

Application of Assessment and Evaluation in Learning: Theories and Realities.

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Abstract

Assessment and evaluation involve activities of collecting information and using it for making valued judgement. In teaching and learning many facilitators/teachers see that assessment and evaluation is done at the end of the semester/course or academic year. This paper shows that assessment and evaluation is done in all stages of learning including preparations/planning, implementation, and at the end of the course. Also, in the assessment and evaluation it gives the picture of all things that are involved in the learning process including teachers, needs of the society, content, process of teaching, resources for teaching, learners, pedagogical content and competencies of the teacher.

Key Words: *assessment, evaluation, learning*

Introduction

Assessment and evaluation are the terms and activities that cannot be avoided in every step of planning, implementing, and receiving outputs/feedback. This is because they play a big role in showing the strength, weakness and obstacles to your plans, implementation process and the general outcomes of what you are doing. This paper discusses the theoretical perspectives of Assessment and Evaluation in learning based on Behaviorist and social learning theories.

Behaviorist theories

Behaviorist defines learning as a relatively change in behavior that occurs because of experience (Driscoll 2000) or Learning is a change in a person that comes about because of experience (Omary 2011). The issue here is to assess and evaluate what changes you want learners to be developed, what are the means of bringing such changes in behavior, and what are the reference measures of the change in a particular behavior. According to the definition from behaviorists these changes are the results of experience being measured and evaluated through observations. This informs that a person who is assessing that is collecting information on the prior learning, during learning and after learning experiences, then the evaluation is that there is change in behavior which is the valued judgment.

Founders of behaviorism theory

B. F. Skinner

B. F. Skinner is a behaviorist who emphasized that; learning occurs through making operations in the learning environment, he described this operation as operant conditioning where an association is made between a behaviour and a consequence which referred to the process in which learning can occur through reinforcement and punishment. As well as can be done by associating between a certain behavior and the consequences of that behavior. The term operant' means how behaviour operates in the environment. According to Good and Brophy (1990), Skinner's major contributions to behaviourism is his operant conditioning mechanisms. The Operant conditioning mechanisms involve Skinnerian concepts like positive reinforcement which is reward, negative reinforcement which is extinction or non-reinforcement and punishment. Skinner has made a lot of major contributions to the development of behaviourism. For instance, according to Dembo (1994) in his 1948 book with a title *Walden two* he explores an imaginary society based on operant conditioning. Skinner (1958), in his book with title *Science and Human Behaviour* intensely points out how the

principles of operant conditioning function in social institutions such as government, law, religion, economics and education (Omari, 2011). What can be learned here depends on the minds and needs of individuals who want to use the work of Skinner. But simply individuals can learn how he assessed and evaluated the functions of reinforcement in the teaching and learning process before learning, during learning and after. Teachers of Skinner type always demand for a successful learning. We cannot think in the same way as Skinner, but we can think of the modern ways of learning styles while making Skinner as our reference. We have sociologically realized various reinforcements by the teachers in the classroom, some reinforcements are like:

1. If you present well, you will be awarded more points
2. Being active in the classroom will contribute to your final grade
3. You are so many in this class, I think I must remain with very few learners who are really committed
4. If you don't like to read books you will know who I am
5. I am not here to spoon feed you
6. I will prepare a very difficult examination please be ready
7. The examination will cover all that we have learned
8. My examinations are very difficult ask those who passed through my hands
9. Go and discuss if you encounter challenges don't hesitate to ask me
10. Be free to ask, what you want to know more.
11. Do not underrate me I am
12. The examination will be constructed from the topic.... which is in the book.... by ...
13. If you don't work hard, you will not realize.

From the few reinforcements mentioned above, anyone can assess and evaluate the appropriateness of the type of reinforcement normally used and why? But it is suggested to avoid the overuse of defensive mechanisms as a part of reinforcement. The main theme is to make sure learning leads to the change in behaviour as results of experience in school operations.

Ivan Pavlov

Ivan Pavlov proposed the concept of classical conditioning (Dembo, 1994). Pavlov is best known for his contribution to the theory of behaviourism mostly through his work of classical conditioning or stimulus substitution. Pavlov's assessed and evaluated role of the bell in providing food to a dog. Thus, his experiment involved a dog, food, and a bell. Before conditioning, ringing the bell caused

no response from the dog. Placing food in front of the dog enabled it to salivate. During conditioning, the bell was rung a few seconds before the dog was presented with food. After conditioning, the ringing of the bell alone produced salivation (Dembo, 1994). This may be reflected in the current teaching and learning. We need to think of the ways that can make learners salivate (Create intrinsic motivation) towards addressing societal challenges to what they are expecting to learn. We must think about the link of learners, schools, and societal challenges. Let us make a small reflection for Tanzania education system, is the learning in schools, colleges and Universities focused on addressing societal challenges or doing the same business which doesn't pay us? Basing on Pavlov's ideas while teaching let us not only think of the content itself, but we should also think what food is, what bell will be used and the dog to consume the food. The assessment and evaluation are needed to reflect what type of conditioning we need. It is expected that graduates should salivate in solving societal challenges rather than saying we are graduates. From this aspect the conditioning should not just be given to graduates but to individuals who effectively participate in solving societal challenges and innovation of new productive ideas towards solving real life problems.

Pavlov added another concept apart from the former behaviorist, which he named it as stimulus generalization. Here he stated that after learning to salivate to the sound of the bell, the dog can still salivate at similar sounds. This informs that learners can act in the same way when they are brought into the new environment after conditioning. Questions to reflect, is the teaching of today's schools condition learners to solve the challenges that arise? Are the teachers well informed of those challenges? Does the community in general know the needs of future generations? Is the teaching focused on the graduate of the 21st Century? Or What to do then? He then said that if the pairing of the bell and food is stopped, salivation in response to the food eventually ceases (Omari, 2011). This is like saying without conditioning learners to solve societal problems, there will be no individuals in the society to solve the problems arising in the society which implies that learning is a continuous process involving both the assessment and evaluation at a particular time what is to be taught.

Edward L. Thorndike

Thorndike was another founder of behaviorism learning theory. He is best known for his emphasis on the application of the methods of exact science to educational problems, due to this, he advocated for an accurate quantitative treatment of information (Rizo 1991). His arguments are based on the idea that anything that exists in a certain quantity can be measured. His major

contribution to behaviourism is his theory of connectionism, which states that learning involves the formation of a connection between stimulus and response (Dembo 1994). Later, he developed three laws based on stimulus-response hypothesis. The first of these laws is the 'law of effect' which states that the connection between stimulus and response is strengthened when it is positively rewarded and weakened when negatively rewarded. Generally, here he assessed the role of stimulus in providing a desired response. Then come up with the valued judgement that response is strengthened when it is positively rewarded and weakened when negatively rewarded. The thingmain idea here is about how teachers make connections between stimulus and responses in the learning process. Are these teachers motivating learners to produce positive or negative responses? Most teachers focus on the content/academic area only, but learning is more than that which probably give the link between stimulus and responses. He also developed the second law known as the law of exercise, central to this law is the premise that, the more the stimulus response bond is practiced, the stronger it becomes. This is more technical in our today's learning. How do teachers expose learners to exercise? Are the learners given proper activities, guidance, and feedback? Exposing learners to practice what they have learned theoretically is of more value than giving a lot of content packages without exercises. Here exercises should not only be taken as examinations, homework, tests, or quizzes but the reality of what a learner is expected to do after schooling, that is the actual practice or solving the real life problems. Different fields might say yes there is practice, but let us think of the time used for this exercise. Is it enough or not? How these are practical assessed and evaluated? Is the assessment and evaluation of actual practical effectively done?

Social Learning Theory

Social learning theory was developed by psychologist Albert Bandura. He is best known for his modeling study on aggression, referred to as the Bobo Doll experiment, which demonstrated that children could learn behaviors through the observation of adults. The theory is based on the idea that we learn from our interactions with others in a social context. This is successfully done by observing the behavior of other people, then we develop similar behaviors. Thus, most learners act like adults around them. From this sociological point of view learners not only learn academic content from their teachers but also actions. The concept is how do these teachers act in front of their learners sociologically because after observing the behavior of teachers, learners assimilate and imitate that behavior, especially if their observational experience is positive or include rewards related to the observed behavior. The proper assessment and evaluation of deciding what to

assimilate and imitate depends on the prior assessment of teachers' behavior not only in front of the learners but the general life. A prominent psychologist named Albert Bandura who has done much work in this area used terms like social learning or observational learning to describe his theory of learning. Bandura sees behavior as only one component in a chain of interlocking processes involving the interaction between cognitive structures with the environment and decision making regarding the appropriate response which can be either exhibited immediately or delayed and reflected upon, and even refined and changed (Ormrod, 2008).

Bandura collected information and identified two distinct types of social learning that can take place in a social context.

1. **Imitational learning:** Bandura observed that there was a lot of important behaviours learnt through imitation, both among children and adults and very often quite informally. For example Teachers/adults stand when the national anthem is being sung, and the child learns to stand as well without specific instruction that it should be so. Father and Mother go to church every Sunday. The little kids do the same.
2. **Modelling:** This happens when we observe a performer doing things to another person, and then we do the same. For instance, the child sees father appreciating her mother and next day the child appreciate mother as well. The child sees the father kisses the mother, then does the same next day, or after a while (Omari, 2011).

Bandura performed an experiment with preschool children who observed an adult fight a doll called Bobo Doll. The adult was hitting the doll, pounding it, abusing it, yelling at it and harassing it by pricking its ears and eyes. After a couple of days, the Bobo Doll was placed in another room and the children were allowed to play with it. Apparently, they beat and yelled, and harassed the doll as the adult did. These types of behaviors are exhibited quite regularly in many situations, and again exemplify observational learning. The term often used is vicarious learning, which is an experience enjoyed by someone through imagined participation in another person's experience (Omari, 2011).

According to Bandura social learning theory has four mediational processes that help determine whether a new behavior is acquired:

Attention. In order to learn, you need to be paying attention. Anything that distracts your attention is going to have a negative effect on observational learning. If the model is interesting or there is a novel aspect of the situation, you are far more likely to dedicate your full attention to learning.

Retention. The ability to store information is also an important part of the learning process. Retention can be affected by a number of factors, but the ability to pull up information later and act on it is vital to observational learning.

Reproduction. Once you have paid attention to the model and retained the information, it is time to actually perform the behavior you observed. Further practice of the learned behavior leads to improvement and skill advancement.

Motivation. Finally, in order for observational learning to be successful, you have to be motivated to imitate the behavior that has been modeled. Reinforcement and punishment play an important role in motivation (Omari 2011).

Reflection: How do teachers use the four-mediation process in teaching and learning? What are the important tools for the assessment and evaluation of those mediations?

Conclusion

Assessment and Evaluation is sometimes seen as the last item to be done in the task or the teaching and learning, but from the few theories discussed above it is seen that at every stage assessment and evaluation is needed for improving the practice, otherwise very little achievements will be realized. Normally the assessment and evaluation look more organized when it is done against the goals at each stage that is from planning, implementation, and product. Sometimes it is challenging to report a class of 100 students, only five passed the examination which can be concluded that there were no/weak assessment and evaluation strategies in the teaching and learning. But what does this inform managers? Or a class of 100 students 95 passes the examination or students just fail the continuous assessment, or all learners pass/fail. In reality here teachers need to assess and evaluate themselves, the needs of the society, the content, the teaching, resources/facilities, and the learners.

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Conflict of interest

The authors declare they have no conflict of interest.

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