FUNDAMENTALS OF TEACHING

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Knowledge is Our Business

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By Nibedita Dash, Rashmi Mehrotra

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CONTENTS

CHAPTER 1

UNDERSTANDING LEARNING THEORIES

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ABSTRACT:

When developing a teaching strategy for a university, it's critical to understand what will likely work, when, and why. This chapter walks you through the intricate world of learning theories, which are explanations of how the process of learning works. To help you understand the consequences for teaching, it provides an introduction to the most important and prominent theories and details how these concepts have evolved and clashed. It defines words like "constructivism" and "behaviorism," which you might come across in literature on teaching and learning, and it examines recent advances in cognitive psychology and, more recently, neuroscience that look at how people process and recall information. Before moving on to significant writings on metacognition and "self" ideas that increasingly impact contemporary teaching strategies, we discuss the social influences on learning. Also reviewed are modern ideas of networked and distributed learning that apply to the internet era. In order to assist the reader in making an informed decision about whether or not a specific method is appropriate in a given situation, important criticisms of the various views, theories, and models are summarised throughout this chapter along with their influence and implications for teachers. The chapter concludes with ideas on how your increased understanding of learning as a process might be utilised to maximise efficient teaching designs, even if "theory" is sometimes perceived as being detached from actual practise in teaching.

KEYWORDS:

Behaviourism, Teaching Strategy, Teaching Model, Understanding Learning.

INTRODUCTION

Learning is the process through which we take in and analyse sensory information, store it as memories in the neural networks of our brains, and then access those memories when needed. These memories contain a vast array of knowledge, such as how to control your sphincter muscle until a socially acceptable occasion, how to recognize mommy in a crowd, how to ride a bicycle, how to get to grandmother's house the fastest without passing the wolf's den, what Beethoven's Ode to Joy's tune is, and what a philosopher means when she says "The cat is on the mat." All learning occurs within the brain, and as our knowledge of the brain's fundamental architecture and functions grows, we may start to use that information to enhance the design of learning environments.

Recent technological advancements and the collection of extensive research in both human and animal populations have improved our ability to define and comprehend the fundamental mechanisms by which our brain learns. The advancement of brain-imaging methods, which enable us to watch how typical human brains function while carrying out a variety of tasks, has been particularly useful. Researchers have been able to trace brain activity during sensory data processing and track the entry of information into long-term memory using MRI and related

technologies. The fundamental systems underlying the transfer of information within the brain have also made significant progress in research. Neuro-physiological models of learning have been made possible by such studies on brain structure, neuronal transmitters, and the method by which memories are stored and recovered [1], [2].

We still require prescriptive ideas on how to increase the effectiveness and capacity of human learning, despite the fact that neuroscience has given us an increasingly rich and accurate descriptive theory of learning inside the brain. All learning theories, to some extent, are prescriptive and aim to reduce the time needed to commit information to memory and increase the effectiveness of retrieval. Such prescriptive theories should aid in the creation of learning environments that provide for the highest levels of learning efficiency given our current understanding of the brain and our hypotheses regarding the evolutionary function of learning.

We should be able to assess the function of multimedia in learning environments in particular thanks to prescriptive theories based on our present understanding of neuroscience. Through the use of learning theories and our understanding of the human brain, we ought to be able to maximise the effects of multimedia in such settings. In the framework of institutionalized public education, learning environments should not be limited to the traditional formal classroom. As communication and information technology continue to permeate Western society, these environments can be found in the workplace, the family, and other social institutions. We should be mindful that the usage of multimedia will affect how the human brain develops, especially when such techniques are applied to children and adolescents whose brains are still growing and maturing. The purpose of this essay is to provide a brief critical assessment of the literature on learning theories. Despite all the hype, there is a startling lack of focus on concerns relevant to its definition and process, thus this still matters [3], [4].

DISCUSSION

Review of The Documents and Learning Theories

The following responses grouped into five broad kinds of learning were the result of an intriguing study by Säljö on what adult students understood by learning and threw more light on the foregoing in an empirical sense.

1. Learning as an increase in knowledge on a quantitative scale. Learning is gaining knowledge, or "knowing a lot."
2. Memorization as learning. Learning is the process of retaining information that may be reused.
3. Acquiring knowledge, abilities, and techniques that can be retained and applied when required.
4. Learning is the creation of meaning or its abstraction. Learning entails making connections between different academic areas and the outside world.
5. Learning as a new way of perceiving and comprehending reality.

Learning entails reinterpreting knowledge in order to understand the world. The author said that concepts 1 to 3 reflect a less complex view of learning because the ideas are obviously divergent. Learning is something that happens outside of the learner; people go out and purchase knowledge. Conceptions 4 and 5 focus on the 'internal' or personal part of learning, and it seems that learning is something that one undertakes in order to comprehend the outside world. Learning is the process

by which change in behaviour, knowledge, abilities, etc. occurs through practise, instruction, or experience, according to Richards, Jack C., and Schmidt, Richard (2010: 657), and it is also the end consequence of this process. The author draws the following conclusions about learning from the two sources mentioned above:

a. A change in behavior brought about by practise or experience.
b. The process of learning.
c. Education-based knowledge.
d. To become knowledgeable or skilled in something by education, training, experience, or other means.
e. The method of learning new things.
f. A procedure used to modify, mould, or regulate behaviour.
g. The process through which an individual builds understanding based on experience from a variety of sources.

Behaviourism in education

1. Praise and criticism
2. The teacher bears sole responsibility for the education of the students.
3. Intensively planned lectures.

Analysis of behaviourism

1. Does not take into account mental activities that cannot be seen.
2. Supporters of passive learning for students in a teacher-centered setting
3. Universal size
4. Knowledge is inherent and unchangeable.
5. Computerized instruction and teacher validation.

Nativism

The nativist theory addresses the biological viewpoint that infants are born with the ability to speak. Noam Chomsky, a researcher, is a strong supporter of this hypothesis. He proposed the concept of the Language Acquisition Device (LAD), a language organ. The hypotheses of Chomsky have been refuted by other scholars [5], [6]. Perhaps the most well-known and influential linguist of the second half of the 20th century is Noam Chomsky. He has made a number of compelling arguments regarding language, most notably that it is an intrinsic talent, meaning that humans are born with what he refers to as the "Universal Grammar" of laws governing language. All human languages are built on the universal grammar. A Martian linguist who came to Earth would conclude from the evidence that there was just one language, with numerous regional varieties. Chomsky cites a variety of arguments in favour of this. The ease with which youngsters pick up their mother tongue is one of the most crucial of these factors. If kids learned their language the same way they learn maths or how to ride a bike, he says, it would be nothing short of a miracle. This, he claims, is the result of:

1. Children's exposure to properly structured language is extremely limited. People frequently change their thoughts while they're talking, interrupt themselves stumble over their words, and so on. However, kids still manage to learn their language.
2. Kids don't just mimic what they hear around them in terms of language.

From that, they derive principles that they can employ to construct previously unheard sentences. As opposed to what behaviourists assume, they learn a grammar that creates an infinite number of new sentences rather than a repertory of phrases and sayings [7], [8].

Limitations

The rate of language development is slower than predicted by nativist theories. It progresses more gradually. The numerous languages that are spoken around the world are also not taken into account by this idea.

Cognitivism

1. Developed in reaction to behaviourism
2. Symbols are used to cognitively store knowledge.
3. Making meaningful and memorable connections between symbols is the process of learning.
4. Research on the mental operations that support symbol linkage
5. Anyone can learn anything at any age, according to Bruner, as long as it is explained in terms they can grasp.
6. David Ausubel's Meaningful Verbal Learning
7. The planners in advance:

a. New information is provided methodically and meaningfully tied to pre-existing cognitive processes.
b. Return to the concrete anchors (Advance Organisers) when students struggle with new material. Give them a Discovery approach, and they will pick it up.

Learning through cognitivism

1. Projects centred on inquiry
2. Possibilities for hypothesis testing
3. Encourage curiosity
4. Staged rigging

Objections to cognitivist

1. Similar to behaviourism, knowledge is predetermined and unchangeable
2. The input-process-output model is deterministic and mechanical.
3. Does not give enough consideration to individuality
4. There is not enough focus on emotional traits
5. Does not sufficiently take into account uniqueness and variations in developmental stages.
6. Little focus is placed on emotive qualities, particularly motivation.

Theory of Social Learning (SLT)

According to research, the following elements affect how effectively people learn from models:

1. How much power the model appears to have.
2. How capable the model appears
3. How nurturing (caring) the model appears to be
4. How closely the learner views themselves and the model
5. The quantity of models the student views

Identification with the model is established and strengthened through four interconnected processes:

1. Children aspire to emulate the role model
2. Kids think they look like the model
3. Children feel the same feelings that the model does.
4. Kids imitate the model.

Children begin to assume they share the traits of the model as a result of identification.

a. Kids are happy and proud when they identify with a nurturing and capable role model.
b. Children experience unhappiness and insecurity when they identify with a poor role model.

SLT has drawbacks, including the following:

1. It ignores individuality, environment, and experience as mediating elements.
2. Postulates that rather than being active learners, students learn best when they are passive recipients of sensory stimuli.
3. Motivation and feelings are not seen as crucial or related to learning.

Consider the setting of a lab, for instance. Doing the lab yourself or seeing a faculty person perform it, in your opinion, is more effective?

Community Construction

1. Was based on metacognition and emerged from and in response to cognitivism.
2. Knowledge is created actively
3. Education is a learner's search for meaning, contextualized learning, an activity that is by its very nature social, and dialogic and iterative.
4. The learner's accountability.

Zone of Proximal Development for Social Learning

Individuals actively create information in light of and in relation to their earlier experiences, the learning context, their own personal motivations, and their views, attitudes, and prior knowledge. Consider a lab where, rather than just watching it be done, the student actively conducts the experiment under the guidance of the instructor, pushing them to the limits of their knowledge and beyond.

Dialogic: The main emphasis is on verbal and written dialogue. Recursive learning builds on earlier knowledge scaffolding [9], [10].

CONCLUSION

The importance of learning theories stems from their ability to "help us understand both how knowledge is created and how people learn" 2017's Harasim. François (2019) contends that ideas can primarily be evaluated by how useful they are to educational practice, even though evaluating theories does not always involve determining whether they are correct or incorrect. To plan, create, and deliver successful teaching and learning experiences, teachers use learning theories, related pedagogical approaches, and technologies whether they are aware of it or not. Knowing that our theoretical starting points will influence our teaching methods, learning technology we use, and

the types of activities we offer to our students is important as we design for learning. The following article in this series is an interactive learning theories timeline that traces the development of the nine theories I am concentrating on across time. This timeline emphasises important theoretical concepts and offers references to important books and academic publications.

REFERENCES:

[1] K. V. Mann, "Theoretical perspectives in medical education: Past experience and future possibilities," *Med. Educ.*, 2011, doi: 10.1111/j.1365-2923.2010.03757.x.

[2] D. w. Kilgore, "Understanding learning in social movements: A theory of collective learning," *Int. J. Lifelong Educ.*, 1999, doi: 10.1080/026013799293784.

[3] A. M. Langer, "Book Review: Understanding and promoting transformative learning: A guide to theory and practice," *J. Transform. Educ.*, 2017, doi: 10.1177/1541344617695885.

[4] A. K. Warren-Smith and P. D. McGreevy, "Equestrian coaches' understanding and application of learning theory in horse training," *Anthrozoos*, 2008, doi: 10.2752/175303708X305800.

[5] M. S. Rücker, "2017_How can an understanding of learning theories be used in the design of training-- A critical evaluation," *J. Hum. Resour. Manag.*, 2017.

[6] D. Kay and J. Kibble, "Learning theories 101: Application to everyday teaching and scholarship," *Adv. Physiol. Educ.*, 2016, doi: 10.1152/advan.00132.2015.

[7] M. Stewart, "Understanding learning: Theories and critique," in *University Teaching in Focus: A Learning-Centred Approach*, 2012. doi: 10.4324/9780203079690.

[8] S. Nalliah, "Applying the learning theories to medical education: A commentary," *Int. e-Journal Sci. Med. Educ.*, 2014, doi: 10.56026/imu.8.1.50.

[9] M. Taras, "Assessment for learning: Understanding theory to improve practice," *J. Furth. High. Educ.*, 2007, doi: 10.1080/03098770701625746.

[10] S. Dekhane and M. Y. Tsoi, "Designing a mobile application for conceptual understanding: Integrating learning theory with organic chemistry learning needs," *Int. J. Mob. Blended Learn.*, 2012, doi: 10.4018/jmbl.2012070103.

CHAPTER 2

EDUCATIONAL PSYCHOLOGY AND STUDENT DEVELOPMENT

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ABSTRACT:

The study of psychology as it relates to understanding students and learning settings is the focus of educational psychology. This chapter provides examples of how the discipline of educational psychology is significant in terms of psychological theory, research, and application. The five main areas of current educational psychology research and practise are: cognitive and regulatory contributions to learning, development, and instruction; sociocultural, instructional, and relational processes; applications in early education and curriculum; psychology in schools; and educational programme, research, and policy. Each represents a rich area of research on its own, and nearly all reflect the emergence of new paradigms, viewpoints, theories, and important conceptualizations in research over the previous 20 years. Although the subject of psychology known as educational psychology has a very broad scope, there are many commonalities that cut across its many different domains. These communalities imply a link that supports the richness and importance of educational psychology as a subject of scientific study. Applications to teacher education and training, the creation of protocols to improve classroom instruction and learning, how we motivate learners, and the integration of new technology into the classroom and beyond are the best ways to recognize the influence and impact of educational psychology research on society. These and other educational psychology applications are supported by empirically rigorous research methodologies used in the design of fundamental and applied experiments as well as field-based studies. Major concerns about the teaching of students in standard and special education environments are addressed by researchers in educational psychology. Policy and educational reform have benefited greatly from the contributions of the discipline of educational psychology. We anticipate that this significance will endure and even increase in the twenty-first century.

KEYWORDS:

Conceptualization, Educational Psychology, Education Curriculum, Psychological Theory, Student Development.

INTRODUCTION

Educational psychologists examine how variables including age, culture, gender, and the physical and social environments affect how people learn in both traditional classroom settings and those outside of them. To comprehend the emotional, cognitive, and social elements of human learning, they make use of educational theory and practise based on the most recent research in the field of human development. The development of programmes, curricula, and lessons as well as methods for managing the classroom can all be influenced by educational psychology. For instance, educators can employ ideas from educational psychology to comprehend and address how quickly developing technology both benefit and impair their students' ability to learn. Additionally, educational psychologists are crucial in informing administrators, instructors, and parents or guardians on the best practises for students who struggle with traditional teaching approaches. As psychologists, these individuals frequently collaborate with teachers, parents, and other carers to

enhance a child's learning outcomes. Although they can work in a range of settings, such as schools, community organisations, government research centres, and learning centres, educational psychologists can also pursue careers as researchers, consultants, and teachers [1], [2].

DISCUSSION

Long-term, multifaceted, and multifaceted personal changes are referred to as development. Instead of the difference between Kelvin's music from one week to the next, think about the contrast between his music at age five and fifteen. A person's ever-evolving capacity to "read" other people's moods, for example, may take a lifetime to fully mature. Some human developments are particularly broad and take years to emerge entirely. Other changes are quicker and more concentrated, such as a person's improving crossword puzzle-solving abilities. The likelihood that we will refer to a change as "learning" rather than "development" increases with how quickly and easily it occurs. The degree to which learning and development differ from one another. For instance, a youngster might not require a lot of time or a variety of experiences to acquire the names of the planets in the solar system. Therefore, it is perhaps preferable to see that specific experience learning the names of the planets as an illustration of learning as opposed to development.

Why Development Is Important

Teachers care about students' growth, but how much they care relies in part on how schools are set up. The advantages of understanding growth will be less obvious while teaching one "self-contained" grade level, but they will still be present. Working just with one grade (such, say, a third-grade classroom) brings out disparities amongst pupils despite their comparable ages and hides commonalities that arise as a result of those same ages. In these circumstances, it is still simple to observe the diversity of kids, but more challenging to determine how much of it stems from differences in long-term development as opposed to those in short-term experiences. However, it is still helpful to be aware of long-term changes when organising appropriate activities and setting reasonable expectations for kids. What student changes can you reasonably anticipate shortly from your current programme of activities, and which ones might take a year or longer to manifest? Developmental psychology can provide insight into this issue [3], [4].

Your need for developmental expertise will be more apparent if you teach numerous grade levels, as is frequently the case for specialists or teachers in middle or high school, because you will frequently encounter large age gaps. For instance, if you teach physical education, you might educate kindergarteners at one point in the day and sixth-graders at another, or you might teach seventh-graders at one point and twelfth-graders at another. Along with other differences like recent skill or knowledge acquisition, students' differences due to age will be more pronounced. The instructional difficulty, however, will be the same as it is for teachers of single-grade classes: you will need to know what assignments and expectations are suitable for your kids. You must have some understanding of both the overall tendencies in child and adolescent development as well as the specific characteristics that make each of your pupils unique in order to respond to this question.

Keep in mind that there are two key ways in which developmental trends differ. As was already mentioned, the first is in their generality. Some theories or models of development make the audacious claim that specific changes occur to almost everyone on the world, and frequently at very regular times throughout life. For instance, a theory can contend that almost every toddler

picks up a spoken language or that every adolescent develops a sense of self. Rare, although not necessarily handicapped, individuals would not go through these processes. Other theories just say that some people or specific circumstances result in developmental changes, which is a more constrained claim. For instance, only the females in a population develop a feminine gender role, and the specifics depend on the family, neighbourhood, or society that the child lives in [5], [6].

The strictness with which they are ordered and hierarchical is the second way that developmental patterns differ. Some theories of development hold that changes must occur in a certain sequence and build upon one another, sort of like a "staircase" model of development (Case, 1991, 1996). For instance, a developmental psychologist (as well as many of the rest of us) may contend that children must have concrete, hands-on experience with new things before they can reason about the items abstractly. The sequence cannot be changed. Other perspectives on development hold that change occurs, but not in a predictable manner or with a predetermined outcome. As opposed to a staircase, this kind of shift is more akin to a "kaleidoscope" (Levinson, 1990; Lewis, 1997; Harris, 2006). For instance, a person who develops a lifelong disability might go through intricate, long-lasting changes in their values and priorities that are unrelated to most people's growth processes in terms of both timing and content.

In general, educational psychologists have tended to place more emphasis on developmental explanations that are relatively general, universal, and sequential rather than explanations that are unique to particular cultures or that are unsequenced and kaleidoscopic. Such models sometimes referred to as "grand theories" have the benefit of succinctly integrating a variety of developmental aspects while also explaining the types of persons that kids or teenagers often mature into. Given that educators must successfully and efficiently engage with a large number of varied students, the preference for integrative perspectives makes logical. However, the strategy runs the risk of oversimplifying or overgeneralizing certain children's and youths' experiences. Additionally, it may conflate what should happen to children with what really occurs when some children (such as those from middle-class families) mature. Imagine two children who are roughly the same age but who had significantly different upbringings for instance, one who grew up in poverty and the other who grew up with plenty of money in order to grasp this idea. Can we say that as they become older, these two kids go through the same fundamental developmental changes? And to what extent should we even expect them to comply? Developmental psychology, and particularly its broad ideas, emphasise the "sameness" or shared characteristics of these two kids. As a result, it provides a contrast to knowledge of their obvious uniqueness and puts it into a broader context [7], [8].

Physical growth during the academic years

Physical development is a basis for many academic activities, despite the temptation to believe that physical education teachers are the only ones who should be concerned about it. For instance, it's crucial to understand whether kids can handle a pencil in first grade. Knowing how long pupils can be expected to remain still without feeling uncomfortable is crucial as they progress through the grades. In order to know who might get sick and with what sickness, and to know what physical activities are appropriate and necessary, it is crucial to have an understanding of the health needs of children in relation to their age or maturity in all grades.

Students' experiences with puberty

Puberty, the series of physical changes that occur in early adolescence and lead to sexual maturity, is a physical development that occurs to all adolescents. External changes like the development of

the breasts in girls and the penis in boys, as well as rather abrupt gains in height and weight, go hand in hand with internal changes in the reproductive organs. By around age 10 or 11, the majority of youngsters (often heterosexual, but not always) exhibit heightened sexual attraction to others, which has an impact on their social lives both within and outside of school. The conclusion of high school, more than half of boys and girls report having had at least one sexual encounter, while it is difficult to estimate the proportion due to the sensitive and private nature of the data.

Role differences intensify for at least some teenagers around the same time that puberty intensifies gender. For fear of losing their status or attractiveness as girls, some girls who excelled in math or science in primary school may temper their enthusiasm and demonstrations of achievement in these disciplines. Some males who had not previously shown a strong interest in sports may start to devote themselves to athletics in order to project a sense of masculinity to others. Some boys and girls who had successfully collaborated on class projects may no longer feel at ease doing so, or alternatively, they may now seek out collaborative partners for social as opposed to scholastic reasons. These changes don't effect every child equally, nor do they always affect any given child equally. An individual pupil might behave more like a child one day and like a young adult the next. Teachers must react adaptably and supportively to students who are going through puberty.

Motor skills development

When students enter kindergarten, their basic motor skills are already developing, though they are still not completely synchronised. In typically, five-year-olds can walk well enough for most school-related activities (if they couldn't, schools would need to be set up very differently!). Running may still resemble a rapid stroll for some five-year-olds, but after a year or two, it normally improves in coordination. The majority of kids can jump, throw, and catch when they first start school, albeit frequently awkwardly; however, they visibly develop these skills during the first few years of primary school. It is typically the responsibility of physical education teachers, where they exist, or classroom teachers, during defined physical education activities, to assist such developments. Whoever is in charge must take note if a child does not follow the typical developmental timeline more or less, and if necessary, make arrangements for a specific assessment or supports. Chapter 6 ("Special education") describes typical processes for making arrangements for assistance.

Although a teacher may not place a lot of emphasis on physical talents in the classroom, pupils may value them highly. Students who are clumsy are aware of this reality and how it may potentially harm their peers' esteem, regardless of their grade level. For a child who is clumsy, self-consciousness and low self-esteem may eventually set in, especially if peers, instructors, or parents place a great importance on physical performance. For instance, one study confirmed what several instructors and coaches already know: losers in athletic contests have a tendency to become less sociable and are more likely to miss following athletic practises than victors [9].

Wellness and ailment

Children and young people in economically developed cultures typically have very good health by global standards. Even yet, a lot relies on how wealthy families are and how much access they have to health care. Compared to children from lower-income families, children from higher-income families encounter considerably less serious or life-threatening illnesses. Parents and instructors often correctly observe that children especially the smallest ones get significantly more illnesses than do adults, regardless of their household status. For instance, according to a

government survey from 2004, adults only have about 2-4 colds year compared to children's average of 6 to 10 (National Institute of Allergies and Infectious Diseases, 2004). Children's immune systems are likely less developed than those of adults, and they are frequently exposed to other kids at school, many of whom may be contagious. These two factors account for the discrepancy. Teachers (along with airline flight attendants, interestingly) also report more frequent minor illnesses than do adults in general for example, roughly five colds per year instead of just. This is an indirect effect of children's frequent illness. Although the "simple" illnesses do not pose a life-threatening threat, they are still to blame for many missed school days for both students and teachers, as well as days when a student may be physically present but performs below par while concurrently infecting classmates. As a result, learning and instruction frequently suffer due of poor health.

The issue is not just the general occurrence of disease even in the United States, one person contracts a minor illness every few seconds in the winter but also the uneven distribution of illnesses among students, schools, and communities. Whether it's a simple cold or something more serious, disease is more prevalent in areas with congested living conditions, limited access to or the cost of health care, and environments where people experience regular stress of any type. These are frequently, but not always, the conditions of poverty [10].

Cognitive Development: Jean Piaget's Theory

The terms cognition and cognitive development both relate to the processes involved in thinking and memory. The cognitive stage theory of Swiss psychologist Jean Piaget is among the most well-known viewpoints on cognitive development. Piaget developed and researched an explanation of how children and young people eventually acquire the capacity for logical and scientific thought. We concentrate on his thesis in this chapter since it is particularly well-liked by educators. In later chapters, particularly Chapter 10 ("Facilitating complex thinking"), we shall examine alternative cognitive perspectives those that are not entirely "developmental."

We briefly discussed Piaget's psychological constructivist theory of learning in Chapter 3 (see "Psychological constructivism"). According to Piaget, learning progresses through the interaction of assimilation (fitting new experiences into existing concepts) and accommodation (fitting existing concepts into new experiences). As was mentioned in Chapter 1, the back and forth of these two processes results in both short-term learning as well as long-term developmental change. Piaget's cognitive theory particularly focuses on the long-term changes.

Birth through age two is the sensorimotor stage.

According to Piaget's hypothesis, the sensorimotor stage, which is the first, is when infants "think" using their senses and muscular movements. Infants constantly touch, manipulate, stare, listen, and even chew on objects, as any new parent can confirm. These activities, in accordance with Piaget, enable kids to learn about the outside world and are essential to their early cognitive development.

Infants can represent (or create simple notions of) objects and events through their activities. A kid may first experience a toy animal as merely a chaotic collection of sensations, but as she looks at, feels, and plays with it frequently, she progressively organises her sensations and actions into a stable notion, toy animal. The depiction gains a stability that is missing from the varied, ever-changing sensations of the item itself. Despite the toy animal being temporarily out of sight, the youngster "knows" or at least believes that it exists since the representation remains stable. This

sense of stability, which Piaget dubbed object permanence, is the conviction that things exist whether or not they are truly there. It is a significant milestone in sensorimotor development and represents a shift in the way older infants (24 months) conceptualise experience in comparison to younger infants (6 months).

Of all, a baby can't talk during the majority of infancy, therefore at first, sensorimotor development takes place without the aid of language. Because of this, it may appear difficult to understand what infants are thinking. However, Piaget came up with a number of straightforward yet ingenious experiments to circumvent this problem and show that infants do in fact represent objects even before they can speak (Piaget, 1952). In one, for instance, he merely covered over a toy animal or other object. He discovered that doing so regularly encourages older infants (18–24 months) to look for the object, but does not consistently encourage younger infants (less than six months). (If you have access to a small infant, you can try this experiment yourself.) Even without the advantage of much language, the older newborn is motivated to search by "something," and it is assumed that "something" is a persistent concept or representation of the object.

Ages 2 to 7 for the preoperational stage

Children employ their newly acquired ability to represent objects in a range of tasks throughout the preoperational stage, but they do not yet do so in ways that are organised or wholly logical. Dramatic play, or the spontaneous pretending of young children, is one of the most visible examples of this type of cognition. You have probably seen this kind of play if you have ever been in charge of young children. "Hello, Mom?" says Ashley as she leans a plastic banana against her ear. Please make sure to bring my baby doll, please. OK!" She hangs the banana up after that and makes Jeremy some tea in an unseen cup. When he sees all of this, Jeremy laughs and says, "Rinnng! Oh no, Ashley, it's the phone again! You'd best respond. And so forth.

Children who are absorbed in fantasy appear to be "mentally insane" since they are not thinking realistically. However, because they have not actually lost their senses, they are not completely insane. Ashley and Jeremy are constantly aware, on some level, that the banana is still a banana and isn't actually a telephone; they are only portraying it as such. They are simultaneously engaging in inventive and practical thought processes. Dramatic play is a prime example of metacognition, which is the process of reflecting on and supervising one's own thought processes. Teachers frequently promote metacognition as a highly desirable quality for academic performance. Teachers of young children (preschool, kindergarten, even first or second grade) frequently set aside time and space in their classrooms for dramatic play, and occasionally even engage in it themselves to assist the play progress. This is due in part to the fact that young children benefit much from dramatic play.

Ages 7 to 11 are the specific operational stage.

As they progress through primary school, kids have the flexibility and logical ability to express concepts and occurrences. By allowing children to solve issues more methodically than before and so succeed with many scholastic activities, their norms of thinking—which by adult standards still seem extremely simple and typically function unconsciously—allow children to think more systematically than before. For instance, a toddler may automatically obey the rule "If nothing is added or subtracted, then the amount of something stays the same" during the concrete operational stage. This straightforward idea aids students' understanding of several mathematical operations, such as adding or removing zeroes from a number, as well as some science investigations that

require estimation of the amounts of liquids when mixed. Because children "operate" intellectually on concrete objects and events during this stage, Piaget named it the concrete operational stage. However, they are still unable to act (or think) consistently in relation to representations of things or occurrences. A later, more abstract talent that emerges in adolescence is manipulating representations.

There are two ways that concrete operational thinking varies from preoperational thinking, and each one improves students' abilities. Reversibility, or the capacity to consider a process's phases in any sequence, is one distinction. Consider a straightforward science experiment where a child places a variety of objects in a water basin to investigate why certain objects sink or float. The stages in this experiment can be remembered and described by both the preoperational and concrete operational children, but only the latter can do so in any particular order. Any task requiring numerous steps—a common aspect of assignments in the classroom—will benefit greatly from this skill. Another example of how a teacher could instruct pupils to learn new vocabulary from a tale is to "first make a list of words in the story that you do not know, then find and write down their definitions, and finally get a friend to test you on your list" These instructions require remembering to switch back and forth between a second step and a first step repeatedly. While most adults and concrete operational students find this activity to be simple, preoperational youngsters frequently forget to execute it or find it puzzling. The teacher may need to periodically encourage the younger students to return to the story to look for additional unfamiliar terms if they are to complete this job successfully.

Age 11 and up, the formal operating stage

The infant can reason about hypothetical or abstract items and events in the final Piagetian stage, in addition to concrete objects and events. The time when the person may "operate" on "forms" or representations is known as the formal operational stage, thus the name. When working with pupils at this level, the instructor can provide hypothetical or counterfactual questions, such as, "What if the world had never discovered oil?" or "What if the first European explorers had settled in California instead of on the East Coast of the United States?" Students are required to apply hypothetical reasoning, or the simultaneous manipulation of many ideas, in order to respond to such problems. Piaget was particularly concerned with hypothetical reasoning including scientific issues. Therefore, many of the issues in his research of formal operational thinking resemble those that science teachers present to students in middle or high school. For instance, in one exercise, a young individual is given a straightforward pendulum to which various weights can be attached (Inhelder & Piaget, 1958). What controls how quickly the pendulum swings the length of the string supporting it, the weight on it, or the distance it is being pulled to one side? Is the experimenter's question. The young person must mentally reason their way to the solution instead of attempting to solve the problem by trial and error using the materials themselves. He or she must visualise changing each variable separately, while also visualising keeping the other variables constant, in order to do so methodically. The ability to manipulate mental images of the pertinent objects and events is necessary for this type of thinking exactly the ability that defines formal operations.

CONCLUSION

In conclusion, educational psychology is crucial to teachers' success in the classroom and should be highly valued. Teachers can now comprehend the various individuals and children in the classroom. Teachers are able to determine some pupils' areas of interest because they don't perform well overall. In early childhood, educational P- psychology has promoted mental growth. Teachers

can help the children develop cognitively by using psychology. Weak students' motivation has been made possible by educational psychology. Students that are motivated will learn how to learn and behave towards their subject matter, which will aid them in understanding themselves. Motivation gives direction towards goals, improves cognitive function and processing capacities, directs behavior towards specific goals, and results in more effort and energy. Finally, it promotes activity start and perseverance. With the aid of educational psychology, teachers are better equipped to comprehend students' unique traits, skills, and obstacles as they arise from their dispositions towards learning and development. Individual variations in intelligence, creativity, cognitive style, motivation, and the ability to process information, communicate, and relate to others are how these variances take shape. To help teachers educate effectively and achieve MDG number two, educational psychology should be incorporated into all teacher training programmers.

REFERENCES:

[1] S. Black, "Development, interest, self-direction and the teaching of information literacy," *Commun. Inf. Lit.*, 2018, doi: 10.15760/comminfolit.2018.12.2.9.

[2] L. C. Irani, D. M. Handarini, and L. Fauzan, "Pengembangan Panduan Pelatihan Keterampilan Mengelola Emosi sebagai Upaya Preventif Perilaku Bullying Siswa Sekolah Menengah Pertama," *J. Kaji. Bimbing. dan Konseling*, 2018, doi: 10.17977/um001v3i12018p022.

[3] Q. Wang, H. Li, W. Pang, S. Liang, and Y. Su, "Developing an integrated framework of problem-based learning and coaching psychology for medical education: A participatory research," *BMC Med. Educ.*, 2016, doi: 10.1186/s12909-015-0516-x.

[4] S. L. Christenson, C. Wylie, and A. L. Reschly, *Handbook of Research on Student Engagement*. 2012. doi: 10.1007/978-1-4614-2018-7.

[5] L. Göncz, "Teacher personality: a review of psychological research and guidelines for a more comprehensive theory in educational psychology," *Open Review of Educational Research*. 2017. doi: 10.1080/23265507.2017.1339572.

[6] R. E. Slavin, "Educational Psychology : Theory and Practic, (5th Edition)," *Needham Height. MA Allyn Bacon*, 1997.

[7] M. A. White, "Why won't it Stick? Positive Psychology and Positive Education," *Psychol. Well. Being.*, 2016, doi: 10.1186/s13612-016-0039-1.

[8] B. Blake and T. Pope, "Developmental Psychology: Incorporating Piaget's and Vygotsky's Theories in Classrooms," *J. Cross-Disciplinary Perspect. Educ.*, 2008.

[9] S. Haryati, "The Effectiveness of the Process Oriented Guided Inquiry Learning (POGIL) Model in Educational Psychology Learning," *Int. J. Pedagog. Teach. Educ.*, 2018, doi: 10.20961/ijpte.v2i2.24094.

[10] J. Biggs, "Enhancing teaching through constructive alignment," *High. Educ.*, 1996, doi: 10.1007/BF00138871.

CHAPTER 3

STRATEGIES FOR CLASSROOM MANAGEMENT

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ABSTRACT:

A study looked into how students were managed in the classroom. For 15 weeks, 97 high school students (mostly ninth graders) were monitored in five separate classes at one particular school. This observation, together with student and teacher interviews, was used to gather data. The Constant-Comparative Method of Qualitative Analysis was used to develop and analyse theoretical constructs that suggested the classroom goals students sought, the strategies they developed to achieve these goals, the times they chose to use these strategies, and the types of students who used each strategy. According to the findings, students had two main objectives: "socializing" and "passing the course. Each category is related to specific types of classroom events, and these tactics fall into the preliminary category, proactive category, and reactionary category. The ratio of time spent "socialising" or "passing the course" can be used to categorise students into one of four main groups: play, play/work, work/play, or work. The degree of cooperation between students and teachers, as well as how well teachers express their academic and behavioural objectives to students, are crucial for students.

KEYWORDS:

Classroom Management, Qualitative Analysis, Socializing, Strategy Class Management.

INTRODUCTION

The term "classroom management" refers to the vast range of abilities and strategies teachers employ to keep their students on track, focused, orderly, and academically productive throughout a lesson. Effective classroom management techniques allow teachers to maximize the behaviours that support or improve learning while minimizing the behaviors that hinder learning for both individual students and groups of students. Effective teachers typically have great classroom management skills, whereas inexperienced or less effective teachers are more likely to have a disorganized classroom full of disinterested kids.

While a limited or more traditional interpretation of effective classroom management may focus largely on “compliance” rules and strategies that teachers may use to make sure students are sitting in their seats, following directions, listening attentively, etc. a more encompassing or updated view of classroom management extends to everything that teachers may do to facilitate or improve student learning, which would include such factors as behavior (a positive attitude, happy facial expressions, encouraging statements, the respectful and fair treatment of students, etc.), environment (for example, a welcoming, well-lit classroom filled with intellectually stimulating learning materials that’s organized to support specific learning activities), expectations (the quality of work that teachers expect students to produce, the ways that teachers expect students to behave toward other students, the agreements that teachers make with students), materials (the types of texts, equipment, and other learning resources that teachers use), or activities (the kinds of learning experiences that teachers design to engage student interests, passions, and intellectual curiosity).

Classroom management cannot be easily separated from all the other decisions that teachers make because poor lesson designs, uninteresting learning materials, or unclear expectations, for instance, could cause more student disengagement, more behavioural issues, or unruly and disorganized classes. In this broader vision of classroom management, effective teaching and effective classroom management are somewhat conflated [1], [2].

DISCUSSION

Managing the classroom is necessary

According to our definition, effective classroom management is important to guarantee

1. Students learn something new in every class.
2. The class is not being disrupted.
3. The session's learning objectives are all met.

Whether you already teach or want to start, you are aware that every instructor arrives at a class with a lesson plan. The timely completion of the course syllabus is ensured by this lesson plan. However, you must effectively manage your classroom if you want to stick to the lesson plan. Your class will veer off into improper terrain if you don't do it. And if this persists even for two or three lessons, you and your students will struggle to finish the curriculum.

Developing a classroom management strategy

As a teacher, you must plan ahead to avoid being bogged down in the routine tasks of the classroom, such as taking attendance, settling conflicts, etc. Always keep the overall picture in mind and work to spend as little time as possible on tasks that aren't teaching-related. Make your own classroom management plan for effective time management in the classroom. This strategy needs to include

1. Classroom regulations that must be adhered to
2. What should the notification be for every instance of indiscipline?
3. What to do if the warning is ineffective
4. Conditions for de-intensifying or escalating a problem

A classroom management plan should be flexible and take into consideration how you've been doing with the syllabus thus far, unlike a lesson plan, which cannot be changed. Consider cutting back on other daily activities if, for instance, you were unable to finish the intended topics. Never schedule a lesson for the entire class period. Therefore, if your class is 40 minutes long, only allocate 30 to 35 minutes. You will take a few minutes to get to the class as well!

Management in the Classroom Has Benefits

60% knowledge and 40% classroom management go into teaching. In the opinion of your pupils, colleagues, and the administration of your school, you will be a better teacher if you can effectively manage your class. If that isn't enough to persuade you, consider these other real benefits of classroom management:

1. You'll finish the curriculum on schedule.
2. You'll be able to teach the students discipline.
3. Students will pick up good classroom behavior.
4. You and your students will get along better.

An issue with classroom management

We must consider both sides of the issue as educators. The use of classroom management techniques creates a highly structured learning environment that guarantees the accomplishment of all learning objectives. However, that also leaves very little room for candid conversations. There is no question that open dialogues help students think creatively and laterally. They gain experience applying what they learn to actual life situations [3], [4].

By scheduling the lectures so that you have enough time for open conversations, you can overcome the drawback of overly organized learning. For instance, you may devote one session following the completion of a chapter to unstructured conversation. To avoid interfering with nearby classes, think about holding your session outside or in a large room.

Pre-primary

Pre-primary pupils are particularly intriguing to manage because they are only now beginning to grasp the idea of a class. An environment where they must adhere to regulations, maintain some semblance of order, and obey their teacher. Here are some typical difficulties educators encounter when managing pre-primary classes:

Age-appropriate development in this age group, children that are only three or six months apart from one another exhibit varying levels of development. Therefore, when teaching fundamental language and math skills, the teacher must take into account the pupils' diverse capacities.

Parental involvement Pre-primary pupils may have parents who are very interested in their education or parents who leave everything to the school. While the second group discourages learning at home out of concern that it may overwhelm the child, the first group does not want its child to fail on any one parameter. You should calmly explain to both sets of parents that the child needs to learn at home and at school, but at her own speed [5], [6].

Help from the school is crucial for successfully managing students without putting too much stress or strain on instructors. This help includes both physical and psychological assistance. Every teacher should ask the authorities what assistance she is eligible for and take full advantage of it.

Primary

Primary school students begin formal academic and sociobehavioral education. They are also regarded as old enough to begin accepting accountability for their deeds. Some of the issues the teacher faces throughout this mixed growth era are

More professors, more subjects Pre-primary pupils often have a single teacher for all subjects. They must get used to the idea of having a new instructor for each subject when they transition to primary school. Since each student reacts differently to each teacher, the class needs to be managed dynamically according to the responses of the pupils.

Studying behind schedule: As the real teaching gets underway, some students may fall behind in some or all of their academic disciplines. You must be on the lookout for pupils who are struggling and give them extra support as a teacher.

Expanding horizons: Depending on the school, primary-level pupils' activities multiply as compared to pre-primary classes. For instance, they might be permitted to leave class unattended,

visit the library, do some class assignments, etc. They might become agitated and disinterested as a result, making it harder to maintain order in the classroom.

Secondary School

Due to the emotional sensitivity of children in their tween years, middle school class management issues are mostly related to student behaviour. Middle school instructors face a number of difficulties, such as

Academic strain: Due to the growing number of classes and the in-depth treatment of topics, academic pressure really picks up in middle school. Teachers must emphasise the fundamentals of the majority of the disciplines that students will study for the rest of their lives during these formative years as well. Therefore, you should have enough space in your classroom management strategy to devote extra time to difficult subjects.

Beginning of negative feelings: Children begin to experience negative emotions during their middle school years, such as disappointment, rejection, and low self-esteem. They need to understand that one accomplishment or one failure does not define them, as you must do as their teacher. If you don't handle this, you might have to teach a class that is made up of half happy students and half grumpy ones. Include some time in your schedule to discuss these emotional concerns with your students and, if necessary, to send them to therapy.

Bullying: After pre-primary school, new bullies start to appear in every class. Some kids are more likely to be bullied because they are emotionally weak, while others like bullying. Bullying needs to stop right away. In the following chapter, we will go into further detail on this [7], [8].

Upper School

The level of the class determines how effective a teacher must be at managing the class. Here are some difficulties educators in high school courses must overcome:

Academic greatness: In high school, students begin to think about their future careers and choose the courses that will help them along the way. So they anticipate receiving the best education possible from their teachers. Teachers themselves must provide the best instruction possible while also guiding the students' decision-making.

Disobedience: As adolescents enter their teen years, they experience a sense of freedom that causes them to act disrespectfully in class. Teachers must deal with pupil misbehavior without engaging in a conflict.

Not Paying Attention

Some students find it challenging to focus on the teacher's instruction and any related class activities. Here are some of the typical causes for these agitated pupils' behaviour, in case you want to learn more:

Lack of sleep: To reach the same levels of focus as adults, children need 2 to 4 hours more sleep per night. A school-age child should sleep between 9 and 11 hours per day on average, including both nighttime sleep and naps throughout the day.

The absence of one or more parents, arguments between parents, or other elderly family members may all contribute to a stressful home environment. A child who is experiencing emotional stress becomes listless and is unable to focus in class or in any other situation.

Unhealthy eating practises: The youngster is inattentive as a result of eating a lot of junk food (read: empty calories) and lack of nutrients in her body, making it difficult for her to focus in class.

Medical condition: Health issues including hormonal imbalance and ADHD (attention deficit hyperactivity disorder) may be to blame for a student's lack of focus. Consider encouraging the parents to contact a child expert if you are unable to identify the cause of a child's behavioural troubles.

Displeasing Behaviour

Disruptive behaviour is any activity taken solely for the goal of undermining the authority of the teacher. The most typical examples of disruptive conduct include

1. Conversing while lecturing
2. Yelling out loud
3. Disputes without justification
4. Yawning heartily
5. Sending messages to pals
6. Swearing or abusive language
7. Entering the classroom after the lesson has begun
8. Requesting approval before using the loo

As a teacher, you must keep in mind that a lot of these behaviours could be displayed by any kid, driven entirely by need rather than a desire to disturb the class. To identify the disruptive kids in your class, you must monitor trends in behaviour over time—typically not longer than three or four courses.

Most frequently, kids engage in disruptive behaviour to get the teacher's attention, impress their classmates, or just for kicks. Instead of just reprimanding or disciplining the child, a good treatment requires locating the cause of the problem and eliminating it.

School bullies

According to the dictionary, a bully is someone who threatens or harasses people because they are weaker than them. You must have encountered the bullies in your class because every class has its own.

The following are some typical explanations for why students engage in bullying:

1. to experience dominance over classmates
2. to take advantage of the publicity that follows the incident
3. for amusement
4. to demonstrate their maturation
5. They disapprove of their victim.
6. to improve one's standing among peers

Bullying leaves the sufferer with a permanent emotional scar. It is your duty as a teacher to put an end to bullying in your classroom. No matter what you are doing or what the class is doing, stop

it as soon as you see it. If you let it go even for that brief period the bullies will acquire the idea that they can get away with it. This unhealthful circumstance might make it difficult for you to manage your pupils' intellectual and emotional development in the classroom [9], [10].

CONCLUSION

The ability of the instructor to establish and maintain a conducive learning environment so that the students may work academically and learn securely during the teaching and learning process in the classroom is known as classroom management. Teachers cannot neglect classroom management because it has been one of their most important responsibilities outside of teaching. Therefore, the teachers in the classroom must have a solid understanding of classroom management. In addition, they must comprehend each component of classroom management, as they are highly correlated with one another.

The ability of the teacher to establish and maintain the best conditions for learning, then restore those conditions if problems arise during teaching and learning, as well as teaching strategies, learning materials, the use of efficient learning media, control techniques in classroom management, and approaches in classroom management, were among the elements of classroom management. For the teaching and learning process to be successful, it was imperative that the teachers were aware of these crucial components. Each component has its own significance, such as the group process approach's significance given that this research is focused on it. Group process methodology develops group classes with strong social structures and the capacity to function effectively and efficiently. It implies that for a group to be strong, there must be leadership, rules, and goals.

This phrase implies that it is essential to put group process approach techniques into practice. The researcher used descriptive study in SMKN Padang to examine how English teachers implemented the group process method to classroom management in order to support that claim. Based on the research findings, the researcher came to the following conclusion: According to the criteria percentage suggested by the percentage 100% categorised as always implemented, the implementation of group process approach by English teachers in manage classroom in SMKN 6 Padang was good implementation with value 100%.In other words, since teachers constantly used the group process approach when managing the classroom, the number of teachers using the group process approach's components rose.

REFERENCES:

[1] H. Korpershoek, T. Harms, H. de Boer, M. van Kuijk, and S. Doolaard, “A Meta-Analysis of the Effects of Classroom Management Strategies and Classroom Management Programs on Students’ Academic, Behavioral, Emotional, and Motivational Outcomes,” *Rev. Educ. Res.*, 2016, doi: 10.3102/0034654315626799.

[2] R. Huth, “A strategy for classroom management success,” *J. Best Teach. Pract.* □, 2015.

[3] C. N. G. Chao, W. S. E. Chow, C. Forlin, and F. C. Ho, “Improving teachers’ self-efficacy in applying teaching and learning strategies and classroom management to students with special education needs in Hong Kong,” *Teach. Teach. Educ.*, 2017, doi: 10.1016/j.tate.2017.05.004.

[4] S. Polirstok, "Classroom Management Strategies for Inclusive Classrooms," *Creat. Educ.*, 2015, doi: 10.4236/ce.2015.610094.

[5] Sadia Shaukat and Hafiz Muhammad Iqbal, "Teacher Self-Efficacy as a Function of Student Engagement, Instructional Strategies and Classroom Management," *Pakistan J. Sci. Clin. Psychol.*, 2012.

[6] M. Aliakbari and B. Bozorgmanesh, "Assertive classroom management strategies and students' performance: the case of EFL classroom," *Cogent Educ.*, 2015, doi: 10.1080/2331186X.2015.1012899.

[7] G. Dustova and S. Cotton, "Classroom Management Strategies Classroom Management," *CTE J. ISSN*, 2014.

[8] R. Nejati, M. T. Hassani, and H. A. Sahrapour, "The relationship between gender and student engagement, instructional strategies, and classroom management of Iranian EFL teachers," *Theory Pract. Lang. Stud.*, 2014, doi: 10.4304/tpls.4.6.1219-1226.

[9] F. K. Sarfo, F. Amankwah, F. K. Sam, and D. Konin, "Teachers' Self-efficacy Beliefs: The Relationship between Gender and Instructional Strategies, Classroom Management and Student Engagement," *Ghana J. Dev. Stud.*, 2015, doi: 10.4314/gjds.v12i1-2.2.

[10] E. T. Pas, A. H. Cash, L. O'Brennan, K. J. Debnam, and C. P. Bradshaw, "Profiles of classroom behavior in high schools: Associations with teacher behavior management strategies and classroom composition," *J. Sch. Psychol.*, 2015, doi: 10.1016/j.jsp.2014.12.005.

CHAPTER 4

LESSON PLANNING AND DESIGN

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ABSTRACT:

This study intends to investigate the preferences for lesson planning systems and lesson preparation practises of beginner ESL teachers. It also aims to look at how the two factors relate to one another. The researchers answered 448 questionnaires using quantitative research designs. Only 232 questionnaires were usable and measurable after the data screening process for the descriptive and inferential data analysis. The study's findings for the descriptive analysis revealed that the practice's overall mean score for lesson preparation. This average score demonstrated that the lesson planning procedures used by the inexperienced ESL teachers are of a moderate standard. These teachers are interested in having a lesson planning system to help their lesson preparation process, as evidenced by the overall mean score of 4.45 for lesson planning system preferences. For the inferential analysis, the data showed that among teachers in Malaysia's Northern Region, there was a statistically significant moderately strong positive association between lesson planning practise and preferences for lesson planning systems. According to the research, creating a new lesson planning method ought to enhance how inexperienced ESL teachers approach lesson planning. Finally, this study makes a contribution to the intended system's design principles.

KEYWORDS:

Lesson Planning, Lesson Planning, Lesson Design, Lesson Planning System, Quantitative Research Design.

INTRODUCTION

The foundational pillars of good teaching are lesson preparation and design. They give teachers a clear framework within which to convey knowledge and create engaging learning opportunities. Well-defined learning objectives are the foundation of a strong lesson plan because they act as compass points for both teachers and students. These goals should be SMART-compliant, which ensures clarity and focus. SMART stands for Specific, Measurable, Achievable, Relevant, and Time-bound.

Teachers must evaluate students' past knowledge in order to adjust the content to their understanding while filling in any gaps in order to design an interesting and effective session. The chosen information should be organized rationally, progressing from basic ideas to more complicated ones to allow for a progressive accumulation of knowledge. Diverse instructional approaches, including group discussions, team projects, and multimedia presentations, accommodate different learning preferences and raise student involvement.

It's important to differentiate instruction because every student is different. A well-designed lesson plan takes into account different learning styles and needs, offering assistance or extension activities as needed. While summative evaluations examine overall comprehension, regular formative assessments measure understanding in real-time. Students are informed of their progress

and areas for development through constructive criticism [1], [2]. All planned activities can be completed during the class period with the help of effective time management. A well-planned conclusion summarizes the main points and invites student inquiries, encouraging reflection on the lesson's goals. Additionally, the lesson plan's elasticity enables modifications depending on student input and unanticipated events, ensuring that the learning experience remains dynamic and flexible.

DISCUSSION

The most thorough standards-based plan a teacher will create is the daily lesson plan. It describes the goals and procedures for what will be done on a particular day or over the course of several days. Unit plans make it easier to convert year plans into daily schedules. The objectives and activities of standards-based daily lesson plans are derived from the unit plans. By fusing content knowledge, information-processing abilities, and real-world experiences, the teacher is able to make academic learning relevant to the students through the use of a daily lesson plan based on standards. The following elements are part of the daily lesson plan:

Lesson Details

Each session is started by the teacher taking into account the qualities of the pupils as well as the learning environment. This involves taking into account the topic standards, standards-based curriculum, and rules, as well as what the students should be able to do and how they should perform once education has been completed. Along with the lesson's content, lesson information also includes the students' learning and developmental needs. The teacher must decide whether the lesson should take one class session or several, taking into account the amount of time available and other resources. Do I have the correct number of activities planned for the time I have available? Is the lesson's scope too expansive for the allowed time? If students spend too much time on one tiny component of their assignment, will they be able to stay on target or will they lose interest? The focus, time period, activities, and assessments must be appropriate for the pupils in order for the lesson to be successful. It also depends on how well the teacher can match educational tactics to the demands of each individual student [3], [4].

Lesson Subject

The class should start with a subject taken from the district's or schools adopted standards-based curriculum. The subject should be covered as part of the bigger curriculum (such as unit instruction) necessary at your grade level since it relates to the specific information the instructor is aiming to transmit. The lesson's specific subject, however, may be determined by the students' questions or interests, local resources (such as the Rio Grande River, the Manzano Mountains, or Carlsbad Caverns), local expectations included in the content standards (such as cattle ranching, New Mexico water rights, or the relationship between language and culture), or other topics listed in the standards (such as data analysis, geometry, or life sciences).

Standards for Performance and Benchmarks

Select the performance standards and benchmarks you will cover in the session. These could originate from a single curriculum area or combine standards and benchmarks from several. Always keep in mind the allotted time for the class.

Intentional learning objectives

"When first preparing for instruction, teachers usually concentrate on the choice of subject matter, instructional strategy, and learning resources. All of these aspects of instructional planning are crucial, but overall process effectiveness is increased if emphasis is first paid to instructional objectives [5], [6].

Desired learning objectives:

1. Are particularly linked to the criteria or standards discussed in the course.
2. Clearly state the objectives for student and instructor learning.
3. Set a focus for your lesson planning.
4. Create the conditions for instruction, learning, and evaluation
5. Specify the specifics of how learning will be demonstrated.

Describe your desired learning goals in the lesson plan using the terminology that follows:

a. Students will be able to (for example, identify pion, aspen, and juniper tree leaves; make a timeline of nineteenth-century New Mexico) at the end of the session.
b. Write the planned learning outcomes for students on the board or present them to them in another way that is visually appealing.

Educative Resources

Be sure to give careful thought to the materials in your planning that will aid in the students' learning during the class.

These could consist of:

1. Reading items such as textbooks
2. Websites
3. Text editors and other specialized computer software
4. DVDs, CDs, and other forms of media
5. Visiting speakers
6. Supplies for the project, such as posters, paper, markers, or tape
7. Setting up the Environment
8. The way in which students will finish different parts of the class will have a direct impact on how the setting is set up.

Consider these issues:

1. Will the pupils collaborate in teams or on their own?
2. Will the class involve a number of activities or call for more than one desk configuration? How will participants move between activities?
3. Will pupils move between the classroom's set-up learning centres?
4. What configuration will facilitate mobility between these centres the most?
5. Will modifications be required to support travel between centres or any other activities for kids with special needs?
6. Will the class at any point have to concentrate on a guest speaker or a screen?
7. Where will the easy-access supplies be kept?

8. Educational Exercises
9. At the very least, a good daily lesson plan will contain the following:

Introduction

The lesson should focus on the subject and draw the students' attention early on. Always keep in mind that curriculum-based activities should be based on the standards. Activities could include posing a difficult question, conducting a brief survey of opinions or beliefs regarding the subject, or using a movie clip or other brief media device to pique interest in the conversation. The key to the activity and a good introduction would be to go over what the students already know or have encountered.

Creation of lessons

The lesson's intended learning objectives should be made clear to students by the teacher. Each activity should be described along with what the kids will do as well as what you will do as the teacher. Higher order thinking abilities are crucial for pupils to use in order to apply and synthesise new material. Describe the adjustments that will be made for kids with special needs. Keep in mind the time limit you've set for this lesson. How long will it take to accomplish each task? How many activities can pupils actually do in the specified time?

Assessment procedures

1. You should keep an eye on students' progress during the lesson. Indicate in precise, quantifiable terms how you'll know if students have achieved the desired learning goals. For instance, you might include the following phrases in your description of the evaluation procedure:
2. Each activity will involve full participation from all pupils.
3. Each student will finish a timeline that details the significant occasions covered in the class.
4. At the conclusion of the lesson, each student will write a statement regarding what they learned.

To sum up:

Restate the learning objectives at the end of class. Choose a strategy for wrapping up the activities. Will they consider what they've learned? Will they send in their assignments or finish them at home? If applicable, have you outlined expectations for their homework assignment? Does the homework assignment add to or finish what was learned in class?

Educator Introspection

After you have delivered each course, reflect on the experience by writing a reflection. Did the lesson's targeted learning objectives get through to the students? If not, why not? Think about how you can help them succeed. Was the time frame suitable? Were your instructions precise? Did the scheduled activities genuinely support the desired learning outcomes, or did they veer off course in some way? Did you properly adapt the activities for the students with special needs in your class? What pursuits would you resume? What would you change if you could? When creating standards-based classes, it's critical to take students' cultural and linguistic diversity into account. Veronica Nolan, a kindergarten instructor, discusses in the audio clip below how she incorporates her kids' cultures into her lessons [7], [8].

Result-Based Design

Consider the knowledge and skills you want your students to have attained at the end of their educational experience. Consider these three inquiries on the effects of your students:

a. How and in what ways have they changed as a result of the training?
b. What key ideas and fundamental principles do students currently understand that are connected to your learning objectives?

How can you tell whether someone "got it"? Which evaluations did you employ, and are they consistent with the performance standards in the real world? A "backward planning" method is frequently employed in your planning and lesson building. By starting with the goal in mind, you can make sure that the learners' whereabouts remain the major emphasis rather than just the possible grade they might receive as a result of the training intervention.

This planning model's steps are to:

a. Identify the learning objectives you want students to achieve, including their "enduring understandings" and their "knowledge and abilities."
b. Identify the "evidence" that the students will present to support their knowledge and abilities. Working through a scenario, creating a section of a criminal report, writing a message to a superior, or simulating an interview with a victim are all examples of "evidence."
c. Take into account the methods you could employ to gauge student learning (e.g., how do you know they are understanding it?) both formally using performance tasks and other data (quizzes, tests, assignments, and journals) and "in the moment" (observations, questions, debate, and demonstrations).
d. Create a lesson (learning experience) in line with the goal and the evidence provided by the students. For instance, if you want pupils to learn how to write a memo, have them draught one. If you want pupils to understand the possibilities available during a typical car stop, the learning experience should provide them the chance to actually explore the various options.
e. Create educational activities that support the goals you've set.

Planning Using Nested Circles

As you examine how to handle concerns of content against time, the nested circles on the preceding page can be quite helpful. A teacher who has more time available than material to teach is uncommon. In fact, the main challenge instructors at all levels have is attempting to guarantee that everything necessary is taught. As time limits the possibility of presenting all potential content, being able to divide potential taught concepts into three main divisions may help to clearly recognise what might be "left out":

1. The largest circle stands for all of the course's or segment's declared and targeted learning objectives. The lowest level of Bloom's Taxonomy to the highest degree of evaluative or creative activities are all covered. However, in general, the ideas, abilities, and knowledge that are still in the outer circle are those that the learner "should be familiar" with. We argue that these ideas and facts shouldn't often be covered in lectures unless they are essential for developing fundamental "know and

do" abilities or comprehension. Most of the time, they can be covered with the use of handouts, job aids, or other types of reference materials.

2. The majority of your instructional efforts are represented by the centre circle. Teaching then focuses on how students will be different from when they entered training after recognising the learner's comprehension and performance gaps. What do they currently know (in accordance with learning objectives) and what can they do (as evidenced by demonstrated performance)? The core of transformative training is this.
3. Think about what you would leave out of your topic if you had an hour instead of the regular eight hours allotted for your class. That could be a good place to start when considering the "enduring understandings" gathered in the inner circle. The student's need for training is motivated by certain ideas, which are typically found in the profession's core principles and deepest beliefs. For instance, while teaching police use of force, an enduring understanding would be that the police have the right to use any amount of force necessary to preserve lives and disperse opposition to their authorised actions. It might also be understood that the police have the obligation to stop using force once the threat or opposition has subsided. Any following training on the subject will be organized and made meaningful once a police trainee fully comprehends this.

This concept's planning and implementation are based on the fundamental conviction that not everything can be taught and that what is taught varies from class to class. It is inevitable that you think about the fundamentals of what you teach and how to impart it in a transforming manner. Not all topics are created equal, so think carefully about what you want to cover in the training environment [9], [10].

CONCLUSION

Both locally and internationally, there has been extensive research into the potential of virtual reality in the educational setting. In-depth study on the application of virtual reality technology in education is still in its infancy in China. Through the creation of new teaching tools or the enhancement of instructional strategies and outcomes, virtual reality technology has given established teaching approaches new life and increased opportunities for improvement. As technology advances and improves, there will be a greater variety and utilization of virtual reality in network distant education. A crucial part of contemporary distance education, distance virtual teaching makes full use of the learning environment offered by contemporary information technology, including new communication channels and a multitude of materials, giving contemporary distance education a whole new meaning. There are still many specific concerns concerning the use of virtual reality technology in distant learning, especially in trials, that need more attention and study. In this report, research was done on the evolution of educational virtual technology. Despite the fact that domestic technology is still in its infancy when compared to that of other nations, it has been supported by a sizable population of keen students. As a result, classroom education has fully mobilized children's excitement, and the virtual reality system has progressed steadily. The study in this article contains various errors that will be looked into in more detail in the future.

REFERENCES:

[1] S. J. Courey, P. Tappe, J. Siker, and P. LePage, "Improved Lesson Planning With Universal Design for Learning (UDL)," *Teach. Educ. Spec. Educ. J. Teach. Educ. Div. Counc. Except. Child.*, 2013, doi: 10.1177/0888406412446178.

[2] J. Hou and D. Grohmann, "Integrating community gardens into urban parks: Lessons in planning, design and partnership from Seattle," *Urban For. Urban Green.*, 2018, doi: 10.1016/j.ufug.2018.05.007.

[3] H. P. Widodo, "Approaches to needs analysis in ESP curriculum development," *Eur. J. Appl. Linguist. TEFL*, 2017.

[4] T. Fujii, "Designing and adapting tasks in lesson planning: a critical process of Lesson Study," *ZDM - Math. Educ.*, 2016, doi: 10.1007/s11858-016-0770-3.

[5] N. Pontee, S. Narayan, M. W. Beck, and A. H. Hosking, "Nature-based solutions: Lessons from around the world," *Proc. Inst. Civ. Eng. Marit. Eng.*, 2016, doi: 10.1680/jmaen.15.00027.

[6] J. Williams, C. Evans, and L. King, "The impact of universal design for learning instruction on lesson planning," *Int. J. Learn.*, 2012, doi: 10.18848/1447-9494/cgp/v18i04/47587.

[7] J. N. Causton-Theoharis, G. T. Theoharis, and B. J. Trezek, "Teaching pre-service teachers to design inclusive instruction: A lesson planning template," *Int. J. Incl. Educ.*, 2008, doi: 10.1080/13603110601156509.

[8] K. A. Jones, P. J. Vermette, and J. L. Jones, "An integration of 'backward planning' unit design with the 'two-step' lesson planning framework," *Education*, 2009.

[9] M. E. McGuire-Schwartz and J. S. Arndt, "Transforming universal design for learning in early childhood teacher education from college classroom to early childhood classroom," *J. Early Child. Teach. Educ.*, 2007, doi: 10.1080/10901020701366707.

[10] D. McGhie-Richmond and A. N. Sung, "Applying Universal Design for Learning to Instructional Lesson Planning.," *Int. J. Whole Sch.*, 2012.

CHAPTER 5

A BRIEF DISCUSSION ON TECHNOLOGY IN TEACHING

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ABSTRACT:

Due to the advancement of technology, digital technology is now used in almost every aspect of daily work life and is being created to progress technology for humanity. Computer-based digital technology has grown to be a significant component of the teaching and learning process in education. Computer technology has an impact on all other teaching and learning techniques employed in the educational system and has permeated daily life. In this study, it will be discussed how using educational technology and computer technology in the classroom can help students acquire computer science and engineering concepts and abilities more effectively.

KEYWORDS:

Computer-based Digital Technology, Digital Technology, Technology, Teaching Technology, Technological Advancement.

INTRODUCTION

A degree programme in educational technology looks at how to better teaching and learning by investigating, planning, designing, implementing, and evaluating the instructional context and learning aspects. Technology used in education or in the classroom is primarily intended to improve instruction. With the use of technology, students can learn subjects more effectively. Technology in education aids in overcoming academic issues with motivation and analytical and problem-solving abilities. Books are being transformed into ebooks thanks to the development of educational technologies. When compared to the former way of teaching, lessons are now animated for a thorough understanding of themes and to digitally clear up any ambiguities. Only because to educational technology do students today have an endless supply of tools for learning. The list keeps growing as Blackboard went digital, classes were taught online, students are now taught using LCD projectors, etc.

To achieve the ultimate objective of developing education, educators in public schools and professors at universities must be aware of the different types of resources that are accessible, how to utilise them, why and when they should be used, and how to integrate them into the instruction/education backdrop. Coaches must carefully consider how these contemporary materials may impact our ability to absorb and impart knowledge. Technology can be employed to implement a student self-development strategy or a knowledge-based training technique. Teachers must understand how technology is changing education. The educational system will start to improve when technology use is taught [1], [2].

DISCUSSION

In recent years, technology has significantly improved schooling. Students and teachers now have access to a variety of information and services that were previously inaccessible because to the expansion of the internet and the general adoption of gadgets like computers, tablets, and

smartphones. The fact that students can access information and resources at any time and from any location is a significant advantage of technology in education. Students may now readily obtain answers to their inquiries and complete homework from the comfort of their own homes thanks to easy access to the internet. Students have the option to decide when and where to learn because to this flexibility, which also allows them to learn at their own speed. The ability to personalize learning is another advantage of technology in education. Teachers can now construct unique lesson plans and assignments depending on the unique needs and abilities of their students with the aid of adaptive learning software. Since they may concentrate on the concepts and abilities that are most pertinent to their requirements, students who benefit from this personalized approach to education may feel more engaged and motivated to learn. Teachers may now communicate and exchange resources with their peers more easily because to technology. Teachers can communicate with one another and share lesson ideas, exercises, and other teaching resources by using social media and internet platforms. In addition to saving teachers time and effort when it comes to developing their own lesson plans, this collaboration enables them to keep current on the most recent teaching methodologies [3], [4].

Technology has also made it feasible for pupils to learn from a greater variety of sources in addition to these advantages. Students now have access to lectures, films, and other educational resources from some of the best institutions and authorities in the world thanks to the internet. This enables students to get knowledge from a variety of viewpoints and experiences, which can deepen their comprehension of and appreciation for many subjects. Last but not least, technology has improved the accessibility of classroom participation for children with impairments. Students with hearing or vision impairments can now readily access class discussions and activities with the aid of assistive technologies like text-to-speech software and electronic magnifiers. Overall, there is no denying that technology has improved education. Technology has changed the way we learn and given students and teachers alike new opportunities. From improved flexibility and personalised learning to the opportunity to interact and access a wide range of resources, technology has revolutionized education.

I want to know what you think of the chapters you have read so far before I move on to my main point. Are they obvious? Do they present a logical case? If you said "yes," you'll be as shocked as I am to learn that GPT-3 from OpenAI, a free online chat programme, wrote the entire thing. I just entered "write a 500 word essay on the positive impact of technology on education," and it quickly wrote those paragraphs on its own! A free internet plagiarism detector I used revealed that the essay's content was 100 percent original. What do these technological developments entail for the teaching profession? One benefit is that it makes us reevaluate how important each of our present academic objectives is. Should we keep devoting the majority of our educational time to teaching students mechanical abilities like handwriting that are practically obsolete in a society when communication and collaboration are nearly fully mediated through technology? Should it continue to learn a sizable disconnected collection of world knowledge and lower order procedural thinking abilities when a burgeoning market of artificial intelligence programmes could accomplish it more quickly and effectively?

According to the Brookings Universal Centre for Education, by the time children graduate from high school, a sizable portion of the jobs for which they are currently being trained will be obsolete. Has education adapted to this change as our globe gradually shifts from an industrial economy to a knowledge economy? What is the ideal way to allocate the limited and valuable time that pupils have in school, then? Of course, we should devote some time to teaching the fundamentals of

academics, but this cannot be seen as the conclusion of the learning process in the classroom. As stated by the Ministry of Education's Innovation Cell, these knowledge and skills should be viewed as MEANS or tools that students are trained to use and apply towards developing the competencies that actually matter for their success in the 21st century, which include "creativity, innovation, empathy, problem solving, team work, strategic thinking, entrepreneurship as well as learning to accept failures as a part of one's development process." Instead of teaching students how to outperform AI, we should teach them how to strategically use AI's capabilities to shift their cognitive capacity towards higher order thought processes and original problem-solving that the human mind is only capable of [5], [6].

What Means in Education Technology Integration?

The use of technology to improve student learning is referred to as technology integration in education. Different forms of technology, such as a virtual classroom, are used in the classroom to generate active learners who are interested in the learning objectives. Technology integration also opens doors for individualised instruction to fulfil each student's specific needs as an individual learner within a larger classroom environment.

Technology Integration in The Classroom

Contrary to popular belief, kids do not necessarily need their own tablets or laptops to flourish with technology. Instead, it is possible for school systems to implement technology in the classroom without incurring significant financial costs. For auditory and visual learners, using technology during whole-class education can increase student participation. Simple technological integrations like Power Points, games, online homework assignments, or online grading platforms can make a significant difference in how well students do in the classroom.

Presentations and Games

PowerPoint presentations can be used to engage students while introducing important concepts in the classroom. Links to films that support the concepts offered in the Powerpoint presentation deck can be incorporated into the slides, in addition to the usage of images and bulleted information. After a course or unit, students can review material using educational apps like Kahoot. While students can create anonymous user names to play the game, teachers can develop and share Kahoots with one another. Students who might ordinarily be reluctant to participate in class can now participate in it as a whole. Teachers can choose whether they want their students to work independently or in teams when using the Kahoot app, which can be played on computers or smartphones.

Internet-based homework tasks

One method many teachers might start incorporating technology in the classroom is by posting homework assignments online (through learning systems like Blackboard, Bright space, and Moodle). Assignments are conveniently available, which might improve student involvement and aid in the organization of the students.

Online Assessment Tools

In order for teachers, administrators, parents, and students to recognize a student's strengths and areas for development, communication is a crucial component of education. With the help of online

grading platforms like PowerSchool, teachers may post grades, examine student attendance trends, and manage transcript data.

Student Tablets

When teachers are fortunate enough to have tablets for their kids, technology can help them differentiate their lessons. During assignments, students can work at their own pace, and teachers can provide individualised teaching.

Parents are able to manage and organise their emails using software like Listserv. Teachers can inform parents of significant announcements, newsletters, and conversations to maintain open lines of contact [7], [8].

Age Group Implementation Strategies

Technology advantages can improve any modern classroom. The implementation and application of technology will vary depending on the grade level and subject matter of the classroom.

Methods for Including Technology in Elementary Classrooms

Younger kids can develop foundational skills using technology to get them ready for autonomous study in the future. Interactive games can help students improve their reading, numeracy, spelling, and phonemic awareness skills. Students and teachers can upload their own word lists to websites like Spelling Training in order to practice word pronunciation and make interactive games. These websites can be used by parents to practice fundamental skills outside of the classroom.

Technology Application in Middle School Classrooms

Students can use technology to acquire fundamental life skills as they start to develop as independent thinkers. Middle school students will become more independent if they have different teachers for each subject. It is possible to use technology to learn skills like performing research across all subject areas. Through a variety of search engines, websites like Easy Bib help students identify reliable sources and show them how to properly cite such sources in order to prevent plagiarism.

High School Classroom Technology

Once students have completed their secondary education, they can learn how to use technology to advance their college and professional goals. Learning how to create spreadsheets, slide shows, and share papers using Google Drive and Microsoft Office enables students to get ongoing feedback on their work. These Google and Microsoft features are widely used in many professions to organize information and foster collaboration among coworkers or clients.

Technology Integration in the Classroom Important

When they offer students the chance to use technology in the classroom, teachers frequently have success. Some would argue that not all of the results of using technology for educational instruction are favorable. However, there are many advantages and consequences. The fact that there is an endless supply of information and entertainment available at all times may be considered a distraction, but if technology is incorporated into the classroom with routines in place that are monitored or assessed, the benefits outweigh the drawbacks.

Maintaining student interest

Any lesson plan must include active engagement. Technology interests pupils because it is participatory, whether they are working alone or in groups.

Aids pupils with various learning modalities

Not every student picks up knowledge and retains it at the same rate or in the same way. With the use of technology, teachers may adapt their lessons to the diverse learning styles and capacities of their students. Students who use technology may also be able to work at their own paces.

Give students life skills preparation

Because of how frequently it is utilized in daily life, technology has developed into its own type of literacy. Microsoft Office and Google Drive are used in many professions on a regular basis for at least one function, such as producing decks or slide shows for presentations or attaching documents to emails to convey crucial information. Students are better prepared for life after school by being given the opportunity to learn and develop these abilities.

Tech in education in several forms? What role does information technology play in education?

IT is one of the many types of educational technology that has helped education advance to new heights with modernization. By creating software and supporting government-initiated programmes with technical support, the IT sector has aided education. More and more developers are stepping up to create more sophisticated projects in the near future so that they can also benefit India's rural people. Information technology is used in educational settings to Tools include documents, databases, spreadsheets, Powerpoint presentations, PPTs, screen sharing, graphic design software, online video call apps, etc.

Systems for managing learning:

It's an application or website that serves as a virtual classroom where we may watch recorded or live classes whenever we want. The best platform for studying anything right now is available to everyone, everywhere. Equipment includes a digital camera, a smartphone, a computer, a router, a printer, a projector, and other recording devices.

What contemporary instructional devices come to mind?

In the past four years, there have been significant Edtech firms in India that are bringing about revolutions in educational technologies and breaking down barriers. This is assisting in developing the abilities of the next generation by providing them with visual lessons and the most recent information. Academy, BYJUs, Udemy, Shaw Academy, Khan Academy, and other major Edtech businesses are located in and around India. These startups offer expertise and information on a variety of areas, assisting thousands of students in better comprehending the material. It will set the largest trends in transforming education in the future [9], [10].

CONCLUSION

The most significant lesson I learned in this session was how vital technology is to today's education. Today, it's crucial to be able to not just use technology but also pick up new skills in the field. I now have the knowledge and abilities to more effectively incorporate technology into my

classroom. This helps the pupils, but it also helps me as a teacher. My already-existing IT skills have improved because to this training. It has also introduced me to a few fresh technologies that I can apply in my own future classroom. I am now more equipped to design a classroom for the digital era. This entails instilling creativity in pupils as well as educating them about new technology and the proper and improper ways to use it. These technological elements have paved the way for me to become the greatest teacher I can be.

REFERENCES:

[1] L. Stošić, "The importance of educational technology in teaching," *Int. J. Cogn. Res. Sci. Eng. Educ.*, 2015, doi: 10.23947/2334-8496-2015-3-1-111-114.

[2] S. Kumar and B. K. Daniel, "Integration of learning technologies into teaching within Fijian Polytechnic Institutions," *Int. J. Educ. Technol. High. Educ.*, 2016, doi: 10.1186/s41239-016-0036-8.

[3] B. Basheer Nomass, "The Impact of Using Technology in Teaching English as a Second Language," *English Lang. Lit. Stud.*, 2013, doi: 10.5539/ells.v3n1p111.

[4] Á. Salinas, M. Nussbaum, O. Herrera, M. Solarte, and R. Aldunate, "Factors affecting the adoption of information and communication technologies in teaching," *Educ. Inf. Technol.*, 2017, doi: 10.1007/s10639-016-9540-7.

[5] R. Murati and A. Ceka, "The Use of Technology in Educational Teaching.," *J. Educ. Pract.*, 2017.

[6] D. R. Paneru, "Information communication technologies in teaching english as a foreign language: Analysing EFL teachers' TPACK in Czech elementary schools," *Cent. Educ. Policy Stud. J.*, 2018, doi: 10.26529/cepsj.499.

[7] S. Ullah and Q. Farzana, "Using technology in teaching English at the S.S.C. level," *J. NELTA*, 2018, doi: 10.3126/nelta.v23i1-2.23358.

[8] I. Sabado, "Technology-Assisted Teaching and Students ' Performance in Literature," *Int. J. Soc. Sci. Humanit.*, 2018.

[9] J. C. Richards, "Technology in Language Teaching Today," *Indones. JELT Indones. J. English Lang. Teach.*, 2015.

[10] B. N. Cvetković, L. Stošić, and A. Belousova, "Media and information literacy-the basis for applying digital technologies in teaching from the discourse of educational needs of teachers," *Croat. J. Educ.*, 2018, doi: 10.15516/cje.v20i4.3001.

CHAPTER 6

A BRIEF DISCUSSION ON EFFECTIVE CLASSROOM COMMUNICATION

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ABSTRACT:

Teachers now spend so much time teaching the curricula that they no longer recognize "how" they do it. This essay examines communication enhancers for the classroom, cultural communications in the classroom, and various verbal and nonverbal means of communication, all of which are significant forks in the road to a successful education. According to the publication, teachers are not adequately educating youngsters from low-income families. According to the paper, when a child does not speak Standard English, the teacher must be able to communicate with him or her on that level and then move on to the Standard Level of Understanding. Additionally, accurate message sending and receiving is necessary for effective classroom communication between the teacher and students. It asserts that children can feel good about themselves by understanding and appreciating communication diversity (i.e., culture), and that if the classroom teacher and the speech teacher collaborated, they could plan interactions with the students and offer helpful bilingual and bicultural programmes. It emphasizes that in order to effectively address the issue, instructors must first comprehend the nature of language and dialect differences. They can either identify "non-standard" dialect and eradicate it, leave the student language alone, or accept bi-dialectalism. According to the essay, the classroom should offer a range of stimuli, give off a secure, cosy feeling, be modified to meet the activity, and allow for some privacy and individuality.

KEYWORDS:

Bidialectalism, Communication, Communication Diversity, Effective Classroom Communication, Speaking Standard.

INTRODUCTION

A key component of successful education is effective communication in the classroom because it promotes an atmosphere where learning flourishes and students' potential is realised. It entails the deft sharing of concepts, details, and knowledge between students and professors as well as within the student body. This complicated process includes active listening, verbal and nonverbal cues, and a respectful environment. Effective classroom communication primarily promotes understanding. It is crucial for teachers to be able to explain difficult ideas in a straightforward and accessible way. Speaking clearly and using the right examples and visual aids can simplify complex topics into easily understood ideas. Additionally, active listening enables teachers to assess students' comprehension levels and make prompt modifications to their teaching strategies and pace.

Another crucial result of effective communication is engagement. Students are more inclined to contribute when they believe that their opinions and inquiries are valued. Open dialogue and debate promote critical thinking and a variety of viewpoints. Additionally, strong communication skills

give students the ability to express their ideas clearly, boosting their self-confidence and presentation abilities valuable qualities outside of the classroom.

The foundation of a positive learning environment is respect and empathy. A safe environment where inquiries are welcomed and mistakes are accepted as a necessary part of learning is created by teachers who are patient and sensitive to their students' learning requirements. This capacity for emotional intelligence encourages cooperation, trust, and good relationships. Technology can increase interaction and involvement in communication processes. Modern teaching strategies and interactive learning opportunities can be facilitated by resources like digital presentations, online discussion boards, and educational apps. But maintaining the depth of human connection requires finding a balance between online and in-person contacts [1], [2].

DISCUSSION

Why is it important for teachers to communicate effectively?

Effective communication is advantageous for teachers in three contexts: interactions with students, parents, and coworkers.

Having Conversations with Students

Since teaching itself entails communication, it is crucial to have these abilities when interacting with pupils. Your job requires you to understand and deconstruct difficult knowledge, communicate it to your pupils in a way that keeps their attention (both vocally and through written resources), and listen to and address any questions or issues they may have. In order to create a secure and encouraging learning environment in your classroom, you must also adjust the content for different learning styles, inspire students to learn, create supportive connections through encouragement and empathy, manage the classroom, and provide feedback. These items all demand effective communication abilities.

The more effectively you can complete these duties, the better your communication abilities will be. Your students will consequently advance academically. According to studies (see Mashburn et al., 2008), effective teachers create interactive, engaging learning environments that strongly correlate with student achievement. Additionally, the way you interact with your students can have a beneficial impact on how they view learning, their role in the classroom, their own strengths, and their drive to succeed. The problem is that poor communication skills, and thus bad teaching strategies, lower students' levels of comprehension, which may harm their academic advancement. Additionally, it could cause pupils to lose motivation, dislike school, and think they are incapable of succeeding. Their life may be affected by this for the foreseeable future.

Consequently, it is crucial for teachers and students to communicate effectively. It enables you to do your work effectively, producing favourable outcomes for your students. Another advantage is that your students can look up to you as a role model for developing communication skills, which are crucial for growth and future learning. As you concentrate on three crucial areas: foundations, principles, and practise, effective coaching and mentoring can improve your communication with pupils [3], [4].

Talking to the parents

You will also need to effectively interact with parents as a teacher. You must be proficient in both verbal and writing communication because this may involve a range of channels, such as phone

conversations, emails, and in-person meetings. This is crucial since you'll frequently need to talk to parents about delicate topics including behavioral problems, academic difficulties, and the student's strengths and shortcomings without offending them or making them defensive. You must always communicate clearly while remaining diplomatic. Poor parent communication may result in parental scepticism about your teaching abilities, potential complaints, and an inability to comprehend the academic achievement and requirements of their child.

Having conversations with coworkers

Collaboration is also necessary in teaching; autonomous work is not always a need. You will benefit from having effective communication skills whether you are working with colleagues to design lessons, providing updates on specific students' development, or exchanging advice on how to handle situations in the classroom. An excellent way to show your coworkers and superiors that you are a strong candidate for promotion is to demonstrate your ability to run meetings, present in front of a variety of audiences, and provide feedback to other employees. You might also use these talents in staff meetings and training sessions. Effective communication skills are essential in a teaching career for a variety of reasons, as we have shown. We will provide you with some tips in the next section on how to communicate more effectively in the classroom.

Techniques for Communication Success in the Classroom

The context determines what constitutes "good" or "effective" communication. You will employ different techniques depending on whether you are leading a group discussion, speaking one-on-one with a student, or giving a presentation in front of the class. Here, we'll outline eight tactics that you can use in any of the possible situations.

1. Establish supportive relationships and a secure learning environment.

It has been demonstrated that favourable interactions between students and teachers have an impact on how actively students participate in class and how well they perform academically. According to some research, these positive connections may even counteract the tendency of low-income pupils to achieve less academically. This is because when students feel encouraged, they are more at ease speaking out during class discussions, taking on difficulties, and asking for assistance when they need it. The result is improved understanding and increased accomplishment as a result of higher levels of involvement and participation.

Communication is the key to creating a welcoming learning atmosphere, so get to know your students well and let them know they won't face criticism or embarrassment in your classroom. Learning students' names at the beginning of the year and using them frequently is a good idea. Be compassionate and caring at all times while interacting with children; don't chastise them for not understanding and don't mock their views. Have an open door policy for students to come and talk to you about any difficulties [5], [6].

You should also be aware that some pupils are uncomfortable speaking in front of the class. If you do encourage them to engage, you may utilize scaffolding to help them feel more secure doing so (such as using sentence starters). Forced participation is rarely necessary, though, as it is likely that more reserved students have excellent listening skills and are still picking up just as much information.

2. More cooperation

Making the classroom more comfortable includes teamwork and group discussions. Students can more easily share ideas and develop their own communication abilities when they work in small groups. They have a great chance to ask you questions and receive feedback on their work throughout these exercises, which will improve communication between you, help them understand the lesson, and help them academically. You might also try working in a team with your coworkers to hone your communication abilities. Your ability to communicate will improve as a result of creating more classes together, exchanging ideas, and working out problems as a group.

3. Nonverbal cues

Nonverbal communication is just as important as verbal communication, so you should watch your body language to make sure it conveys confidence, positivity, and interest. Making eye contact with students when you are speaking to them, for instance, conveys your interest and support. When giving a presentation to the entire class, making eye contact is particularly crucial since it encourages everyone to pay attention, which aids in their learning, and it makes them feel engaged. You might need to master the material for your class more completely in advance so that you can make eye contact without having to turn away to read your notes.

As you instruct, you should use gestures to emphasise your words. This increases the interactivity of the lesson, making it more visually fascinating and hence, more memorable. Keep your arms open – do not fold them – and use smiles, nods, and palms up to encourage students when they participate. Moving around the classroom while you teach can help to remove the barrier between you and your pupils, and gives them less opportunity to zone out or get distracted.

Body language is also essential when dealing with negative behaviour. To avoid being confrontational, ensure that you don’t stand directly above or in front of a pupil, point, or invade their personal space. It may be effective to get down to their level and talk quietly about their behaviour, or speak to them outside the classroom, to avoid attracting too much attention. Remember that students’ behaviour is also a form of communication, and reflect about what it is telling you.

4. Listening actively

Over 60% of all misunderstandings are caused by inadequate listening, thus it's important to not disregard this aspect of communication. You can gain from practising attentive listening in the classroom in two different ways. First of all, by setting an example for your students, they will become better listeners and learn information more effectively. Additionally, you may clarify misconceptions and expand learning using active listening, giving your kids a better education.

Active listening entails paying close attention to what your pupils are saying, making sure you have understood them correctly (for instance, by saying what you believe they have said back to them), elaborating on their ideas, and challenging or posing questions about them. It is the ideal strategy to utilise in the classroom to promote understanding, and it is a superb illustration of efficient communication [7], [8].

5. Remarks

In the classroom, feedback is a crucial part of communication. In recent years, there have been numerous studies that have emphasized feedback. Positive feedback, or praise, has been demonstrated to enhance students' confidence and increase their likelihood of believing they can succeed. It has also been shown to foster a supportive environment and increase academic success. Positive reinforcement can also be used to change students' behaviour. For instance, rewarding a student for raising their hand will probably encourage the kids nearby to cease "shouting out" and adopt the same action in order to receive praise as well.

Positive criticism, however, can be harmful to learning if it is given unjustly or too frequently. Good work or beautiful phrases may not inspire pupils since they don't know what they are being praised for exactly, and over-praising may make kids uninterested in activities where they aren't being applauded. Give the student precise, well-deserved praise as a result; use their name, be clear about what they are doing well, and express your gratitude.

Positive feedback isn't used in the classroom as frequently as negative feedback, and this is contrary to the claims of many academics. Negative feedback can help students develop by encouraging them to try harder or change their conduct, for example, but it can also lead to conflict in relationships with students. Furthermore, it has been asserted that it may result in lower levels of academic success. These drawbacks are exacerbated by the fact that negative feedback is not always effective around 20% of students prefer to carry on with their conduct despite receiving it and that it tends to lower students' motivation and interest in a task. Other effects include diminished self-worth, which has an effect on kids' academic progress.

As a result, you should be careful to give negative feedback infrequently; for general classroom management, it is much more useful to offer positive feedback to model the behaviours you desire. When giving negative feedback, you should specifically identify the behaviour you wish to change and explain why (for example, "don't do that. I don't think that is safe," let them consider morality (e.g., "Are you doing the right thing?"), or use a straightforward "no" (e.g., "no," "mm mm," or "no"). These methods boost the potency of negative feedback and lessen any negative effects it might have. Giving students the chance to comment on your classes or teaching methods is the final step. This increases communication between you, demonstrates your respect for their views, and aids in the improvement of both your instruction and their learning.

6. A good sense of humor

Using humour in the classroom has been shown to improve learning, self-motivation, and connections between students & teachers. It enables you to build a relationship with your students and maintain their interest in the course. You might, for instance, provide jokes or amusing anecdotes, offer humorous examples from your own life, or simply laugh at the jokes your students make. To avoid demeaning or embarrassing kids, you should avoid using forced or inappropriate comedy that isn't related to the subject, scary, violent, or sexual. Only keep using humour when the class has responded favourably to it by laughing, for example.

7. Technical expertise

Another strategy to keep students interested and strengthen their understanding is to use modern teaching tools like computers, movies, and online resources. Additionally, it can help you communicate more effectively with students who have various learning preferences and who could

gain more from using modern resources than more traditional ones. Try to regularly use some of these tools into your classes.

8. Be precise

Understanding and being understood are key components of excellent communication, including good teaching. Because of this, you should always be precise and unambiguous, and tailor your language to the needs of your audience. Consider this when creating lesson plans (be sure to simplify difficult concepts into logical, easy portions for your audience to understand), as well as when interacting with the kids after the class. For instance, you might ask your students questions or ask them to provide written recaps of the lesson to see if your instruction was clear [9], [10].

CONCLUSION

For teachers to establish a pleasant and engaging learning environment and support their students in achieving higher learning outcomes, effective communication skills are essential. By carefully listening to their students, speaking clearly, utilising good body language, displaying empathy, giving constructive criticism, utilising technology, and practicing frequently, teachers can improve their communication abilities. Platforms like Fluent Life may help teachers improve their communication skills by providing flexible training, interactive sessions, personalised instruction, and cutting-edge techniques. The communication skills training offered by Fluent Life can assist teachers in strengthening their capacity to interact with students, inspire them, make topics clear, offer feedback, and create gratifying parent-teacher connections. Overall, teachers benefit from investing in the development of their communication skills since it can make them more successful teachers and raise the standard of instruction they deliver to their pupils.

REFERENCES:

[1] C. O. Fashiku, “Effective Communication: Any Role In Classroom Teaching–Learning Process In Nigerian Schools?,” *Bulg. J. Sci. Educ. Policy*, 2017.

[2] U. Kubat and N. C. Dedebali, “Opinions of Science Teachers for Classroom Management,” *J. Educ. e-Learning Res.*, 2018, doi: 10.20448/journal.509.2018.52.110.117.

[3] H. W. Banse, N. A. Palacios, E. G. Merritt, and S. E. Rimm-Kaufman, “5 Strategies for Scaffolding Math Discourse with ELLs,” *Teach. Child. Math.*, 2016, doi: 10.5951/teacchilmath.23.2.0100.

[4] R. N. Osakwe, “Dimensions of Communication as Predictors of Effective Classroom Interaction,” *Stud. Home Community Sci.*, 2009, doi: 10.1080/09737189.2009.11885277.

[5] P. Thuruvan and M. M. Yunus, “The speech act of request in the ESL classroom,” *3L: Language, Linguistics, Literature*. 2017. doi: 10.17576/3L-2017-2304-16.

[6] S. Sudirman, H. Atmowardoyo, and K. Salija, “Communication Styles used by Effective EFL Teachers in Classroom Interaction,” *ELT Worldw. J. English Lang. Teach.*, 2018, doi: 10.26858/eltww.v5i2.7332.

[7] G. Devita, “Inclusive approaches to effective communication and active participation in the multicultural classroom: An international business management context,” *Act. Learn. High. Educ.*, 2000, doi: 10.1177/1469787400001002006.

[8] D. F. Brown, "The Significance of Congruent Communication in Effective Classroom Management," *Clear. House A J. Educ. Strateg. Issues Ideas*, 2005, doi: 10.3200/tchs.79.1.12-15.

[9] S. Shan, C. Li, J. Shi, L. Wang, and H. Cai, "Impact of Effective Communication, Achievement Sharing and Positive Classroom Environments on Learning Performance," *Syst. Res. Behav. Sci.*, 2014, doi: 10.1002/sres.2285.

[10] P. Nilsson and A. Ryve, "Focal event, contextualization, and effective communication in the mathematics classroom," *Educ. Stud. Math.*, 2010, doi: 10.1007/s10649-010-9236-7.

CHAPTER 7

UTILIZING VISUAL RESOURCES AND AIDS

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ABSTRACT:

This study examines teachers' perceptions on the effectiveness of using visual aids such as photographs, animated videos, projectors, and movies to motivate pupils to read literary texts. The closed ended questionnaire was used to gather the necessary data in order to achieve the research's goal. The employees and students of the public and private educational institutions in District Dera Ghazi Khan were the studies targeted demographic. In this study, information was gathered via primary data. The gathered data was analysed using the SPSS programme, and it was also displayed as a percentage distribution in pie, line, and bar graphs. The data analysis revealed that most teachers and students had favorable opinions of the usage of visual aids.

KEYWORDS:

Student Perceptions, Resources, Teaching Methods, Teaching Tools, Visual Resources.

INTRODUCTION

Education's key component is teaching and learning. To teach their students and encourage active learning, the teacher employs a variety of ways. As time goes on, new approaches and strategies are introduced in the field of education, and teachers now employ a variety of tools to facilitate effective learning. Visual aids capture students' attention and make it easier for teachers to convey concepts. Visual aids are educational tools that teachers employ in the classroom to support students' learning. Visual aids, in Burton's words, are "sensory objects or images that initiate, stimulate, or support learning." Visual aids are any tools that can be utilized to enhance learning by making it more dynamic, accurate, and realistic, according to Kinder, S. James.

Visual aids (pictures, models, charts, maps, films, slides, real objects, etc.) are tools that make a topic or lesson clearer or simpler to comprehend and remember. Visual aids are widely available today. These aids can be categorized as follows: visual aids are those that make use of vision. As an illustration, consider models, real things, charts, photos, and maps. Also consider flannel board, flash cards, a bulletin board, a chalkboard, slides, and an overhead projector. The most popular of these are chalk and a blackboard. When a course is assigned to the class while the course books (textbooks) contain an excessive amount of interactive expertise exercises, the obstacles of classroom instruction increase. The integration of textbooks with audiovisual aids as an additional or auxiliary resource for classroom course learning activities has become a regular phenomenon, which is most notable (Hoppenot et al., 2012b; Sliep et al., 2001).

The use of visual aids in schooling is crucial. Visual aids are tools that teachers employ in the classroom to facilitate and make learning more engaging for students. The best method for effective teaching and knowledge transfer is using visual aids. Research by Cuban (2001) revealed the psychology of visual aids as follows: 1% of what is learned is from the sense of TASTE, 1.5% from the sense of TOUCH, 3.5% from the logic of SMELL, 11% from the logic of HEARING, and 83% from the sense of SIGHT. In addition, studies have shown that people typically recall

10% of what they READ, 20% of what they HEAR, 30% of what they SEE, 50% of what they HEAR and SEE, 70% of what they SAY, and 90% of what they SAY when they DO a thing. Therefore, there is no question that technological devices have a more significant impact and dynamic informational system.

Importance of the Study

Visual aids are the tools that enable the teacher in accurate conception, establishment, correlation, and coordination of understandings and appreciations as well as in making learning more active, motivating, meaningful, and glowing. The implications of our study are as follows: Everyone has a tendency to forget. The effective use of visual aids aids in the long-term retention of more concepts.

1. Students who are adequately motivated by various visual aids can study effectively.
2. When kids see and hear clearly, visual aids help to create an accurate mental picture.
3. A complete example for conceptual thinking is provided by visual aids.
4. Students are drawn into an engaging environment thanks to visual assistance.
5. Students' vocabulary can be increased with the aid of visuals.
6. Visual aids allow the instructor to take breaks and create

DISCUSSION

A difficult process, learning. It can be characterised as a shift in character; an evolution of generally stable behaviour over time, partly influenced by knowledge. Learning can result from newly acquired knowledge, principles, skills, perception, facts, and new information at hand. Different teaching/learning tools can reinforce learning since they pique students' interest during the teaching process, motivate them, and keep them there for a while. Visual aids capture students' attention and make it easier for teachers to convey concepts. Visual aids are educational tools that are used in the classroom to support teaching and learning. The term "audio visual aids" is defined by Singh as "any device which by sight and sound increase the individual s' practise, other than that attained through reading." Visual aids are those teaching tools that are applied in the classroom to motivate and facilitate learning. Instructional aids are objects such as models, charts, film strips, projectors, radios, televisions, and maps. Visual aids work well to "invest the past with a sense of reality." Visual aids provide the students with accurate information, retaining their interest and assisting in the comprehension of the wonders of antiquity. Through the visual and aural senses, they make demands on the mind. One of the factors that roots student engagement in the class is the use of visual aids as teaching aids because when students look at a visual model or aid, it is measured as a form of contribution (M. M. Marzouk et al., 2010; Musrifah, 2018).

Additionally, the introduction of visual aids encourages movement and could improve control. One picture is worth a hundred words, according to a well-known Chinese saying, and it is true that we acquire knowledge through our intellects. According to a different adage, "if we hear, we forget, if we see, we remember, and if we do something, we know it," using visual aids in the classroom improves learning outcomes. In the words of Kishore (2003), "visual aids stimulated thinking and cognize." The benefits of using visual aids in the teaching and learning process are numerous. Visual aids give speakers the possibility to deliver a more polished and reliable presentation. While certain ideas and educational goals will be simple for pupils to grasp, other ones will require you to think critically to ensure that crucial learning objectives are accomplished. The teaching vocation is full with unlimited opportunity to better the academic lives of students. One strategy

to improve lesson planning and give students extra ways to assimilate topic material is by using visual aids in the classroom. Visual aids are tools that display a unit of knowledge through both aural and visual cues in order to facilitate learning. They help make learning practise apples real, active, and essential by making the knowledge more concretely accessible. They aid in the research for the text books and support the teacher's job. Comenius, a famous evaluator of education, once observed, "The basis of all learning consists in representing clearly to the senses and sensible objects so they can be appreciated easily"; Agun et al. A few types of learning resources are genuine items, audiovisual aids, and many others. Visual aids are materials that may be developed locally or commercially. For instance, they can take the form of wall charts, example images, symbolic materials, or other two-dimensional objects. Additionally, there are audiovisual aids. These are educational tools with sound capabilities, similar to television, radio, and various projector types. Radio and television shows offer yet another beneficial source of information. Similar to books, films serve as broad teaching and learning tools. Teaching and learning resources have benefits beyond simply aiding pupils in remembering vital information (Brooks et al., 2009; Marschall, 2004).

When properly applied, they promote learning and keep students' attention. Visual aids can be highly helpful in illustrating a point, and combining visual and auditory stimuli is especially successful because it involves the two most vital senses (Burrow, 1986). Teachers should keep in mind that they are similar to philosophy' salesman and that many of the best strategies for grabbing customers' attention are well worth taking into account. It is obvious that one of the main objectives of all instruction is for the pupils to be able to recall as much information as possible, especially the key elements. Numerous research has looked into how well learning resources accomplish this goal. The research' results, which are only modestly significant and only show 10-15.

Percent retention rise to more positive outcomes where retention is boosted by as much as 80% (Burrow, 1986). Due to their correct visual representation and facilitation of learning for the student, good learning tools can assist in overcoming some language barrier issues (Chacko, 1981). Learning resources can also be used to explain the connection between tangible things and difficult-to-understand abstractions. Associations of place, time, size, value, and frequency can also be depicted visually using symbols, graphs, and diagrams. It is even possible to visualise abstract relationships by symbolising the entangled components. If instructional assistants cannot be seen or heard, they serve no use in the learning process. Speech and sound recordings on tape should be checked for accuracy in terms of volume and quality in the actual setting in which they will be utilised. The entire class must be able to see any visual assistance. All calligraphy and illustrations must be large enough for the students who are further away from the aids to easily view them. When employed, colours should have a strong contrast and be immediately apparent. The effectiveness of assistance can be increased by using the right sequencing to expand on prior information. Natural patterns of logic and good institutions frequently dictate the sequencing.

Technology integration in the classroom, according to Ranasinghe and Leisher, starts with the teacher's preparation of lessons that make use of technology in meaningful and applicable ways. Instead than dictating the curriculum, technological devices ought to supplement it. According to Ranasinghe and Leisher, technology should help the instructor foster a cooperative learning environment. Integrating technology into the curriculum entails using it as a tool to teach academic subjects and to encourage students' higher-order thinking abilities.

Technology advancements opened the door for creative teaching methods in the classroom. There have been notable practical advancements in the design of visual aids for use in the classroom. The learning environment for pupils in Pakistan has benefited from technological advancements. Pakistan's classroom learning environment has improved as a result of reforms in education for enhancing skills that were started by the Ministry of Higher Education. University classrooms are furnished with cutting-edge electronic teaching aids to make learning engaging and creative for students. However, it is advised to employ the same materials that make up a syllabus. Using overlays on slides, dotting techniques on charts and/or chalkboards, and marker boards alone can help improve sequencing. The use of contrasting colours can emphasize and make preparation for sequencing more obvious (Hernandez et al., 2018; M. Marzouk et al., 2008).

Research's Statement of the Problem

Since visual aids are one of the most important teaching tools and are crucial during instruction, it is easier to study, teach, and explain a concept when using them. Visual aids are more effective and convenient for people and may give the opportunity to learn visually. Students attempt to identify models and visual aids during instruction by recognising their functions and attempting to interpret them in order to comprehend their utilisation.

They contrast it with their preconceived notions while adjusting to the new sensation and seeking to understand it. Therefore, it is morally right to encourage pupils or keep them engaged in the learning and teaching process. However, the majority of teachers do not use sufficient visual aids in their lesson plans. This could obstruct the teaching and learning process and have a direct impact on the learning results. The primary research question is as follows:

1. How do educators feel about the use of visual aids?
2. What distinctions exist between the academic levels of kids who use and don't use visual aids?
3. Do teachers and students in Dera Ghazi Khan have different opinions and practises regarding the usage of visual aids?

Methodology

In this study, information from specific people who possessed the necessary knowledge was gathered using random sampling procedures. Therefore, this kind of knowledge has been necessary for quantitative study. The Ghazi University Campus Dera Ghazi Khan, Indus International Institute, Government Degree College, Government High School No. 1 (Centre of Excellence) for boys and girls, Government College of Technology Dera Ghazi Khan, Government Technical Training Centre, Vocational Training Institutes for boys and girls Dera Ghazi Khan, and pr

This study has a 200-person sample size, and it relies on primary data to compile its findings. Closed-ended surveys are utilised to assess a number of factors that demonstrate how visual aids have improved learning for Dera Ghazi Khan Kids. Regression and correlation analysis are used to examine the data in SPSS.

Findings

According to the research, high schools in the study locations lacked sufficient teaching and learning resources that would have allowed high school teachers to provide their students with a high-quality education. This conclusion would lead one to believe that this is one of the reasons

high schools might not use these services. The research has also revealed that the high schools that were the subject of the study lacked sufficient funding to buy teaching/learning tools including globes, text books, and maps for use by teachers during lessons. Additionally, it was observed that high schools had a severe lack of fundamental resources, including text books and equipment, for teaching and learning. This situation has had a significant impact on both teachers' and students' learning and instruction. The study also revealed that while most students have access to teaching and learning resources, schools only have the most basic equipment, which is insufficient for both students and teachers.

The study also discovered that the majority of teachers were unable to create their own teaching and learning materials and did not even borrow materials from other schools. From this, it may be inferred that high school instructors lacked the necessary time and resources, which they could not purchase with school funds. According to the research, text books, wall charts, atlases, and rain gauges were the most widely used teaching and learning tools. This alone demonstrates the significance of the teachers' and pupils' lack of access to information from other sources.

This study also revealed that certain schools did not have access to visual teaching/learning tools including TV, CDs, computers, recording tapes, and radios, which prevented teachers from using them for instruction and students from using them for learning. This study also revealed that high schools did not yet have a widespread use of ICT and the internet. Because so few instructors are trained in the use of ICT, according to the research's findings, high school teachers are unable to debate the kinds of software packages that should be utilised in the classroom. The study's findings regarding the supply of teaching/learning resources indicated that it was up to individual schools to make these resources accessible to both teachers and students. It is hoped that this research has given other scholars interested in looking into the availability and utilization of teaching/learning resources in the Dera Ghazi Khan Institutions useful information.

The results of this study are helpful for lecturers in related fields, particularly those who work with learner teachers and students at universities, colleges, and other educational institutions. They are also helpful for teachers who teach in schools. The results may be used as guidance for teachers who use visual aids in the classroom because they want their pupils to completely focus on the lesson and because they are aware of the expectations and requirements for teaching literature. Teachers may create a welcoming and engaging environment for the children to learn in when they know how to capture their attention. This will motivate the students to read what they learn in order to enhance their own knowledge rather than only learning by listening to and writing what the teachers provide in the classroom (Hoppenot et al., 2012a; Russell & Lee, 2014). Additionally, using visual aids in teaching takes less time to deploy. The teachers will have more time to plan entertaining classroom activities and run a successful teaching and learning process as a result.

CONCLUSION

The study came to the conclusion that using visual aids as a teaching strategy encourages critical thought and enhances the classroom learning environment. Visual aids can effectively replace boring learning situations. When students have a good and enjoyable learning experience in the classroom, their own grasp of the subject matter grows. When there is a clear connection between the visual aids sessions and the course material, students perceive them to be valuable and pertinent. The current study provided information on how students perceived and felt about the utilization of visual aids and resources. While using visual aids resources, it is crucial to refocus teachers' perspectives, experiences, mistakes, and successes.

REFERENCES:

[1] Brooks, R. H., Hart, K. N., & Church, J. A. (2009). Farm and forest fair educates fifth graders about natural resource issues. *Journal of Extension*.

[2] Hernandez, D., Balzen, C., & McDonald, L. (2018). Comprehensive, Family-Centered Patient Education, a Long and Windy Road. *Biology of Blood and Marrow Transplantation*. https://doi.org/10.1016/j.bbmt.2017.12.758

[3] Hoppenot, C., Stampler, K., & Dunton, C. (2012a). Cervical Cancer Screening in High- and Low-Resource Countries. *Obstetrical & Gynecological Survey*. https://doi.org/10.1097/ogx.0b013e3182732375

[4] Hoppenot, C., Stampler, K., & Dunton, C. (2012b). Cervical cancer screening in high-and low-resource countries:Implications and new developments. In *Obstetrical and Gynecological Survey*. https://doi.org/10.1097/OGX.0b013e3182732375

[5] Marschall, S. (2004). Getting the message across: Art and Craft in the Service of HIV/AIDS Awareness in South Africa. *Visual Anthropology*. https://doi.org/10.1080/08949460490457074

[6] Marzouk, M. M., Omar, O. A., Abdel Hamid, M. S., & El-Said, M. E. (2010). An optimization algorithm for simulation-based planning of low-income housing projects. *Journal of Advanced Research*. https://doi.org/10.1016/j.jare.2010.06.002

[7] Marzouk, M., Said, H., & El-Said, M. (2008). Special-Purpose Simulation Model for Balanced Cantilever Bridges. *Journal of Bridge Engineering*. https://doi.org/10.1061/(asce)1084-0702(2008)13:2(122)

[8] Musrifah. (2018). Strategi Pengambangan Sistem Temu Kembali Informasi Berbasis Gambar (Content Based Image Retrieval System). *Jurnal Ilmu Perpustakaan Dan Informasi*.

[9] Russell, R., & Lee, L. (2014). Development and evaluation of a computer-aided learning resource in anatomy (725.6). *The FASEB Journal*. https://doi.org/10.1096/fasebj.28.1_supplement.725.6

[10] Sliep, Y., Poggenpoel, M., & Gmeiner, A. (2001). A care counselling model for HIV reactive patients in rural Malawi--Part II. *Curationis*. https://doi.org/10.4102/curationis.v24i3.855

CHAPTER 8

A BRIEF STUDY ON PROMOTING CRITICAL THOUGHT

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ABSTRACT:

It might be difficult to develop a teaching strategy that encourages critical thinking at all educational levels, not only in higher education. In this essay, we contend that values and knowledge education (VaKE) is a method of instruction that may be used in higher education to foster students' critical thinking abilities and attitudes. We used the VaKE approach with a group of 27 students enrolled in a psychology course at the undergraduate level to test our claim. Students were challenged to offer a solution to a value-laden dilemma during the course when there were several viable options. Students' experiences were documented in structured journals that adhered to Facione's concept of critical thinking, including critical thinking abilities and dispositions. Students' critical thinking abilities and dispositions were activated during the several VaKE phases, according to the findings of a theory-driven content analysis. Our ongoing research demonstrates through this study that during the VaKE course, students demonstrated and inferred critical thinking abilities and dispositions.

KEYWORDS:

Dispositions, Higher Education, Knowledge Education, Teaching Critical Thinking, Teaching Critical Thinking Skills, Values Education.

INTRODUCTION

Today, critical thinking courses are frequently offered in college and university settings. The art of critical thinking, which is frequently taught as a technique to "improve" thinking, involves an approach to thinking and, more significantly, learning that encompasses shifting one's perspective on thinking. To understand how thinking might be enhanced, critical thinking takes into account how students develop and apply their mental processes. A person is typically considered a critical thinker to the extent that they consistently and consciously work to improve their thinking. The fundamental principle guiding the study of critical thinking is straightforward: identify one's thinking's positive and negative aspects in order to build on the positive aspects and strengthen the negative aspects. The word "critical" used in this essay is not meant to connote a pessimistic way of thinking. Critical assessment entails assessing ideas, judgements, or thoughts while being conscious, creative, and iterating on these processes as necessary.

Early examples of influential thinkers who contributed to critical thinking include Socrates, Thomas Aquinas, Francis Bacon, Rene Descartes, John Locke, and Sir Isaac Newton. Among others, John Dewey, Ludwig Wittgenstein, and Jean Piaget made more contemporary contributions. Critical thinking abilities were developed through work done by Robert Ennis in the 1960s, which were then taught in schools and applied in the workplace. Ennis emphasised critical thinking as an acquired talent that, with instruction and practise, could be applied in the workplace. Ennis came to the conclusion that critical thinking is "focused on deciding what to believe or do" through years of study, analysis, instruction, and practises.

Ennis distinguished between two types of critical thinking: inclinations and talents. The ideal critical thinker is inclined to achieve the "right" conclusion, convey that perspective honestly and plainly, take into account other people's viewpoints, strive to be well-informed, and avoid intimidating or confounding other people. A critical thinker can also concentrate on a question, analyse an argument, assess the reliability of a source, make value judgements, clarify and improve their viewpoint, provide appropriate evidence for their viewpoints, and imaginatively suppose and incorporate the logic of a viewpoint while being sensitive to others [1], [2].

Thinking is defined by Vincent Ruggiero as "any mental activity that helps formulate or solve a problem, make a decision, or fulfil a desire to understand," in The art of thinking: A guide to critical and creative thought. It is seeking meaning while looking for answers". He observes that thinking might not always be a deliberate act. There are forces at play so to speak, under the surface within the unconscious that direct one's outward thoughts. An illustration would be making a daily trip, like to work, without paying attention to every landmark along the way. This way of thinking happens completely without any critical thought.

DISCUSSION

What Critical Thinking Means

According to a recent poll by the American Associate of Colleges & Universities (AACU), 74% of participants said that a key learning aim for the campus' general education programme was critical thinking. Professionals in higher education generally concur that critical thinking abilities are crucial, but they disagree on what precisely critical thinking entails. Even while the vast majority (89 percent) said they integrate it in their curriculum, California research revealed that only 19 percent of professors could explain critical thinking in plain terms. Investigated teachers' opinions on students' thinking through faculty interviews at a private liberal arts college. Although the majority of participants were "eager to promote critical thinking", the authors pointed out that none had received any formal training in this area. As a result, educators created and promoted their own unique definitions of critical thinking.

An examination of the literature provides a number of definitions for critical thinking, which are included in Appendix A. These definitions came from numerous that can be found in different publications. It's challenging, if not impossible, to come to a consensus. Academics, journalists, and writers of all stripes "poke" at a term that will please the general public. This attempt to define critical thinking is likely to continue throughout time, and writers will most likely choose the description that best fits the situation [3], [4].

Qualities of Critical Thinkers

The ability to shift from "typical" thinking models to an advanced method of thinking is a trait of critical thinkers. Compared to weak thinkers, critical thinkers generate more and better ideas. Through the use of a range of probing tactics, they enhance their ability to generate fresh and frequently improved ideas. More specifically, before deciding on a plan of action, critical thinkers frequently evaluate numerous investigative options, consider numerous views on the issue, and generate numerous ideas. Additionally, they are more inclined to employ their imaginations and take intellectual risks while analyzing problems and situations. They are also more daring and adventurous. Critical thinkers examine their initial assumptions, distinguish between options carefully, and draw judgements based on facts rather than emotions. They evaluate their reasoning

and the viability of their solutions twice, looking for flaws and complexities, foreseeing objections, and generally polishing their ideas since they are aware of their own limitations and tendencies. Focus is a skill critical thinkers acquire. They don't face distractions less frequently than others do; rather, they manage them more swiftly and successfully than ineffective thinkers do. The actions taken by successful minds are not magical. Like any learnt skill, they put their abilities into practise [5], [6].

Typical critical thinkers:

1. Recognize your own limitations.
2. View obstacles as stimulating challenges.
3. Set comprehension as a goal.
4. Support your conclusions with proof.
5. Show interest in the opinions of others.
6. Views that are radical with skepticism.
7. Consider your actions before taking them.
8. Keep emotions at bay
9. Remain open-minded
10. Practises attentive listening

Critical thinking in the Classroom: Benefits

Students have the chance to comprehend and control their learning thanks to teachers who emphasise critical thinking. Students who use critical thinking techniques approach the course material more deliberately and effectively, pose more thought-provoking queries, and engage in the learning process more actively. Critical thinking abilities are routinely practised long into later life by students who develop them. These abilities might genuinely alter their life for the better. Building critical thinking skills is essential for success in school and at work. By using these abilities, students often broaden their worldviews and improve their capacity to make critical decisions in both academic and personal contexts.

Once upon a time, educators thought that pupils could achieve with just content knowledge. It was once believed that, for the most part, what pupils learnt in school was also what their parents learned. In a society that is evolving and characterized by immediate communication, 24-hour news cycles, and the need to know everything as soon as possible, that paradigm has changed. A society where information changes swiftly and new ideas can be shared and modified practically instantly has been made possible by the speed and power of technology. Additionally, it has led to erroneous and misleading material that needs to be combed through and properly examined.

Today, it is crucial for students to develop their critical thinking abilities so they can both create and evaluate new knowledge. In de Bono's Thinking Course, Edward de Bono (2004) states, "Knowledge is not enough. Knowledge is crucial, but so are the creative, constructive, design, and operational components of thinking. Here, a word of caution is in order. The greatest and worst ways to think are developed in order to foster critical thinking. The long and convoluted road to mastering critical thinking may lead some people to initially misuse their newfound talent. It is wise to keep in mind that critical thinking does not mean to criticize negatively, but rather to "think deeply or to question." "In a humanities culture where being smart often means being a critical 'un-masker,' our students may become too good at demonstrating how things don't make sense," warns Michael Roth. Critical thinking aims to teach us how to think more deeply, solve issues

more effectively, communicate, work together, and innovate more successfully in both our personal and professional lives [7], [8].

A Workplace for Critical Thinking

Anytime someone is asked to make a choice or solve an issue, critical thinking is appropriate. People who are employed make choices. Some are wise choices that advance the company and boost revenue. Others are terrible choices that harm the company and cut into profit. This happens frequently in workplaces of all levels.

Making decisions and solving problems are continual processes in organisations; they are not just the domain of management and senior executives. Every day, every individual in a company or organization, regardless of rank, makes hundreds of decisions, each of which has the potential to be successful or unsuccessful.

Positive Effects of Critical Thinking at Work

Through the decision-making process, critical thinking in the workplace has the potential to affect people negatively or favourably. Because action must be taken, choices are frequently made and communicated to individuals inside organisations without much consideration. Based on everyday practise, the effect of "normal" acts in this situation may be innocuous. However, "bad" decisions might have a negative effect or deal a significant blow to the firm when it comes to important concerns or challenges. Making judgements after carefully considering them based on information that has been extensively assessed, analysed, and looked for the most logical option is crucial to reduce the danger of major negative effects.

Employers and managers are encouraged to observe diverse circumstances, consider all viable alternatives, and then choose a course of action through the use of critical thinking. This procedure can take a while and calls for input from various sources at various organizational levels. When the practise is exemplified and promoted from the top to the bottom of the organizational hierarchy, it benefits management as well as employees.

There is substantial evidence that employers value and need critical thinking abilities. In a 2007 Society for Human Resources Management report, employers ranked critical thinking and problem-solving abilities as the top sought talents for new hires (47% and 46%, respectively). Potential employees listed critical thinking/problem solving (48%), creativity/innovation (40%) and leadership (40%) as recent changes in their desired skills before entering the workforce.

The advantages of improving critical thinking go beyond being "nice" to do. This ability literally boosts productivity and staff capacities. Companies and organizations can anticipate a different standard of corporate culture given the capacity to use critically upgraded thinking. Long-term, this enhanced culture may result in cash or increased income, while short-term improvements in cooperation, cooperation, and collaboration may result from it. In Appendix B, several organizational effects of critical thinking are proposed.

In the workplace, critical thinking frequently introduces new concepts and procedures. For instance, when a problem-solving issue arises at work, a typical response is to presume that it belongs in a certain category. Utilising critical thinking in the workplace eliminates the temptation to categorise every problem as something that has already happened in the past because it makes no assumptions. Employees can think outside the box when it comes to finding a solution, look

for fresh perspectives, and weigh their options. Thinking can be liberated in many different ways by using critical thinking as a method for problem solving, issue resolution, or the development of new products or procedures. Critical thinking also considers the effects of a decision's decision-making process as a whole; for example, if step one of a decision changes, then the decision's subsequent steps must also be critically analyzed. This way of thinking creates opportunities that might not otherwise exist [9].

CONCLUSION

Though it may seem like a relatively straightforward process, thinking clearly needs a lot of cognitive discipline and the ability to maintain attention on the topic under consideration despite outside distractions. This makes it important for someone who wants to develop their critical thinking skills to block out all of their ideas that are unrelated to the material being examined. It is quite challenging to develop into an efficient and expert critical thinker without the discipline to be able to quiet the mind and focus properly. The acquisition of the knowledge required to develop into an effective critical thinker is a third significant challenge of being a critical thinker. This is because developing critical thinking skills requires having a large knowledge base from which to draw in order to be able to critically analyse a situation in a way that would enable the formulation of sound, reasoned conclusions. This is made worse by the requirement that someone acquire extensive knowledge across a wide range of topic areas in order to develop good critical thinking skills. The ability to trust one's critical thinking skills to the same extent that one trusts their own observations and conclusions, despite disagreement from others, is a sometimes-underappreciated obstacle of becoming a critical thinker.

REFERENCES:

[1] T. A. Angelo, “Beginning the dialogue: Thoughts on promoting critical thinking: Classroom assessment for critical thinking,” *Teach. Psychol.*, 1995.

[2] M. B. Pierstorff, “Promoting Critical Thought in the Study of Character Conduct in Literature,” *English J.*, 1958, doi: 10.2307/808527.

[3] H. Stroud *et al.*, “Early-Life Gene Expression in Neurons Modulates Lasting Epigenetic States,” *Cell*, 2017, doi: 10.1016/j.cell.2017.09.047.

[4] J. E. Dominy, F. Vazquez, and P. Puigserver, “Glycine Decarboxylase Cleaves a ‘Malignant’ Metabolic Path to Promote Tumor Initiation,” *Cancer Cell*. 2012. doi: 10.1016/j.ccr.2012.01.019.

[5] G. Hollman Frisman, I. Wåhlin, L. Orvelius, and S. Ågren, “Health-promoting conversations—A novel approach to families experiencing critical illness in the ICU environment,” *J. Clin. Nurs.*, 2018, doi: 10.1111/jocn.13969.

[6] K. Michels, E. Nemeth, T. Ganz, and B. Mehrad, “Hepcidin and Host Defense against Infectious Diseases,” *PLoS Pathogens*. 2015. doi: 10.1371/journal.ppat.1004998.

[7] B. K. Singh and T. Kambayashi, “The immunomodulatory functions of diacylglycerol kinase ζ,” *Frontiers in Cell and Developmental Biology*. 2016. doi: 10.3389/fcell.2016.00096.

[8] C. O. Aagbedia and J. Ogbe, “Critical thinking; issues in nursing education and practice,” *Int. J. Adv. Nurs. Stud.*, 2013, doi: 10.14419/ijans.v3i1.1200.

[9] E. Castanys-Muñoz, M. J. Martin, and E. Vazquez, “Building a beneficial microbiome from birth,” *Adv. Nutr.*, 2016, doi: 10.3945/an.115.010694.

CHAPTER 9

A BRIEF DISCUSSION ON FEEDBACK AND REFLECTION FOR TEACHERS

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ABSTRACT:

This study looks at post-teaching practise comments from peers and tutors in the context of quick, intensive TESOL certificate programmers. According to findings of current research into these courses, feedback was a contentious and difficult element. The results were taken into account in the context of the curriculum, as well as in light of current research on adult learning, reflection, and "best practises" in feedback. A novel method for the post-teaching practise meeting is presented, in which feedback alone is thought to be insufficient, drawing on insights from these domains. Instead, feedback and reflection are combined in the form of reflective conversations, which include a variety of characteristics such as giving reflection more emphasis and including a facilitator and language learners. It is hypothesized that these elements would provide a more trainee-centered forum where feedback is balanced by reflective practise, hence addressing several of the issues found in the research.

KEYWORDS:

Feedback, Reflection, Teachers, Teaching, Teaching Methods, TESOL.

INTRODUCTION

In The importance of feedback in teaching, learning, and assessment is frequently noted. According to Hattie and Timperley, feedback in education is information given by a representative regarding certain aspects of a student's performance or comprehension. Feedback can be given in a variety of ways. For instance, students can give vocal feedback to their classmates, and a computer programme can automatically generate feedback for a student. This study focuses particularly on the written feedback that teachers give to certain students. Students receive written feedback from teachers, and it is expected that they would respond to it and enhance their learning. Students don't always hear and react to feedback in ways that are expected or wanted, which is an issue. Researchers have looked for traits or elements that contribute to improving the usefulness of feedback in order to address this problem. The mechanics of providing feedback and illuminating or extending teachers' feedback practises have received a lot of attention in this research. Recent research has demonstrated the necessity to refocus attention on how pupils react to criticism. In other words, rather than focusing on how teachers give feedback, more consideration should be given to how students absorb, comprehend, and use it. This article's pilot study makes a contribution to this new field [1], [2].

This study looked at how Year Seven children, who were between the ages of 12 and 13, responded to written teacher evaluation. How do Year Seven students think on and respond to written teacher comments offered in the context of a music history/appreciation assignment was the research question that served as the study's driving principle. This study was inspired by the first author's desire to better her own feedback strategies as a practising teacher and learn more about her

students' perceptions of written teacher feedback in Australian Journal of Teacher Education. The second author worked on the project as a co-investigator. The literature review that follows will: In this section, we'll look at some important theoretical stances on feedback, where it fits into assessment framework, how reflection relates to feedback, and what makes for good written feedback [3], [4].

DISCUSSION

Feedback from a Theoretical Perspective

Early 20th-century behaviourist learning theories served as the foundation for the development of feedback research. According to these ideas, feedback is a potent external input that has the potential to reinforce conduct. According to behavioristic perspectives on feedback, it was more important to reward right answers than wrong ones. Based on the idea that providing feedback on incorrect responses will enrage students and should be avoided, this was done. Although there are several issues with this logic, it did acknowledge that errors have an inherently negative aspect and that the feedback process has an emotional component.

The behavioristic idea of feedback started to be questioned in the later half of the 20th century. According to studies feedback given after a correct response did not necessarily act in a reinforcing fashion. The focus of research shifted to the mental operations required for gathering, structuring, and applying knowledge. This happened at the same time that cognitive studies began to take front stage in psychology as a whole. As a fundamental shift from an external to an internal perspective, cognitivist underlined that students actively evaluate input rather than passively accept it. This important development demonstrated the value of both directional feedback which indicates correctness or incorrectness and facilitative feedback which offers suggestions to assist learners advance.

As a result of the cognitive viewpoint that has dominated feedback research in recent decades, various influential models of feedback have been developed. The value of cognitive models resides in the way they connect feedback from outside sources to what happens inside the "black box" of students' thinking. To particularly investigate how school-aged pupils encounter, analyses, and comprehend written teacher evaluation, however, little study has been done. Formative evaluation and cognitive views are closely related since they both emphasise feedback as information.

Formative Evaluation and Commentary

Rarely is feedback viewed as a standalone act. Instead, it is usually embedded in the framework of assessment, and formative assessment in particular. According to William and Black, the main goal of formative assessment is to enhance, encourage, and improve student learning. Students can "bridge the gap" between where they are in their learning and where they need to be with the aid of formative assessment. Students receive feedback regarding their learning from it, giving them the chance to change their ways of thinking or acting. Contrast this with summative assessment, which is an evaluation used to measure students' performance or comprehension at the end of a unit of study. Australian Journal of Teacher Education. Having said that, summative evaluations can also be referred to as "formative" if they include comments that students can apply to future exams of a similar nature [5], [6]. The main proponents of feedback in the context of formative assessment are Hattie and Timperley. They note that three key issues are addressed by effective formative feedback: First, "Where am I going?" and second, "How am I going?" 3) "What comes

next?" It is widely accepted that feedback is more effective when it is related to a particular learning goal or target, and there is no debate over this position.

The role of self-regulation, or the process of controlling and monitoring one's own thinking or actions in order to attain a goal, is highlighted when feedback is placed within a context of formative assessment. According to Parr and Timperley, for feedback to be really "formative," it must cooperate with self-control; otherwise, students are unlikely to act on input or apply what they have learned in other contexts. Reflection may help this process, according to a number of research.

Feedback and Analysis

An experience from the outside world is brought inside the mind, processed, connected to previous experiences, and filtered through personal biases during reflection, according to Daudelin, who defines reflection as a cognitive activity. Since learning is primarily promoted by reflective, conscious reception of feedback, the goals of reflection and feedback are extremely compatible. Studies have found a favorable association between post-feedback reflection and student performance, which is not surprising.

Although the importance of contemplation in the feedback process is generally accepted, different feedback studies may place different emphasis on reflection. Many studies make implicit references to the significance of reflection and feedback but much fewer explicitly explore the relationship between reflection and feedback Quinton & Small bone. The majority of the studies in the latter category took place in tertiary education settings. This in no way implies that pupils in school are unable to engage in reflection. Contrarily, a number of research (such as Bond & have made the opposite claim. It only highlights the dearth of studies that investigate both feedback and reflection in educational contexts.

Schools utilize a variety of reflection techniques, such as think-pair-share exercises, notebooks or "thinking books," and graphic organisers. But according to Yinger, written contemplation can have a significant impact since writing "forces people to think in ways that clarify and modify their ideas". As stated by Suriyon, Inprasitha, and Sangaroon "thinking aloud on paper" might be used to characterize this technique. Written feedback remarks, which are the primary subject of this study, seem to be well-aligned with written reflections on feedback.

Qualities of Effective Written Criticism

In schools, written remarks are regularly used as feedback. However, it would be beneficial to first look at broad traits of effective feedback before discussing traits of good written feedback. The various factors that influence the effectiveness of feedback, such as strategy (e.g., time, amount, method, audience) and content (e.g., focus, function, valence, clarity, specificity, tone), have been the subject of much research. Despite the inconclusiveness of the findings, the following four broad suggestions can be made.

According to Bruno and Santos, written remarks should be clear and concise, use common words and short sentences, and refrain from offering partial answers. Regan (2010) points out that the tone used to express written comments should also be taken into account. This is crucial because teachers must strike a balance between pushing students to make the required changes and enabling them [7], [8].

Additionally, written comments have a propensity to overwhelm and be excessive. Students are inclined to disregard it as a result of this or become discouraged by the number of revisions required. Therefore, while offering written criticism, teachers should exercise discretion. The four major concepts of theoretical views, formative assessment, reflection, and characteristics of good written feedback have served as the framework for the debate that has just been had. The conceptual framework for this study was provided by these constructs and the connections that exist between them.

Research Objectives and Methods

The purpose of this pilot study was to examine how Year Seven students (aged 12–13) responded to written teacher comments in the context of a project on the history and appreciation of music. A systematic investigation into the first author's professional practise as a teacher was conducted using a qualitative small-scale action research approach, which resulted in suggestions for improvement. The first author shall hereafter be referred to as the teacher-researcher. The traditional definition of action research is a process that incorporates repeated cycles of observation, data collection and synthesis, and action. However, because this was a small-scale pilot project, a one-turn action research design that was informed by the literature was employed. This only required one planning, doing, observing, and reflecting cycle, but it nevertheless aimed to significantly improve the teacher-researcher's feedback technique.

In order to assure academic variety and gender fairness, the teacher-researcher used purposeful sampling to choose ten participants from her Year Seven music courses. Due to the unique nature of the researcher-teacher's relationship with her students, plain language statements were given to the students and their parents/caregivers, specifically stating that participation was completely voluntary and that withholding consent would not affect grades. All of the students who took part in the study, together with their parents or guardians, Australian Journal of Teacher Education Vol 43, 12, December 2018 34, provided written consent.

On the campus of a private independent school in Perth, Western Australia, research was carried out during a term of required classroom music instruction for Year Seven students. Students produced a music history/appreciation project this term to show that they understood Sergei Prokofiev and his compositions. Students had to undertake research for this assignment and respond to the five questions listed in Table 1 by providing their answers. The Western Australian Curriculum's Music Responding strand was addressed in the music history/appreciation project (School Curriculum and Standards Authority, 2014), which contributed 30% of the students' final term grades.

Before finishing their graded final music project submissions, students were asked to complete a draught music project component and submit it to the teacher-researcher for written assessment. The music history/appreciation assignment was completed by each student in the teacher-researcher's Year Seven music courses, and each student also received written evaluation. However, for the purposes of this study, only the data of participating students were gathered.

Two phases of data collection were used for this investigation. Data were gathered during Phase One via student draught music project components and a Feedback Reflection survey. This feedback reflection survey will henceforth be known as feedback reflection 1 (FR1). FR1 was a one-page, open-ended questionnaire that served as a foundation for written reflection. Six questions from Quinton and Small bone’s feedback reflection framework for college students made

up the instrument. Following written teacher input on their first music project component, students completed FR1 alone [9], [10].

In Phase 2, information was gathered from two sources: the students' assessed final music project submissions and a second Feedback Reflection questionnaire. This second Feedback Reflection survey will henceforth be known as Feedback Reflection 2 (FR2). Following receipt of written teacher evaluation on their evaluated final music project submissions, each student promptly completed FR2. FR2 was given under similar circumstances and was identical to FR1. The evaluated final music project entries from students were photographed and data was gathered. This revealed how students' reflections on written teacher feedback helped them submit better final music project submissions that had been evaluated.

Following Stringer's four-stage process of:

1. Evaluating the data,
2. Unitizing the data,
3. Categorizing the data, and
4. Grouping categories of data into broad themes, the study's data were inductively and thematically evaluated. Iterative data analysis was used throughout the data collection procedure. The study's results are shown in the section below.

Findings

In this study, Year Seven students were asked to think on and reply to written teacher feedback, and the analysis of the data highlighted three key themes. Based on

1. Individual characteristics,
2. Task perceptions, and
3. Personal choices, students considered and replied to written teacher comments.

Individual Qualities

Students considered written teacher criticism that focused on their own traits or self-related qualities, such as feelings, effort, and prior experiences. Reflections from students revealed that when they received written instructor comments, they felt various personal feelings. The kind of input they got was correlated with the kind of feeling they experienced. In contrast to facilitative feedback, which was connected with sentiments of normalcy or displeasure, positive directive input was related with feelings of contentment or confidence. The relationship between the kind of feedback given and the students' related emotional response is displayed.

In this study, students' emotional reactions to written teacher evaluation varied. Particularly, facilitative input was frequently met with unfavourable reactions. This was noteworthy in light of the teacher-researcher's goal to provide feedback that addressed the qualities of successful written feedback as described in the literature, such as by putting more emphasis on the task or task processes than on the individual. This might be due to the fact that, according to Poulos and Mahoney, students may interpret facilitative feedback as an opportunity to reflect on themselves rather than as a means of enhancing their learning. Additionally, according to King, Schrodt, and Weisel, they might detect a hidden "correspondent inference" in the feedback message. Despite the teacher's best efforts, this might make it difficult for pupils to distinguish between task rating

and personal appraisal. As an alternative, Pitt and Norton (2017) contend that students' emotional maturity can influence how they react to feedback, independent of the type of feedback they get.

Therefore, it is insufficient to just advise giving facilitative feedback and avoiding "self-oriented" feedback. Students must be encouraged and instructed on how to evaluate comments with less self-interest. Findings also demonstrated that in response to written instructor criticism, students actively make decisions. When asked how they will use comments to their future work, some students were categorical, while others were not. This implies that a variety of factors may have an impact on how pupils react to criticism. Students may think about things like whether it is worthwhile for them to respond to feedback and whether they are capable of succeeding. This is consistent with Hattie and Timperley's study, which found that students' engagement with feedback depends on their estimation of the "transaction costs" involved. The amount of work necessary to achieve one's personal goals, how others will see these efforts, and the likelihood that one's interpretation of feedback information is true are some examples of transaction costs. Although Hattie and Timperley focused primarily on the expenses associated with receiving feedback, it appears that similar ideas apply just as well to students' reactions to that input. In order to engage with criticism, especially feedback that they do not understand or feel is not worth the bother to apply, students need encouragement.

CONCLUSION

Another intriguing result of this research was the permanence of students' task perceptions. Despite receiving positive directed feedback, students nevertheless assessed their work in light of how they perceived the task and made adjustments as necessary. This corroborates Butler and Winne's claim that students self-regulate and respond to feedback in ways that are consistent with their ingrained beliefs and past Australian Journal of Teacher Education Vol 43, 12, December 2018 38 experiences. Some students also showed perplexity about the assignment and the feedback that was given. They expressed displeasure in their self-reflective comments over not "getting it". According to Nicol and Macfarlane-Dick, knowledge gaps may prevent students from comprehending feedback. Re-teaching rather than giving criticism may be more suitable in certain circumstances. However, in addition to providing opportunities for discussion to help students better understand their concepts, teachers can also help students by explicitly teaching them how to use feedback, supplementing written feedback with oral feedback (Jonsson), and providing them with opportunities to discuss what they have learned. Students cannot be forced by teachers to respond to criticism. But they might have some power over the decisions students make in relation to feedback.

REFERENCES:

[1] C. Brandt, "Integrating feedback and reflection in teacher preparation," *ELT J.*, 2008, doi: 10.1093/elt/ccm076.

[2] State of Victoria, "Peer Observation, Feedback and Reflection: a Practical Guide for Teachers," *Dep. Educ. Train. Melb.*, 2018.

[3] G. Hoban and G. Hastings, "Developing different forms of student feedback to promote teacher reflection: A 10-year collaboration," *Teach. Teach. Educ.*, 2006, doi: 10.1016/j.tate.2006.04.006.

[4] J. D. Gonzalo *et al.*, "Content and timing of feedback and reflection: A multi-center qualitative study of experienced bedside teachers," *BMC Med. Educ.*, 2014, doi: 10.1186/1472-6920-14-212.

[5] C. V. Fluit *et al.*, "Residents provide feedback to their clinical teachers: Reflection through dialogue," *Med. Teach.*, 2013, doi: 10.3109/0142159X.2013.785631.

[6] P. Runhaar, K. Sanders, and H. Yang, "Stimulating teachers' reflection and feedback asking: An interplay of self-efficacy, learning goal orientation, and transformational leadership," *Teach. Teach. Educ.*, 2010, doi: 10.1016/j.tate.2010.02.011.

[7] K. Goh and R. Walker, "Written teacher feedback: Reflections of year seven music students," *Aust. J. Teach. Educ.*, 2018, doi: 10.14221/ajte.2018v43n12.3.

[8] L. Mandouit, "Using student feedback to improve teaching," *Educ. Action Res.*, 2018, doi: 10.1080/09650792.2018.1426470.

[9] J. Broadbent, E. Panadero, and D. Bouda, "Implementing summative assessment with a formative flavour: A case study in a large class," *Assess. Eval. High. Educ.*, 2018, doi: 10.1080/02602938.2017.1343455.

[10] M. Kleinknecht and A. Gröschner, "Fostering preservice teachers' noticing with structured video feedback: Results of an online- and video-based intervention study," *Teach. Teach. Educ.*, 2016, doi: 10.1016/j.tate.2016.05.020.

CHAPTER 10

A BRIEF DISCUSSION ON ETHICS OF TEACHING

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ABSTRACT:

Education-related research is carried out to address educational issues and offer answers that will boost efficiency in the educational sector. The integrity of the study and the researchers must be maintained, much like in other fields, when doing educational research. This chapter lists a number of unethical practises that are currently being used. The chapter also offers insights into the areas on which academics and researchers can concentrate to make sure that unethical problems are avoided when doing research. In order to move present practices towards international best practices in managing educational research, conclusions and recommendations were developed.

KEYWORDS:

Ethics, Ethical Issues, Issues, Educational Research, Management, Educational, Research Management.

INTRODUCTION

Extending human knowledge beyond what is currently known is the goal of study. However, a person's information does not become scientific unless it is disseminated to others in a way that allows others to evaluate it on their own. The platform that research gives for academics and scientists to compile and disseminate their study's findings as well as discuss their thoughts. The goal of research is the creation and/or advancement of knowledge. As a result, God's experiments in research enabled man to exist on earth. It should be mentioned that the entire creative process was an investigation. The sixth day of creation was an experiment that God began since even he (God) said that everything created as a result of the experiment "was very good" before taking a vacation on the seventh day. Inferentially, research conclusions are always drawn based on the proof offered by experiments and data analysis.

In order to keep the process fresh and moving as intended, certain norms and laws must be upheld and avoided given the significance of research to mankind, particularly in terms of issue solving and decision making. In general, these guidelines are referred to as ethical issues in research. However, there are still ethical standards that must be upheld in educational research. Additionally, there are guidelines that must be followed when conducting educational research in order to prevent issues and maintain the validity of the findings [1], [2].

Like other practises or disciplines, management of educational research calls for ensuring efficacy in each step of the process. This emphasizes the requirement for higher standards in the management and use of educational research. Most frequently, many academics conduct experimental studies with reliable empirical data to show for them; yet, while reporting such findings, a number of difficulties are not given adequate consideration. When this is done, a researcher has violated "ethical codes," and if the violation is notified to the relevant authorities, the violator may face substantial punishments and/or liabilities.

The importance of ethical issues in research is highlighted by Centre for Innovation in Research and Teaching (CIRT). Ethics regulations forbid the fabrication or falsification of data, which supports the pursuit of knowledge and truth, which is the main objective of research. Being ethical is essential for collaborative work because it fosters a culture of trust, responsibility, and respect among researchers. When taking into account issues like data sharing, co-authorship, copyright regulations, confidentiality, and many other issues, this is extremely crucial. For the public to support and believe in the research, researchers must also abide by ethical standards. The general public needs to know that researchers adhered to the correct standards for matters like safety, health standards, compliance with the law, animal welfare, human rights, and so forth. The way these ethical concerns are handled has a significant impact on the research project's integrity and may have an impact on whether the study is funded.

If the results are to be useful, research must be conducted in a way that is ethical, reliable, and socially conscious. For a research study to be deemed ethical, every component from the project design through the submission of the findings for peer review must be upstanding. The integrity of a whole research endeavor is put in jeopardy when even one component is problematic or unethically done, according to the University of Minnesota Centre for Bioethics (UMCB, 2003). All individuals who conduct research projects or use and use the findings of research projects should be aware of what ethical research entails. All researchers should be familiar with fundamental ethical principles and should be knowledgeable about current policies and procedures intended to protect research subjects and to prevent careless or irresponsible research. Failure to be aware of such policies is not regarded as a good reason for conducting projects that are morally dubious. Therefore, it is the responsibility of the researcher to look for and completely comprehend the theories and policies intended to ensure ethical research practises (UMCB, 2003).

It should not be surprising that a wide range of professional bodies, governmental organisations, and universities have developed certain codes, norms, and policies relating to research ethics given the significance of ethics for the conduct of research. Standards of conduct that are appropriate for their objectives and purposes can be found across a wide variety of disciplines, institutions, and professions. These standards also assist practitioners in organizing their actions or endeavors and in building the public's confidence in the discipline. For instance, ethical principles guide behavior in business, law, engineering, and medicine. Ethical standards apply to those who practise or conduct scientific research as well as other scholarly or creative endeavours and serve the purposes or goals of educational research management. Research ethics is an area of study that is much specialised. After examining the significance of ethics in research, this chapter focuses on the presentation of ethical concerns in the management and practise of educational research. When conducting educational and other research trials, these must always be followed [3], [4].

DISCUSSION

Ethics

The rules or criteria for behaviour that provide a distinction between right and wrong are known as ethics. They aid in defining what constitutes acceptable and undesirable behaviour (CIRT, 2019).

In everyday speech, we simply refer to the laws, rules, regulations, dos and don'ts that govern a setting, a profession, or a thing when we discuss ethics. In other words, these are merely the

standards that must be followed. From one location, culture, profession, and time to another, ethics change.

Research

Finding the reality and truths underlying particular problems or phenomena of interest through observation and data collection (using appropriate tools), analysis of data (using appropriate quantitative or qualitative techniques), presentation and interpretation of data, and proper decision-making (deductions or inferences) constitutes the process of research. Solving issues, producing new knowledge, and modifying current knowledge to fit societal dynamics are the main goals of educational research. For any activity to be considered research in education or elsewhere, it must possess the following characteristics: the capacity to anticipate hidden truths that can be discovered by simple intuition; the development of new contextually relevant methods of doing things; the provision of verifiable evidence to support the truth uncovered; and the use of the exercise to address issues that have drawn the attention of many people in the environment.

Management research in education

The process of streamlining and adjusting research activities in education and its allied fields in order to achieve their objectives is referred to as educational research management. Every study conducted on education has both general and targeted objectives. However, for one reason or another, not all educational experiments end up accomplishing their original goals. Whatever the reason, administration of any research that fails to accomplish stated goals and objectives cannot be considered effective. Eliminating any obstacles that can prevent any research endeavour in education from being completed successfully is the goal of educational research management, or simply research management. This can be done by properly organising, planning, staffing, budgeting, directing, coordinating, and reporting.

Planning is essential for any educational research project because it allows you to anticipate future outcomes, including what educational problem you'll address, why you'll address it, how you'll address it, when and where you'll address it, and who will profit from the research. By taking these into account, you will have a better understanding of the study's problem or topic, its setting, its target audience, its sample size, its methods of data collecting and analysis, its significance, its timing, and so on. In educational research management, organising signifies that all the data required to carry out the study have been appropriately gathered and integrated. Designing research instruments, locating pertinent literatures connected to the study, creating citations and references of other works used, as well as data collection, processing, presentation, and interpretation, are examples of materials that need to be organized [5], [6].

Every research project needs a budget because it can occasionally anticipate the size of the investigations. It is appropriate to constantly take your ability to support the research with resources into account. Budgeting encompasses the readiness to allocate resources to enable the conduct of a study and the dissemination of research reports. It is not just limited to available cash. The selection of the right people to collect data from or choose research assistants to assist in the data collecting process is referred to as staffing in educational research management. In order for research participants, research assistants, and other team members to understand their roles, what to avoid, and the care they must demonstrate in order to obtain reliable results, directing involves the process of passing instructions, guidelines, rules, and regulations to them. In educational research, coordination is a crucial management function. It is highly helpful for collaborative

studies since it enables each member of the research team to work individually and yet together to accomplish the single goal of the study. To ensure that all of the sub-units or different people work in accordance with the research's objectives is to coordinate.

Budgeting is the final step in the administration of educational research. Reporting calls for thorough documentation of the entire process, including the objectives, problem statement, hypothesis (for quantitative studies), techniques, and outcomes, to be made available at the conclusion of any educational research project. Research reporting is done to facilitate information exchange and problem solutions. Additionally, this needs to be done in accordance with any regulations established by the university or the publishers. Giving input to grant sponsors about the extent to which the suggested research study has been carried out, as well as the study's strengths, shortcomings, possibilities, and dangers, is another aspect of reporting in educational research management.

Managing educational research ethically

As was previously said, ethics are just norms that must be followed in order to carry out an action in a way that is deemed appropriate or right. As a result, in order to avoid issues with the research process and to produce research findings that can be applied to address societal concerns about education, academics conducting educational research are expected to abide by certain ideals, rules, and guidelines. These ethical principles serve as a guide for what should be done and what should not be done, not as a threat to researchers. Therefore, it is vital for researchers to get familiar with the ethical rules that regulate research in academia and other fields. As a result, this chapter discusses these ethical concerns and practical ways to check them [7], [8].

Ethics in administration and practise of educational research

The challenges that arise when required ethics are not followed when conducting educational research or managing the process and activities of educational research are referred to as ethical issues in educational research management and practise. The following list of ethical concerns in the practise and management of educational research.

Difficulties with copyright infringement

Copyright refers to giving a research project or other scholarly work the only right to use, publish, or sell it. When a document is copyrighted, it indicates that it is protected by copyright laws and cannot be used by anyone else without the author's, creator's, or copyright owner's permission. Such protected works are used in violation of copyright laws, which is referred to as copyright infringement. So, to put it simply, copyright infringement is when someone uses a file that has a copyright for their own or a business purpose without first getting permission from the owner of the copyright. It is a serious offence that carries legal repercussions.

However, it is usual in educational research management or practise to see many students, lecturers, researchers, and scholars use other people's work that is copyrighted without first obtaining permission from the authors or copyright owners of such content. Even if only a small portion of these protected files have been used, it is irrelevant. Copying in whole or in part is subject to copyright regulations. To prevent this, it's crucial to recognize copyrighted content online and/or offline, then obtain permission from the appropriate parties before utilizing them as directed.

Falsification problems

According to the American Speech-Language-Hearing Association, fabrication is "making up data or results and recording or reporting them." Examples of making up research data or results and recording or reporting them include making up spreadsheets with demographic data and performance data for research participants who don't exist and making up charts for public presentations with data from physical measurements of sound outputs for auditory devices that can't produce these levels. Many academics and researchers frequently engage in fabrication in the field of education research.

The following areas frequently include fabrication: data generation and collecting, citations, literature reviews, and data analysis. Many academics stay home and create (cook) data that are untrue rather than going out into the field to collect data. It is also typical for academics to mention writers who did not make these claims in their citations simply because they were unable to identify the true author of the work. Many academics have been seen generating empirical research that do not yet exist, according to literature reviews. The main reason they do this is to give their studies' literature reviews a foundation on which to build discussions of their findings. Most often, this is carried out by highly skilled researchers who create fictitious empirical studies and make them appear to be real.

Authentication problems

Falsification concerns are simple instances where academics purposefully distort people's opinions, facts, and citations to fit the needs of their studies. Falsification is "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record," according to ORI as stated in ASHA (2018). Falsifying research data and/or reporting it includes, among other things, the following:

a. Reporting data that weren't collected;
b. Altering data collected to accomplish a specific conclusion.
c. Only publishing information that is consistent with your theories and/or interests, and
d. Misrepresenting what one's study has shown or supported in promotional materials.

Many academics often insert new dates in old studies throughout the writing process to update the appearance of the work. In addition, some academics frequently tweak data and steer it in the direction that supports their goals and ideologies. In order to make other people's thoughts support their point of view, many researchers may purposefully add their own comments and suggestions to others' ideas (even after giving due credit). Falsification involves altering a study's setting to make it appear different or completely changing another person's research question while passing off your modified version as your own. For efficient problem-solving, all of these and many more practises in educational research should be avoided [9], [10].

Plagiarism

The act of misrepresenting the words, concepts, theories, ideas, or works of another as your own is known as plagiarism (UMCB, 2003). Plagiarism is defined by ORI as "the appropriation of another person's ideas, processes, results, or words without giving appropriate credit," according to ASHA. Plagiarism is the act of representing any portion or portions of someone else's work as one's own.

There are several ways to plagiarise. On one extreme of the spectrum, there are those who purposefully copy a whole piece into their own work without giving the original author due credit. On the other end are unintentionally paraphrased and cut-and-pasted texts that the author has assembled from several publications without properly citing the original sources. There are numerous fields of research where plagiarism, whether deliberate or not, is possible. It is plagiarism to conduct a study of the literature without acknowledging the contributions of other experts in the subject or pertinent earlier work. Plagiarism also includes using information, figures, or charts from someone else's work without giving credit. Plagiarism can range from the uncredited use of another person's published or unpublished ideas, including funding applications for research, to the submission of an entire work under the guise of a "new" author, sometimes in a different language.

The following actions in research are considered plagiarism by ASHA (2018). It is possible to violate research standards by failing to credit students or other contributors as authors of research or scholarly work or by giving authorship credit to someone who hasn't actually contributed to either. Plagiarism and potential rules violations might result from using direct quotes or paraphrasing existing research to imply that the author(s) of the research supported a product, treatment, or 1293 product (ASHA, 2018). As a result, it's critical to cite all information sources, and permission is required before using a significant quantity of another person's writing or artwork.

Cite all ideas, facts, and information that are not your own and come from other individuals in order to avoid plagiarism; Use quote marks whenever you are utilising someone else's words or thoughts that are less than 40 words long, or indent such lengthy quotations that are longer than 40 words to indicate that they are not your own; Place the appropriate citation at the end of a paraphrased portion and indicate at the beginning of a paraphrased section that what follows is someone else's original thought (for instance, according to John). "Person shall cite the source when utilising other persons' ideas, research, presentations, results, or products in written, oral, or any other media presentation or summary," states the National Institutes of Health. Anything else is considered plagiarism.

Citation/Reference problems

Concerns with plagiarism and falsification are connected to concerns with citations and referencing. Citation is simply the procedure by which authors provide due acknowledgment to the proper source from which information that was not created by them but was used in their work was gathered. Many different facts, including concepts, quotations, data, figures, tables, remarks, discoveries, and many more, might be mentioned in order to convey, explain, or clarify an idea or to offer support for a claim that a scholar is making.

On the other hand, referencing is only a list of all the different authors and sources that were used in the text of the work. The purpose is to provide information about the sources used to gather data so that other researchers can confirm or locate those sources as their own requirements may need. Citation and referencing go hand in hand since all works that are cited must be included in the references list, and all authors or sources that are found in the references list will be assumed to have been cited in the primary work. Many students, postgraduates, and even researchers don't seem to be aware of this connection between citation and reference in everyday research practise. As a result, it is feasible to pick up numerous research studies and find that references were made

without including the works in the references list or that works were cited without being listed in the references list.

Publishing problems

Publication concerns are those unethical behaviours that take place during the publication of academic works and which must be prevented to ensure good management and practises for educational research. These problems include submitting the same paper to multiple journals without informing the editors, publishing the same paper in two journals without informing the editors, skipping the peer review process and announcing your findings at a press conference without providing your peers with enough information to evaluate your work, and publishing research works without appropriate peer review.

All of the aforementioned problems, including the issue of redundant publication, must be scrupulously avoided for effective management of educational research. Giles (2005) states that duplicate publication happens when the same hypothesis, data, discussion points, or conclusions are used in two or more works without a complete cross reference. An abstract may still be submitted for publication after it has already been published in the meeting proceedings, but full disclosure must be provided at the time of submission. It is also referred to as self-plagiarism. Researchers are under enormous pressure to publish in the increasingly competitive climate where appointments, promotions, and grant applications are heavily influenced by publication record, and a growing minority is looking to boost their CV using dishonest means (Giles, 2005).

Authenticity problems

The selection of those people whose names should be used as the developers, creators, and proprietors of research work is the process of authorship. Due to differences in scholarly viewpoints and thinking, authorship, like many other concepts, lacks a universal meaning. The consensus is that an author should have contributed significantly to the intellectual content, including conceptualizing and designing the study as well as collecting, analyzing, and interpreting the data. In order for someone or something to be considered too as an author, they must demonstrate that their work is authentic, original, and hasn't been published anywhere else by them or anybody else.

The document must also be written by an author, who must also approve the version that has been submitted for publication. Scholarly works should not include anyone who helped with data collection, editing, and typesetting as authors. Their efforts might be appreciated, nevertheless. Jenn argues that choosing who will be acknowledged as authors, contributors, and authors early in the design of a project is essential. Additionally, it's a good idea to carefully examine the "Advice to Authors" of the intended publication, which can offer guidance on the subject of authorship.

Include a colleague as an author on a paper in exchange for a favor even though the colleague did not make a significant contribution to the paper; the acquisition of funding, the gathering of data, or general supervision of the research group, by themselves, do not justify a co-authorship. These are just a few unethical practises in authorship that are common in educational research. (2015) David and Resnik. Other examples include having difficulty leading a paper in a research project due of your higher position even when your efforts are not as effective as those of others who are lower in ranks. Authorship is not also conferred by presenting a paper that is a summary of a student's work as a lecturer, changing the order of the list of authors during publication without

informing others, removing the names of other authors without informing others during publication correspondence, or paying money for the publication of articles only without making a significant contribution to the development of the research work.

Given the aforementioned, it is imperative to be aware of and avoid all these unethical authorship-related activities while ensuring that only proper conduct is followed. The order of the listing of names for an article must be decided jointly by all the contributing co-authors, according to UMCB's 2003 warning. The person most directly associated with the 1295 research should be named first. The remaining authors should then be arranged in accordance with the requirements of the publishing journal, and the authors should be ready to explain why the arrangement is what it is (UMCB, 2003).

CONCLUSION

Without paying attention to the ethical concerns that surround it, education research cannot be successfully undertaken. Several academics have purposefully erred in the past, either through ignorance or a lack of awareness. Effective management and practise of educational research require adherence to several different ethics. These have been thoroughly discussed, and it is now the responsibility of scholars, researchers, and students to uphold these ethical standards for better decision-making and problem-solving in studies done in education and elsewhere. Other unethical publishing practises include charging authors for vetting fees without reviewing their manuscripts, collecting money from authors without publishing their works, announcing the publication of a work in a different month, volume, or issue from when it was supposed to be published, having your papers reviewed in open access journals and sending the same to another Journal for publication, publishing works online or in print without sending hard copies, and more.

REFERENCES:

[1] T. Hindmarch, S. Allikmets, and F. Knights, “A narrative review of undergraduate peer-based healthcare ethics teaching,” *International journal of medical education*. 2015. doi: 10.5116/ijme.5650.54ad.

[2] M. Fryer, “A Role for Ethics Theory in Speculative Business Ethics Teaching,” *J. Bus. Ethics*, 2016, doi: 10.1007/s10551-015-2592-6.

[3] M. Laliberté, A. Hudon, B. Mazer, M. R. Hunt, D. Ehrmann Feldman, and B. Williams-Jones, “An in-depth analysis of ethics teaching in Canadian physiotherapy and occupational therapy programs,” *Disabil. Rehabil.*, 2015, doi: 10.3109/09638288.2015.1015687.

[4] Y. Safari and N. Yoosefpour, “Dataset for assessing the professional ethics of teaching by medical teachers from the perspective of students in Kermanshah University of Medical Sciences, Iran (2017),” *Data Br.*, 2018, doi: 10.1016/j.dib.2018.09.060.

[5] M. Drumwright, R. Prentice, and C. Biasucci, “Behavioral Ethics and Teaching Ethical Decision Making,” *Decis. Sci. J. Innov. Educ.*, 2015, doi: 10.1111/dsji.12071.

[6] D. Suar, “Ethics in teaching,” *J. Hum. Values*, 2014, doi: 10.1177/0971685814539408.

[7] M. Sultana, “Ethics in Teaching Profession,” *ABC J. Adv. Res.*, 2014, doi: 10.18034/abcjar.v3i1.31.

[8] B. Maxwell and M. Schwimmer, "Professional ethics education for future teachers: A narrative review of the scholarly writings," *J. Moral Educ.*, 2016, doi: 10.1080/03057240.2016.1204271.

[9] V. d'Agnese, "Facing paradox everyday: a Heideggerian approach to the ethics of teaching," *Ethics Educ.*, 2016, doi: 10.1080/17449642.2015.1104861.

[10] K. Hytten, "Ethics in Teaching for Democracy and Social Justice," *Democr. Educ.*, 2015.

CHAPTER 11

CONSTRUCTION AND EVALUATION OF A VIRTUAL REALITY EDUCATIONAL SYSTEM USING STATIC IMAGES

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ABSTRACT:

Reforming teacher education is the topic of this article. At the time this article was written, teacher education has undergone a number of critical appraisals with little noticeable change. In Australia, universities are primarily responsible for this field of study. The difficulties the teaching profession faces in adapting to a changing world have been well-documented, and regular articles in the national Australian news highlight the growing pressure Australian governments at the state and federal levels are putting on Australia to improve school outcomes. Many observers on teacher education argue for more consideration of teacher education. This article answers some of the questions about what teacher education could be and how it might be structured differently for the new environment in which instructors must work. It does so by showcasing a disruptive paradigm in teacher education. The Bachelor of Learning Management (BLM), which was created at Central Queensland University in 2000 and is still in use today, is the subject of the article in more detail. The BLM was the first significant overhaul and development of teacher education in Australia in 25 years, which makes it an intriguing case study in and of itself.

KEYWORDS:

Constructional Education System, Evaluation, Education, Education System, Static Image, Virtual Reality.

INTRODUCTION

The Organization for Economic Cooperation and Development (OECD) has helped nations adapt and improve their educational systems for more than 60 years. Due to the quantity and calibre of its comparative data, assessment programmes, surveys, and analytical and policy work, the OECD has acquired a leadership position in the area of global collaboration in education. In this area, the OECD collaborates and works with numerous other institutions. Each company concentrates on its unique advantages and strengths. These include the OECD's multilateral frameworks for comparative data gathering and analysis, peer learning and peer review, and for facilitating interaction among policy makers and a broad spectrum of stakeholders. But the OECD's greatest comparative advantage comes from its ability to create novel and progressive concepts and methods that influence global discourse, motivate policymaking, and reshape the course of education.

The OECD's work on education must interact with developing concerns, operate at the cutting edge of knowledge, and predict a variety of conceivable futures and possibilities that are influencing the future of learning if it is to remain relevant. This calls for taking a daring look at the information, skills, attitudes, and values that will matter the most in the future, as well as the kind of learning environments and educational opportunities that can best facilitate these throughout the lifecycle. By requiring education institutions, teachers, and students to deliver

instruction using digital resources and accelerating the use of learning analytics to track student progress, it caused digitalization in education to make a significant leap forward. The argument about the function of education was brought to a head by the issues of equity and inclusion in education and via education. And by accelerating labour market change, technology has further underlined the growing significance of lifelong and all-encompassing learning.

In light of this, this paper explores ways that the OECD might help in the future in addressing the current policy difficulties through education. This paper makes the case that education and skill development are essential to achieving the OECD's strategic goals, which include maximizing the strength and quality of the ongoing recovery, taking the lead on climate action to ensure that the world is net-zero by 2050, taking advantage of the opportunities presented by the digital transformation, promoting OECD standards through membership, and securing global net-zero by 2050 [1], [2].

The essay is divided into three sections. The setting in which education is given has undergone some significant changes, as noted in the first section. The main focuses of the OECD's work learners, educators, educational institutions, and systems are summarized in the second section. Propositions for the OECD's future work in education and skills are made possible in the final section. This paper's first edition was released in 2021. The newest OECD strategic objectives and priorities, as well as the future Programme of Work and Budget biennium, are all taken into account in this revised edition.

DISCUSSION

Educating for an ambiguous future

There will be surprises in the future. This poses problems for educators and decision-makers in the field of education. How can they prepare students for careers that haven't yet been developed, teach them how to use technology that haven't yet been developed, or teach them how to deal with social issues we can't yet imagine? Changes reshape the world and the preoccupations and belief systems of the people and communities, whether they take the form of steadily evolving trends or abrupt systemic shocks. They consequently alter how learning is structured and change expectations regarding education. Education now involves more than just imparting knowledge; it also involves giving students the skills and tools they need to confidently navigate a complex, turbulent, and uncertain environment. Success in education now depends on a student's sense of self, agency (the ability to set goals, reflect, and take responsible action to bring about change), values, the development of their curiosity, and the mobilization of their cognitive, social, and emotional resources to participate fully in society [3], [4].

With the world confronting enormous issues including climate change, the influence of artificial intelligence (AI) and new technologies, mass migration, and global taxes, education is at a crossroads. The COVID-19 outbreak and the war in Ukraine have further hastened transformation and increased its urgency. Finding strategies to maintain innovation in education is crucial, as is affirming the notion that spending money on education is an investment in the future prosperity and well-being of society.

In this setting, everyone now expects to continue learning. It will make it possible for people, groups, organisations, and society to turn chances into the active feeling of agency required to assure a decent existence. A new reality is the transition from upfront qualification-oriented

attainment to a new distribution of learning and skill development over the lifespan. Important public policy issues will result from this, necessitating the creation of new partnerships to support learning through creative supply-side and demand-side arrangements.

Providing instruction for a new social contract

It is commonly acknowledged that education has a special ability to eliminate inequality and lay solid groundwork for inclusive and democratic communities. However, in many OECD nations, achieving upward social mobility has become more challenging, and middle-class anxiety of downward social mobility is spreading. The "social contract" of the welfare state of the 20th century, of which public education is an essential component, appears to have lost much of its appeal to large segments of the populace. In this situation, confidence in educational systems erodes, and young people from disadvantaged families may stop devoting time and effort to their studies. Beyond schooling, those who no longer believe in the "social contract" run the risk of rebelling against the "system," embracing populism, and abandoning democracy.

The primary institutional structure that maintains social cohesion is still education. Education fosters shared identities and a sense of belonging that allows citizens' active participation in democratic processes by imparting a common canon of knowledge, shared behaviours, and collective social values. But education plays a bigger part in preserving democracy than that. Literature has identified a number of aspects of civic participation that education can support, including as fostering tolerance for diverse cultures and ideas, fostering trust in society, and educating students about political processes and other types of civic engagement. Building resilience to systemic threats presented by the spread of misinformation and disinformation has become a significant priority for democratic countries in recent years. This demonstrates the significance of media literacy and digital literacy initiatives in schooling.

Additionally, it should be recognized that when educational possibilities are not equally dispersed across nations, education can aggravate inequality. Evidence suggests that education helps pass on benefits and privileges from one generation to the next. This is something to keep in mind as the relevance of personalized learning increases since it challenges the up until now prevalent "one size fits all" model of education. School choice based on a family's neighbourhood or social background is another aspect of the existing quo of disparities that needs to be reevaluated [5], [6].

Electronic transformation

It takes ability on the ground in addition to vision, audacity, and courage on the part of leaders and policy makers to keep up with and foresee the effects of technological development. The world is fundamentally changing as a result of the Internet of Things, virtual reality, cloud computing, big data, artificial intelligence, and other forms of digitalization. With improved connectivity, innovative digital business models, mostly automated physical production, an increase in virtual labour, and digitized international trade, the future appears to be increasingly digital. All of this will change markets and businesses, the nature of labour and the demand for skills, as well as how individuals interact with one another and participate in real-world or online communities.

Digitalization has an impact on health and wellbeing as well as security and privacy, particularly for young people.

This change has produced a plethora of information, made it easier for information to spread instantly around the world, and has challenged established news sources. The free and fact-based

exchange of information that democracy depends on is particularly threatened by the proliferation of misinformation and deception. This trend emphasises the importance of giving individuals media and digital literacy training, as well as improving critical thinking and ethical judgment, so they may successfully navigate these environments and comprehend their significance. The OECD has prioritised this in its fight against false and misleading information.

One of the effects of the COVID-19 school closures has been an increase in the use of digital technologies in education, however it is generally agreed that much more can be done in this area. For people who are unable to engage in traditional school, alternative learning possibilities can be created using digital technology, which also make it possible to reach new demographics. These persons include those who are older, have special needs, and young people who are not in employment, education, or training (NEETs). Additionally, technology can make it easier for teachers and students to access information in a variety of formats, across time and distance, and at a reduced cost.

Digital technologies stand out because they may create a collaborative learning ecosystem in addition to helping individual students and teachers. Technology can create learning communities that foster collaboration, improving goal orientation, motivation, perseverance, and the creation of efficient learning methodologies. Similar to this, technology may create communities where educators can engage on professional development and the institutionalization of professional practise while sharing and enhancing educational resources and practises. Additionally, it can assist governments and system leaders in creating and exchanging best practises for pedagogy, policy, and curriculum design [7], [8].

Redefining what education's goals are

The advent of digital technology will present new opportunities. Our lives, communities, and jobs will all be impacted by digital technology, which also replicate human abilities. People's cognitive and sensory capacities will be improved by smart machines, biotech, and terotechnology. This raises concerns about whether biological and technological advancements may eliminate some aspects of human activity and separate intelligence from consciousness. People are encouraged to consider the finest integration and collaboration strategies for digital technology as well as approaches to strengthen their most "human" components. For the purpose of education, this has significant ramifications.

The most precious resource for education itself is evolving into knowledge about education. In fact, as science and research advance, so does the ability of educational systems to evolve. The body of knowledge that underpins education is being renewed at an incredibly fast rate by new discoveries in the field. A brand-new "science of learning" is taking shape, with components drawn from social psychology, cognitive psychology, and neuroscience. This presents significant opportunity for educational systems to reconsider their goals, plans, and methods of delivery.

Expanding fields of knowledge and expertise

Learning is an essential human activity that is not limited by time or geography. Institutionalised environments continue to be crucial for creating learning environments and possibilities, but there are concerns about whether or not traditional educational institutions are delivering education that is in line with the needs of the real world. Technology makes it simpler to access chances for

lifelong learning as well as ways to recognize such learning outside of official educational systems. This desire for such opportunities is on the rise.

At the same time, numerous social actors who present educational possibilities are becoming more widely acknowledged.

Families and interpersonal relationships, which are always changing themselves, are significant learning environments that schools must manage and work with. Politics, religion, traditional and social media, as well as many other facets of contemporary life will play an ever-more-important role in fostering social interaction and offering spaces for learning.

Employers are essential to lifelong learning because they offer ongoing professional development opportunities, encourage informal learning at work, and participate in social discussions about the value, relevance, and content of education. Additionally, employer involvement is essential to provide young people with appropriate career counselling, enhancing labour market signalling and facilitating advancement towards desirable jobs.

Learning can be made to be more relevant, real, and engaging by removing the clear distinction between obtaining knowledge and skills in educational institutions and using them in society and the job. Increased collaboration with other actors in society provides an essential channel for re-invention for formal education in educational institutions like schools and universities, which has the potential to be extremely beneficial to students.

Possibility and initiative

Education aims to empower students on an individual and group level. Education systems must give students the chance to acquire the knowledge, skills, attitudes, and values necessary to realize their potential throughout their lives, from infancy to old age, as societies continue to evolve.

Students must learn to establish purpose, take action to achieve goals, including achieving their own learning, and have a sense of responsibility for actively contributing to society's building. The capacity to create their own learning paths will be required of learners. As a result, gaining control over one's life and learning is in and of itself an educational goal that will prepare students for success in a changing world. This equalizes the development of broader transversal abilities with traditional disciplinary knowledge and includes attitudes, values, entrepreneurship, critical thinking, and metacognitive skills.

To exercise agency, however, students will require direction and assistance. They will need to have faith that learning environments will take into account their existing knowledge so they may effortlessly reconnect with formal and casual learning. Given their different socioeconomic, cultural, and ethnic backgrounds, they also require new, creative support, especially in light of the challenges to promote equity and inclusion in education [9], [10].

Trained instructors

Learning that is autonomous, self-directed, and aided by technology will spread in the future. However, learning is a social process that takes place via encounters. Therefore, whether they are teachers, trainers, coaches, or other professionals in workplaces, or tutors and peers, education systems need to better recognise, enable, and articulate the responsibilities and functions of educators.

Teachers are experts who create learning environments, processes, and support learning through a range of professional interventions in formal education. They must possess in-depth knowledge of the subject matter they teach as well as a comprehension of how learning works. They must also access and analyse a rising number of data sources, stay abreast of the quickly evolving technologies and strategies for teaching and facilitating, and promote students' wellbeing. One of the main goals of public policy is to advance the profession of teaching. This includes finding and keeping qualified teachers, offering them initial training and ongoing professional development, welcoming them into the field with orientation and mentoring, creating attractive career paths with fair pay, enforcing workplace regulations, and preserving the teaching profession's appeal, reputation, and public trust.

Educational establishments

Public authorities are accountable for guaranteeing high-quality and equitable learning settings in a way that is both cost-effective and innovation-friendly, along with a variety of other actors and stakeholders. Public authorities do not necessarily provide or own educational institutions, but maintaining and enhancing the institutional structure in education is a crucial role for public policy.

However, there is pressure on educational institutions to alter their mode of operation as they go through significant change. The evolution of educational institutions could follow a variety of different paths, as demonstrated by the OECD's scenario study on potential schools. Regardless of the route, there is a greater urgency and need for fresh ideas when it comes to forming alliances with businesses, nonprofits, and educational institutions.

School systems

These collaborations can make it easier to integrate formal, informal, and non-formal learning into functional ecosystems for lifelong learning and skill development. Working frameworks and processes for recognition and credentialing are required because all forms of learning and various providers will play a part in this. These ecosystems would support a variety of educational and skill-system learning pathways. A smart blend of school-based learning and alternative learning spaces and delivery modes will be necessary to rethink education efficiently in order to solve issues like modernising physical infrastructure and cost-efficiency.

Utilise a balanced, integrative approach to learning

The Programme for International Student Assessment (PISA) and the Survey of Adult Skills, which is a product of the Programme for the International Assessment of Adult Competencies (PIAAC), are successful because of their analytical and assessment frameworks, which priorities real-world competency in applying and using cognitive skills. The idea that learning should be applicable to job, social involvement, and real life has been further supported by work on adult learning over the life course. The reproduction of subject-matter knowledge that characterized the prior educational paradigm has been significantly corrected by competency-based education. Neuroscientific studies on learning also show that competences are based on strong background knowledge. It has been demonstrated that skilled memorization and retrieval practise is quite beneficial in establishing subject-matter proficiency. As it is for PISA and PIAAC, finding the ideal balance between knowledge of the disciplines and knowledge and thinking abilities about the disciplines will continue to be a significant problem for education. Sharing knowledge on the development and use of curricula internationally can be very beneficial.

The OECD has recently reinforced and broadened its evaluations of learning outcomes by taking into account additional vital learning domains outside of mastery of the fundamental academic subjects. The findings of the Social and Emotional Skills Survey (SSES) by the OECD offer the first global comparative statistics on social and emotional learning. The idea that social and emotional learning is equally important as the development of cognitive domains is gaining momentum in part due to the OECD's groundbreaking work on this subject.

Building The Education of the Future

The OECD's education effort included social and emotional learning alongside disciplinary content, which was significant and will remain a priority area of work in the short- and medium-term.

More so than with cognitive abilities, social skill development results from the interaction of diverse learning environments. The things that families and schools "teach" are interacted with by experiences in after-school activities, athletics, community life, part-time employment, volunteering, and other things. Additionally, it is important to comprehend how abilities like self-control, self-discipline, entrepreneurship, resilience, and perseverance may be developed through education in a variety of circumstances given the growing focus on mental health in many institutions. Another intriguing area of research is how various contexts and actors might work together and help to the development of certain talents.

The complete scope of human learning does not, however, consist of just information, abilities, and character. Another crucial aspect of learning is the integration of values and moral standards to foster ethical development. Although some nations have given values a significant amount of room in curriculum design, this area is still relatively unexplored in terms of our understanding of how formal and informal learning settings affect human learning. There is a cognitive component to values. Environmental science knowledge is necessary if one wants to care about climate change and feel compelled to take personal action. More research is needed to understand how cognitive and non-cognitive building pieces come together to form solid and enduring ethical values and standards.

The abilities required for human learning and development will need to be further redefined as a result of the digital transformation and AI. The workforce currently lacks AI capabilities, which is a significant obstacle to the widespread deployment of AI. How will education respond to this demand is the question. The OECD can keep an eye on, evaluate, and predict this trend and present a picture of how human learning will continue to be crucial for ensuring future growth, prosperity, social advancement, and the general quality of life. AI will simultaneously radically alter the means, modes, and procedures by which we learn. How much cognitive support for learners can AI provide? To deliver more individualized and customized learning at scale, the OECD should leverage the capabilities of AI, big data, and learning analytics.

CONCLUSION

Future teaching, as noted in the opening, is planning classes that encourage student engagement and critical thought about various subjects. A modern approach of teaching includes the use of instructional techniques. Through this project, we had the chance to collaborate with overseas partners at several schools while speaking a different language. Making concessions is crucial for future teaching. Everyone has fresh perspectives and new ideas, therefore it is always beneficial

to learn from one another. This initiative undoubtedly helped me gain new experiences, knowledge, and fascinating lessons for future teaching. Teachers can alter their plans, particularly by studying the reactions of their students. For future work with the class, it would be interesting to know which teaching style the student prefers or detests.

A great illustration of how to collaborate with foreign partners and learn about other cultures is "European Values Education." We can benefit from such assignments and chances to organise lessons with professional assistance from our advisers for our future job as aspiring teachers. We had the opportunity to learn about two distinct educational systems the German system and the Slovak system. We have observed many educational frameworks and educational institutions, including private schools with top-notch facilities and public schools with various social standings. Overall, you can claim that this project will be very beneficial for teaching in the future.

REFERENCES:

[1] W. A. Abdelhameed, "Virtual reality use in architectural design studios: A case of studying structure and construction," in *Procedia Computer Science*, 2013. doi: 10.1016/j.procs.2013.11.027.

[2] P. T. Nakamoto, A. Cardoso, E. Lamounier, E. B. Mendes, E. Takahaschi, and G. Arantes Carrijo, "An virtual environment learning of low cost for the instruction of electric circuits," *IEEE Lat. Am. Trans.*, 2010, doi: 10.1109/TLA.2010.5688097.

[3] A. Sánchez, E. Redondo, D. Fonseca, and I. Navarro, "Hand-held augmented reality: Usability and academic performance assessment in educational environments. Case study of an engineering degree course," *Inf.*, 2013.

[4] P. T. Nakamoto, A. Cardoso, E. Lamounier, E. B. Mendes, E. K. Takahashi, and G. A. Carrijo, "A Virtual Learning Environment Low Cost for the Teaching of Electric Circuits," *Ieee Lat. Am. Trans.*, 2010.

[5] C. Loscos *et al.*, "The Create project: Mixed reality for design, education, and cultural heritage with a constructivist approach," in *Proceedings - 2nd IEEE and ACM International Symposium on Mixed and Augmented Reality, ISMAR 2003*, 2003. doi: 10.1109/ISMAR.2003.1240721.

[6] L. Santos, P. Escudeiro, and C. V. De Carvalho, "Evaluating virtual experiential learning in engineering," in *2013 International Conference on Interactive Collaborative Learning, ICL 2013*, 2013. doi: 10.1109/ICL.2013.6644533.

[7] C. C. Cantarelli, B. Flybjerg, E. J. E. Molin, and B. van Wee, "Cost Overruns in Large-Scale Transport Infrastructure Projects," *Autom. Constr.*, 2018.

[8] Y. Zhou, S. Ji, T. Xu, and Z. Wang, "ScienceDirect The 9th International Conference on Ambient Systems, Networks and Technologies (ANT 2018) Promoting Knowledge Construction: A Model for Using Virtual Reality Interaction to Enhance Learning," *Procedia Comput. Sci.*, 2018.

[9] W. Cartwright and G. Heath, "Geography as seen from the window: Explorations about viewpoint-specific images of geography defined by tools of visualization," *Cartography*, 2002, doi: 10.1080/00690805.2002.9714209.

[10] Y. Hernández, M. Cervantes-Salgado, M. Pérez-Ramírez, and M. Mejía-Lavalle, "Data-driven construction of a student model using bayesian networks in an electrical domain," in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2017. doi: 10.1007/978-3-319-62428-0_39.

CHAPTER 12

INTRODUCTION TO EFFECTIVE TEACHING

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ABSTRACT:

Teaching effectiveness primarily focuses on the connection between teachers' personalities, their actions in the classroom, and how such things affect students' learning. It depends on a teacher's emotional (warm, empathetic, and kind), cognitive (using creative teaching methods, subject-matter expertise), and behavioral (patient, timely, and attentive) competence. An effective teacher possesses these characteristics. The conduit between the educational setting and the learner is an effective teacher. The effectiveness of the school is increased since he or she can use their teaching abilities to bring out the best in each pupil. Additionally, evaluating a teacher's efficiency as a teacher is crucial because it enhances the calibre of instruction. Periodic feedback also aids in identifying instructional gaps and developing corrective action plans. The efficiency of teaching is influenced by a number of internal and external factors. In conclusion, it can be concluded that research on teaching effectiveness focuses on a teacher's professional and personal competency. This essay also describes the variables that determine and the metrics used to assess teaching effectiveness. The study also offers recommendations for enhancing the efficiency of instruction.

KEYWORDS:

Effective Teaching, Internal Teaching Factor, External Teaching Factor, Periodic Feedback.

INTRODUCTION

What is known about effective teaching practises and how to define a teacher's effectiveness are two linked but distinct subjects that are highlighted in this paper. It also aims to determine the ramifications for educational policymakers and for enhancing teaching methods. The analysis of inspection data that involves determining the calibre of instruction in schools is also covered in the report. It examines what is meant by "effective teaching" and how the literature describes those who are deemed to be "effective teachers," taking into account evidence from research and inspections as well as the perspectives of different important education stakeholders, including teachers, school principals, students, and parents. It tries to define and summarise some of the key traits and procedures of successful classroom practises, including specific features of pedagogy (by which we refer to instructional techniques). This is done by drawing on a substantial body of research information.

When analysing the evidence, the main emphasis is placed on the elements of effective instruction and classroom management that result in greater student results. We also point out some consequences for practitioners and politicians that want to enhance instructional methods and student results. The review also emphasises some of the challenges involved in characterising and categorising effective practises as well as in seeking to pinpoint teacher effects. We discuss several measurement-related challenges that must be taken into account when attempting to pinpoint teacher effects as well as the traits and procedures of successful instruction. Also covered are some

examples of classroom observation tools that can be used to pinpoint specific elements of effective teaching techniques [1], [2].

The primary sections of this paper go into greater detail about the definition of a teacher and the effectiveness of their instruction, lay out the many viewpoints and sources of evidence that can be employed, and look at measurement-related issues. The conclusions are then discussed, including the models and theories employed in TER (teacher effectiveness research) and SER (school effectiveness research), as well as the knowledge foundation and traits of effective teaching and classroom practises. The review evidence is organised using five interconnected issues, and for each of these challenges, several pertinent questions will be addressed.

DISCUSSION

The Concept of Effective Teaching

It is universally recognized that the teacher is the key person in an education system and whole system of education revolves around him/her. Educational practice and researches are continuously working in the area of "improvement of learning". The concept of effective teaching has emerged out as one of the component that contributes a large in improving learning. Interaction in classroom is often dominated by the teacher. According to Ilukena, A. (1998) teachers are the persons who can bring a difference in educational practices. Quality of their teaching is an important factor in promoting effective learning in schools.

Effective teaching involves talking to the learners about their learning and listening to them. St. Augustine quoted in Fisher, (1992) says *I learned not from those who taught me but from those who talked with me*. Being important persons of the teaching and learning process, the effective teachers must be highly competent in planning and organizing instruction as well as in managing in classroom environment, if they want their students to be academically successful (Dilworth, 1991). Cruickshank, Jenkins & Metcalf (2003) define effective teaching: Most people would agree that good teachers are caring, supportive, concerned about the welfare of students, knowledgeable about their subject matter, able to get along with parents…and genuinely excited about the work that they do. Effective teachers are able to help students learn [3], [4].

The concept of "Effective Teaching" is considered as a range of factors that collectively work together and result in effective learning. Most of the people agree that the basic purpose of teaching is to enable learning. An elaboration to this concept is required to fulfill the needs of today's youth in a knowledge-driven society where information rapidly increases at great scale. Therefore, the concept of teaching should move beyond the lower order skills of acquisition and reproduction of knowledge and facts.

The students require equipping them with more recent and advanced body of knowledge, and enabling them to apply, upgrade and create knowledge. There are various aspects of effective teaching, such as;

1. Effectively managing a classroom,
2. Starting each class with a clear objective,
3. Engaging students with questioning strategies,
4. Consolidating the lesson at the end of a period, and

5. Diagnosing common student errors and correcting them that can be systematically measured by observing classrooms and by asking students.

Principles of Effective Teaching

According to Walls (1999) student learning is better, faster, and/or more long-lasting when teachers play the following four principles:

1: Outcomes

The outcomes enable students to focus their attention on clear learning goals. These outcomes inform students of where they are going and how they will get there. Outcomes also provide the teacher a framework for designing and delivering the course content. Outcomes enable teachers to assess student learning as a measure of their own instructional effectiveness [5].

2: Clarity

The effective teachers provide explanations and give details of the course concepts and content. If students DO NOT LEARN, it means the methods of delivery may lack the required degree of clarity.

So the teacher should make the message clear from alternate perspectives to alternate senses, the effective instructional practice of the teacher should afford students the opportunity to make connections between the new material and the concepts that they have already been learned.

3: Engagement

This principle suggests that students learn by doing. Teachers must create an educational environment that offers students the opportunity to practice every concept that they are learning. The effective teachers use those instructional strategies that engage students throughout the lesson.

4: Enthusiasm

The principle of high level of enthusiasm reflects teacher's professional competence and confidence, teacher's subject matter knowledge and instructional experience. Teachers establish a positive learning environment and show their enthusiasm for the subject matter. They use student's names, reinforce student participation during class, and keep moving among the students [6].

Personal Characteristics of an Effective Teacher

Knowledge and skills are taught and learned at school. School is a little community in itself where teachers and students interact with each other. During this interaction teachers influence their learner's behavior and learners influence their teacher's behavior. The nature of this interaction is an important factor in determining the learner's perceptions of school and his/her attitudes toward school-related persons and activities. This factor involves the relationship between the personality of the teacher and that of the learner.

A teacher's personality traits are important as Callahan, (1966) says that the teacher whose personality helps create and maintain a classroom or learning environment in which students feel comfortable and in which they are motivated to learn is said to have a desirable teaching personality. Research says that teachers are cognitively oriented toward pupils while pupils are affectively oriented toward teachers. Teacher's personality is, therefore, directly and indirectly

related to learning and teaching in the affective domain as well as to that in cognitive and psychomotor domains.

Teachers have rights and responsibilities to develop a climate in the classroom which supports effective learning. Aristotle quoted in Stephen Covey, "The Seven Habits of Highly Effective People", says we are what we repeatedly do. Climate in their classroom is based on the teachers' personality and style of teaching, the tone of their voice, and the little things they continually say and do on a daily basis. In the classroom, the learners' behavior could be determined from the way their teachers behave with them.

Marchbanks, (2000) in a study, examined the personalities of sixty students at the University of North Carolina at Chapel Hill through a 110-question questionnaire. The traits of passion, patience, cooperation, authoritativeness, and creativity were studied in particular because these are the essential personality traits of an effective elementary school teacher. He says teachers in the twenty- first century are responsible for the overall well-being of their students, as well as educating, disciplining, and stimulating their developing minds. Because teachers have these additional duties, many more requirements are needed to be an effective teacher [7], [8].

One must be passionate, patient, cooperative, authoritative, and creative in order to be an effective teacher beside the basic and extended knowledge of the subject he/she is teaching. A true passion for both the profession and the children is essential; a teacher must look forward to his/her job every single day, having the desire to instill in the students all the knowledge and skills needed to lead a happy, healthy life in today's world. Patience is needed to maintain that passion and desire for teaching. In order to interact with the children and other teachers most effectively, an overall cooperative personality is needed. A degree of authoritativeness is necessary to preserve order and discipline in the classroom. Finally, teachers have to be creative in their approaches to instruction to earn the most successful results in educating their students (Marchbanks, 2000).

Thompson, Greer, and Greer (n.d) says that "every teacher should possess twelve characteristics such as displaying fairness, having a positive outlook, being prepared, using a personal touch, possessing a sense of humor, possessing creativity, admitting mistakes, being forgiving, respecting students, maintaining high expectations, showing compassion, and developing a sense of belonging for students". These characteristics are given as bellow:

1) Fairness

Fairness is one of the characteristics of the students' favorite teachers. All humans possess an inbuilt sense of fair play. Whenever a person violates, the other person in this situation is prone to react negatively.

Any impression of favoritism, or lack of fairness, leaves scars on the life of persons that lasts forever. The students report in great detail, the unfair actions of their teachers when they had negative experience of competition between classmates, even after many years have passed.

2) Positive Attitude

Another characteristic that students' like most is the positive attitude and approach of their teachers they use into the classroom. Scholars suggest that effective teachers are those who use meaningful verbal praise to get and keep students actively participating in the learning process. The effective

teachers are generally positive minded individuals who believe in the success of their students as well as their own ability to help student's achievements.

If the teachers have positive attitude they "catch students doing things right" rather than "catching them doing something wrong." The students often recall praise and recognition that was given by their teachers at schools, and they point to the confidence and direction that often resulted in their lives.

3) Preparedness

Competence and knowledge of the content area being taught is something that our college students have always mentioned about their favorite teachers. In a research the students pointed out that in classrooms where teachers were well prepared, behavior problems were less prevalent. The well-prepared teacher is more likely to be able to take time during lessons to notice and attend to behavioral matters, and is less likely to miss the beginnings of potentially disruptive activity. If, on the other hand, teachers have not spent sufficient time in planning and preparation, they tend to be so focused on what they are doing that they miss the early signs of misbehavior. This ultimately results in frequent disruption, waste of valuable instructional time, and student's frustration.

4) Personal Touch

Teachers who are connected personally with their students; call them by name, smile often, ask about students' feelings and opinions, and accept students for who they are. As well as the teachers who tell stories of their own lives events which relate to subject matter currently being taught, motivate student's interest and endorse bonding with the students. Teachers who show interest in their students have interested students.

5) Sense of Humor

If a teacher has the ability to break the ice in difficult situations with the use of humor, this is an extremely valuable asset for teaching. According to McDermott & Rothenberg (2000) students enjoy teachers with a sense of humor and remember those teachers who made learning a fun. Good teachers enjoy a laugh with the class occasionally.

6) Creativity

Students always like the unusual things that their teachers do in creative ways. Construction of models or things from wastage like plastic bottles provides a field into which students could go and work themselves quietly on academic activities such as puzzles and word-finds. Fun activities arranged by teachers into the classroom encourage the students towards learning. Teachers can use unique ways of motivating their class. Teacher can set a reward for the class on reaching a particular academic goal. For example a teacher can give extra marks of work done by the students in a creative way.

7) Willingness to Admit Mistakes

Like everybody, teachers may make mistakes. Sometimes students may know when their teachers make mistakes. Unfortunately, some teachers try to let the mistakes go unnoticed or cover over them quickly. Teachers who recognize their mistakes in a very humble and pleasant way and apologize them. This act of teacher provides an excellent model for the students, and they may be remembered as a good teacher.

8) Forgivingness

The effective teachers reflect a willingness to forgive students for misbehavior. For example if a student repeatedly asks irrelevant questions and detracts others from the lesson. The teacher can simply say the question is irrelevant and direct the student for further study.

9) Respect

The teacher's desire be respected by their students. The teachers who give respect to their students are always respected by them. Effective teachers can train their students be respectful by many ways such as, he can keep individual grades on papers confidentially, or can speak to students privately after misbehavior not in front of others. Good teachers show sensitivity for feelings and consistently avoid situations that unnecessarily make students uncomfortable.

10) High expectations

Teachers with positive attitudes also possess high expectations for success. Teachers' expectation levels affect the ways in which teachers teach and interact with students. Generally, students either rise to their teachers' expectations or do not perform well when expectations are low or non-existent. The best teachers have the highest standards. They consistently challenge their students to do their best.

11) Compassion

Hopefully, school is a place where children can learn and be nurtured in an emotionally safe environment. Sometimes in youngsters classrooms there may happens a significant amount of cruelty and hurt feelings. In these situations a caring teacher tries to reduce the impact of hurt feelings on learning.

12) Sense of Belongingness

Teachers develop a sense of family in their classrooms. A variety of strategies, such as random act of kindness awards, class picture albums, and cooperative class goals build a sense of unity and belongings and maintain an emotionally safe classroom. Good teachers also took strong measures to prevent mean and hurtful behavior like teasing and bullying. Effective teachers know well that when children feel emotionally and physically safe, they learn far better [9], [10].

CONCLUSION

Acquiring the necessary information and abilities to contribute as valuable members of the community. To effectively teach a diverse group of students, manage behaviour, create an effective learning environment, and incorporate teaching and learning strategies into the classroom, teachers need to have a philosophy of teaching that reflects their personal beliefs (Edwards & Watts, p.28). A teacher must be dedicated to acquiring the necessary knowledge, abilities, and qualities to support this crucial profession because they have the chance to influence the lives of students. A unique calling is teaching. Not everyone is suitable for this job. In actuality, a lot of new teachers quit teaching within the first 3–5 years. But this frequently derided profession also offers a lot of benefits. Here are my top ten justifications for why teaching can be a fantastic career.

REFERENCES:

[1] Abby Ellis, "Introduction to effective music teaching: artistry and attitude," *Choice Rev. Online*, 2012, doi: 10.5860/choice.49-4002.

[2] M. J. Koehler, P. Mishra, and W. Cain, "What is Technological Pedagogical Content Knowledge (TPACK)?," *J. Educ.*, 2013, doi: 10.1177/002205741319300303.

[3] S. L. Garner *et al.*, "The impact of simulation education on self-efficacy towards teaching for nurse educators," *Int. Nurs. Rev.*, 2018, doi: 10.1111/inr.12455.

[4] I. A. Leontyeva, "Modern distance learning technologies in higher education: Introduction problems," *Eurasia J. Math. Sci. Technol. Educ.*, 2018, doi: 10.29333/ejmste/92284.

[5] S. Sharkey and M. Weimer, "Learner-Centered Teaching: Five Key Changes to Practice," *Teach. Sociol.*, 2003, doi: 10.2307/3211318.

[6] M. Muthmainnah, F. Fajriana, and D. Siska, "Pemanfaatan Teknologi Informasi Untuk Meningkatkan Kualitas Pembelajaran," *Techsi - J. Tek. Inform.*, 2017, Doi: 10.29103/Techsi.V9i2.214.

[7] H. N. Damayanti and S. Sutama, "Efektivitas Flipped Classroom Terhadap Sikap Dan Ketrampilan Belajar Matematika Di Smk," *Manaj. Pendidik.*, 2016, doi: 10.23917/jmp.v11i1.1799.

[8] B. B. Bifftu, B. A. Dachew, B. T. Tiruneh, T. D. Ashenafie, E. T. Tegegne, and W. Z. Worku, "Effective Clinical Teaching Behaviors Views of Nursing Students and Nurse Educators at University of Gondar, Northwest Ethiopia: Cross-Sectional Institution Based Study," *J. Caring Sci.*, 2018, doi: 10.15171/jcs.2018.019.

[9] M. A. S. Nodoushan, "Language Teaching: State of the Art," *i-manager's J. Educ. Technol.*, 2006, doi: 10.26634/jet.3.1.1008.

[10] WHO, "Framework for Action on Interprofessional Education & Collaborative Practice. Health Professions Networks Nursing & Midwifery Human Resources for Health," *World Heal. Organ. Dep. Hum. Resour. Heal. CH-1211 Geneva 27, Switz.* ©, 2018.