

Pedagogical Theories

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Abstract - Quality instruction is key to educational processes; it heightens achievement of set objectives, aims and goals. The quality of instruction is dependent on pedagogy, thus teachers should employ relevant pedagogical strategies in their teaching. Pedagogical strategies stem from pedagogical theories; therefore each and every teacher should be knowledgeable about these theories. This article explores and gives vital information on pedagogical theories. It is aimed at equipping teachers with relevant pedagogical knowledge.

Index terms - *pedagogy, theory, pedagogical theories*

Pedagogy: it's a discipline that deals with the theory and practice of education. It concerns with knowledge and skills of teaching.

Theory: refers to an organized system of accepted knowledge that tries to explain about a phenomenon

Pedagogical theories: these are theories that postulate how things should be thought, how teaching should be done and/or how one can be brought to learn.

1:0 INTRODUCTION

Learning is the core function of schools, irrespective of the type or level. Therefore, teaching should be at its best always in order to achieve the best standards of learning. This calls for teachers/instructors to be adequately equipped with pedagogical knowledge and skills.

1:1 THEORIES OF PEDAGOGY

As explained earlier pedagogical theories postulate how teaching should be done in order to bring one to learn. In a practical perspective, the theories are much related to pedagogical strategies. Pedagogical theories stem from different perspectives. This article explores a detailed view of pedagogical theories stemming from:

- a. Herbatianism
- b. The new London group
- c. Learning theories

1:1:0 HERBATIANISM

Johann Friederich Herbart (1776-1841) is regard-

ed as the father of pedagogy as his works conceptualized pedagogy. In his theory, he identified five components of pedagogy, as listed below:

- Preparation; involves getting ready for the instructional process.
- Presentation; refers to the actual teaching and learning process.
- Association; the process of bringing ideas or events together, eg in memory or imaginations, it can also refer to a mental connection or relation between thoughts, feelings, ideas, and/or sensations:
- Generalization; refers to reasoning from detailed facts to general principles also can be explained as formulation of general concepts from specific instances.
- Applications; refers to putting into practice what was learnt.

For effective pedagogy, teachers should incorporate the above components in their teaching and learning. Herbart also highlighted the relationship between an individual's development and its societal impact. His works led to the rise of

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Herbatianism a movement associated with his views.

1:1:1 THE NEW LONDON GROUP

The new London group (1996), refers to an international consortium of academics researching literacy pedagogies. Their research identified four major components of pedagogy namely:

- Situated practice
- Overt instruction
- Critical framing
- Transformed practice

Situated practice

Didactic methods of teaching conveys results, products or facts of inquiry to learners without engaging them in the processes through which they were achieved or even the impact it will have on their lives. Macleod & Colby (2003), observe that situation practice calls for the modeling in classrooms of the contexts in which "real-life" learning is achieved. Situation practice takes learners through the processes that yield the desired knowledge. Basically it involves tangible activities (projects, practical, etc) and social contexts of learning (learner interactions).

Overt instruction

Overt instruction involves construction of knowledge from what learners already know and also identifying learner's specific needs for further attention.

Critical framing

It is an aspect of pedagogy where learners stand back from what they have learnt and view it critically in relation to its context. Learners are guided to critically analyze and question the ideologies at hand and their relevance. In critical framing, emphasis is placed on critique.

Transformed practice

The new London group (1996), explain transformed practice as an authentic learning experience where students are both products and transmitters of literacy learning, including stu-

dent-teacher role reversals. Transformed practice enables learners put into practice the learned knowledge and are able to work in a new situation. It helps them develop an ability to act based on their understanding and apply knowledge acquired to solve problems. With transformed practice, learners are provided with opportunities that will help them apply the learned knowledge beyond the classroom setting.

Generally, the four pedagogical aspects are neither hierarchical nor sequential but can be interdependent.

1:1:2 LEARNING THEORIES

Pedagogical theories also stem from leaning theories. Learning theories serve as conceptual framework to teaching & learning. The major learning theories are:

- Behaviorist learning theories
- Constructivist learning theories
- Cognitive learning theories

Behaviorist Learning Theories: these focus on learning as an aspect of conditioning as such put emphasis on behavior modification. There are three types of conditioning as explained below.

1. *Operant conditioning:* This is where antecedent stimulus is followed by a consequence of behavior through reinforcement or punishment. Operant conditioning was proposed by Burrhus Fredric Skinner (1904 - 1990) commonly referred to as B.F. Skinner. He was an American psychologist & Behaviorist. He did lots of research in human behavior, thus developed a conceptual analysis of human behavior. This approach considers causes of an action and its consequences; he referred to it as operant conditioning. Operant conditioning deals with intentional actions that have an effect on the surrounding environment. In his works, Skinner concluded that reinforced behavior tends to be re-

peated/strengthened and vice versa i.e. behavior not reinforced tends to diminish/die out. He identified three responses that can follow behavior.

- Neutral operant: these are responses from the environment, that neither increase nor decrease the probability of behavior being repeated.
- Reinforces: these are responses from the environment that increases the probability of behavior being repeated. Reinforcers can be either positive or negative. *Positive reinforcement* strengthens behavior by giving rewarding consequences to an individual e.g. if an instructor gives a learner some amount of money each time he/she scores more than seventy percent in class assignments, the learner will be more likely to repeat this behavior in the future, hence strengthening the behavior of scoring more than seventy percent in class assignments. *Negative reinforcement* refers to removal of an unpleasant behavior in order to strengthen a given behavior. For example if a learner is supposed to give out some amount of money for failing to score more than seventy percent in class assignments will definitely make them work hard to score more than seventy percent to avoid giving out money, therefore strengthening the behavior of working hard.
- Punisher: these are responses from the environment that decrease the likelihood of a behavior being repeated. It weakens/eliminates a given behavior. Generally, a pun-

isher acts the opposite of reinforcement. Disadvantages of punishers

- Does not guide learners on what to do, but what not to do
 - Can lead to increased aggression, as a way of fighting back
 - Punished behavior is not easily forgotten and resurfaces when the punisher is withdrawn. Can lead to fear e.g. fear of school.
2. *Classical conditioning*: Ivan Pablov a Russian psychologist (1849-1936) proposed it. It explains behavior as becoming a reflex action/response to an antecedent stimulus.
 3. *Social learning theory*: It is a type of conditioning where an observable behavior is followed by modeling.

Relevance of Behavioural Learning Theories to Pedagogy

The following are the major implications of behavioral theories to instruction & pedagogical strategies.

- Instructors ought to reinforce learners
- Instructors need to employ punishers
- Behavior modeling is paramount

Constructivist Learning Theories: these theories emphasize on active involvement of learners during knowledge construction. It focuses on practical activities. Various educationist, psychologists, and researchers have put a number of constructivist theories forward. An example is Jean Piaget's theory explained below.

Jean Piaget (1896 - 1980), was a Swiss psychologist. He did lots of research on children's development where he developed the Jean Piaget's theory of cognitive development. In the theory, he describes a child's development as a sequence of learning that goes beyond simple rote learning.

He identified four stages of development in a child as listed:

- Sensory motor stage
- Pre-operational stage
- Concrete operational stage
- Formal operational stage

Sensory motor stage

According to him, this stage spans from birth to two years. In this stage, children experience the world through senses and movement. The stage has six sub-stages:

- *Simple reflexes*: runs from birth to a month. A child has no sense of object permanency in their minds; their actions are mainly through reflexes.
- *Primary circular reactions*: runs from a month to about four months. Primary circular reactions refer to a situation whereby an infant will try to re-produce an event that accidentally happened. Basically, in this sub-stage they learn to coordinate sensation.
- *Secondary circular reaction*: spans from four months to about eight months, in this sub-stage they are object oriented eg they can shake a shakers. They are also aware of things beyond their own body.
- *Coordination of secondary circular reaction*: runs from eight months to about twelve months. In this sub-stage infants can do things intentionally e.g. using a rod to reach something.
- *Tertiary circular reaction*: spans from twelve to eighteen months during this sub-stage the infant makes explorations and new possibilities.
- *Internalization of schemata*: This is the last sub-stage. It runs from eighteen months to about two years. It is a transitional phase between sensory motor and pre-operation stage.

Pre-operational stage

This is the second stage. It spans from two to seven years. It starts when the child begins to learn to speak. In this stage children are not capable of concrete or abstract logic, they are also egocentric i.e. cannot see things from a different point of view. The stage has two sub-stages:

- *Symbolic function sub-stage*: runs from two years to about four years. In this sub-stage children majorly use symbols to represent physical models around them eg using drawings.
- *Intuitive thought sub-stage*: spans from four years to seven years. In this sub-stage there is an emergence of some reasoning, they tend to ask lots of questions characterized by the urge to know more. Irreversibility, centration, and lack of conservation are other characteristics of this stage.

Concrete operational stage

According to him, this stage spans from seven to twelve years. A child will have developed a sense of conservation and can think logically. Despite their logical thought, they still require more of concrete learning.

Formal operational stage

It spans from twelve years to fifteen years onwards. In this stage, children are capable of abstract and rational thought hence can learn abstractly, they also display more skills geared towards problem solving.

Cognitive development of children occur through the four stages, however the duration in each stage may vary from child to child depending on nature and nurture.

Relevance of Jean Piaget's Theory & Constructivist Theories in General to Pedagogy
Jean Piaget's theory and other constructivist theories have direct implications to classroom in-

struction and pedagogical strategies. As explained below:

- *Age consideration*; this call for teachers to provide appropriate learning activities depending on learner's developmental level
- *Individual differences*; due to nature and nurture children exhibit differences, teachers should therefore attend to learners at individual level from time to time, avoid making comparisons and allow learners progress at an appropriate pace for them. Appropriate materials should also be provided in the case of learners with special needs.
- *Assimilation*; it is the process of fitting in new information to the already existing way of thinking (mental schemes) in the learners minds. To achieve this teaching should be build from prior knowledge.
- *Learning by doing*, efficacious learning occurs when learners are engaged in activity based instruction.
- *Active receptors of stimulus*; learners are active receptors of stimulus. As such should be fully involved in the process of knowledge acquisition & construction. Teachers should employ teaching methods that are involving to learners.

Cognitive Learning Theories: These theories focus on the complexities of human memory as influencing learning. Thus, instructional strategies should foster learner retention. The theories also place emphasis on the importance of prior knowledge, as having a huge impact on teaching and learning. Therefore, instruction should be done in a sequential manner that incorporates teaching from known to unknown, simple to complex and/or concrete to abstract. Generally, all learning theories are geared towards boosting knowledge acquisition, absorp-

tion; processing & retention. Teachers/instructors should interpret and apply these theories in their day-to-day pedagogical duties.

1:2 CONCLUSION

This article has given an insight into pedagogical theories. The information provided adds more knowledge to the field of teaching & learning and teacher education, this will go a long way into ameliorating education in general.

REFERENCES

- [1] Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- [2] Bloom, B. S. (1952). *Taxonomy of Educational objectives: The classification of educational goals, handbook 1. The cognitive domain*. New York: Mac-kay.
- [3] Bruner, J.S. (1971). *Toward a theory of instruction*. Cambridge, MA: Belkapp press.
- [4] Dewey, J. (1963). *Experience and education*. New York: Collier books.
- [5] Fester, C.B., & Skinner, B.F. (1957). *Schedules of reinforcement*.
- [6] http://en.m.wikipedia.org/wiki/Jean_Piaget: *Constructivist learning theories*.
- [7] <https://www.learning-theories.com/classical-conditioning-pavlov.html>: *Learning theories*
- [8] <https://www.learning-theories.com/social-learning-theory-bandura.html>: *Learning theories*
- [9] Macleod, F., Golby, M. [2003]. *Theories of learning and pedagogy: Issues for teacher development*, Volume 7, pp. 345-360.
- [10] New London group (1996). *A pedagogy of multiliteracies: Designing social future*. Harvard Educational review.
- [11] Piaget, J. (1926). *The language and thought of the child*. London: Routledge & Kegan.
- [12] Murei, K., & Rutto, D. K. (2015). *Constructivist Instruction in Science Education*. International Journal of Scientific & Engineering Research, Volume 6, Issue 7, July-2015, ISSN 2229-5518

[13] Skinner, B.F. (1951). *How to teach animals*.
Freeman.

[14] Skinner, B.F. (1953). *Science and human behav-
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