

Critical Analysis of Learning Theories and Ideologies and Their Impact on Learning: “Review Article”

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Abstract

Learning is a complex process by which we are able to convert information and experience into knowledge, skills, behaviours, and attitudes. There are various learning theories which help to explain how we learn. There are also many methods of teaching which have been shown to provide positive results. We must also note the many different roles of a teacher and the importance of each one; each role serves as a means to achieve learning outcomes. A variety of teaching styles are used by some teachers (expert, formal, authority, personal model facilitator and delegator), while others rely on the same tried and tested techniques. However, the most effective teaching method involves changing ones' teaching style to suit the situation and individual needs. The importance of teaching behaviour and the various teaching styles and the predicted benefits on student learning has been demonstrated.

Keywords: Learning theories, cognitivism, behaviorism, observational learning, teacher.

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Learning is something we continue to do our entire lives. It is a complex process by which we are able to convert information and experience into knowledge, skills, behaviours, and attitudes. The ability to learn is present in us all, although perhaps to varying degrees. In order to fully appreciate the complexity of learning, we must examine the different learning theories and ideologies.

Learning can be described as a process bringing together both the influences and experiences of cognition, emotion, and the environment in order to acquire, enhance, or make changes in one's knowledge, values, skills, and world views Illeris, (2000); Ormorod (1995). As a process, learning focuses on what occurs during the act of learning. Tighe (1982) has shown that learning can be distinguished from behavioural changes occurring due to maturation and illness; however, it applies to motor skills; like riding a bicycle, to intellectual skills; such as writing, and to certain attitudes and values; such as bigotry. It has been suggested by Wolfe (1952) that neurotic symptoms and patterns of mental illness may also be learned behaviour. Illeris (2000, p-3) broadly defines learning as "any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or aging." In order to clarify and describe what is occurring, we turn to learning theories. A learning theory is used in an attempt to explain how adults and children learn, allowing us to fully understand the complex processes involved in learning.

Cognitive learning in its broad sense refers to the mental processes of perception, memory, judgment and reasoning, Blanchette and Richards (2010). It is the process or act of knowing. It focuses on how a person's previous experience can be affected by his or her environment or interaction with others to produce changes and growth in his or her way of thinking. There has been a lot of confusion as to how to properly define cognitive learning. Arhem and Liljenström (1996, p-610) defined cognition as "knowledge processing mediated by a centralized nervous system is suggested mainly to be based on the same principles as non neural adaptive processes". Peterson, et. al (2009, p-519) found in their study of sixty-five participants, that "cognitive styles were seen as stable, innate and closely linked to underlying information processing mechanisms. Learning styles were seen as variable, environmentally dependent and were described in terms of their broader effects on learning behaviour — not their effects on cognitive processing. Cognitive theorists believe that it is by cognitive processes that influence learning. They believe that as children grow, they become capable of increasingly more sophisticated thought Chen & Hancock (2011). Metacognition refers to the

ability of a person to comprehend and understand their own cognitive processes and to actively control and manage those processes (Efklides & Vauras, 1999).

In our experience as teachers, this has been observed as grasping concepts of scientific information and putting them into practice. Students listen to explanations given by the teacher which is an example of perception. They are then presented with exercises which must be completed in class. While solving the exercises students must draw on the rules they have been taught -drawing on their memory - then, using their judgment and reasoning, decide which rule is appropriate for the questions they must solve and apply it.

Learning Theories

Cognitivism and Behaviourism

Cognitivism is reflected in the work of theorists such as Dewey (1938), Piaget (1964), Vygotsky (1978), and Gagné (1970); there are, however, no clear lines separating the different theories of learning and they often blur into one another. Gagné (1968) has also been associated with behaviourism, which identifies behaviours that can be observed. The difference with behaviourism is that the entire thought processes that occur in the mind of the learner are not fully considered. The primary concern is that of stimuli and responses to those stimuli, as can be seen in the works of Pavlov (1927), Watson (1928), Thorndike (1913), Skinner (1938), and Gagné (1970). There are three types of behaviourism; methodological, psychological and analytical.

Methodological, Psychological and Analytical Behaviourism

Methodological behaviourism is concerned with the behaviour of a person rather than their mental state. Watson (1928), wrote extensively on this type of behaviourism. Psychological behaviourism attempts to explain behaviour in terms of external physical stimuli, responses, learning histories, and in certain cases, reinforcements. Both Pavlov (1927) and Skinner (1938) were supporters of this theory of learning. Analytical or logical behaviorism claims that the very idea of a mental state or condition is the idea of a behavioral disposition or family of behavioral tendencies, manifested in how a person behaves in one situation rather than another. This is better illustrated by attributing a belief, for example, to someone. In doing so, we are not saying that they are in a particular internal state or condition, but we are characterizing them in terms of what they might do in environmental

interactions or particular situations. Analytical behaviorism may be found in the work of Ryle (1949).

From our own experiences, we have observed behavioursim in the form of classroom management. Students who behaved appropriately - as opposed to achieving correct answers - were given the incentive of receiving smiley face stickers. At the end of the term, the students counted how many stickers they had received and were rewarded with a smiley face cookie for every 5 stickers. Students were extremely receptive of this form of encouragement and good behaviour dramatically improved.

Social Processes

Social learning is not merely a classroom event. It is a process which occurs all day and every day, as it involves learning from things we see around us. Bandura (1975), proposed the social learning theory, which has become one of the most prominent theories of learning and development. Although based on traditional learning theories, Bandura considered the possibility that direct reinforcement alone couldn't account for all types of learning.

Bandura (1976, p-5) stated that "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action." What Bandura added was a social element, arguing that by watching other people, it is possible to learn new information and behaviours. This kind of behaviour, known as observational learning (or modeling) can be used to explain numerous types of behaviours.

Social media has had a huge impact on social learning. The use of social networking websites such as Facebook have linked people from all corners of the globe and influenced social learning in a dramatic way. It offers users a means to create a virtual identity and network with friends, family and colleagues. Unlike Friendster and MySpace, Facebook offers those in the academic community the ability to operate exclusively and has become progressively more popular on college campuses. Approximately 8 million students from over 2,000 colleges and 22,000 high schools in the U.S. use Facebook to post personal information such as pictures, hobbies, and messages to interact with fellow students and instructors in addition to friends and family (Lashinsky, 2005).

Models of observational learning

Three essential models of observational learning were identified by Bandura, including: A live model, which involves a real person demonstrating or acting out a behaviour. A verbal instructional model, in which descriptions and explanations of a behaviour are provided and, a symbolic model, in which real or fictional characters display behaviours in books, films, television programmes, or online media. Although behaviourists recognized that learning leads to a permanent change in behaviour, observational learning shows that people may learn new information without displaying new behaviours.

Example of observational learning

A good example of observational learning would be the case of the students receiving stickers, and later cookies for good behaviour. One student may have seen another child rewarded with extra stickers for good behaviour (having his book open on the right page at the beginning of the lesson). Observing this behaviour might lead the first student to open his book quickly in the next lesson in order to obtain the same reward.

Another incidence, in which behavioural learning proved effective, is the case of a student who due to his consistently bad behaviour, a meeting was set up with his parents. After discussing the problem at hand, it was decided that his homework diary would remain in the possession of the teacher for the duration of the lessons and the teacher would write a simple sentence reflecting his behaviour in each lesson. The student would then be dealt with at home according to each day's report. This technique proved so effective, that if the teacher forgot to ask for the diary, the student himself would bring it in the hopes of getting a glowing report that day.

Motivational methods

There are many methods which can be implemented by teachers in order to successfully motivate students. A good teacher is one who knows and understands their students. An informal setting, where a teacher sets creative writing assignments which ask students about their hobbies, interests etc helps a teacher to get to know students. Students often enjoy talking about themselves and a group discussion may feel less formal than written work. Having assessed the students, it then becomes necessary to plan which teaching methods you should use. The most common form of instruction used by teachers is that of

direct instruction. This method of teaching is often referred to as lecturing. Because this method of teaching is considered the simplest, many teachers use this teaching method almost exclusively. One of the most important benefits of this teaching method is that you can cover large amounts of material in a short period of time. It does, however, have its disadvantages; mainly, that it is not the most effective teaching method to reach all students, especially younger ones. Younger students often need a more appealing, hands-on technique in order to learn effectively. It can also be difficult for teachers to tailor instruction to students at different levels.

A teaching method which is quickly gaining popularity is inquiry-based learning. Based on the scientific method, this teaching method can be used for virtually all subjects. Although inquiry-based learning is often very effective, it is time consuming, requires a lot of energy, and lots of planning. In order to arrive at conclusions, students practice problem solving and critical thinking skills. One good advantage of this technique is that it can be modified for students at any level. A disadvantage of this method of teaching noted by Sweller (1988), was that it places a huge burden on working memory.

Cooperative learning is another teaching method that is considered highly effective when done correctly. In this method students are put in small groups to work together. They are not usually grouped by ability, but put in a group with children mixed levels. The students are then given tasks to complete together. Teachers may possibly need to monitor these groups carefully, to make sure they are staying on task and that all students are taking part. This is a good method to use when there are various ability levels in the class, because the teacher can assign specific tasks to children at different ability levels. There are disadvantages to this method however, and they were highlighted by Sharan (2010), including the causes of discrepancies between the promise and practice of cooperative learning, such as confusion about methods, lack of adequate preparation, and teachers' perceptions of teaching in general and of cooperative learning in particular.

One more common teaching method is to teach information processing strategies. While it is prudent to have students really comprehend the teaching methods and not just memorize facts, there are some cases when facts need to be memorized. Facts and concepts may also need to be grouped or organized in order to aid better understanding. Teachers may use various teaching methods to help students with memorization, or they can use graphic organizers, mind maps, story webs, or other ways to represent information visually. It is best to use a variety of techniques when teaching as students easily get bored and using a variety

of methods helps to overcome this. Certain techniques may also be more effective with some students than others. The goal is to find a balance when teaching.

Roles of the teacher

The Norms and Standards for Educators (2000) identifies seven different roles of an educator:

- 1- Mediator
- 2- Designer of learning programmes
- 3- Administrator
- 4- Scholar
- 5- Pastoral
- 6- Assessor
- 7- Learning area/phase specialist

Mediator

The role of mediator was promoted by Stich and Roth (2010), as teachers who mediate the various systems that constitute their class were better prepared to understand their students and avoid potential violence. It was also noted, that it is important to see these conflicts and contradictions as opportunities for change and improvement rather than as problems to be erased. Apart from acting as a mediator in the classroom, teachers also act as mediators when it comes to implementing new policies or practices as shown by Brain et al. (2006). Major (2006) found that teachers can also act as cultural mediators whose practices support minority students, helping them adjust to American school culture and develop their own social identity while maintaining their own cultural identity and connection with their home language and culture. We are often faced with situations which require an integration of both the English language - the language of instruction in the school - and Arab culture which influences many aspects of students' lives. We have the advantage of being bilingual (speaking both English and Arabic), and having lived in the Middle East for many years. Both factors are highly useful when dealing with cultural issues.

Designer

Ellis *et al.*, (2008, p-117), noted that "approaches to design, which are pragmatically orientated and aim at adding things on, tend to be related to approaches to teaching that involve trial and error and are yet to develop a more holistic approach to their use. In contrast, those approaches to design that encourage active learning and applied understanding, tend to be related to approaches to teaching which integrate experiences of learning across face-to-face and on-line contexts in which students are able to develop autonomy." When designing a programme of study, there are many factors one must consider. We can assume based on what Ellis (2008) found, that when designing a practical programme we should look at teaching methods involving trial and error, for example a chemistry lab course; whereas, when designing a programme which encourages individual learning, we should examine methods which encourage students to work independently, such as distance learning courses.

Administrator

When looking at an administrative role, teachers have varying opinions. Some consider teaching a stepping stone to climbing the administrative ladder; whereas, others seem to forgo the teaching experience altogether. Gurr *et al.* (2011) noted that successful school leaders from both Australia and the US reported that it was a combination of personal experience and formal and informal learning that helped them to develop as successful school leaders. One of the main contributing factors to their success was their dispositions that promoted continuous learning; they themselves were learners with a thirst for knowledge who were personally responsible for their professional growth. The administrative role of a teacher is one which requires experience. A teacher hoping to rise "through the ranks" and advance to an administrative position must first ensure that they have enough experience within the classroom, or risk making serious administrative mistakes due to a lack of practical experience. From a personal view point, experience as an English teacher has given the researchers increased confidence in their skills and an awareness of modifications which could be made to improve learning amongst the students. By consistently looking for opportunities to improve and implement new ideas, we were able to prove ourselves in the workplace.

Scholar

Research is an important part of and academics life. The role of scholar may include writing up case studies, carrying out surveys or literature review. There are various reasons one might undertake scholarly writing; a thirst for knowledge (as in the case of literature review) a desire to share knowledge (as in the writing of case studies), or even to further their careers by increasing the number of published papers they might have. The problem many educators face when undertaking such scholarly pursuits however, is that of time. Nevertheless, as stated by Carroll (2003), it is important to remind ourselves of the value of research in the professional lives of teachers, specifically, if it enhances the overall performance of the teacher which may lead to better time management.

Pastoral

Promoting and monitoring students' school attendance sharing concerns about children who might be at risk of "significant harm", helping parents access support and services for "children in need" and understanding the role of key professionals, both within and from outside the school, all fall under the heading of pastoral care. Whitney (2006), noted that being healthy, staying safe and enjoying and achieving all have a direct impact on education. According to Eade (2006), in Britain, primary school teachers usually act in both an academic and pastoral role, whereas in France and central Europe, the teacher's focus is mainly on the academic aspects, with pastoral work being delegated to someone else. The pastoral role of the teacher therefore, is highly important as a means of ensuring a positive academic outcome.

Assessor and learning area/phase specialist

In order to determine learning outcomes, teachers use various means of assessing their students; written exams, oral exams, classroom discussions, research papers, the list is endless. Pope *et al.*, (2009) highlighted the importance of ethics in the assessment process. The average educator spends a great deal of time preparing and correcting assessment papers. Stiggins (2001), reported that teachers in the United States may spend up to as much as one third of their time in assessment-related activities. A problem that has been highlighted by Shafer (1993), however is that educators often lack any formal training in methods of student assessment. This is a cause for concern, which has been noted by researchers in Canada,

Volante and Fazio (2007) and in Taiwan, Wang *et al.*, (2008). O'Leary (2008) noted there was a need for an increased focus on professional development in assessment in the U.K.

When teaching any subject, it is essential that the teacher has good understanding and knowledge of their subject. Kind (2009), found that teachers with more knowledge of their subject matter tended to have greater self-confidence which lead to better teaching skills and more successful teachers.

Teaching styles

Five main styles of teaching were described by Grasha (1996); expert, formal authority, personal model, facilitator and delegator.

Expert

The expert possesses both the knowledge and expertise that students need. Experts try to maintain their status as such amid students by presenting detailed knowledge and by challenging students to improve their abilities. Experts are concerned with passing on information and insuring that students are well prepared. This style has the advantage that individuals possess vast amounts of information, knowledge, and skills. A disadvantage may be that if overused, the display of knowledge can be daunting to less experienced students. It may not always show how the answers were produced, i.e. the thought processes that were involved are not apparent.

Formal authority

The formal authority teaching style means a teacher possesses status among students because of both the knowledge they possess and their position as a staff member. They have many responsibilities, including providing positive and negative feedback, establishing learning goals, expectations, and rules of conduct for students. They are mainly concerned with the correct, acceptable, and standard ways to do things and with providing students with the structure they need to learn. The advantages of this style of learning is that there the focus in on clear expectations and acceptable ways of doing things. A disadvantage however may be that when used to excess this style can lead to rigid, standardized, and less flexible ways of managing students and their concerns.

Grasha (1994) found that when there is an emphasis on both the expert and formal authority styles of teaching is it sends a message to students that "I'm in charge here." and

creates a neutral or "cool" emotional climate. Grasha (1994), also found the expert/formal authority blend to be popular among teachers when classes were large and where there was time pressure to cover material. Teachers also preferred these styles because they provided an acceptable way to "go through the motions" of teaching courses they disliked.

Personal model

Using a personal model as a teaching style has an emphasis on direct observation and following a role model. A personal model involves "teaching by personal example" establishes a prototype for how to think and behave. The teacher acts to oversee, guide and direct students on how to do things and encourages them to emulate the instructor's approach. A disadvantage of this style is that some teachers might consider their approach to be the best, causing some students to feel inadequate if they are unable to achieve such expectations and standards.

Facilitator

A facilitator emphasizes the personal nature of teacher-student interactions. They act as a guide by directing students. They do this by asking them questions, exploring their options while suggesting alternatives, and then encourage them to formulate criteria in order to make informed choices. Their main objective is to help students enhance their ability for independent action, initiative, and responsibility. A facilitator works alongside students on tasks in role of consultant and thus provide as much support and encouragement as they can. Their flexibility when it comes to dealing with an individual's needs and objectives and their willingness to examine other options make is a big advantage to this style of teaching. The main drawback of this style is that is it very time consuming. According to Grasha (1994), a facilitator sends a message to students that "I'm here to consult with you on the projects and issues you are exploring." The very nature and quality of the interactions are different. This is because instead of working independently, students work with the teachers to share information and are able to openly express their views. There are also, less obvious boundaries between teachers and students.

Delegator

The delegator style of teaching is mainly concerned with developing students' ability to work in an independent fashion. Students work alone on assignments or as part of

autonomous teams. The teacher is only available at the request of students as a resource person. The main advantage of this style is that it helps students to perceive themselves as independent learners. There are a couple of disadvantages to this style, namely, the teacher may misread student's readiness for independent work and some students do not work well independently, and may become anxious when asked to work alone. The important effects of teaching behaviour and teaching styles, and their benefits on student learning have been demonstrated by Centra and Potter (1980) and Wentzel (2002).

Conclusion

Learning is a complex process by which we are able to convert information and experience into knowledge, skills, behaviours, and attitudes. Illeris (2000, p-3) broadly defines learning as "any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or aging." The various learning theories help to explain how we learn. There are also many methods of teaching which have been shown to provide positive results. We must also note the many different roles of a teacher and the importance of each one; each role serves as a means to achieve learning outcomes. Different teachers have various styles of teaching and some stick to the same techniques time and time again; however, the most effective teaching method involves changing one's teaching style to suit the situation and individual needs. The importance of teaching behaviour and the various teaching styles and the predicted benefits on student learning have been demonstrated.

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