Q.1 Are student characteristics necessary to know for effective teaching? If yes, then how?

Teachers enter the teaching profession to impart their knowledge and make a difference in a young persons' life. Teachers want students to succeed. The way this knowledge is imparted to a student will be dramatically different from one teacher to another. Being an effective teacher is not achieved instantly or "overnight", but simply by continual improvement and reassessing processes to achieve successful results. Within the classroom, teachers need to apply many practices to enable students to learn effectively and achieve maximum potential. Some of these essential characteristics of effective teaching will be discussed in this essay. The importance of providing a positive learning environment, creation of dynamic and effective lessons, flexible delivery through the use of a number of strategies, greatly increases the potential for students to achieve their maximum learning. An effective teacher will strive for the "Kaizen" and to be successful in improving student learning outcomes. Teaching Skills. Tagged as a noble profession that can change the lives of students for the better, every effective teacher requires good inter-personal skills along with effective speaking and strong presentation skills. Teaching skills include all of these and more… such as great organizational skills. For students to achieve their maximum learning potential, teachers must implement and deliver effective lessons. These lessons not only must link to the relevant Australian Curriculum Assessment and Reporting Authority (ACARA) strand, but must also be delivered successfully. Students will learn if the plan is motivating and interesting, and teachers must match teaching strategies to the learning plan objectives. An effective teacher is one who reflects on their knowledge of how best to develop a lesson plan that is engaging and exciting, and will deliver the appropriate knowledge in the best possible way to the student. An effective lesson plan may reflect a number of teaching characteristics – delivery of teaching and learning strategies, behaviour management and the classroom environment. These are all reflected in Appendix One – Lesson Plan. It demonstrates a number of elements to gain student interest and ensure effective involvement. These are detailed further in the essay. Teaching strategies such as Constructivism, direct instruction, effective questioning are used to ensure the ACARA Science strand ACSSU080, is delivered in the most effective way.

To be an effective teacher, a teacher must establish strategies for students to feel the sense of belonging within the classroom. Providing a positive and inclusive learning environment enables the student to feel safe and secure. Students with this sense of belonging are more likely to respond with appropriate behaviours and play an active part in class participation rather than against the teacher. A positive relationship must be formed between teacher and student, and to establish this relationship respect from the student must be gained. To gain this respect however, the teacher must first show respect, students must feel accepted and their contributions valued. The teacher must show a positive and genuine concern in the students' interests and display positive affirmations and recognition of a students' contribution, not dismissal - even if the answer to a question is incorrect. A genuine greeting by a teacher after an absence is one example of how to encourage students.

Compassion, empathy and patience are also attributes for a successful student/teacher relationship. (Killen, R., 2005, p. 34) All students achieve at different rates and a teacher must be patient and persistent for these students to succeed. Teachers need to be confident in their own knowledge and enthusiastic when presenting their lesson. Teachers who deliver their material in this manner, are more likely to succeed in motivating their students. (Killen, 2005, p. 33) In the Science – Modelling Light video, students were continually shown respect by the teacher. In response to student's answers, the teacher gave positive remarks in return showing she valued their input – ie: "That's a really good explanation." . (Neil, n.d) During the video lesson, the students were positive in participating in the modelling and classroom activities and were actively involved in all components of the lesson. In Appendix One hands-on shared experience, while moving from group to group as detailed. The teacher may show praise and positive reinforcement with verbal comments such as "Great team work everyone. You are working so well as a group."

A number of classroom environment factors influence the successful learning of students and are important for effective teaching. Consideration of: desk and furniture placements; accessibility of high traffic areas; floor space; reducing noise; room temperature; and seating arrangements must be given high priority and should be reviewed depending on the teaching task at hand. The classroom environment must facilitate the teaching rather than impede it. (Marsh, 2010, p. 72) Group work activities may require desks to be joined together or pushed to a side to maximise student participation and group involvement. This would need to be considered in Appendix One during the shared experience activity.

A positive learning environment results in positive classroom behaviour. A teacher must display proactive classroom management. How a student behaves and acts, is determined by the influences on his/her life, namely: family (care, stresses, parental attitudes to education), peer (social prejudices and authority), personal (personality, learning styles, social) and school (communications, leadership), all of which have a dramatic effect on a student's behaviour. Teachers must be considerate of those influences and the effects they have within the classroom, and minimize factors which may increase the angst that a student may feeling. Students will feel secure if they know the classroom is consistently a positive and safe environment.

Q.2 Elaborate moral development with the help of different theories.

Moral development focuses on the emergence, change, and understanding of morality from infancy through adulthood. Morality develops across a lifetime and is influenced by an individual's experiences and behavior when faced with moral issues through different periods of physical and cognitive development. Morality concerns an individual's reforming sense of what is right and wrong; it is for this reason that young children have different moral judgment and character than that of a grown adult. Morality in itself is often a synonym for "rightness" or "goodness." It refers to a specific code of conduct that is derived from one's culture, religion, or personal philosophy that guides one's actions, behaviors, and thoughts.[1]

Notions of moral development have evolved over the centuries. The earliest theories came from philosophers like Confucius, Aristotle, and Rousseau, who took a more humanist perspective and focused on developing the conscience and sense of virtue. In the modern-day, empirical research has explored morality through a moral psychology lens by theorists like Sigmund Freud and its relation to cognitive development by theorists like Jean Piaget, Lawrence Kohlberg, B. F. Skinner, Carol Gilligan, and Judith Smetana.

The interest in morality spans many disciplines (e.g., philosophy, economics, biology, and political science) and specializations within psychology (e.g., social, cognitive, and cultural). In order to investigate the different ways individuals understand morality, it is essential to consider their culture, beliefs, emotions, attitudes, and behaviors that contribute to their moral understanding. Additionally, researchers in moral development consider the role of peers and parents, conscience and values, socialization and cultural influences, empathy and altruism, and positive development to discover what factors have the most significant impacts on the development of an individual's morality.

Historically, socialization theories have conceptualized moral development primarily in terms of children's internalization and compliance with adult and societal rules and requests, although they differ in their view of the role of emotions and affect in this process. Approaches emphasizing morality's affective components have their roots in the psychoanalytic tradition of Sigmund Freud. In line with his broader theory of psychosexual development, Freud believed that moral development entailed the internalization of societal standards through the child's identification with parents. This process resulted in the creation of the conscience, or the superego in Freudian terms, which functions as an internal regulator of behavior. The conscience inhibits the innate impulses and urges toward selfishness and aggression that, if left unchecked, would otherwise prevent humans from living in society. From this perspective, aversive emotions such as guilt, shame, and anxiety are thought to serve as the driving motivations for the child's successful inhibition of impulses and internalization of external norm

Kohlberg's theory of moral development is a theory that focuses on how children develop morality and moral reasoning. Kohlberg's theory suggests that moral development occurs in a series of six stages. The theory also suggests that moral logic is primarily focused on seeking and maintaining justice. What Is Moral Development? Kohlberg based his theory on a series of moral dilemmas presented to his study subjects. Participants were also interviewed to determine the reasoning behind their judgments in each scenario.[5]

One example was "Heinz Steals the Drug." In this scenario, a woman has cancer and her doctors believe only one drug might save her. This drug had been discovered by a local pharmacist and he was able to make it for $200 per dose and sell it for $2,000 per dose. The woman's husband, Heinz, could only raise $1,000 to buy the drug.

He tried to negotiate with the pharmacist for a lower price or to be extended credit to pay for it over time. But the pharmacist refused to sell it for any less or to accept partial payments. Rebuffed, Heinz instead broke into the pharmacy and stole the drug to save his wife. Kohlberg asked, "Should the husband have done that?"

Kohlberg was not interested so much in the answer to whether Heinz was wrong or right but in the reasoning for each participant's decision. He then classified their reasoning into the stages of his theory of moral development.[6]

Stages of Moral Development

Kohlberg's theory is broken down into three primary levels. At each level of moral development, there are two stages. Similar to how Piaget believed that not all people reach the highest levels of cognitive development, Kohlberg believed not everyone progresses to the highest stages of moral development.

Level 1. Preconventional Morality

Preconventional morality is the earliest period of moral development. It lasts until around the age of 9. At this age, children's decisions are primarily shaped by the expectations of adults and the consequences for breaking the rules. There are two stages within this level:

- **Stage 1 (Obedience and Punishment)**: The earliest stages of moral development, obedience and punishment are especially common in young children, but adults are also capable of expressing this type of reasoning. According to Kohlberg, people at this stage see rules as fixed and absolute.[7] Obeying the rules is important because it is a way to avoid punishment.

- **Stage 2 (Individualism and Exchange)**: At the individualism and exchange stage of moral development, children account for individual points of view and judge actions based on how they serve individual needs. In the Heinz dilemma, children argued that the best course of action was the choice that best served Heinz's needs. Reciprocity is possible at this point in moral development, but only if it serves one's own interests.

Level 2. Conventional Morality

The next period of moral development is marked by the acceptance of social rules regarding what is good and moral. During this time, adolescents and adults internalize the moral standards they have learned from their role models and from society.

This period also focuses on the acceptance of authority and conforming to the norms of the group. There are two stages at this level of morality:

- **Stage 3 (Developing Good Interpersonal Relationships)**: Often referred to as the "good boy-good girl" orientation, this stage of the interpersonal relationship of moral development is focused on living up to social expectations and roles.[7] There is an emphasis on conformity, being "nice," and consideration of how choices influence relationships.

- **Stage 4 (Maintaining Social Order)**: This stage is focused on ensuring that social order is maintained. At this stage of moral development, people begin to consider society as a whole when making judgments. The focus is on maintaining law and order by following the rules, doing one's duty, and respecting authority.

Level 3. Postconventional Morality

At this level of moral development, people develop an understanding of abstract principles of morality. The two stages at this level are:

- **Stage 5 (Social Contract and Individual Rights)**: The ideas of a social contract and individual rights cause people in the next stage to begin to account for the differing values, opinions, and beliefs of other people.[7] Rules of law are important for maintaining a society, but members of the society should agree upon these standards.

- **Stage 6 (Universal Principles)**: Kohlberg's final level of moral reasoning is based on universal ethical principles and abstract reasoning. At this stage, people follow these internalized principles of justice, even if they conflict with laws and rules.

Kohlberg believed that only a relatively small percentage of people ever reach the post-conventional stages (around 10 to 15%).[7] One analysis found that while stages one to four could be seen as universal in populations throughout the world, the fifth and sixth stages were extremely rare in all populations.[8]

Criticisms

Kohlberg's theory played an important role in the development of moral psychology. While the theory has been highly influential, aspects of the theory have been critiqued for a number of reasons:

- **Moral reasoning does not equal moral behavior**: Kohlberg's theory is concerned with moral thinking, but there is a big difference between knowing what we ought to do versus our actual actions. Moral reasoning, therefore, may not lead to moral behavior.

- **Overemphasizes justice**: Critics have pointed out that Kohlberg's theory of moral development overemphasizes the concept of justice when making moral choices. Factors such as compassion, caring, and other interpersonal feelings may play an important part in moral reasoning.[9]

- **Cultural bias**: Individualist cultures emphasize personal rights, while collectivist cultures stress the importance of society and community. Eastern, collectivist cultures may have different moral outlooks that Kohlberg's theory does not take into account.

- **Age bias**: Most of his subjects were children under the age of 16 who obviously had no experience with marriage. The Heinz dilemma may have been too abstract for these children to understand, and a scenario more applicable to their everyday concerns might have led to different results.

- **Gender bias**: Kohlberg's critics, including Carol Gilligan, have suggested that Kohlberg's theory was gender-biased since all of the subjects in his sample were male.[10] Kohlberg believed that women tended

to remain at the third level of moral development because they place a stronger emphasis on things such as social relationships and the welfare of others.

Gilligan instead suggested that Kohlberg's theory overemphasizes concepts such as justice and does not adequately address moral reasoning founded on the principles and ethics of caring and concern for others.

Q.3 Define Cognition. Discuss the processes of assimilation and accommodation proposed by jean Piaget

Cognition refers to the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. It encompasses many aspects of intellectual functions and processes such as: perception, memory and working memory, judgment and evaluation, reasoning and computation, problem solving and decision making, comprehension and production of language. Cognitive processes use existing knowledge and discover new knowledge. Cognitive processes are analyzed from different perspectives within different contexts, notably in fields of linguistics, education, philosophy, anthropology, biology, systemic, logic, and computer science. These and other different approaches to the analysis of cognition are synthesized in the developing field of cognitive science, a progressively autonomous academic discipline. Assimilation and Accommodation are two basic components of Jean Piaget's theory of **cognitive development**. According to Piaget's theory, a child's intellectual growth is a result of adaptation. Assimilation and accommodation are two complementary processes of adaptation. Assimilation and Accommodation are two basic components of Jean Piaget's theory of cognitive development. According to Piaget's theory, a child's intellectual growth is a result of adaptation. Assimilation and accommodation are two complementary processes of adaptation. It is important to understand the key concept of schema in this theory, before moving on to the difference between assimilation and accommodation. A schema refers to both mental and physical actions in understanding and knowing. In Cognitive development theory, a schema includes both a category of knowledge and the process of obtaining that knowledge. The process by which new information is taken into the previously existing schema is known as assimilation. Alteration of existing schemas or ideas as a result of new knowledge is known as accommodation. Therefore the **main difference** between assimilation and accommodation is that in **assimilation**, **the new idea fits in with the already existing ideas** while, in **accommodation**, **the new idea changes the already existing ideas.**

What is Assimilation

Assimilation is an adaptation process by which new information is taken into the previously existing schema. This is how humans perceive and adapt to new ideas. Here, the learner fits the new idea into what he already knows. For example, a small child may have a schema about a type of animals. The child's only experience with dogs is their pet dog, and he knows that dogs have four legs. One day this child sees another dog. He identifies the new animal as a dog based on his previous knowledge of his dog. Labeling it as a dog is an example of assimilating the animal into the child's dog schema.

Assimilation occurs when someone makes use of the pre-existing knowledge to make sense of the new knowledge. Therefore, we can say that assimilation tends to be subjective.

Accommodation

Accommodation is the process by which pre-existing knowledge is altered in order to fit in the new information. A new schema might be created in this process. This happens when the existing knowledge is not accurate. For example, a child knows that a dog has four legs. When the child sees a horse for the first time, he calls it dog as it has four legs. He fits in the new animal with the existing knowledge; this is assimilation. But an adult points out that it is a horse, not a dog; then the child alters his knowledge that all four-legged animals are not dogs. It is important to note that both assimilation and accommodation are interrelated processes and are vital to the intellectual growth of a human.

Q.4 Learning is the modification of behavior'. Example

Behavior modification is a treatment approach that replaces undesirable behaviors with more desirable ones by using the principles of operant conditioning. Based on methodological behaviorism,[1] overt behavior is modified with consequences, including positive and negative reinforcement contingencies to increase desirable behavior, or administering positive and negative punishment and/or extinction to reduce problematic behavior.[2] [3][4]

Applied behavior analysis (ABA)—the application of behavior analysis—is based on radical behaviorism, which refers to B. F. Skinner's viewpoint that cognition and emotions are covert behavior that are to be subjected to the same conditions as overt behavior.

The first use of the term behavior modification appears to have been by Edward Thorndike in 1911. His article Provisional Laws of Acquired Behavior or Learning makes frequent use of the term "modifying behavior".[5] Through early research in the 1940s and the 1950s the term was used by Joseph Wolpe's research group.[6] The experimental tradition in clinical psychology used it to refer to psycho-therapeutic techniques derived from empirical research.[7] It has since come to refer mainly to techniques for increasing adaptive behavior through reinforcement and decreasing maladaptive behavior through extinction or punishment (with emphasis on the former).

In recent years, the concept of punishment has had many critics, though these criticisms tend not to apply to negative punishment (time-outs) and usually apply to the addition of some aversive event. The use of positive punishment by board certified behavior analysts is restricted to extreme circumstances when all other forms of treatment have failed and when the behavior to be modified is a danger to the person or to others (see professional practice of behavior analysis). In clinical settings positive punishment is usually restricted to using a spray bottle filled with water as an aversive event. When misused, more aversive punishment can lead to affective (emotional) disorders, as well as to the receiver of the punishment increasingly trying to avoid the punishment (i.e., "not get caught")..

Some areas of effectiveness

Functional behavior assessment forms the core of applied behavior analysis. Many techniques in this therapy are specific techniques aimed at specific issues. Interventions based on behavior analytic principles have been extremely effective in developing evidence-based treatments.[8]

In addition to the above, a growing list of research-based interventions from the behavioral paradigm exist. With children with attention deficit hyperactivity disorder (ADHD), one study showed that over a several-year period, children in the behavior modification group had half the number of felony arrests as children in the medication group.[9][10] These findings have yet to be replicated, but are considered encouraging for the use of behavior modification for children with ADHD. There is strong and consistent evidence that behavioral treatments are effective for treating ADHD. A recent meta-analysis found that the use of behavior modification for ADHD resulted in effect sizes in between group studies (.83), pre-post studies (.70), within group studies (2.64), and single subject studies (3.78) indicating behavioral treatments are highly effective.[11]

Behavior modification programs form the core of many residential treatment facility programs. They have shown success in reducing recidivism for adolescents with conduct problems and adult offenders. One particular program that is of interest is teaching-family homes (see Teaching Family Model), which is based on a social learning model that emerged from radical behaviorism. These particular homes use a family style approach to residential treatment, which has been carefully replicated over 700 times.[12] Recent efforts have seen a push for the inclusion of more behavior modification programs in residential re-entry programs in the U.S. to aid prisoners in re-adjusting after release.

One area that has repeatedly shown effectiveness has been the work of behaviorists working in the area of community reinforcement for addictions.[13] Another area of research that has been strongly supported has been behavioral activation for depression.[14]

One way of giving positive reinforcement in behavior modification is in providing compliments, approval, encouragement, and affirmation; a ratio of five compliments for every one complaint is generally seen as being effective in altering behavior in a desired manner[15] and even in producing stable marriages.[16]

In job performance

Based on the conceptual premises of classical behaviorism and reinforcement theory, the Organizational Behavior Modification Model (aka O.B. Mod) represents a behavioral approach to the management of human resources in organizational settings.[17] The application of reinforcement theory to modification of behavior as it relates to job performance first requires analysis of necessary antecedents (e.g., job design, training) of the desired behavior.[17] After it has been determined that the necessary antecedents are present, managers must first identify the behaviors to change. These behaviors must be observable, measurable, task-related, and critical to the task at hand. Next, a baseline measure of the behavior must be assessed and functional consequences analyzed.[17] Now that the link between the antecedent, behavior, and contingent consequences has been

established, an intervention to change the behavior can be introduced. If the intervention is successful in modifying the behavior, it must be maintained using schedules of reinforcement and must be evaluated for performance improvement.[17] The O.B. Mod has been found to have a significant positive effect on task performance globally,[17][18] with performance on average increasing 17%.[19]

A study that examined the differential effects of incentive motivators administered with the O.B. Mod on job performance found that using money as a reinforcer with O.B. Mod was more successful at increasing performance compared to routine pay for performance (i.e., money administered on performance not using O.B. Mod).[20] The authors also found that using money administered through the O.B. Mod produced stronger effects (37% performance increase), compared to social recognition (24% performance increase) and performance feedback (20% performance increase).

Criticism

Behavior modification is critiqued in person-centered psychotherapeutic approaches such as Rogerian Counseling and Re-evaluation Counseling,[21] which involve "connecting with the human qualities of the person to promote healing", while behaviorism is "denigrating to the human spirit".[22] B.F. Skinner argues in Beyond Freedom and Dignity that unrestricted reinforcement is what led to the "feeling of freedom", thus removal of aversive events allows people to "feel freer".[23] Further criticism extends to the presumption that behavior increases only when it is reinforced. This premise is at odds with research conducted by Albert Bandura at Stanford University. His findings indicate that violent behavior is imitated, without being reinforced, in studies conducted with children watching films showing various individuals "beating the daylights out of Bobo". Bandura believes that human personality and learning is the result of the interaction between environment, behavior and psychological process. There is evidence, however, that imitation is a class of behavior that can be learned just like anything else. Children have been shown to imitate behavior that they have never displayed before and are never reinforced for, after being taught to imitate in general.

Q.5 Define Conditioning. Explain the conditioning process explained by lvon Pavlov.

The process of training to become physically fit by a regimen of exercise, diet, and rest also : the resulting state of physical fitness : a simple form of learning involving the formation, strengthening, or weakening of an association between a stimulus and a response Pavlov had identified a fundamental associative learning process called **classical conditioning**. Classical conditioning refers to learning that occurs when a neutral stimulus (e.g., a tone) becomes associated with a stimulus (e.g., food) that naturally produces a behavior.

Pavlov's Dogs

In the early twentieth century, Russian physiologist Ivan Pavlov did Nobel prize-winning work on digestion. While studying the role of saliva in dogs' digestive processes, he stumbled upon a phenomenon he labeled "psychic reflexes." While an accidental discovery, he had the foresight to see the importance of it. Pavlov's dogs, restrained in an experimental chamber, were presented with meat powder and they had their saliva

collected via a surgically implanted tube in their saliva glands. Over time, he noticed that his dogs who begin salivation before the meat powder was even presented, whether it was by the presence of the handler or merely by a clicking noise produced by the device that distributed the meat powder.

Fascinated by this finding, Pavlov paired the meat powder with various stimuli such as the ringing of a bell. After the meat powder and bell (auditory stimulus) were presented together several times, the bell was used alone. Pavlov's dogs, as predicted, responded by salivating to the sound of the bell (without the food). The bell began as a neutral stimulus (i.e. the bell itself did not produce the dogs' salivation). However, by pairing the bell with the stimulus that did produce the salivation response, the bell was able to acquire the ability to trigger the salivation response. Pavlov therefore demonstrated how stimulus-response bonds (which some consider as the basic building blocks of learning) are formed. He dedicated much of the rest of his career further exploring this finding.

In technical terms, the meat powder is considered an unconditioned stimulus (UCS) and the dog's salivation is the unconditioned response (UCR). The bell is a neutral stimulus until the dog learns to associate the bell with food. Then the bell becomes a conditioned stimulus (CS) which produces the conditioned response (CR) of salivation after repeated pairings between the bell and food.

Stage 1: Before Conditioning:

In this stage, the unconditioned stimulus (UCS) produces an unconditioned response (UCR) in an organism.

In basic terms, this means that a stimulus in the environment has produced a behavior / response which is unlearned (i.e., unconditioned) and therefore is a natural response which has not been taught. In this respect, no new behavior has been learned yet.

For example, a stomach virus (UCS) would produce a response of nausea (UCR). In another example, a perfume (UCS) could create a response of happiness or desire (UCR).

This stage also involves another stimulus which has no effect on a person and is called the neutral stimulus (NS). The NS could be a person, object, place, etc.

The neutral stimulus in classical conditioning does not produce a response until it is paired with the unconditioned stimulus.

Stage 2: During Conditioning:

During this stage, a stimulus which produces no response (i.e., neutral) is associated with the unconditioned stimulus at which point it now becomes known as the conditioned stimulus (CS).

For example, a stomach virus (UCS) might be associated with eating a certain food such as chocolate (CS). Also, perfume (UCS) might be associated with a specific person (CS).

For classical conditioning to be effective, the conditioned stimulus should occur before the unconditioned stimulus, rather than after it, or during the same time. Thus, the conditioned stimulus acts as a type of signal or cue for the unconditioned stimulus.

In some cases, conditioning may take place if the NS occurs after the UCS (backward conditioning), but this normally disappears quite quickly. The most important aspect of the conditioning stimulus is the it helps the organism predict the coming of the unconditional stimulus.

Often during this stage, the UCS must be associated with the CS on a number of occasions, or trials, for learning to take place. However, one trail learning can happen on certain occasions when it is not necessary for an association to be strengthened over time (such as being sick after food poisoning or drinking too much alcohol).

Stage 3: After Conditioning:

Now the conditioned stimulus (CS) has been associated with the unconditioned stimulus (UCS) to create a new conditioned response (CR).