The continuous and comprehensive evaluation education essay

Education

THEMEEDUCATION AND TEACHONOLOGYSUB THEMEINNOVATIVE EDUCATIONAL TOOLS & TECHNIQUESVed Prakash Chaudhari(M. Sc., M. Ed., NET)(Asst. Prof., GNCE, Gr. Noida)E-Mail: vedraj. patel@gmail. comRakesh Kumar Verma(M. A., M. Ed., Ph. D. App.)(Asst. Prof., GNCE, Gr. Noida)E-Mail: rakeshmed85@gmail. comDharmendra Kumar ' Swatantra'(M. A., M. Ed.)(Lecturer, GNCE, Gr. Noida)E-Mail: swatantradk@gmail. comABSTRACT: It is recognized that India needs to strengthen its capacity and innovation to able to respond effectively to the development of knowledge society and to become more competitive in economic and social terms. Creativity and innovation are becoming increasingly important for the development of the 21st century knowledge society. Education is seen as central in fostering creative and innovative tools and techniques. Basically teaching must include two major components sending and receiving information. The use of innovative methods in educational governance and galvanize the effort to achieve the human development goal for the country. This paper provides an overview of the theoretical foundation for innovative educational tools and techniques in the context of maxims of teaching, CCE, multimedia learning process, mind map, teaching with sense of humour, mnemonics words, role playing and scenario analysis, team teaching, symposium, seminar, workshop, conference smart classes, and language lab etc. which, in global scenario, are enumerated as the encouraging tools and techniques for the development of pupils' and students' creative and innovative potential. This paper also develops the notions of " creative learning and innovative teaching." Creativity has been defined as a product or process that shows a balance of originality and value. It is a skill, an ability to make unforeseen

connections and to generate new and appropriate ideas. Creative learning is therefore any learning which involves understanding and new awareness, which allows the learner to go beyond notional acquisition, and focuses on thinking skills. Therefore innovative teaching is a process leading to creative learning, the implementation of new methods, tools and contents which could benefit learners and their potential. INDRODUCTION: Education is a light that shows the mankind the right direction to surge. The purpose of education is not just making a student literate but also rationale thinking, knowlegeability and self sufficiency which are present in child in dormancy state. In this concern Swami Vivekananda has rightly said... " Education is the manifestation of perfection already present in man". If education fails to inculcate self-discipline and commitment to achieve in the minds of students, it is not their fault. We have to convert education into a sport, and learning process has to generate interest in the students and motivate them to stay back in the institution than to run away from it. Education should become a fun and thrill to them rather than burden and boredom. It is an integral part of their growth and helps them become good citizens. Education is an engine for the growth and progress of any society. It not only imparts knowledge, skills and inculcates values, but is also responsible for building human capital which breeds, drives and sets technological innovation and economic growth. Knowledge and innovation are seen as the beating heart of Indian growth. Transversal skills such as problem-solving-self-management or analytical skills are the back bone of new skills for new job. The provision of new basic skills has been identified as a priority from pre-school age to post retirement (EC 2001-2002). What a person perceives through his senses

becomes his world of awareness. Methods of learning, therefore, are to be evolved in such a way that can stimulate the senses of individuals. The methods may stimulate one sense or more than one sense at a time. The teacher have to plan which methodology and stimulating techniques are to be adapted to suit to varying target groups. Development of techniques that stimulate the individual's senses and accelerate the process of learning and their use in teaching can be termed as educational technology. The word ' technology' has evolved from Greek word ' tech' whose meaning is ' skill' or ' art'. That means technology is an art or skill to use various techniques, tools or machines. According to Webster's dictionary, technology is that " branch of knowledge that deals with industrial arts and sciences." Sometimes the term ' technology' is understood as synonymous as to the mare use of machines, which is not correct interpretation. It involves a body of methods for the application of scientific knowledge to deal with practical situation. The term ' educational technology' has emerged from the concepts from behavioral sciences and includes " development, application and evaluation of systems, techniques and aids in the field of learning." Heinich, et. Al., defined educational technology as " the application of our scientific knowledge about human learning to the practical tasks of teaching and learning." Educational technology relates to overall education i. e. covers all aspects of education and learning.' Sarva Shiksha Abhiyan' introduced by the Government of India can be implemented only if education expands quantitatively and qualitatively. Technology facilitates such expansion. Through technology, education not only can reach to all, but can also contribute to significant qualitative improvements in instructions. Education

technology can be used for all types of educational programmes, for all types of people and for all types of areas. It can cater to the needs of specific regions, specific target groups coming from varying cultures and for small children to adult learners. Education has to adjust itself with the changing perspectives, needs and demands in the present scenario of globalization era. In this concern reasonable and effective application and implementation of 5 Ms- machine (bringing innovations to education to generate curiosity to learn more and more), material (various types of materials as- toys , story books, games, CDs, poems, films, etc. to teach specific topics meaningfully), media (including paper media as well as electronic media to stimulate multiple senses of the students), men (active involving of the personnel in the process of education) & methods (including processes of tools and techniques to provide answer to the question – ' how to teach'? play major role to vitalize the educational technology in order to establish a healthy and harmonious adjustment maintaining the quantity of education with the quality of education in the age of globalization. INNOVATION: Change is the law of nature. So, under the universal law of change, with the needs of time a number of changes in teaching-learning process are naturally must under which different methods, strategies, tacts, tools and techniques are applied to transfer the knowledge to the students. Innovation is a new thing or a new method of doing something introducing new ideas in order to promote originality in a better way for the betterment of the human being. TRADITIONAL TEACHING LEARNING PROCESS: In the traditional context, the teacher is the sender or the source, the educational material is the information or message, and the student is the receiver of the information.

Mostly, the teacher delivers the content via the " chalk & talk" method to the entire class emphasizing factual knowledge. Thus, the learning mode tends to be passive and the learners play little part in their learning process, in the resultant, students assume a purely passive role and their concentration fades off after short span of time. Some limitations which may prevail in traditional teaching learning process are…" Chalk & Talk" teaching method is " one way flow" of information. Teachers often continuously talk till a long duration without knowing students response and feedback. The material presented is only based on lecture notes and textbooks. Teaching learning process is concentrated on " plug and play" method rather than practical aspects. The handwriting of the lecturer decides the fades of the subject. There is insufficient interaction with students. More emphases is given on theory without any practical and real life time situation. Learning from memorization but not understanding. Marks rather than result oriented. MAXIMS OF TEACHING: Maxims of teaching play an important role to make the learners more active and alert in teaching learning process. They are helpful in making learning effective, interesting and meaningful. Let's have a glance over the maxims of teaching -1. Known to Unknown: Learning does not occur in vacuum so new knowledge is linked up with previous knowledge. 2. Simple to Complex: Under this maxim the things are categorized on the basis of difficulty level. The teacher conducts the teaching learning process having the sense that simple and complex both should be well understood from the pupils stand point and outlook. 3. Seen to Unseen: According to this maxim first of all the present knowledge is imparted to the pupil and then regarding past and future. 4. Indefinite to

Definite: Usually children have mosaic ideas which are settled by the teacher meaningfully in order to proceed towards right direction to make them definite and clear. This maxim suggests that every word and idea presented should stand out clearly in the child's mind as picture. 5. Concrete to Abstract: In this concern things are shown first and then elaborate the abstraction i. e. " things first and words after". 6. Particular to General: This maxim indicates that the teacher should follow the teaching learning process from examples to rules. The rules of arithmetic, of physical geography, of grammar and almost of all sciences are based on the principle of proceeding from particular instances to general rules. 7. Empirical to Rational: Empirical means gaining knowledge through sensual organs. Observation and experience are the basis of empirical knowledge in which the children are given opportunities to have experience & observation to build up rationale thinking. 8. Whole to Parts: This maxim tells that whole is more meaningful to the child than the parts of the whole. According to the Gestalt Psychologists we first perceive the object as a whole and then its parts. 9. Psychological to Logical: Logical approach is related with sequential and gradational style where as psychological approach looks at the pupil's nature, behavior, traits, tendencies, qualities, capacities etc. For example the modern way of teaching any language is by following the order of listening, speaking, reading and writing is purely psychological where as the previous way of teaching the language by emphasizing letter, words, sentence etc. are logical. 10. Near to Far: This maxim is concerned with acquainting the children with their immediate environment first because they learn well in the surroundings they live. Gradually they may be taught about things which

are away from their immediate environment. 11. Analysis to Synthesis: This maxim suggests the teacher to break down the complete whole into parts. 12. Encouraging Self-Study: The learners should be encouraged and motivated frequently to read by themselves at their own pace as an essential part of their routine life in order to update with the rapid changing scenario of the world. INNOVATION IN TEACHING LEARNING PROCESS THROUGH TOOLS & TECHNIQUES: Basically the standard of education depends upon the standard of teaching learning process which is changed according to changing needs and demands of the society and the nation in the sense of globalization. The present era is the era of technology as in the most of the fields of life technology is being applied in innovative way with demanding tools and techniques. So how education can be untouched with the above said fact of technology? Here, we shall discuss on some important innovative tools and techniques in education.

1. CONTINUOUS & COMPREHENSIVE EVALUATION (CCE)

National Policy of Education of 1986 (revised in 1992) mentions about continuous and comprehensive evaluation of pupil which covers both scholastic and non-scholastic aspects of their development. Continuous evaluation emphasizes the evaluation of a child on continuous basis as his development is a continuous process. Comprehensive evaluation relates to covering all aspects of a child's development including academic, abilities, attitudes, personalities etc. evaluation includes not only measurement of level of achievement but also development due to diagnosis and remedial measures taken during teaching-learning process. The continuous and

Comprehensive Evaluation Scheme indicated by the National Policy has following dimensions:

Scholastic Aspects:

Curricular Areas: Techniques of Evaluation

Written ExaminationsOral ExaminationsPractical Examinations

Tools of Evaluation

Question PapersUnit TestsProjectsSurveys Periodicity of EvaluationTwice in an Academic Session

Coverage

For all Students

Non-scholastic Areas:

Health StatusTechniques of Evaluation

Height in relation to age, Medical Check-upWeight in relation to height,

Observation by the TeacherChest expansion, Eyesight , Hearing.

Tools of Assessment

Height and weight charts, weighingmachine, measuring tapes

Periodicity of Assessment

Twice in an Academic Session

Coverage

For all Students

Personal and Social QualitiesTechniques of Evaluation

Regularity, Punctuality, Discipline, ObservationHabits of cleanliness, Initiative, Tools of EvaluationCo-operation, Sense of responsibility, Anecdotal records, Rating ScaleDiligence, Civil Consciousness, Periodicity of EvaluationSpirit of Social Service. Twice in an Academic Session

Coverage

* The first four personal and socialqualities to be assessed in respect ofall students and the rest only whenevidences are available.

Interests

Literary Interests* A student may choose only one Recitation, Debates, Creative writing, activity from any one of the areas of Extra Reading. interest for being evaluated, though Scientific Interests he may participate in as many Exploration, as he likes. Experimentation, Science Club Activities. Cultural Interests*A student is to be rated on all identified attitudes. Music, Dance, Dramatics.*On values a student will be evaluated only when evidences are available. Artistic Interests*In regard to co-curricular activities Games & Sports are to be compulsoryDrawing, Painting, Sculpture, for all students and they will be ratedArtistic Embroidery. on any one of them selected by the student. In addition a student can choose any one other activity for evaluation available in school for being rated.

Attitude

Towards teachers, A student could participate inTowards school-mates, additional activities other than thoseTowards school programmes, selected

for evaluation. While theseTowards school property. will not be rated, his participation inthem will be indicated in the certificate.

Values

Dignity of labour, honesty, Courage. 2. SMART CLASS: Smart Class is comprehensive solution designed to assistteachers in meeting with their day to day classroom challenges and enhancing students academic performance with simple, practical and meaningful use of technology. It provides teachers with instant access to multimedia content and instruction materials mapped exactly to the specific curriculum guidelines for use in class. It also enables teachers to instantly assess and evaluate the learning achieved by their students in class with innovative use of technology. It is also highly efficient in maintaining student's interest and engagement in learning inside the classroom. Smart Class simplifies the problems of teaching abstract curriculum concepts that are difficult for students to visualize or relate to through the provision of three dimensional interactive multimedia modules. The well designed modules allow a student to visualize the concepts much better than static images or oral instruction and hence improve learning greatly.

Objectives of Smart Class:

Cost effective and long term programs. Audio-Visual Demonstration to understand the requirements. Simplicity and Effectiveness of our programs. Education with the help of entertainment. To increase the attendance of students. To make education comfortable and understandable. Reduce pressure from teachers. 3. MULTIMEDIA LEARNING PROCESS: " I hear and I

forget, I see and I believe, I do and I understand."... Confucius. Multimedia is the combination of various digital media types such as text, images, audio and video into an integrated multi-sensory interactive application or presentation to convey information to an audience. Traditional educational approaches have resulted in a mismatch between what is taught to the students and what the industry needs. Currently many institutions are moving towards problem-based learning as a solution to producing students who are creative and can think critically, analytically, and solve problems. Traditional approaches do not encourage students to question what they have learnt or to associate with previously acquired knowledge (Teo & Wong, 2000), problem-based learning is seen as an innovative measure to encourage students to learn how to learn via real-life problems (Boud & Felletti, 1999). The teacher uses different media elements to represent the content material in a more meaningful way by modifying it. These media elements can be converted into digital form, modified and customized for the final presentation. By incorporating digital media elements into the projects, the students are able to learn better since they use multiple sensory modalities, which would make them more motivated to pay more attention to the information presented and retain the information better. There are many multimedia technologies to bring meaningful innovation in teaching learning process. These technologies include Adobe Photoshop and Premier to create edit graphics and video files respectively, Sound Forge and 3D Studio Max to create and/or edit sound and animation files, respectively. 4. MIND MAP: Mind maps were developed in the late 60s by Tony Buzan as a way of helping students make notes that used only key words and images,

but mind map can be used by teachers to explain concepts in an innovative way. They are much quicker to make and much easier to remember and review because of their visual reference different elements of the lamp. Mind maps are also very quick to review as it is easy to refresh information in your mind just by glancing once. Mind maps can also be effective mnemonics and remembering their shape and structure can provide the cues necessary to remember the information within it. They engage much more of the brain in the process of assimilating and connecting facts than conventional notes. The key notion behind mind mapping is that we learn and remember more effectively by using the full range of visual and sensory tools at our disposal. Pictures, music, color, even touch and smell play a part in our learning armory will help to recollect information for long time. The key is to build up mind maps that make the most of these things building on or our own creativity, thinking and cross linking between ideas that exist in our own minds. Mind mapping brings high impact on the minds of the students as it creates clear understanding improving innovative thinking. 5. TEACHING WITH SENSE OF HUMOUR- " HUMOUR AN EFFECTIVE MEDIUM OF TEACHING": Everyone loves a teacher with an infectious sense of humour. Looking at the lighter side of life not only fosters cordial relations between professors and students, but also provides welcome relief while trying to follow a there is hope for progress in any field of life. Teaching is a challenge. Learning is a challenge. Combining both effectively is a challenge. Being humorous is a challenge. However, laughing is easy. We are convinced both by experience and research that using humour in teaching is very effective tool for both the teacher and student as it strengthens the relationship between students and

teacher, reduces stress, makes a course more interesting and if relevant to the subject, may even enhance recall of the material. Humour has the ability to relax people, reduce tension, and thereby create an atmosphere conducive for learning and communication. Numerous studies in the field of advertising have noted that humour is the most effective tool for enhancing recall of advertisements. It is easy to create a humour in the classroom by reading books of jokes and to listen to professional comics. The students should be encouraged to take notes, specially to learn about the professionals' use of such techniques as exaggeration, pauses and timing. Observe reality and exaggerate it-much humour lies in observations about real life and truthful situations. In conclusion, humour not only plays an important role in the healing process but is also very important in education.

6. MNEMONIC WORDS: WORDS-WORDS APPROACH: A mnemonic is a word, short poem, or sentence that is intended to help us to remember things such as scientific rules or spelling rules. Here the teacher is not supposed to talk on a particular concept for a quite long time. But to make it clear to the student he can just go on saying mnemonics or its associated meaning in words. Here he goes on saying only words instead of sentence, and once they to a basic understanding of the meaning of a particular concept then the teacher will explain in sentences. In teaching language courses this technique can be used as an effective medium by the teacher to develop word power. For example, ' i before e, except after c' is a mnemonic to help the students to remember how to spell words like ' believe' and ' receive'. 7. ROLE PLAYING & SCENARIO ANALYSIS BASED TEACHING: Role playing and scenario analysis is mostly used in organizations that try to analyze a

problem pertaining to the organization, and this is also used in management institutions. But the similar kind of practice can be tried in other organizations too like science these practical if students are given a scenario and other options to solve a particular issue, then the students are exposed to decision making in a given environment. 8. ACTION RESEARCH: In the field of education, research aims at solving the problems in teaching or in making the process of education effective and efficient. Educational research can be classified into two parts. One is fundamental research that aims at expanding the horizons of theoretical knowledge about the concept and process of education. Another type of educational research is action research or applied research. The concept of action research in education is relatively new and has been initiated by Stephen M. Corey. he defined this term as " a process for studying problems by practitioners scientifically to take decisions for improving their current practices" (1953). The action research—Relates to study of the local and immediate problem, which leads to quick decision in scientific manner to overcome the problem. Relates, in the educational setting, to evolving methods for improvement in the teaching process in the school or in the class. Is flexible, data may be collected through observation or teacher made tests. Involves simple procedures of data analysis. Has a narrow scope in a school situation. Is self evaluative and a continuous process. The canvas of action research in a school is very vast. Some of the issues may be as follows: Improvement in teaching technology. Motivation of students in learning. Dealing the cases of indiscipline, truancy, stealing, aggression, etc. Modifications in study habits of students. Improvement in memorization techniques. Dealing with late-comers. Motivate students to do

their homework properly or improve the grades. Adjustment problems of students in the school. Dealing with sex-related matters. Use of leisure time. Dealing with the problems of children with special needs. Handling parents. STEPS OF ACTION RESEARCH: Any action research project should answer the questions of Why? What? Where? Who? How? These involves the following steps: 2. Identification of Specific Problem. 3. Analysis of the Problem. 4. Action Hypotheses. 5. Designing of the Study. 6. Evaluation of Action Programmme and Findings. 7. Conclusion and recommendations. 8. Report Writing. 9. STORY TELLING: Story Telling is an ancient indirect method of teaching which is not only entertaining but also helping the children in learning about various things. A story used to be narrated and the children would be asked to find out the moral conveyed by the story. Taking the clue from this ancient tradition, schools are nowadays trying to teach through this method. The method is not only effective with small children but also with older children as everybody likes to hear stories. It is an impressive technique to enrich the children with morals and ethics. 10. EXCURSIONS: Another new technique of teaching is taking children on excursion tours to areas relevant to teach a topic or provide a first hand experience to the students. These educational tours can be to some museums for history lessons, work places to give an idea about world of work, tribal areas to study their culture and living patterns etc. 11. PHOTO LANGUAGE SESSIONS: In this technique, some photographs and pictures are placed and students are asked to express their feelings, ideas and thoughts. Photographs are collected on a topic of the subject and displayed. The photos should be shown for a fixed time only either trough projector or could be circulated

among groups of students one by one and they should be asked to react. They can note down their thoughts after seeing the photos. 12. BRAIN STORMING: Brain- storming sessions are organized to stimulate the thought process among the students through posing a question, telling about a situation and asking the students to react, showing a thought provoking film and discussing it. Brain- storming makes a monotonous class active and participative. For example, if the teacher wants to plan an educational trip, students can be asked to give their ideas on where, when and how to go. The students would start thinking and come up with several ideas. These ideas can be written on the chalkboard by the teacher and discussed. Relevant ideas can be adopted and sequenced. Such brain storming sessions can be organized for teaching certain topics of the subject also. These are beneficial where opinions on certain issues are to be obtained. 13. TEAM TEACHING: First of all team teaching was applied in 1955 in Harward University of U. S. A.; later on Prof. Francis Chase of Chicago University used team teaching for making the teaching more effective. In 1960 J. Freeman of Britain developed it further. This device is being used in many countries of the world; so far as India is concern, it is used as experiment. It is also known as group teaching; because in it two or more teachers make plan regarding teaching with mental efforts to make teaching affective and influential, they implement the plan and evaluate at the end. Team teaching has been explained in Dictionary of Education (P. 590) as, " The Team-Teaching is a type of instructional organization involving teaching personnel and the students assigned to them, in which two or more teachers are given joints responsibility for all or a significant part of the instruction of the same group

of students, the team may include such assistants as auxiliary aids or student- teachers". It is basically based on Pragmatism in which individual differences with peculiar skills are integrated in order to transfer important content for the students in a better way meaningfully. This device is considered as covering all the three domains-cognitive, affective and psychomotor representatively, which is useful and helpful for both-the teachers and the students. 14. SEMINAR: " Seminar is an instructional technique common in but not limited to higher education in which a group of students engaged in research or advanced study meets under the general direction of one or more leaders for a discussion of problems of mutual interest". It is latest technique of teaching. In it every member participates to present his individual achievements or he expresses his thought regarding any big project. It develops the tendency of free and original thinking in students enabling them to evaluate any problem or topic with clear and rational views. It trains the students for delivering lecture. 15. SYMPOSIUM: According to Dictionary of Education (P. 579), " Symposium is an instructional technique in which two to five persons qualified to speak with authority on different phases of the same topic or on closely related topics present a series of related speeches". Every student- member who participates in symposium is expected to put his rational views to discuss the topic or problem by reading the paper or article aloud. There after the audience-students are told to furnish additional information about the problem or topic and by asking questions related to the topic they may satisfy their quest. The students put their doubts and suspicions regarding the topic and the teachers convince them. The students acquire deep and

knowledge with it. It develops their mental power inspiring them for self-help. 16. WORKSHOP: Workshop is organized for discussion of different aspects of constructive and practical problems. The students discuss together or work directly to find out remedy of any problem. In this device learning by doing comes in existence and so psychomotor domain play an important role to make the learning permanent. This technique is very useful for the students of higher classes. It develops independent thinking of the students promoting their self-confidence and individual skills. This technique also develops mutual co-operation and sweet relations among students, which is helpful for the development of personality of students.

CONCLUSION: Adoption of appropriate educational technology makes the process of teaching and learning faster and more interesting and, therefore, more effective over time, scientific knowledge about the learning process keeps expanding, which leads to more technological advances in the field of education, and adopting the latest technologies contributes to the effectiveness of education. Apart from this generalization, the need for selecting the right technology environments, intellectual differences among the learners, access to resources imperatives of spreading education rapidly, etc. The analysis reveals some of the suggestions that teaching community can practice in the classroom. Ultimately the teaching people are satisfied when he could reach the students community with his ideas and views. So teaching depends upon successful mode of communication and innovation though we mean the changes that we propose to be include in our medium of communication or even inclusion of some other elements in communication information. REFERENCES: Agrawal Rashmi, Educational

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