate knowledge of results. Programmed instructions are based on certain mandatory principles, which are objective specifications, empirical testing and self pacing. Thus programmed learning is significantly different from conventional mode of instruction. The methodology of programmed instruction is based on science of learning. In programmed instruction the subject matter is presented to the learner in the form of small frames or steps constructed according to some behavior and the student is required to form a response to each frame. Now if the student is given feedback in the form of knowledge of the correct response as soon as he makes his own response it is quite likely that he will also make correct response for the frame next in order because the knowledge of being right, encourages him. Thus the theory of reinforcement is applicable in making the programmed subject matter in different styles in self-learning.

Keeping in view the usefulness of self-instructional material as an instructional mode, the investigator decided to develop linear style programme material on Qualitative Research Methodology for the students of M.Ed. class by splitting the subject matter of Qualitative Research on the basis of behavioural objectives. Since programme learning material (PLM)

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ensures cent percent mastery of the subject matter, the programme on Qualitative Research Methodology will certainly motivate the students to attain cent percent mastery of the content and further enable them to apply this knowledge in real life situations.

OBJECTIVES

1. To decide about the subject matter concerning Qualitative Research.
2. To develop a linear programme by dividing the subject matter of Qualitative Research into small frames.
3. To write the instructional objectives concerning the programmed learning material in behavioural terms.
4. To sequence the frames according to the behavioural objectives.
5. To decide about the format of writing the actual response for each frame.
6. To try out programme on
    - An individual
    - A small group of 8 students of M.Ed class.
    - A large group of 40 students from two colleges of education having M.Ed. class on their rolls.
7. To validate the programme empirically by finding error rate, programme density and sequence progression.
8. To construct the criterion test based on the instructional objectives.
9. Administration of criterion test after the tryout of the programme on the sample.
10. To organise the data.
11. To find the error rate and programme density and to draw the sequence progression data chart.

12. To interpret the results concerning the linear programme and to refine the programme accordingly.

HYPOTHESES

1. Sequential Organization of the content material produces better learning.
2. A 90x90 validity hypothesis will hold good in the present case of linear programme which states that 90% of the content matter will be successfully attempted by the 90% of the students included in the sample.
3. The error rate of the programme ranges between to 0 to 10 percent.
4. Achievement on criterion test is expected to range between 80% and 100%.

SAMPLE

Sample for the present study consisted of 40 M.Ed students selected randomly from two colleges of Education viz. Sohal Lal DAV College of Education and P.K.R Jain College of Education, Ambala City.

DEVELOPMENT OF THE PROGRAMME

Preparation

It involved the following things to be done

(i) Selection of the Topic
(ii) Selection of the style of programming.
(iii) Planning of the Instructional Material.
(iv) Defining Behavioural Objectives.

Programme writing

The instructional material was broken into small steps called frames. The frames were written in such a manner that limited amount of instructional material was carefully ordered so that the basic learning sequences are repeated again and again. The frames are of appropriate size so that it is easy to learn with the help of content material. Two types of frames are used:

a) Introductory frames;
b) Instructional frames;

Constructing a criterion test

In the criterion test prepared for the investigation 24 items were constructed. It includes the items covering all the objectives stated in behavioural terms.

TRY-OUT OF THE PROGRAMME

The programme of 80 frames and 24 items criterion test were tried out as follows:-

1. Tryout on an individual
2. Tryout on small group
3. Tryout on large group

ANALYSIS OF DATA

The data was analysed to find out the following:-

1. Programme Density
2. Error Rate
3. Sequence Progression

MAIN FINDINGS

1. The first hypothesis that sequential organization of the subject material produces better learning seems to hold good as is clear from the error rates of the different tapes of the programmed material i.e. sequences. The error rates of sequences of sequences of tapes range between 0 and 19.44%. The error rate of the total linear programme is 2.43%.
2. The second validity hypothesis (90x90) hold good as the successfully attempted material has been found to be 90.55x90.55.
3. The error rate of the programme ranges between 0 to 10%,
4. Achievement on criterion test is expected to range between 80% and 100%. However, an overall achievement of 90% is expected.

CONCLUSIONS

1. The subject matter of Qualitative Research Methodology of educational research can be effectively taught to the students of M.Ed, class with the help of linear programme prepared and empirically validated by the investigator using tryout procedure and making investigation concerning Error Rate, Programme Density and Sequence Progression.

2. The sequential organization has been found to be quite effective as the investigator has followed the proper procedure of including the introductory, the presentation and the testing type frames on one hand and the whole programme has been divided into 6 tapes or sequences. The flow chart also reveals that the sequential organization of the programme is gratifying. It is quite natural that in the beginning the error rate (number of errors) is higher and as the students get to know how of the programme and the subject matter there is reduction in the number of errors. The students of M.Ed. have responded actively to the linear programme.

3. The overall percentage of success on the criterion test is 92%.

4. Most of the objectives (6 objectives were set forth) have been achieved on an average of 90.3% which is quite satisfactory.

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COMPARATIVE STUDY OF THE MINDSET OF GOVERNMENT SCHOOL TEACHERS AND PRIVATE SCHOOL TEACHERS TOWARDS THE EFFECTIVE USE OF TECHNOLOGY

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RATIONALE

Education is the most important foundation upon which the structure of the society can be built or rebuilt. It is conscious, deliberate and planned process designed to modify the behavior in desirable and socially acceptable way to impart knowledge and skills. Twenty first century is the age of science. Modern science has achieved wonders and miracles and glorified world. It has increased human efforts and comforts and has given power to man. Science has entered in our life and daily activities so much that our existence would become impossible without it.

Over the next decade, India will face ever-increasing competition in the global economy. To an overwhelming extent, this competition will involve the mastery and application of new technologies in virtually every field of human endeavour. It will place particular emphasis on the need for heightened skills in mathematics and sciences. It is the responsibility of this nation's educational enterprise –including policy makers to help secure our economic future by ensuring that our young people are adequately prepared to meet these challenges.

We have clearly reached a turning point. All over the country, we see evidence of a new excitement in education, a new determination and a hunger for change. The technology that has so dramatically changed the world outside our schools is now changing the learning and teaching environment within them. Recent years have witnessed the wide spread acceptance of significant

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role of computers in schools all over the world. Several factors have influenced the introduction of this technology in schools, notably the government funded programs, societal pressures, teachers, computer scientist and researchers etc. It has also attracted interest from a wide range of academic disciplines example –Life sciences, psychology, mathematics, physical sciences etc.

Keeping in view the importance of technology in teaching-learning process, the investigator decided to undertake the present study.

OBJECTIVES

1. To study the difference in the mind set of private and government school teachers towards the use of technology.

2. To study the difference in the mind set of rural and urban school teachers towards the use of technology.

3. To study the difference in the mind set of male and female school teachers towards the use of technology.

4. To study the difference in the mind set of more experienced and less experienced school teachers towards the use of technology.

HYPOTHESES

1. There is no significant difference in the mind set of private and government school teachers towards the use of technology.

2. There is no significant difference in the mind set of rural and urban school teachers towards the use of technology.

3. There is no significant difference in the mind set of male and female school teachers towards the use of technology.

4. There is no significant difference in the mind set of more experienced and less experienced school teachers towards the use of technology.

SAMPLE

Keeping in view the objectives of the study, a sample of One Hundred & Sixty (160) Teachers from Government and Private Schools was selected randomly by the investigator. Out of these 160 school teachers, 80 were from Government Schools and 80 were from Private Schools. Government and Private Teachers were further divided into Rural and Urban categories which were subdivided into Males and Females. These Males and Females categories were further divided into More Experienced and Less Experienced teachers.

TOOL USED

A self constructed Questionnaire on the use of technology was used for the collection of data.

STASTISTICAL TECHNIQUES USED

- Descriptive statistics like **MEAN** and **S.D** were used.

- **t**-test was applied to measure significance of difference.

MAIN FINDINGS

1. There is significant difference in the mind set of private and government school teachers towards the use of technology.

2. There is significant difference in the mind set of rural and urban school teachers towards the use of technology.

3. There is no significant difference in the mind set of male and female school teachers towards the use of technology.

4. There is no significant difference in the mind set of more experienced and less experienced school teachers towards the use of technology.

EDUCATIONAL IMPLICATIONS

Implications for students

- The students when exposed to methods of teaching as alternative strategies would gain proficiency in the skills which are inherent in the instructional and nutrient effects of a particular method of teaching.
- For instance through the technology based teaching method, the students can develop meta cognitive abilities for meaningful learning.
- Technology based method will enrich the inductive thinking of the students.
- It will provide opportunities to the students to build richer association, organizing and scaffolding additional conceptual structures in alternative ways.
- The better understanding and manipulation of ‘ content processing skills’ would lead to independence in concept learning among students.
- Technology will enable to access sources of knowledge and interpret them and to create knowledge rather than making them passive users.
- It enhances divergent thinking among students.
- Different color display presented by computer attracts the attention of learners.

Implications for teachers

- Teaching is a multidimensional activity involving multiplicity of instructional objectives. In order to bring about an enrichment of learning process, there is a direct need to search for alternative strategies such as methods of teaching.
- The methods of teaching serve as a repertoire of instructional approaches for teachers to tailor the teaching-learning environment in accordance with the predisposition of the learners to achieve a variety of educational objectives.
- Technology based teaching method is best because it aims to give the learning from particular to general. So the teacher should have proper command in teaching through this method.
- Teacher must gain access to technology for improving learning outcomes. Successful designing and implementation of ICT in the teaching learning process is the key to success of teaching learning process.
- It will also help the teachers to reform their personality. It will boost up the moral of the teachers.
- Teachers can have direct contact with the parents also as they can share their queries on-line.
- Teachers can also add upto their existing knowledge by surfing net.

Implications for curriculum developers

- ICT in curriculum introduces both the teacher and the learner to a real world enquiry approach rather relying on text books.
- Technology based curriculum will change the isolated teacher centered and the text books bound classrooms into rich student focused, interactive knowledge environment.\

Implications for designing insructional material

- Technology can develop all cognitive abilities in the students because, the process mainly concentrates on the concept development rather than memorization. So, the material should be according to the learners' need.
- Teaching based material gives the information upto understanding level and they are based on the process of induction.
- Instructional material should meet the aspirations of the growing students' population at all levels.
- Instructional material should be presented by means of a computer which provides a straight forward presentation of data.
- E-Content material in different subjects benefits the diverse users. The competent teachers can develop e-content in their own areas of specialization

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EFFECT OF LINEAR STYLE PROGRAMMED LEARNING MATERIAL ON THE ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN SOCIAL STUDIES

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RATIONALE

Programmed instruction is one of the important and effective innovations in the teaching learning process which is based on the science of behaviour. It involves carefully constructed frames of the subject matter. It is systematically planned, empirically established and effectively controlled self instructional technique for providing learning experiences to the learner. The programmed instruction is concerned with the selection and arrangement of the content to be learnt based upon what is known about human learning. It is a process of constructing sequences of instructional material in a way that maximizes the rate of learning, fosters understanding and the ability to transfer knowledge to new situations, facilitates retention and enhances the motivation of the students. It is an explicit process and is what an effective teacher does intuitively for the learning of the students.

Keeping in view the usefulness of the programmed learning as an instructional mode and the increasing necessity for such materials in school subjects, the investigator decided to develop linear style programme material in social studies on “Land, Soil and Water” for VIII grade students. Since programme learning material ensures cent percent mastery of the subject matter, the programme in social studies will certainly motivate the students to attain cent percent mastery of the content and further enable them to apply this knowledge in real life situations.

OBJECTIVES

1. To develop and evaluate linear style programme material.

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2. To find out the difference in the Pre-test scores of the experimental group and control group.
3. To find out the difference in the Post-test scores of experimental group and control group.

HYPOTHESES

1. There exists no significant difference in pre-test scores of experimental group and control group.

2. There exists no significant difference in post-test scores of experimental group and control group.

SAMPLE

Target population for the present study consisted of all the students of eighth class. The experimental sample for the present programme consisted of thirty students of eighth Class selected randomly from Murlidhar D.A.V. Senior Secondary Public School, Ambala City.

PLAN AND PROCEDURE

For developing self-learning materials on the proposed topic the researcher covered the following phases of developing programme:

Phase-i Preparatory Analysis

Planning or preparatory analysis of the programme follow the following steps systematically

1. Selection of the topic.
2. Writing assumption about the learners.
3. Content analysis.
4. Writing instructional objectives in behavioural term.
5. Writing pre-requisite knowledge and skills in behavioural term.

6. Preparation of a criterion test.
7. Writing the core material.

Phase-ii Programme Writing

Programme writing involves four basic steps :

1. Writing frames
2. Using prime prompts fading and testing technique in introductory, teaching, practice and testing frames.
3. Sequencing the frames.
4. Editing the programme.

Phase-iii Tryout for Modification

In try out phase the programme was subjected to experimental try-out three times namely :

1. Individual tryout
2. Small group tryout
3. Final field tryout

Phase-iv Evaluation of the Programme

The programme has been evaluated by the investigator on the basis of the final field try out data in terms of :

1. Error rate
2. Sequence progression
3. Evaluation of Criterion Test

MAIN FINDINGS

- No significant difference was found in pre-test scores of experimental group and control group. It means that there was no significant difference in the performance of student before treatment.
- Significant difference was found in post-test scores of experimental group and control group. It means that there was a significant difference in the social studies achievements of students taught through Liner Programmed Material Method and traditional method. Students taught through linear programmed material gain higher in social studies achievement.

EDUCATIONAL IMPLICATIONS

Implication for Students

The students when exposed to programmme learning material as alternative teaching strategies would gain proficiency in the skills which are inherent in the instructional and nutrient effects of a particular model of teaching. For instance through the linear programming model, the students can develop meta cognitive abilities for meaningful learning. They can enrich their inductive thinking by the use of this programme.. The results of the present study suggest that linear programme model provides opportunities to students to build richer association, organizing and scaffolding additional conceptual structures in alternative ways. So the student should earn the maximum knowledge through the process of Linear Programme Material.

Implication for Teachers

Teaching is a multidimensional activity involving multiplicity of instructional objectives. In order to bring about an enrichment of teaching process, there is a direct need to search for alternative strategies such as programmed learning material.

The programmed material serve as a repertoire of instructional approaches for teachers to tailor the teaching-learning environment in accordance with the predisposition of the learners to achieve a variety of educational objectives. Competence in teaching stems from the capacity of teacher to reach out to diverse learners and to create a rich and multidimensional environment

for effective learning. With such type of programme, teacher can develop the cognitive abilities of the students.

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A Q- STUDY OF DESIRABLE CREATIVE BEHAVIOURS OF CLASS XII STUDENTS

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RATIONALE

Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. "Creativity" is often determined by measuring the 'creative behaviour'. Creative behaviour is something that is "…….. novel, original, surprising, and unusual or unique…… (with) some degree of social usefulness". To enable a person to behave in ways that result in creative outcome, a dispositional trait of creativity is required.

The term "Q-Methodology" was used by Stephenson to characterize philosophical, psychological, statistical and psychometric ideas oriented to research on individual. Q-technique is a set of procedures to implement Q Methodology. It uses ipsative procedures (or measures) of sorting decks cards called Q-sorts by using built in systematic restraints (within the sorting procedure). Q-technique uses a rank procedure of sorting items or objects into number of piles. The sorter is instructed to put varying numbers of cards in several piles by using the approval – disapproval (or some others) continuum, the whole making up a normal or quasi –normal distribution. The distribution used is known as a Q-sort distribution which is a rank order continuum ranging from most preferred to least preferred categories with varying degrees of preference between the two extremes. Sorting instructions and the objects sorted vary with the purposes of research. The number of cards in this technique is determined by statistical demands. The Q- distribution can be either symmetrical (Quasi normal) or approximately normal.

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OBJECTIVES

1. To sort out various desirable creative behaviours of the students of class XII.
2. To place these desirable creative behaviours on a scale ranging from most preferred to least preferred.
3. To work out a symmetrical Q-distribution of the desirable creative behaviours on the format of the scale used. Using the ipsative scale (Forced choice Procedure of scaling)
4. To administer the Q-sort measure on a appropriate Random sample of Class XII students.
5. To prepare data sheets of the sample of the students of class XII.
6. To find out the interperson correlations among the students to work out the groups of persons on the basis of the correlation so obtained.
7. To find out the means of the preferences for each creative behaviour.
8. To prepare a classification of the creative behaviours on the basis of the means of these preferences.
9. To dubb the various categories obtained in the classification.
10. To interpret the categories on the basis of the nature of creative behaviours included in a category.
11. To work out the educational implications of the study.
12. To give suggestions for further investigations on the basis of the results obtained.

HYPOTHESIS

The broader hypothesis of the present investigation is that some of the desirable creative behaviours are highly correlated while others having lower values of correlation coefficient.

SAMPLE

A sample of 30 students of class XII was derived from Khalsa Public Senior Secondary School, Saharanpur. The sample was intact group cluster sample.

STATISTICAL TECHNIQUES USED

(1) Product Moment Method of finding correlation was used to find the interperson correlation.

(2) Means of preferences was found for determining the categories of creative behaviours of the students of class XII.

ADMINISTRATION OF Q-SORTS

The students of class XII were asked to place 21 cards each containing a desirable creative behaviour in the form of statement written on each card. The students were asked to place the cards as follows:

Pile No. 1 2 3 4 5 6 7

No. of Cards 1 2 4 7 4 2 1

The investigator used the ipsative scale with seven options ranging from 1 to 7. The students were asked to place the cards into various piles using forced choice procedure in which their choice was limited. Most of the students took 15 to 20 minutes in sorting the twenty one cards into seven piles. The students read each statement carefully and placed the cards into various piles without any constraints, rather they were taking interest in putting the cards into piles. In this way data of 30 students of class XII were derived.

MAIN FINDINGS

The twenty one desirable creative behaviours namely (i) Curiosity (2) Seeking out problems (3) Enjoying challenges (4) Optimism (5) Nonconformity characteristic (6) Sense of Humour (7) Unlimited Approach (8) Emotional Sensitivity (9) Suspended judgement (10) Not to give up easily (11) No frustration even in the face of failures (12) Fantasies (13) Creative conflict (14) Generating Possibilities (15) Foresight (16) Active participation (17) Tolerance of Ambiguity (18) Risk Taking (19) Flexibility in thought, perception and action (20) Fluency of expression (21) Creative imagination with which the investigator started have been classified into six categories using the Q-sorts of thirty students of class XII. These six categories of the desirable creative behaviours have been derived on the basis of the six groups of class XII students found by the methodology of interperson correlations. The items (desirable creative behaviours) within

a category have been placed on the basis of the higher values of mean preferences by the students of class XII in a group.

The first category of items includes four desirable creative behaviours. These are flexibility in thought, perception and action having been preferred highly (M=5.285 by the first-category of class XII students), creative imagination, Risk taking and fluency in expression. The factor may be dubbed as functional creativity as a person having flexibility in thought, perception and action can have creative imagination (original thoughts occur in the mind) and can have the courage to take risks as he/she has many possibilities for him to be successful in such a situation. Fluency in expression is also functional in nature.

The second category of items (desirable creative behaviours) consists of foresight with highest mean preference by the second group of class XII students, Nonconformity characteristic and generating possibilities. The factor may be dubbed as critical thinking.

In the third category of desirable creative behaviours are included enjoying challenges with highest mean preference, not to give up easily, unlimited approach and emotional sensitivity. The factor may be dubbed as resoluteness in solving complexities as they enjoy the challenging situations and try to attain even if something is unattainable and follow unlimited approach that is try to exhaust all the possibilities and have emotional sensitivity.

The fourth factor consists of only two of the creative behaviours. The factor can be dubbed as to face the fortune/misfortune with courage. Creative students have no frustration even if they fail. Their aim is to participate actively.

The fifth category involves fantasies, seeking out problems, curiosity and optimism. This factor can be dubbed as Personal Strength.

The sixth category consists of four desirable creative behaviours of class XII students that are sense of humour, suspendenable judgment, creative conflict tolerance of Ambiguity. The factor can be named as Delaying Decisions, as these four desirable creative behaviours can be placed under this title.

EDUCATIONAL IMPLICATIONS

The study has been quite useful as it is concerned with desirable creative behaviours of class XII students in schools. Twenty one desirable behaviours which have been classified by using Q-methodology using the perceptions of class XII students with regard to their preferences. The

behaviours have been classified with six categories using technique which has heuristic power. The first factor has been found to be functional creativity which involves flexibility in thought, perception and action, creative imagination, risk taking and fluency in expression. The behaviours must be inculcated so that the students are creative in their action. Creative imagination is most important from the point of view of solving problems. The second factor which has been named critical thinking includes foresight which is a very important characteristic to be developed among the students. Nonconformity is a sign of difference in opinion which has to be tackled by effective means. Generating possibilities is the third aspect of this factor. This should be developed so that in future the students are able to become self dependent. Resoluteness in solving complicities is of much significance as determination to achieve ones goals are of much concern in life. This will also help in facing the fortunes/misfortunes in life. The factor personal strength includes the behaviours fantasies, seeking out problems, curiosity and optimism are to be inculcated through practical approach. The students should do experimental work/craft work/use computers so that they are able to gain personal strengths. Delaying Decisions which involves sense of humour, suspended judgement, creative conflict and tolerance of ambiguity should be inculcated by using the total atmospheric approaches or planning values before conducting any activities.

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CONSTRUCTION AND STANDARDIZATION OF AN ATTITUDE SCALE TO MEASURE THE ATTITUDE OF TEACHER TRAINEES TOWARDS WOMEN LEADERSHIP

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RATIONALE

Leadership involves responsibility and empowerment. Madhavi has reported that with proper empowerment and delegation of authority, leadership can be visualized among a group of persons working at different levels in an organization. High performance in an organization is the result of leadership. Leadership requires trustworthiness, courage, intelligence and discipline. It involves the implementation of new approaches and strategies. It means taking of proper decision, exercise of powers for the benefit of others (not for personal end).

Women Leadership means giving power and authority to women which will boost their confidence and morale to lead the women in particular and other people in general. The participative leadership role of the women will help others to come on a common platform around a common goal of development of the women.

It is important to construct reliable and valid instruments for the measurement of attitudes and other personality traits as there is dearth of such measuring instruments. The present study is therefore, an attempt to construct and standardize an attitude measure which will help in measuring the Attitude of teacher trainees towards Women Leadership which itself is an important aspect of the social frame

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OBJECTIVES

1. To work out the characteristics of women leadership.
2. To write the items of the Attitude scale measuring attitude towards women leadership on the basis of the characteristics of women leadership.
3. To place the items of the Attitude measure on a eleven point scale ranging from most unfavorable to the most favorable category.
4. To prepare the preliminary draft of the Thurstone type Attitude scale.
5. To conduct the judgment phase by selecting 30 judges(teacher educators) and administering Thurstone scale on them for the placement of the items into the eleven categories on the basis of their judgment(rather than attitude)
6. To organize the data obtain from judges item wise (to prepare frequency distribution of the data for each item).
7. To find out the Q-values (Q=Q3-Q1) for each of the item.
8. To find scale values (medians) of each of the items.
9. To select items for the Final Draft of the attitude scale using the criteria of $Q \leq 2.00$.
10. To prepare the Final Draft of the Attitude scale with $Q \leq 2.00$ by writing the selected items along with their scale values.
11. Administer the Final Draft of the Attitude scale on the sample of individuals whose attitude has to be measured.

STEPS OF STANDARDIZATION

- Item- Formulation
- Item Selection
- Administration of the test
- Scoring
- Item Analysis

- Reliability
- Validity

MAIN FINDINGS

1. The Q values (Q_3-Q_1) and Scale values (Median) of selected items for the final draft of attitude scale have been found gratifying and quite satisfactory. Twenty four out of sixty items have been finally selected to form the final draft of Thurstone type Attitude Scale to measure attitude of teacher trainees towards Women Leadership. These 24 items have Q-values≤2.00.
2. Split Half Reliability of attitude scale has been found to be very high. The reliability of the half length scale has been found to be 0.74. The reliability of the full length scale using Spearman-Brown formula has been found to be quite high 0.85. It shows that the 24 item attitude scale to measure attitude towards Women Leadership is highly reliable measure of attitude.
3. As no standard attitude scale to measure attitude towards Women Leadership was available, contrasted group method of finding the validity has been used. Two known groups, one loved Women Leadership and other hated Women Leadership were selected on the basis of following items
    a. I like (love) women leadership. Yes ( ) No ( )
    b. I dislike (hate) women leadership. Yes ( ) No ( )

The subjects who loved Women Leadership were found to be high scores while those who hated the concept of Women Leadership got low scores. The t- test was applied on the scores of the two contrasted groups. Significance of the difference between the means of the two groups was tested and the t-ratio of 7.78 was found which is highly significant at p≤.01. It reveals that attitude scale is valid for the measurement of attitude towards Women Leadership.

4. The teacher trainees of B.Ed. class exhibited a positive attitude towards Women Leadership.

EDUCATIONAL IMPLICATIONS

The present study is concerned with the construction and standardization of a Thurstone type attitude scale to measure the attitude of Teacher Trainees towards Women Leadership in which the investigator has been able to construct and standardize 24- item attitude scale which will be quite useful for the measurement of attitude towards Women Leadership of different groups of persons within the society. From educational point of view the field of attitude measurement is of much significance. The investigator has used the phenomenological approach of construction of attitude measure using verbal reports of introspection on the part of those whom the attitude scale of finally selected items has been administered.

The scale has been found to have high reliability and validity and can be very useful as it can be administered on different groups to study their attitudes towards Women Leadership.

The area of Women Leadership is in itself a very important area of investigation. Even in the political system of the country Women Leadership is becoming an issue of much significance.

So construction and standardization of test and instrument on this very important aspect within the framework of education and social psychology will help in understanding the behaviors associated with Women Leadership on one hand and develop strategies to deal with the problems related to the society on the other.

Certain items of the Attitude Measure also reveal the educational significance of the study. Like some positive items with low Q values in the scale were:-

- Women leadership enhances the leadership skill in women.
- Democratic values can be inculcated through women leadership.
- Women leadership is a good thing for the democratic system.

- For most people Women leadership, safeguards the social status of the women.
- Women leadership is a constructive force in national reconstruction.
- All in all Women leadership encourages political socialization.
- Women leadership is a tool of success for women.
- It is the Women leadership which yearns for radical change in the society.

- Women leadership for people like me is a bold realistic step towards service to mankind.

These items reflect the importance of Women leadership as far as its efficacy is concerned. It ensures rapid development and is a positive approach for making a person action oriented and is a means of social improvement. These items reflect progressive notion of attitudes.

There were certain negative items with low Q values in the scale. These items were:--

- Women leadership results in improper decision.
- Women leadership is just an unnecessary step towards social uplift of the masses.
- Women leadership in rational sense is an unfair occurrence.
- Women leadership is impediment to the progress of nation.
- Women leadership is nothing but deviating from mission of life.
- All in all Women leadership is a need less burden on the society.
- Women leadership is nothing more than infatuation towards opportunism.

The negative items reflect as expression of freedom from the binding that is associated with the concept of Women leadership. So the attitudes towards Women Leadership reflect both the aspects. It is important for those who follow it properly and achieve greater success. It has no meaning for those who do not believe in leading women.

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CONTRIBUTION OF MOTHER TERESA TOWARDS HUMANITY AND ITS IMPACT ON MODERN EDUCATION

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RATIONALE

World today is passing through critical phase. Now the world is becoming materialistic. In this world everyone is busy in his own work. Population is also increasing day by day and with growing population vehicles are also increasing. If some where any accident occurs nobody has time to seek those help. It means humanity has come to an end. A mad race is going on to acquire wealth, fame and power. People are becoming status conscious and there is degradation of moral values. India is today a victim of disease of racialism, individualism and separation. The importance of moral education in the life of individual goes unchallenged but inspite of eternal discussion on the proper aim of moral education; no agreement seems to be right. Mother Teresa who gave good values to people making them great humanist was a best example of great creation who influenced this country with her philosophy of moral oriented education. Mother Teresa prepared herself well for her mission by reading literature on India. Her deed or service was so amazing that every child born to the human race is bound to be told the story of the lady with the candle.

The scanning of previous researches reveal that the studies on contribution of Ramdev on yoga education, study of vedantic philosophy of Shankaracharya, contribution of Dayanand on women emancipation and their educational implication are available. Further a very few studies have been conducted on contribution of Mother Teresa towards humanity and its impact on Modern Education. So the investigator realised the need to study the contribution of Mother Teresa towards humanity and its impact on Modern Education.

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OBJECTIVES

1. To study the life and works of Mother Teresa.
2. To study the educational philosophy of Mother Teresa.
3. To study the contribution of Mother Teresa towards humanity.
4. To study the impact of Mother Teresa's contribution in field of education

CONTRIBUTION OF MOTHER TERESA TOWARDS HUMANITY

The name Mother Teresa is very essence of love, dedicated selfless service to the sick, dying, helpless and very poor. Her compassion for poor was incredibly genuine. For a women who neither sought nor expected recognition, Mother Teresa has exercised an enormous influence around the world. She was not Indian by birth but when she adopted India she become more Indian than any other Indian, such was her dedication. Mother Teresa was intelligent but passive and self effacing. She had been an adequate but undistinguished teacher, a common place women, and an ordinary nun, prone to knocking over candles during religious services. When Mother Teresa was in her teen age, she began to feel called to serve God as a nun. Becoming a nun not only meant giving up chance to marry and children, it is also meant giving up all her worldly possessions and her family, perhaps forever. She read many articles about work catholic missionaries were doing in India and she decided to go there. She stayed in the convent for thirty years before started her new mission to teach the poor orphan, to take care of lepers, sick abandoned and dying.

For Mother Teresa, service to humanity came first and foremost. It was important to love the poor and serve them. In her inspiring life full of courage, endurance, devotion to the service of God and humanity the greatness of her deeds and the meaningful life that she lived will continue to be there in the hearts of people she served. She voiced her opinion very clearly on issues like abortion, peace, poverty, love and service to humanity. If it is not feasible for one person to feed a hundred people, then just feed one. To Mother Teresa, the sight of so many unloved children was heart breaking. On September 23, 1955, Mother Teresa opened the first Shishu Bhavan, a home for children. When first Shishu Bhavan was ready, the infants were

brought back to the Bhavan, cleaned, fed and given medical treatment, as many suffered from malnutrition and tuberculosis. Like the home for the dying, Mother Teresa wanted these small infants and children to be cleansed, held and loved, even though death was imminent. Mother Teresa began construction of Shantinagar- The place or peace for Lepers. It was the home for lepers offered treatment and a chance at a normal life for almost 400 lepers and their families. Shantinagar also has its own local government with its leaders elected from among the residents. With each new success and each new undertaking, it was become clear that Mother Teresa possessed extraordinary vision. Her great determination to help those who could not help themselves had earned her a host of supporters and a growing number of critics.

CONCLUSION

According to Mother Teresa, an education should give us not only element of general knowledge or technical knowledge but also impart to us that spirit of citizenship which will make responsible citizens of our country. Her aim of education is to develop the child morality. For the moral development of the child, emotions, habits, and nature are the essential factors. The contribution of Mother Teresa's towards humanity has a lot of impart on the present system of education. Today all the aspects of education whether it may be aims, curriculum, methods, discipline etc. all are influenced by Mother Teresa thoughts.

Aims of Education

Today, following are the aims of education-

- Aim of Humanism
- Aim of Moral Development
- Aim of Social Development
- Aim of Civic Life
- Aim of Self Development
- Aim of Total Development

Curriculum

Curriculum is also influenced by Mother Teresa's thoughts; Today curriculum contain various co-curricular activities and subjects which develops human values in the students. Following subjects are there in curriculum.

Civics from National Point of View

Today, civics subject is taught from national point of view, ideals of citizenship, human rights, national and emotional integration are emphasized.

Moral and Humanistic Education

The moral and humanistic education is considered the most important subject for Higher Education. All the important factors such as good habits, nature, sympathy, emotions are learn with the help of moral education. Character is most valuable thing an individual can posses, so in every sphere of life moral values play a very prominent role.

Education according to nature of child

Each child has an element of divinity in itself as well as his own latent gift of mind and spirit. Education should develop the child morality to the fullest extent by developing these element of divinity and obedience of moral laws.

Education through co-operation

Teaching and learning is a co-operative process. Both the teacher and student must maintain a sacred relationship with a commitment to self, society, nation and global society.

Debates and Discussions

Debates and discussions on the theme of humanity and morality are organized for the students of secondary classes to inculcate the feeling of brotherhood, love and national and emotional integration.

Thus, it can be concluded that Mother Teresa had contributed a lot towards humanity and her contribution has a lot of impart on the present system of education.

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- www.nobelprize.org
- http://www.MotherTeresa.org
- Kingola2001@yahoo.com