Use of Learning Theories in Classroom Instruction

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Abstract

Pivotal to student's development, the product of interaction between person and atmosphere, carries utmost importance. Learning theory, cannot be undermined in teaching-learning process. The present study explores an important intervening variable-classroom instructions (CI). Teaching is the continuum of different actions and elements, CI being one of them. CI is an interactional behaviour of teacher which is the basis for modification of learner's behaviour. Cl needs knowledge of scientific principles, psychological theories, laws, and awareness of social values. Teacher's behavior is guided by the learner's behavioural outcome, the resultant of the learner's learning theory. Data was collected from observation, self-teaching experience, and discussions with other teachers, journals and work of eminent psychologists, researchers and educationists. A few are Piaget's Cognitive Development, Dewy's Constructivism, Jerome Bruner's Social Constructivism, Skinner's Reinforcement, Lev Vygotsky's (1978) Proximal Development (ZPD), Maslow's Motivation. CI is an essential component for managing and organising the process of converting teacher's knowledge into student's synthesis of new knowledge that is metacognition, the ultimate objective of Bloom's Taxonomy of Knowledge. In this global scenario, creativity, reflective thinking, interdisciplinary approach are major objectives of education. It emphasizes upon preparation, atmosphere, awareness, motivation, feedback, active participation and catering to the local and global needs. This study emphasises that a teacher should develop a sound philosophy of education, insight about the process and awareness about social values. It is also suggesting teacher educators to develop the acumen of an artist and a scientist because teaching is creation of new knowledge and creation is subject-neutral. This study inferred that psychological theories provide customisation of instructional design. It also provides a path to see through the learner's unique psyche and elevate it up to the metacognition level. This study concludes in reflecting upon learning theories in reference to CI.

Keywords: *Insight, customisation of CI, Creativity.*

Introduction :-

Our classrooms are the lab of teachers where they mould the future of nation. Children, who have a lot of potential and possibilities, develop as a rich human resource in class rooms. Teacher is a creative director of the whole developing process who imparts knowledge and shapes the personality of the child. That's why education has great importance in progress. Education is a tripolar process is which student and teacher are two active poles and teaching- learning is the process that takes place in classrooms between them through content, which is the third pole. Psychology is the science of behaviour and it's transformation & it cannot be ignored in this process. In teaching-learning process, classroom instruction (CI) is the operational part of the whole process. CI is organization of verbal and non-verbal communication of a teacher with the

student along with the setting up of content and classroom atmosphere. At this juncture, it is imperative to ponder upon "use of **psychological theories** in classroom instruction.

Need and Importance of Study – The rationale behind this study is as follows –

i. **A Paradigm shift from conventional to dynamic classroom** With due course of time, the course and aims of education has changed. Classrooms are changing rapidly from conventional to dynamic constructive labs. It is like a garden of rich soil or we can say a place having a positive aura which has an immense potential of development. Today we need classroom which have democratic environment, emphasizing shared responsibility and decision making. Here, children do not learn only existing knowledge, but they imbibe the highest level of learning and create knowledge.

ii. **A paradigm shift in role of teacher** - Due to the constantly evolving psychology, educational process has changed from teacher centric to learner centre. This psychological thought established by constructivist approach, felt that teacher has a more dynamic role as guide, felicitator and democratic leader. A constructivist teacher allow students to question, to give ideas express opinions and show feelings & emotions. They have a sense of compassion and respect for individuals and their unique potentials. This new role emphasizes to create a classroom with, motivational conditions, problem solving situations and social environment that emphasizes the attitude of **learning to learn**.

iii. **A paradigm shift in learning objectives** - Today's need is to create individuals of **Higher order of Thinking skills (HOTS)**. Our objectives of education has changed. In revised Bloom's Taxonomy of Education, highest aim of learning is **'to create'**, i.e., metacognition level of intellect. Formerly, in the core of learning, evaluation was at the highest step while today's highest point is- 'to create'. Learning objectives changed from **Knowledge** (**Noun**) to **Create (Verb)**.

As is evident from above, the whole scenario of education has changed, therefore, the rationale behind it is that if we want to be a fit cog in this fast changing global machinery, we have to change our classrooms, it's strategies and the role of teacher. We have to conduct researches, elevate learning upto metacognition level and deal with the whole process holistically and not mechanically.

Statement of Problem-

Here the study is an attempt to clarify the factor which makes classroom instructions effective. The problem is to “To analyse factors important in classroom instructions and use of phycological theories in enhancing them”.

Objective –

1. The researcher has tried to explore and analyse research studies and find out factors which enhance academic performance and develop creativity as a habit-in students.
2. The other goal is to explore and analyse psychological theories of learning, principles, laws and their use.

Limitation-

To find out some concrete output scholor tried to limit her study to some most used and studied theories of learning as Piaget's cognitive development theory,zerome Bruner's social constructivism, Skinner's Reinforcement ,Lev Vygotskiy's (1978) Proximal development (ZPD) ,Masslow's Motivational theory.

Research Method –

This study is an attempt to interpret reality through a sense making process . researcher's own experience developed an orientation which sees human actions meaningful. It is an detailed analysis and documentation method. After reviewing researches about CI and phychological theories, a reflective analysis was done.

Data-

Data was collected from observation, self-teaching experience,observation,discussion and studies about classroom instructions and work of eminent phycologist

Section A - Teaching Learning and Instruction: An attempt to Conceptualize.

It is a lively debate about the relationship between teaching and learning. English grammar terms both words as a phrase of reciprocal verbs or V-Recip as per Collins Cobuild English Dictionary. At the centre of this, there is always a question that "can teaching take place without learning?, or, if the teacher has taught, is it certain that the student has learned?" The answers of these questions depend upon the teacher's preparation and research about learning theories or the teacher education curriculum. As a result, a lot of learning theories, teaching models, maxims of teaching and strategies for effective learning, have come to the fore.

Teaching-Learning:

It is an interactive process between teacher and student and its product is concurrent behavioural outcome or learning of the student. Teaching is a process in which different modes of behaviour are present such as, knowledge transaction, conditioning, training and instruction. According to the Dictionary of Psychological and Psycho-analytical Terms - "the art of assisting another to learn (which includes) providing of information (instruction) and of appropriate situations, conditions or activities designed to felicitate learning." All modes or levels of teaching process are present in a continuum. Its concept is molecular, a bundle of activities.

Learning is a continuous process which is complex in nature. According to Skinner - "learning is a process of progressive behaviour adaptations." Learning includes a lot of mental processes and is dynamic in nature. It is the product of interaction with atmosphere and experience. According to **Gates**, "Learning is the modification of behaviour through experience and training."

Class-room Instruction (CI):

It is the operational part of teaching. It is responsible for influencing, changing, modifying and transforming the learner's behaviour. If this operation, which has a lot of constituent activities, is carried on meticulously, then only we can expect that learning has taken place in its truest sense. It is the interactional behaviour of the teacher which is the basis of modification of the learner's behaviour. CI is instructional design (verbal & non-verbal) along with classroom environment which brings desired changes in student's behaviour.

Components of Classroom Instruction:

CI is part of the second stage in teaching called operational stage. It includes all activities inside the classroom, verbal or nonverbal and some of them are:

(i) Sizing up the class and physical planning,
(ii) Diagnosis of the learner or probe into the level of class,
(iii) Achievement or action operation, presentation of content, Verbal and non-verbal interaction.
(iv) Selection and presentation of stimuli.
(v) Feedback and reinforcement
(vi) Development of strategies along with content development
(vii) Content analysis

Objectives of CI:

CI's objectives are not different from teaching objectives. It works as a tool to cater learner's needs as well as educational objectives, such as:

- Learner's need
- Subject matter transaction
- Learner's behavioural outcome
- Local needs
- Global needs

The most important aim of CI is to develop an individual of **High Order of Thinking Skills (HOTS)** having creative abilities and qualities to become a well adapted global citizen.

CI is more concerned with teacher's behaviour which is observable and modifiable, which is the objective of teaching and outcome of learning. Due to this relationship, teacher's behaviour is guided by learner's behavioural outcome in turn to student's psychology.

If we want to explain the dynamic relationship between teaching, learning and classroom instruction, it is established that **teaching** is a **continuum**, learning is the **product** and **CI** work as a **fulcrum**.

In this light, it's proved that classroom instruction needs knowledge of scientific and psychological principles, laws and awareness of social issues and norms, i.e., maxims and principles of teaching. This conceptualization of the dynamic relationship of three again, focuses on the rationale of this study. In the present scenario of changing classrooms, dynamic role of teacher and revised objectives of education, it is important for educational research to maintain scientific integrity, develop tests and refine educational pedagogical practices, in turn, making classroom more constructive, responsive and socially relevant.

Hypothesis:

- Every child is unique, hence the teacher should respect their individuality and the process of teaching should cater to that.
- The strategically designed CI helps in student's learning and achievement.
- The use of psychological theories improve and enhance the psyche of the students through classroom instruction.

Proposition:

The researcher reviewed a number of studies in relation to CI and also studies the psychological theories established by eminent psychologist concerning learning. On critical analysis, the insight developed by these and due to her own experience with would-be teachers, the researcher tries to suggest use of relevant psychological theories in enriching class room experience and teacher's ability to elevate learning.

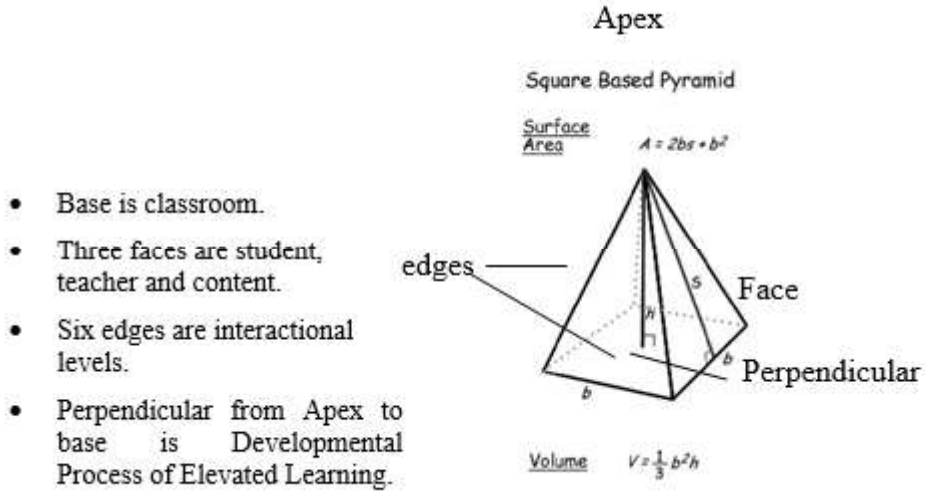

Fig. 1: Pyramid Representation of Learning

Studies about the classroom instructions: -

A study of school attributes of effective schools and classrooms. Based on the findings of the 33 studies reviewed, effective schools and classrooms have the following attributes - A **supportive school wide climate**, **school leadership**, **a customized learning environment, articulation and co-ordination within and between schools**, some use of narrative language and culture in the instruction of language minority students, a balanced curriculum that incorporates both basic and higher order of skills, **explicit skills and instructions, opportunities for student directed activities, use of instructional strategies that enhance understanding**, **opportunities for practice, systematic student assessment**, **home and parent involvement**.

Long Fillmore et. al. (1985) suggest that quality **explicit skills instruction** is important for all.

Instructional Features Study (Tikunoff, 1983), a measure of effectiveness in **active teaching**, defined as a part as **"instruction"**, in which teacher sets and articulates learning goals, actively assess student's progress and frequently make class presentations, illustrating how to do assigned work."

Dianda and Flaherty (1995: 8) found that provided with meta-cognitive skills, teachers can use to think about and prepare for the tasks and evaluate the outcomes, helps students, deal with context reduced tasks.

The National Academic - Sciences, Engineering, medicines, Improving schooling for language Minority children : A Research Agenda (1997).

This research focuses on empirical studies that attempt to identify classroom level factors, related to effective schooling for English language learners. Found out though instructional language issue is important, they do not dominate.

Quality of Instruction and classroom learning outcomes: The **German** contribution to the **IEA classroom environment study, Andreas Helmbe, Walt gang Schheider, Fran Emanuel Weinert[2].** The study explored **instructional quality and classroom management factors** as predictors of student of cognitive and affective outcomes. (Classroom No. 39) A lot of dimensions of data collection had taken and class room was the unit of analysis. As expected, student's entry characteristics were of greatest importance for both objective and cognitive moment. A pattern of direct instruction variables indicating **efficient management, intensive use of time** and **strong task orientation** was **positively related** to student's engagement and cognitive outcomes.

Bark Rosenshine (American Educator, Spring 2012)

(i) Research on cognitive science
(ii) Research on Master Teachers
(iii) Research on Cognitive support

Findings were

(i) begin a class with start overview of previous learning, daily review can strengthen previous learning and can lead to fluent recall.

(ii) Present new material in small steps with student's pratice on each step.

(iii) Ask large no. of questions and check the responses of all students : question helps them practice new information and connect new material to the prior learning.

(iv) Provide models: Providing students with models and prompts and working examples can help to learn to solve, problems faster.

Effective learning and quality teaching J. John Sekavlge 2019.

Training has to be provided in **asking questions**, not first answering them. **Open-ended** and **under-defined problems** should be assigned. Evaluated **credits** should be given for **fluency** (no. of general solutions generated), **flexibility** (variety of approaches adopted) and **originality**. All knowledge we have is a result of asking questions. Creativity is not only subject to the inventions but covers all acts and thoughts.

According to Biggs (2014), an important trait for effective teaching learning is **constructive alignment** - it is a design for teaching what is intended, what is to be learnt by the students and the way they express their learning. All this is clearly stated before teaching takes place **(Seema Shukla Ojha, 2018)[5].**

Facts found from above studies:-

Researcher found CI as an intervening variable in the process of teaching learning. Only the effectiveness of CI can ensure that learning has taken place. Use of psychological theories provide an insight and help in making a strategic plan to prepare content and to design CI.

Objective of CI is to elevate learning of students and cater their needs, develop them upto the highest objective of learning as **High Order Thinking Skills (HOTS),** creativity.

Section 2- Every individual has a unique personality - outer and inner, and behavioural patterns. Mental structure or psyche of a student is only manifested through his behaviour and psychology is the science of behaviour. So it's importance cannot he undermined in teaching learning process. As the education is child centric, psychological theories of learning and development have taken centre stage in child's behavioural modification. These theories equip teachers with knowledge and insight about the whole process and provide a solid base for teaching strategies, instructional design and interactional patterns.

In this section, researcher tried to provide psychological facts and findings of theories in providing an insight to teachers and guide them for efficient CI strategy which enhances students learning as well as their achievements.

Thorndikes's Theory of Connectionism had given three laws - **Law of readiness, Law of effect and Law of exercise**. These laws propose that classroom instruction should be designed such that student should be ready to grasp the main topic. **Teacher should always prepare introductory questions, presentation or scheme** which start from previous knowledge of students and go to the topic which brings curiosity in the student.

Skinner's Operant Conducting proposed the **importance of need of the students, importance of content for students and reinforcement. Classroom instruction objective should satisfy the need of students and during the class, positive or negative reinforcement through verbal and nonverbal behaviour of teacher should be provided.**

Clark L. Hall had given **Need Reduction Theory** or **Goal Gradient Theory**. According to this, living being has an automotive problem solving system. Hall provided 16 postulates through which human behaviour is directed. According to this theory, **teacher should provide stimulus through behaviour or atmosphere which create a drive to do particular activity to reduce that drive. Classroom instruction** should have **reinforcing and incentive** driven need as catalyzing variable for teaching learning process.

Cognitive Theories of Learning established the fact that learning process is a product of a number of activities as a whole experience. Behaviour change is not due to mechanical connections of stimulus response (S-R) but it is due to cognitive development of individual. So the **classroom instruction should be directed towards enhancement of cognitive ability**.

German Psychologist Kohlar, Kolta and Kurt Lewin established Insight Learning Theory. C.I. strategy should be **planned and purposive**. All instruction should **create a whole atmosphere** for a particular objective. **C.I. should be exploratory** and **guiding towards solution not providing solution.** C.I. should have **appropriate time interval to create insight, observation of facts** and **finding the solution.**

Classroom Instruction should **follow maxims of teaching** because they are grounded in psychological theories such as simple to complex, concrete to abstract.

Provide content in small steps: try to have element of intensity, size, repetition, change, novelty and control as objective factors while need, interest and goal as subjective factors. It creates attention in students.

Montessori method by M. Montessori (an Italian Doctor) **gives importance of sense training**. Children should be instructed to feel, listen, observe and categorise them in discreet sensory forms. This activity is helpful in making conception by direct personal experience in competition and regiment free atmosphere. Watch word of this method are - **Things before words, experience before expression.** This theory provide following insight about CI:

- Most important principle of CI is to explain a concept which should be within the experimental realm of pupils.
- Simplified representation of the content.
- CI should reduce the no. of irrelevant attributes and improve the identification of relevant attributes.
- Acquisition of skills, specially language, is good by imitation and practice in relaxed encouraging atmosphere.

Suggestions:

Classroom instruction is a bundle of activity-it should be described in **micro skills**. In our B.Ed. curriculum for would be teachers, the concept of **Micro Teaching** was first proposed by **Allen & Atchison & Bush (1961)** and by **Dr. B.K. Passi & Shah** in **India (1974).**

- Teacher should enter the classroom with content knowledge and a good strategy of classroom instruction under a particular method of teaching.
- CI is more useful when designed according to age of students and type of content to be taught and cater individual difference.
- Atmosphere of classroom should be democratic, relaxed, enthusiastic, constructive and nonjudgmental and unbiased.
- Questioning skill in CI is important-we can use them to introduce, to probe, for stimulus variation and assessment.
- CI should provide reinforcement (verbal/nonverbal, positive /negative) incentives and feedback.
- CI along with atmosphere, should reflect different styles, preferences and provide prompts and resources for maximum stimulation, it develops higher order of thinking skills (HOTS).
- Our (Teacher's) instruction should encourage to generate alternative opinion, seeking multiple perspectives, problem finding, looking for hidden explorations.

- The interaction between teacher and student should be with mutual respect.

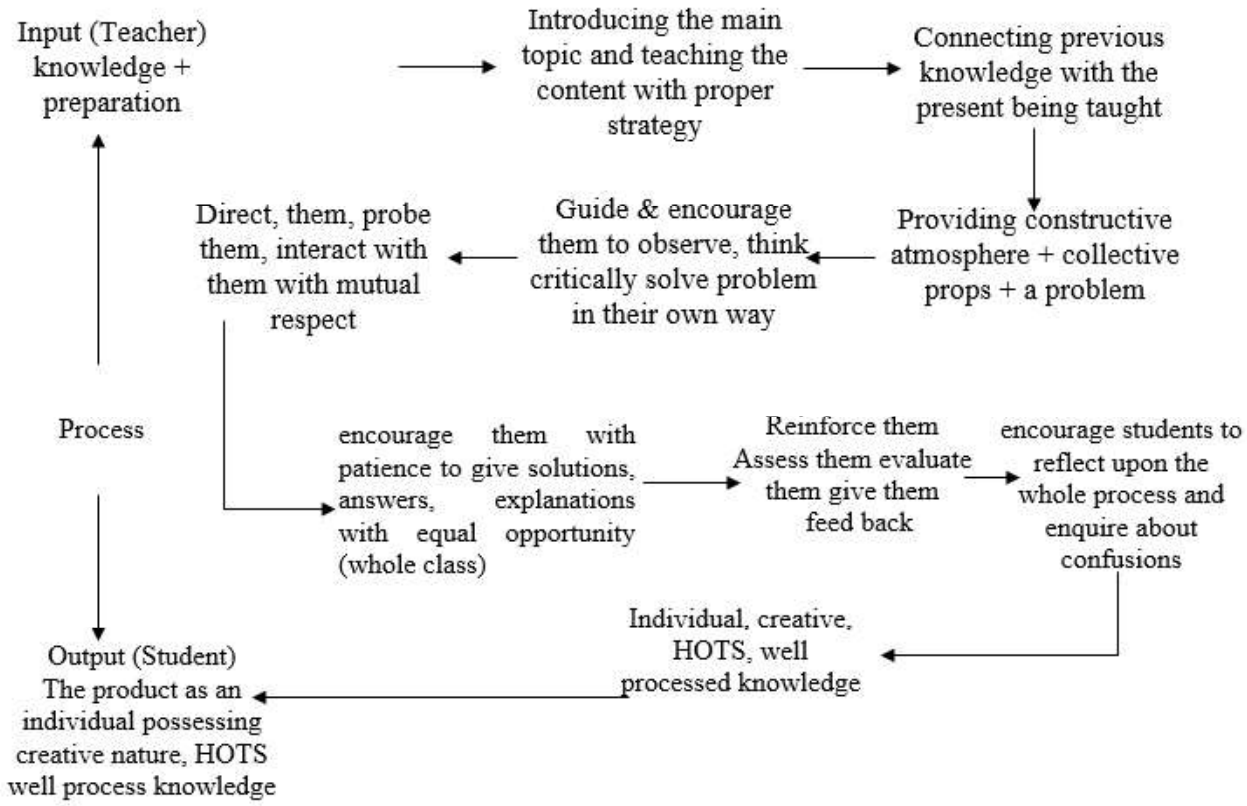

Fig.2- Flow diagram of teaching learning process

Conclusion:

Uniqueness of individual is a postulate which is fundamental. So there can not be any set model or classroom instruction strategy for learning. Along with time, learning objectives have changed and **today we need creative individuals with higher order of thinking skill and a spiritually enlightened mind.** It increases the responsibility of teacher manifold. The person must know the psychology of the learner and should possess good teaching philosophy, high social norms and resourceful enough to use of technology.

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