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Investigating Learning Styles (VARK) to Address
Children's Learning Needs

Case of 3rd Grade Pupils at EL Mojahid ELTayeb ELRezma Primary
School

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Didactics

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Dedications

My beloved mother... my beloved father...

My cherished siblings; Imen, Sara, Meriem, Maroua, Karim and Ismail...

*My beloved grandmother, my adorable nephews and niece, my dear friends and
classmates...*

*Your unwavering support and encouragement have guided me through this thesis
journey. Through every challenge, you have been my driving force; this
accomplishment is as much yours as it is mine. Thank you all.*

Fatima Zahra

*To my beloved parents who have been my biggest support, my lovely mother and father
(May Allah bless him)... Who have been yearning to see me in what I am now*

To my dearest sisters and my lovely little brother

To all my family and my dear friends and classmates.

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Abstract:

According to researchers and psychologists, students have diverse learning styles influenced by their unique environments, experiences, and perspectives. Therefore, effective learning is achieved when teachers are knowledgeable about the learning styles of each student and implement a creative teaching and learning approach that caters to their specific learning needs, capturing their attention throughout the educational journey. This study aims to investigate the visual, auditory, read/write and kinesthetic learning styles model and how it addresses the 3rd year primary school pupils. It is based on recognizing each learner's style of learning and discovers what effective methods could be used in the teaching-learning process to support and develop them in a way to pupils' learning needs. The data used was drawn from classroom observation and face-to-face interview with the teacher. The study involves 59 pupils from EL Mojahid ELtayeb ELRezma primary public school in Ghardaia city and their English language teacher. The outcomes showed that the four learning styles exist among the pupils. As they are young learners, most of them are visual learners; they are attracted and motivated to visual learning materials. The dominant learning style was found to be visual, with auditory following closely behind. Surprisingly, the read/write style came in third place, while the kinesthetic style produced unexpected results.

Keywords: effective learning, learning styles, learning needs, VARK model.

List of Acronyms

MCQs:	Multiple Choice Questions.
CS:	Concrete-Sequential.
AS:	Abstract-Random.
AR:	Abstract-Random.
CR:	Concrete-Random.
VAK:	Visual-Auditory-Kinaesthetic.
VARK:	Visual-Auditory-Read/write-Kinaesthetic.

List of Figures:

Figure 1.1: Classical conditioning process.....	10
Figure 1.2: Skinner box.....	11
Figure 1.3: 21 Learning styles.....	15
Figure 1.4: Kolb's learning cycle and experiential learning styles	16
Figure 3.1: The visual activity.....	44
Figure 3.2: The auditory activity.....	46
Figure 3.3: The results of the auditory activity.....	46
Figure 3.4: Words' pronunciation.....	48
Figure 3.5: The kinesthetic activity.....	50
Figure 3.6: Pupils' performance.....	50

List of Tables

Table 1.1: Activities that accommodate VARK learning styles.....	21
Table 3.1: Describing the physical setting of the classroom.....	41
Table 3.2: Teacher’s warming up before getting started.....	41
Table 3.3: The mental and physical presence of the teacher.....	42
Table 3.4: The teacher’s control of the classroom.....	42
Table 3.5: Pupils’ attention.....	43
Table 3.6: Pupils’ motivation rating for visual activity.....	43
Table 3.7: Pupils’ understanding of the activity.....	44
Table 3.8: Pupils’ excitement for the correction.....	44
Table 3.9: Pupils’ attention rating during words pronunciation.....	45
Table 3.10: Pupils’ motivation through mumbling.....	45
Table 3.11: Pupils’ comprehension of the activity.....	46
Table 3.12: Pupils’ excitement for the correction.....	47
Table 3.13: Pupils’ interest in the reading activity.....	47
Table 3.14: Pupils’ ability to pronounce the words.....	48
Table 3.15: Pupils’ answers in the writing activity.....	48
Table 3.16: Pupils excitement.....	49
Table 3.17: Pupils’ performance.....	50

Table of Contents

Dedications.....	I
Acknowledgement.....	II
Abstract.....	III
List of Acronyms.....	IV
List of Figures.....	V
List of Tables.....	VI
Table of Contents.....	VII

General Introduction

1. Background of the Study.....	2
2. Statement of the Purpose	2
3. Statement of the Problem.....	3
4. Research Questions.....	3
5. Research Hypotheses.....	4
6. Outline of the Chapters.....	4
7. Research Limitations.....	5

Part One: Theoretical Part

Chapter One: Learning styles

Introduction.....	7
1.1. Definition of Learning.....	7
1.2. Learning Theories.....	8
1.2.1-Behaviourism	8
1.2.2-Cognitivism.....	11
1.2.3-Constructivism.....	12
1.3. Definition of a Learning Style.....	16
1.4. Learning Styles Models.....	14
1.4.1- Dunn & Dunn Model.....	14
1.4.2- Kolb’s Learning Style Model.....	15
1.4.3- Gregorc Learning Style Model	16
1.4.4- Felder–Silverman Learning/Teaching Style Model.....	17
1.5. Fleming VARK Learning Style Model.....	18
1.5.1- Visual.....	19
1.5.2- Auditory.....	19
1.5.3- Read/ Write.....	20
1.5.4- Kinaesthetic.....	20
1.6. The Significance of Learning Styles.....	21
Conclusion.....	23

Chapter Two: Children’s Learning Needs

Introduction	25
2.1- Definition of Learning Needs.....	25
2.2- Children’ Learning Needs.....	26
2.2.1- Motivation.....	27
2.2.2- Cognition.....	28
2.2.3-Attention and Concentration Difficulties.....	28
2.3. The Relationship between Learning Styles and Teaching Methods.....	30
2.3.1- Visual Learners.....	32
2.3.2- Auditory Leaners.....	33
2.3.3- Read/Write Learners.....	34
2.3.4- kinaesthetic Learners.....	35
Conclusion	37

Part Two: Practical Part

Chapter Three: Research Methodology

Introduction.....	39
3.1. The Design	39

3.2. The Sample	39
3.3- Data Collection.....	39
3.3.1- Classroom Observation.....	39
3.3.2- Teacher’ Interview.....	40
3.4- Data Analysis	41
3.4.1- Classroom Observation Analysis.....	41
3.4.2- Analysis of the Interview.....	51
3.5- Discussion of the Findings	52
Conclusion.....	54
General Conclusion.....	56
References.....	61
Appendices	65
الملخص.....	68

General Introduction

1. Background of the Study:

Effective learning usually occurs when teachers are aware of each learner's learning style by providing a creative teaching-learning process which stimulates students and get their attention through the teaching course. Researchers and psychologists deduce that students differ from each other in terms of receiving the information, knowing that different individuals' environments, experiences and perspectives are the main factors of the variations of the learning styles.

The Visual, Auditory, Read/Write and Kinesthetic model (henceforth VARK) has been suggested as an attempt to revive learners' cognitive capacities towards learning and capture an individual strength that likely helps a person retain information more effectively, they each focus on one of the senses or involve a social aspect. Through the process of examining and determining them, we can ensure the attainment of the target knowledge and cover learners' needs including the obstacles that they face during learning at the level of classroom. The intervention of the VARK model seeks to develop, support and apply new methods and strategies that contribute in the enhancement of the educational system generally.

1. Statement of Problem:

The importance of the VARK learning styles has been under discussion by some specialists. However, too little attention is given to the importance of recognizing the learning styles among teachers nowadays. Many teachers are less interested in going along with their students interests; hence, they prefer to teach the general goals that are supposed to be achieved at the end of the teaching courses. Moreover, students'

preferred ways of learning are not concerned since teaching and learning methods are usually not designed to meet learners' needs. That is, students may encounter some difficulties in reaching comprehension. This ignorance can deskill students; kill their intelligence, creativity and competences where there are no interactions, no workgroups or additional aids through which students would perform skillfully. Standardized old methods are not sufficient; learners need new active methods and strategies to be applicable according to the variation of their learning styles. Therefore, students learn best when they are active participants in classroom rather than being forced to just listen to lectures.

2. Statement of the Purpose:

The long-term goal of this study is to use the VARK learning styles model to enhance the quality of learning and teaching in the education sector. The objective of this study is to provide a comprehensive review of literatures in relation to learning styles (VARK), leaning needs and outlining strategies to meet learners 'needs. Particularly, the study has the following sub-objectives:

- 1- To provide a clear understanding of the academic struggles that the child may face.
- 2- To stimulate child's conceptual and cognitive abilities in comprehending the given lectures.
- 3- To adopt useful techniques which suit the variations of the VARK learning styles.

The results of this study will be valuable to the improvement of the learners' competencies as they support teachers to design what works best for their students.

4. Research Questions:

To solve the problem of this study, the following research questions have to be addressed:

- 1- What can the VARK model add to the teaching methods to address learners' needs?
- 2- In which extent the VARK learning styles model can improve the students' performance?
- 3- How can we support or apply the VARK model in classrooms?
- 4- What are the gaps educators and learners may encounter during the teaching-learning- process?

5. Research Hypotheses:

This study attempts to check the following research hypotheses:

- Children may have different preferred learning styles, as identified by the VARK model (Visual, Auditory, Reading/Writing, and Kinesthetic).
- Majority of children may tend to process and retain information more effectively when presented with visual cues.
- Implementing interventions based on the VARK model may positively impact children's learning needs and outcomes.
- Read/write style may be the least existed learning style among the other learning styles.

6. Outline of the Chapters:

This study comprises three main chapters. The initial two chapters primarily focus on the theoretical part, involving an extensive literature review related to the study. The first chapter provides a concise overview of learning, various learning theories, and introduces learning styles along with different models, such as the VARK model. It also emphasizes the significance of learning

styles. The second chapter delves into children's learning needs, their definitions, and explores the relationship between learning styles and teaching methods. The third chapter focuses on the practical part by describing the research methodology. It provides a comprehensive analysis of the gathered data concerning the investigation of learning styles (VARK) to address children's learning needs. The core of this chapter revolves around the examination and interpretation of the classroom observation checklist and interview data to either validate or invalidate the hypothesis.

7. Limitations of the Study:

The initial limitation of the study pertains to effectively managing time. In the case of third-grade students, their English sessions are limited to just one session per week, lasting for 1 hour and 15 minutes as outlined in the curriculum. However, this allocated time is insufficient to fully cover certain activities related to our investigation. Therefore, a sub-sampling was the only solution in read and kinesthetic activities since they require too much time.

Chapter One : Learning Styles

Introduction.....	7
1.1. Definition of Learning.....	7
1.2. Learning Theories.....	8
1.3. Definition of a Learning Style.....	16
1.4. Learning Styles Models.....	14
1.5. Fleming VARK Learning Style Model.....	18
1.6. The Significance of Learning Styles.....	21
Conclusion.....	23

Introduction:

The ultimate aim of teaching is to facilitate the process of learning by considering the learners' behaviors and preferences, as every learner has his own way of receiving knowledge. Therefore, this chapter will shed light on learning theories as well as learning styles models, including the various definitions of learning and learning style. It will deal also with introducing the VARK model separately, and how learning styles generally would enhance the quality of learning and teaching.

1.1. Definition of Learning:

The concept of learning has been described and explained by various researchers and psychologists over the years. According to (Bingham & Marcia, 2010, p. 19) learning is "the transformative process of taking in information that when internalized and mixed with what we have experienced changes what we know and builds on what we do. It's based on input, process, and reflection. It is what changes us". It is also seen by (Gagne, 1965, p .5) as "a change in human disposition or capability, which can be retained and which is not simple ascribable to the process of growth". On the other hand, (Hilgard and Bower, 1966, p.2) stated that "learning is the process by which an activity originates or is changed through reacting to an encountered situation, providing the characteristics of the change inactivity cannot be explained on the basis of native response tendencies, maturation, or temporary states of the organism" while (Pritchard, 2008, p. 1) views that "learning is the process of gaining more knowledge, or of learning how to do something". According to (Ambrose et al, 2010, p.3) learning is "a process that leads to change, which occurs as a result of experience and increases the potential for improved performance and future learning". (Kolb, 1984) defined it as "the

process whereby knowledge is created through the transformation of experience” (p. 26).

Learning is the process of attaining new information or knowledge which occurs through the change of experiences and situations surrounded, which will add a change to human behaviour or performance as well.

1.2. Learning Theories:

The three theories that have been most widely used over the past fifty years are behaviourism, cognitivism, and constructivism. These three theories show how learning occurs and how they have contributed to our understanding of how people learn, as well as the rules and various frameworks which they offer teachers for adjusting to students' various learning preferences and academic needs. Ivan Pavlov, John B. Watson, B.F. Skinner, Lev Vygotsky and Jean Piaget are the most important psychologists who helped in providing a fundamental understanding of how learning happens by building upon each other's work.

1.2.1-Behaviourism:

“Education is what survives when what has been learned has been forgotten.” (Skinner, 1964, p. 483).

In the late nineteenth and early twentieth, Ivan Pavlov, John B. Watson, and B.F. Skinner were among the psychologists and scholars who contributed to the development of behaviorism. It was first established in America in the early 20th century as a new approach to psychology by placing a strong emphasis on verbal behavior. According to Parkay and Hass (2000), behaviorism is the field of study that primarily focuses on observable and quantifiable aspects of human behavior. The focus of behaviourist

learning theories is on the adjustments made by the learner's associations with stimulus-response cues. Behavior is directed by stimuli. An individual selects one response instead of another because of prior conditioning and psychological drives existing at the moment of the action (Parkay & Hass, 2000). B.F. Skinner is considered the father of Radical Behaviorism, who in his own words defined it as “ the philosophy of a science of behavior treated as a subject matter in its own right apart from internal explanations, mental or physiological” (Skinner, 1989, p. 122). In addition (Pritchard, 2009, p. 6) defined Behaviourism as a theory of learning that focuses on the observable behaviours and discounts any mental activity. Behaviorism is primarily designed to study the behaviors of humans as well as animals and focuses on the relation between observable behavior and environmental stimulus since all behaviours are learned through experience and interaction with the environment .

- **Classical Conditioning:** In 1928, Ivan Pavlov was regarded as the first explorer of classical conditioning theory, he was well known for his experimentation with dogs in Pavlov's tests; he gave food to a dog while ringing a bell. When the meal was placed in the dog's mouth, salivation was produced automatically. The dog began salivating whenever it heard the bell after the meal presentation and the bell pairing was used frequently. The behavior was later reversed, Pavlov would ring a bell but offer no food, yet the dogs still salivated. In other words, the salivation response was conditioned to be associated with the previously neutral stimulus. According to Pavlov and Watson humans and animals could be conditioned in the same manner. Pavlov later identified the

- four phases in the process of his classical conditioning: **acquisition, extinction, generalization, and discrimination.**

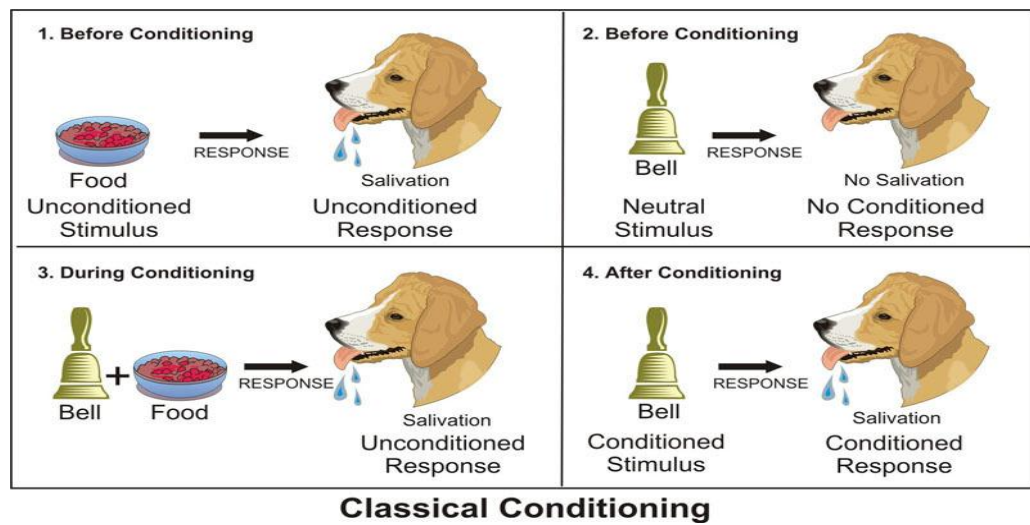


Figure 1.1: Classical conditioning process (DURRIEU, 2021)

- **Operant Conditioning:** Also known as instrumental conditioning is a type of learning that uses rewards and punishments to shape behavior. With operant conditioning, a connection is established between a behavior and a result whether positive or negative (Cerutti, 2003). Operant conditioning was first described by the behaviorist B.F. Skinner, which is why you may occasionally hear it referred to as Skinnerian conditioning. According to Skinner, who was a behaviorist, examining one's own ideas and motivations is not actually important to understand behavior. Instead, he suggested simply focusing on the observable, outside factors that influence individuals' behavior. Skinner examined the behavior of rats and pigeons and generalized his findings to humans. He used a device now known as a Skinner box. The Skinner box was a simple, empty box where an animal might receive food by doing easy actions, like pressing a lever. The animal would receive a reward, such as a food pellet, for a typical, nearly random behavior like pressing a lever in the box. The animal "learned" that

- pressing the lever is necessary to receive food as the rewards for doing the activity repeatedly increased (Kendra, 2022). According to Skinner, most human actions are governed by rewards and punishments, and human learning may be explained by the principles of operant conditioning. The following are the main components of operant conditioning: **positive Reinforcement, Negative Reinforcement, positive punishment, and negative punishment.**

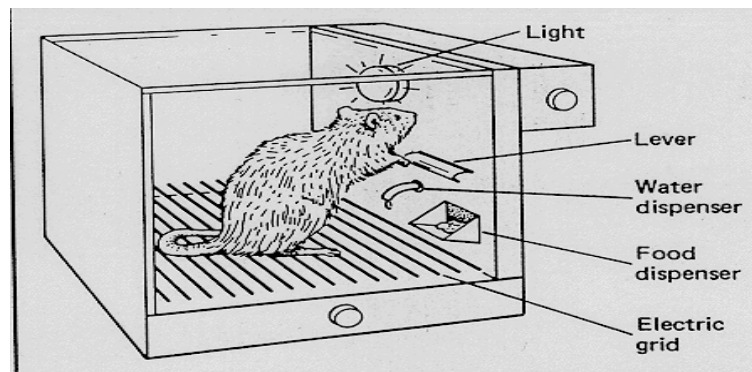


Figure 1.2 : Skinner Box (Miranda et al. 2022)

1.2.2-Cognitivism:

Cognitivism is a theory that focuses on how people receive, process, and manipulates information (Piaget in Smaldino et.al ,2005 p.6). This viewpoint is similarly concerned with how people think, handle problems and make decisions. Understanding ideas or concepts and identifying their connections are hence the guiding principles of cognitive theory (Warsita, 2008, p.69). According to more recent views such as those of Ertmer and Newby (1994), “cognitive theories focus on the conceptualization of a student’s learning processes and address issues of how information is received, organized, stored, and retrieved by the mind” (p. 58). As a reaction to behaviorism, cognitivist theory emerged and gained acceptance in the 1950s. Cognitivists disagreed with behaviorists because they believed that learning was merely a response to a stimulus and disregarded the concept that thinking had a crucial part in

learning. “Cognitivism relies heavily on the idea that the conscious mind is its own independently functioning unit. Cognitivism focuses on inner mental activities, so looking inside the mind is essential in order to understand the process of human learning. Learners themselves are seen as living informational processing systems.” (Carrie et al, 2019, p.1). The Swiss psychologist Jean Piaget was a significant contributor to cognitivism. Piaget claimed that all children go through universal cognitive phases based on their age and stage of mental development. He was interested in understanding the nature of intelligence as well as how children acquire knowledge; Sensorimotor stage (Birth to 2 years), pre-operational stage (Ages 2 to 7), concrete operational stage (Ages 7 to 11), and formal operational stage (Ages 12 and up).

1.2.3-Constructivism:

Constructivism is essentially an observational and empirically based explanation of how individuals learn. It asserts that individuals build their own knowledge and understanding of the world, through experiencing things and reflecting on those experiences (Bereiter, 1994). According to (Bada, 2015), constructivism is a theory of learning that can be found in psychology and explains how humans could learn or acquire knowledge. It directly relates to education. According to the theory, individuals develop knowledge and meaning through their experiences. The main principle of constructivism is that knowledge is built when learners layer new information on top of past understanding (Phillips, 1995). Therefore, it is an approach to teaching and learning that is based on the idea that "mental building" is what causes cognition, or learning. That is, knowledge is acquired by individuals through integrating new knowledge with what they currently know. Constructivists believe that students' views and attitudes as well as the environment in which a concept is presented, have an impact on what they

learn (Bada, 2015). Several psychologists have made significant contributions to constructivism over the years. Constructivist learning theories can be divided into three main types: **Cognitive constructivism, Social constructivism, Radical constructivism.**

1.3. Definition of a Learning Style:

Many researchers have studied the meaning of a learning style, and most of them agree on the fact that a learning style can refer to both the way learners tend to perceive information and the conditions under which they can learn effectively. For instance, Fleming (2001) defines learning style as "an individual's characteristics and preferred ways of gathering, organizing, and thinking about information" (p.1). Dunn & Dunn (1992) view a learning style as "the way in which each learner begins to concentrate on, process, and retain new and difficult information. That interaction occurs differently to everyone" (P.2). It is also seen by Hunt (1979) that learning style "describes a student in terms of those educational conditions under which he is most likely to learn. Learning style describes how a student learns, not what he has learned" (p.27). (James and Gardner, 1995, p.20) define it as "the complex manner in which, and conditions under which, learners most efficiently and most effectively perceive, process, store and recall what they are attempting to learn." Merriam and Caffarella (1991) describe learning style as "an individual's characteristic way of processing information feeling and behaving in a learning situation" (p.176).

Learning style can be considered a significant representation of each individual's unique and preferred approach or way to obtain knowledge which may change depending on the context of the task.

1.4. Learning Styles Models

From the 1970s till now, various learning styles models have been created based on previous findings. By the 1990s, educators started to focus on ensuring that each learner's style was taken into account in the classroom. Changes in the curriculum to accommodate all learning styles were made so that each student had an equal opportunity for acquiring knowledge (S K & Helena, 2017). Some models are explained in brief as follow

1.4.1- Dunn & Dunn Model

This model was created based on individual student responses to 21 elements that influence their ability to focus, comprehend and remember information and skills. According to Dunn and Dunn, there are five key learning style stimuli, each with various elements. These five stimuli and their elements are as follows: Environmental (e.g. sound, light, temperature, and room design), Emotional (motivation, persistence, responsibility, and structure), Sociological (learning alone or in pairs/groups with a teacher and/or peers), Physiological (perceptual intake, an energy pattern based on chronology and mobility needs), and Psychological Processing (e.g. global or analytic thinking, hemispheric and whether one is impulsive or reflective) (Hawk & Shah, 2007). This model evaluates preferences, not strengths. Also, students' capabilities and accomplishments are heavily impacted by their inherent traits and characteristics (Hawk & Shah, 2007).

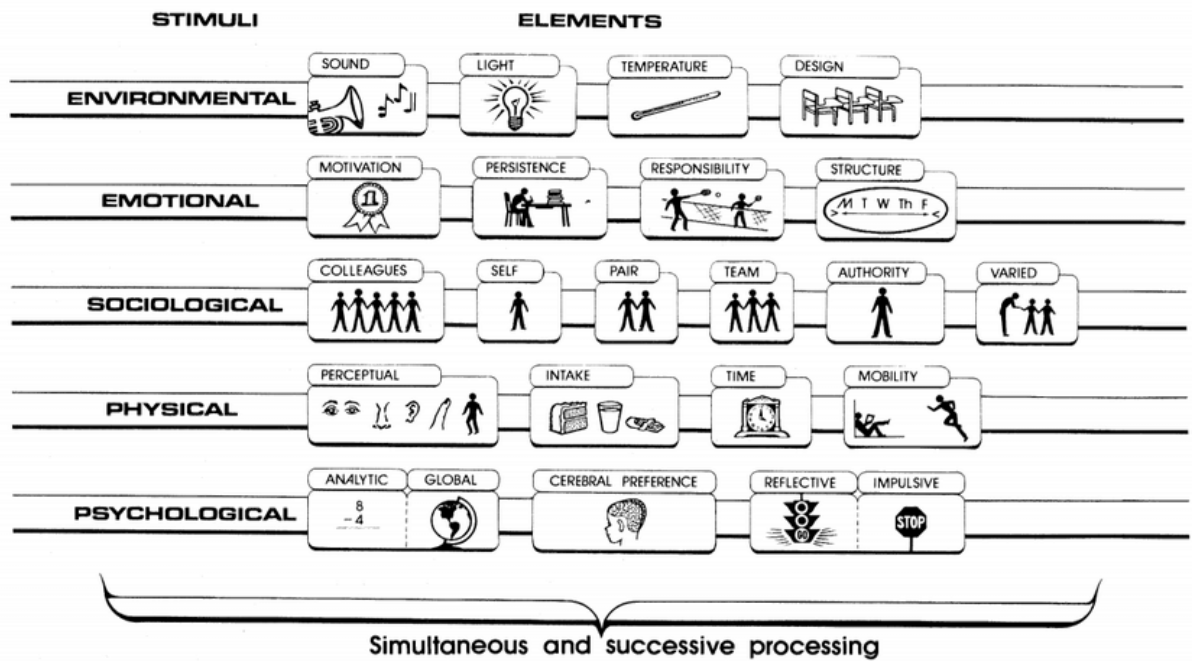


Figure 1.3: 21 Learning Styles (Dunn & Dunn, 1999)

1.4.2- Kolb's Learning Style Model

Kolb's model is a theory of experiential learning which posits that everyone learns differently based on their individual experiences. As such, the model suggests four-stage learning cycle. The first stage of the model is “Concrete Experience” (CE) which entails taking in new information or experiences. “Reflective observation” (RO) is the second stage; in which learners process and analyze the information/experiences they have gained, reflecting on them to gain insight and understanding. The third stage is “Abstract conceptualization” (AC); in which learners use their new knowledge to form abstract theories and principles. Lastly comes “Active experimentation” (AE) which is the application of the learned knowledge to solve problems, test theories, and build skills; in which learners truly understand how to use their newfound knowledge in practice. Learners have different preferences, so they can start learning at any of the other modes in the cycle. However, they should be able to take the time to learn in other modes (Hawk & Shah, 2007).

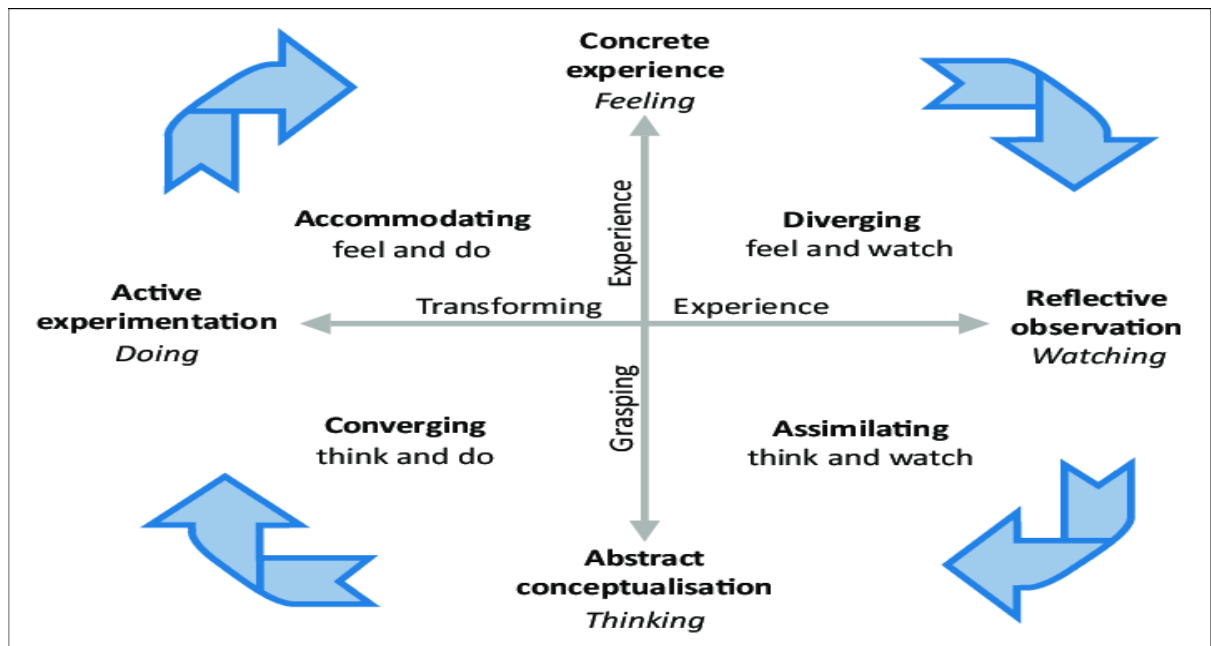


Figure 1.4: Kolb's learning cycle and experiential learning styles (Kolb, 1984)

Kolb (1984) identified four experiential learning styles, namely Divergent, Convergent, Assimilative, and Accommodative. Each style is based on individual preferences and falls within Kolb's learning cycle due to the combination of different stages (see Figure 4). For example, the Divergent style combines CE and RO for those who can take on multiple perspectives and find creative solutions. Assimilative learning links RO with AC, which is great for those who understand abstract concepts easily. The Convergent style connects AC with AE, which works well for those who use a practical approach to problem-solving. The final style, Accommodative learning, joins AE and CE which suits those who are practical and intuitive (or use trial-and-error).

1.4.3- Gregorc Learning Style Model

In addition to Kolb's experiential learning cycle, Gregorc's model is based on a phenomenological study. According to Gregorc (1982), people are predisposed to learn along four bipolar, continuous mental traits that operate as mediators as they take in and respond to their surroundings. These mental faculties include the ability to see

both abstract and concrete things, to organize things sequentially or randomly, to deduce things from other things, and to form associations. The Gregorc Style Delineator measures the first two characteristics, perception and ordering, and assigns a score to each of the four learning styles: Concrete-Sequential (CS), Abstract-Sequential (AS), Abstract-Random (AR), and Concrete-Random (CR), with a total of 100 points over all. According to Gregorc, Sequential and Random are oppositional to Concrete and Abstract (Hawk & Shah, 2007). “On the basis of Gregorc categories, individuals who are CS learners tend to process information in a methodical, instinctive, deliberate manner, whereas CR learners tend to process information in an intuitive, impulsive and independent manner. However, AS learners tend to process information in an intellectual, analytic, logical, and correlative manner, whereas AR learners appear to process information in an emotional, perceptive, and critical manner” (Harasym et al., 1995).

1.4.4- Felder–Silverman Learning/Teaching Style Model:

This model, which all started in the engineering sciences, emphasizes on the fact that people possess preferences along five sets of binary scales: Active-Reflective, Sensing-Intuitive, Verbal-Visual, Sequential-Global, and Intuitive-Deductive. Active learners enjoy working in groups to complete tasks, while reflective learners prefer to take their time thinking through a task before beginning. Sensing learners appreciate facts and experimentation while intuiting learners are intrigued by concepts and innovation. Verbal learners like to converse on the subject at hand and hear their own words, whereas visual learners favor images, symbols, charts, and diagrams. Sequential learners like linear reasoning, step-by-step processes, and materials that are presented in an organized manner. Global learners excel at understanding the larger picture by

making intuitive connections between the components of a system or pattern (Hawk & Shah, 2007).

1.5. Fleming VARK Learning Style Model

“VAK model of learning is a chief pedagogical approach and a dominant learning style that was initially proposed by psychologists in 1920 to categorize the ways and means how people learn. VAK is primarily an acronym of three words visual, auditory, and kinesthetic. Variation in the original acronyms was added by Neil D. Fleming and called it VARK” (Hussain, 2017). The VARK model is an acronym that stands for (visual, auditory, read/write, and kinesthetic), It was introduced in 1987 by the expert teacher and inspector Neil D. Fleming. He observed over ‘1999’ classroom lessons, and those observations led him to develop the VARK model which, according to Fleming (2001), refers to “the category of instructional preference because it deals with perceptual modes” (p.1). The VARK model is based on Neuro-Linguistic Programming ideology (NLP) which is “a name that encompasses the three most influential components involved in producing human experience: neurology, language and programming” (Dilts, 2016, p.1). The VARK also addresses the human perceptual modes and senses except for the smell and taste senses. Fleming invented a questionnaire (Fleming, 1987) with 16 questions used to test each individual’s preferences by selecting one answer or more from multiple-choice questions. The results will indicate each learner’s learning style and how he can enhance them. “VARK above all is designed to be a starting place for a conversation among teachers and learners about learning. It can also be a catalyst for staff development-thinking about strategies for teaching different groups of learners can lead to more, and appropriate, variety of learning and teaching” (Fleming & Baume, 2006). Indeed, learners can learn

by more than one method, but it does not mean they have no preference for a specific learning style. Fleming has updated recently in an interview for the University of Windsor that he prefers to not add the word “learner” into a style of learning such as “visual learner” because it becomes categorical; he would instead say “a student with a V (visual) preference” , this concept was explained in a video (Fleming, 2022, 0:03:22). Learners in the VARK model can have one of its four modes or styles described as follow:

1.5.1- Visual:

Learners with visual preferences prefer anything which is visually appealing and symbolic. They like to draw information from pictures, graphs, charts, mind maps, diagrams, drawings, etc. They are more likely to receive and recall information by seeing it. Stash (2007) captivatingly described visual learners as individuals who thrive with pictographic depictions.

1.5.2- Auditory:

Somebody with an aural preference would rather capture the information through listening. They need fewer materials compared to other styles since they can listen and recall all that has been said by their teachers or they can comprehend through lectures, podcasts, discussions, repetition, etc. “They can easily commit to memory and retain when information is presented before them in the form of melody, poem, or a song. Such learners at times feel unease with boring reading because they are unable to visualize well” (Hussain, 2017).

1.5.3- Read/Write:

This type of preference is most prominent among traditional teachers. Learners with Read/Write preference, tend to be reliant on any written material. They are more comfortable using text to gain and share knowledge. Such learners learn and retain information well by having notes of the material in their mind. They preferred the display of words and signs. Those who can read and write well opt for this learning style. According to Murphy (2004), These learners are accustomed to organizing lectures into draft form, rephrasing notes from class, and studying multiple choice questions (MCQs) for exams.

1.5.4- Kinesthetic:

Learners of this style prefer to learn by doing, they can remember information associated with certain experiences such as physical activities, trips, or manipulating objects with their hands. They find it difficult and boring to sit in one place for a long period, instead they favor frequent breaks during lessons. “Bodily-kinesthetic can understand and solve problems in the world through body or parts of the body” (Armstrong, 2004).

Table 1.1: Activities that accommodate VARK learning styles. Adapted from Fleming (2001).

Visual	Aural	Read/Write	Kinesthetic
Diagrams	Debates, Arguments	Books, Texts	Real-Life Examples
Graphs	Discussions	Handouts	Examples

Colors	Conversations	Reading	Guest Lecturers
Charts	Audio Tapes	Written Feedback	Demonstrations
Written Texts	Video+Audio	Note Taking	Physical Activity
Different Fonts	Seminars	Essays	Constructing
Spatial Arrangement	Music	Multiple Choice	Role Play
Designs	Drama	Bibliographies	Working Models

1.6. The Significance of Learning Styles:

Proponents of the learning style theory argue that when students know their style or styles, they can optimize their learning process, becoming aware of what works best for them (Ellis & Ibrahim, 2015). Research has uncovered that learning styles are a key component when it comes to the learning process. Every person has their style of learning that affects how they communicate with their educational environment. Understanding the correlation between learning styles and the learning process is a major goal of research studies in this field. Learning styles research is built on the belief that people take in, save, and assess information utilizing favored stimulus sense modalities. The understanding gained from this research gives researchers the needed knowledge to improve both the quality of learning and the setting in which it occurs. Learning styles are comprised of a combination of biological and experientially-dictated characteristics that together contribute to one's attentiveness. It goes beyond recognizing whether someone learns better by hearing, seeing, reading, writing, illustrating, or verbalizing. Additionally, it is more involved than noticing if a person processes information in an orderly or analytical way rather than broadly and globally;

information-processing style is only one element. It is imperative to not only observe individual behaviors but to explore and analyze each person's preference for learning as a whole. Evaluating students' learning styles provides knowledge about their particular preferences. This awareness can be used to develop, design, format, and deliver educational programs and resources that will motivate and stimulate students' acquisition, integration, and application of information and professional knowledge in an attempt to individualize instruction. (Brown, 2009). Moreover, by recognizing and understanding the different learning styles, teachers can craft lessons that engage all of their students, creating a more harmonious learning environment. It also helps to ensure that the lessons taught are more likely to be retained and understood. Learning styles are also important when it comes to assessments. By knowing the individual learning styles of their students, teachers can create assessments that are tailored to the way that each student learns best. This can create a more equitable assessment environment, where everyone has a fair chance of understanding and succeeding. In conclusion, learning styles are critically important in the education system, as they help teachers gain insight into how their students learn best. By recognizing and respecting the different learning styles of their students, teachers can create lessons and assessments that are more engaging, equitable, and likely to be remembered.

Conclusion:

At the end of this chapter, it is concluded that learning will always take place in a variety of ways whenever cognitive abilities vary from person to person or whether

environments and experiences have changed. This corresponds to what learning theories previously asserted, and what ensures the significance of the learning style concept presently.

Chapter Two : Children's Learning Needs

Introduction	25
2.1- Definition of Learning Needs.....	25
2.2- Children' Learning Needs.....	26
2.3. The Relationship between Learning Styles and Teaching Methods.....	30
Conclusion	37

Introduction:

Upon knowing and understanding the children's learning styles, teachers will have the chance to address their needs effectively, as it directly impacts their potential for educational success and personal development. This chapter will mention the different definitions of learning needs and discuss briefly the young learners 'common learning needs, followed by an explanation of the relationship between teaching methods and learning styles including the effective methods related to each learning style (VARK) for tailoring these needs.

2.1- Definition of Learning Needs

The idea of "learning needs" is mainly introduced by Hutchinson & Waters and their examination of these needs have demonstrated their value in real-world applications. Consequently, it is essential to always take the learners' needs into account during the learning process. In order to develop effective courses, designers must assess the learners' based on their motivation, the circumstances of the learning environment, and their current knowledge and abilities.

According to Hutchinson and Waters (1987), the term "learning needs" refers to the learner's motivation and attitudes, interests, personal reasons for learning, learning styles, the accessible resources and the time and place of the course. They stated that learning needs are the gap between the learners' current state of knowledge and what is required to achieve for a desired level of competence. They also emphasized that learning needs are not just limited to

the acquisition of new knowledge, but also include the development of new skills and adjustment of attitudes and values. In the same vein, Xiao (2007) states that learning needs are factors that influence the learning experience, such as attitude, motivation, awareness, and personality, learning styles and strategies, together with the social background. Robinson (1991, p.7) views that learning needs are "...what the learner needs to do to actually acquire the language". From the aforementioned definitions we can conclude that learning needs refer to specific requirements that any learner needs to acquire new knowledge and skills, these requirements can vary from one person to another due to certain factors such as age, learning style, and background. Identifying learning needs provide a clear path to achieve an effective and efficient, enjoyable and accessible learning process.

2.2- Children Learning Needs

In the early childhood education, it is crucial for teachers to have a deep understanding of their pupils, their cognitive development, and the varied learning styles they exhibit as they absorb new knowledge. Understanding children's learning needs is essential to ensure that every child has the opportunity to reach their full potential. One key component in addressing these needs is recognizing the role that learning styles play in shaping how each child gets motivated, focuses, absorbs, and processes information. By considering factors such as visual, auditory, read/write, and kinesthetic preferences, educators can create tailored, immersive environments that boost deeper engagement with the material at hand. Children learning needs can be summarized as follows:

2.2.1- Motivation:

“Motivation and learning style have much got attention from researchers. Numerous studies reveal that when learners are well-motivated and their learning preferences are proportionally accommodated, they likely get better improvement in their studies. Similarly, in the case of teaching and learning English as second or foreign language” (Kamiludin, 2019, p. 2). Young learners’ motivation plays a vital role in performing actively in classroom. This is where learning styles come into play – when pupils are taught according to their individual preferences, they become more engaged and motivated in their learning journey, they are more likely to take an active role in their own education, they may ask questions, seek out additional information, and pursue their own interests. On the other hand, pupils who lack motivation may struggle with a number of problems. For instance, they may become disengaged with learning activities, they may lose interest in learning new things or exploring new ideas and they may become bored, which can lead to disruptive behavior in the classroom.

According to Deci and Ryan (2000), motivation can be either intrinsic or extrinsic. Intrinsic motivation refers to the engagement in activities that are inherently interesting and enjoyable, whereas extrinsic motivation involves engaging in activities in order to attain an external reward or avoid punishment. The authors suggest that intrinsic motivation is more likely to result in sustained engagement and creativity. Moreover, learning styles (VARK) may be more closely associated with intrinsic motivation in the classroom by fostering a sense of autonomy, increasing interest, and creating engaging challenges. For instance, when young learners are exposed to learning activities

that align with their learning style, they are more likely to be interested in the subject matter. This may increase intrinsic motivation because the learner is more invested in the learning process.

2.2.2- Cognition:

“Cognition is defined as the mental action or process of acquiring knowledge and understanding through thought. Cognition is considered as a crucial part of learning styles and with its different styles, it has great contributions to second language acquisition” (Tang, 2009, p. 129). By incorporating the different modes of learning styles in classroom, teachers can potentially improve their learners’ cognitive ability. When pupils’ cognition is stimulated through activities that suit their interests, they can understand, remember easily and their memory retention improves. Cognition can also increase their creativity and encourage them to think out of the box and develop their critical thinking skills at an early age. However, the absence of cognition in the classroom may lead to several problems. Children with poor cognition may have difficulty remembering information taught in the class and this will affect their ability to recall important concepts, they may also struggle to comprehend instructions given by the teacher, which can make it challenging for them to complete classroom tasks and assignments.

2.2.3- Attention and Concentration Difficulties

Several investigations have classified attention as one of the main influential factors in the learning process from different aspects, attention has been clearly defined by Gazzaniga, et al. (2002) as "a cognitive brain mechanism that enables one to process relevant input thoughts, or actions while

ignoring irrelevant or distracting ones" (cited in Dean, 2006,p.21). Researchers emphasized that attention is one of the main components of learning, it has been suggested that it aids the learning process because attending to lessons has a huge impact on students' immediate response (Kruschke, 2000). Furthermore, it brings whatever information being discussed to consciousness, and leads to conscious processing (Styles, 1997). Matching different learning styles to teaching and learning processes can better encourage students' attention and concentration toward the given instructions because the VARK model takes students' preferences and needs into consideration and young learners are most likely to pay attention when something catches their interest. Therefore, educators play an important role in the learning process because students' achievement is affected by the teaching activities. For instance, providing engaging activities and methods will remain learners focused, and concentrated on their studies, and they will retain and process information into meaningful insights, staying engaged with the material will improve students' concentration skills as well as their cognitive abilities such as memory problem-solving and critical thinking, which will assure their academic success. However, if there is a mismatch between teaching methods and students' learning styles many pupils will struggle with attention and concentration problems, unsuitable teaching techniques enable them to concentrate or pay attention and they will get distracted easily and miss out on important information and instruction since they are not interested, Also they may have difficulty retaining information or performing well in tests because ignoring their needs and preferred ways of learning can negatively

impact their overall understanding of the subject matter, which can lead to lower academic achievement and reduced learning outcomes.

2.3. The Relationship between Learning Styles and Teaching Methods

Stimulating pupils' learning styles and capacities towards learning and acquiring knowledge would reflect a huge success in the learning-teaching process because learners' ability to acquire knowledge depends upon the style of teaching or the methods and techniques received from the teacher. Therefore, to address pupils' VARK learning styles, diverse methods and techniques should be used during instruction because individual differences of pupils on perceiving and processing information matter and a small educational effort can bring a bright success to education as whole. As mentioned by Mirjeta "knowledge of these preferences helps teachers to implement suitable methods in order to satisfy students' preferences that would lead to successful language acquisition" (Mirjeta, 2015, p. 35). Also Meng (2000) believes that lack of recognition of students' learning style can lead to several problems and difficulties for both teachers and students. While recognition of differences in learning styles can be helpful for teachers and students for using the most effective styles in their courses (Curry, 1999).

The relationship between learning styles and teaching methods seems a quite complex issue that has been under discussion among educators. It is one of the essential aspects to be considered when developing educational programs, while educators need to be aware of their students' learning styles and adapt their teaching methods accordingly, it is also important to recognize that pupils may have multiple learning styles or may learn best through a

combination of different methods, or merely one primary method for acquiring a language. Therefore, to achieve an advanced degree of pupils' learning, it's crucial to determine the favoured learning style of each student and employ inventive, multi-method teaching approaches that enhance the classroom environment with increased engagement and interactivity. This will enable information to reach a broader range of students and encourage every student to develop as effective "learners". According to Cornett, learning style research has helped educators understand that regardless of their students' abilities, all people have ways to learn. There is no right or wrong way to study, but there are learning styles that are more suitable for certain situations when we take into account the range of learning styles people use. (Cornett, 1983, p. 27) also she states that “teachers should have a repertoire of teaching style strategies from which to draw. Strategy selection should be based on both content and skill objectives and the learning styles of the students.” (Cornett, 1983, p. 24) This has concluded what Skinner believes that an effective and actual educational system cannot be created unless learning and teaching are recognized and understood (Meeyari et al., 2009).

In a nutshell, matching teaching methods with pupils' learning styles can significantly improve their academic performance, we can incorporate a variety of teaching methods and strategies that cater the different learning styles through the use of the following different learning styles of VARK model, so that educators can create an inclusive effective learning environment through which they can convey information to their pupils. In the following, we are going to pinpoint highlight each learning style with its corresponding teaching method:

2.3.1- Visual Learners:

Knowing that the majority of visual learners like to learn in a visually appealing atmosphere by seeing material provided in a visual manner, they retain information when it is graphically depicted; here are some tips and activities that may be helpful for the teacher to improve his visual learners' performance:

- Using visual aids such as diagrams and charts, videos (slide shows), images as visual cues (flashcards) can easily allow pupils to convey and recall information, articulate their thoughts.
- Highlighters and coloured markers can be very beneficial for young learners to emphasize the important points or concepts e.g.: green for verbs red for names.
- Encouraging visual projects or presentations to demonstrate their understanding of the topic.
- Designate a space for wall displays so pupils may view visual illustrations of topics to aid in their learning and retention (for example, a poster displaying different colours).
- Word Puzzles, visual learners will enjoy word searches, crossword puzzles, Scrabble, and Boggle. These games allow visual learners to see and solve the problem in front of them. They also help to develop the vocabulary of visual learners as they will be able to remember what the words look like (CNP, 2022).

A Suggested Game: Pictionary

This game works best with young visual learners; it is preferred by most of the pupils because they can get easily creative in the classroom. Pictionary can

help students practice their vocabulary and it tests to see if they're remembering the words you've been teaching.

At first you have to prepare a bunch of flashcards and put them in a bag, then split the class into two teams and draw a line down the middle of the board. One member from each team will choose a card from the bag and draw a picture on the board. The first team to shout the correct answer gets a point and the student who completed drawing should nominate someone else (CNP, 2022).

2.3.2- Auditory Learners:

Auditory learners process information through listening, they are skilled at remembering the information they hear such as oral instructions or concepts. Teachers can meet their auditory learners needs by following tips:

- Using audios in the classroom that contain simple instructions and dialogues will hugely benefit auditory learners and enhance their listening abilities.
- Reading aloud – Encouraging the class to take turns reading from the book aloud is a great activity for auditory learners. They process information much faster when they read it aloud and hear others read. It is also a great way for the whole class to practice reading in front of others.
- Encourage repetition – encourage young auditory learners by asking them to repeat words, letters, instructions this will help them to comprehend best as well as memorise vocabulary.

- Motivating students to participate by giving them the opportunity to get involved by talking and listening to each other and the teacher is a great way to enhance their learning.
- Encouraging Singing can be the best method for children to catch new words and expressions and memorize them as well as Songs can help young learners improve their listening skills and pronunciation (Murphey, 1992).

A Suggested Game: Do this if you hear.

Ask the pupils to put their hands on their head if they hear a certain sound in a word, for example S. Slowly say the following words, and after each word, confirm whether it has the s sound: bin, bet, cat, sit, sun, banana, Sam, sing (CNP, 2022).

2.3.3- Read/Write learners

Reading and writing are essential skills that come by time with patience and much of practice. In order to encourage young learners, fun strategies and techniques need to be included in the learning process.

- Flashcards, Pencils, Markers and highlighters are all the necessary tools to use during writing activity.
- Reading out-loud words, sentences, and instructions is a very preferred technique for children to practice their reading skill.
- Reading and creating flashcards is a great way to exercise that read/ write learning style.
- Short Stories are a great way to teach your pupils how to read. They give students contextual cues and aid in their comprehension of what they are

reading. Moreover, stories keep children interested in learning since they are entertaining and thrilling.

- Stories are not the only way to get your pupils involved in reading but Word Games may be an excellent approach to engage your students' skills without reading a whole story at once.
- Writing out words repeatedly can be a very helpful training to your young learners.
- Phonemic awareness is one of the key components of reading, the teacher should work hard on strengthen the pupils' ability to hear, identify and manipulate the individual units of sound. (CNP, 2022).

A Suggested Activity : It is made to build essential phonics and decoding skills and to develop the pupils' reading skills successfully, Cut out simple cards and write a word with three sounds on each one (e.g. sun, pot, van), and invite your pupils to choose a card and read it together, holding up three fingers. Focus on the sound each letter makes, rather than letter names (CNP, 2022).

2.3.4- kinaesthetic Learners:

Children usually are full of energy that a teacher sometimes cannot control, and their behaviours might be understood as a lack of attention. This indicates that most of them are probably kinaesthetic learners who process information effectively through movements, thus they are most likely to respond to the following active strategies:

- Encourage different activities such as group works, role-plays, demonstrations, projects and crafts and body games.

- Allow pupils to move freely around the classroom during the activity. This is because students have high energy levels and need to physically process what they learn.
- Illustration with real items is the best instructional technique. For instance, replacing flashcards with plastic fruits\vegetables or pictures with real cloths and costumes “the use of realia or real life objects that you bring into the classroom, is the ideal strategy for tactile-kinaesthetic learners” (Pesce, 2012).

A Suggested Game: In This game, teachers are required to stand in front of the class and start doing an action and saying Simon Says. The students must copy what the teacher does, and the winner is the last student standing. To make it harder, speed up the actions and reward children for good behavior by allowing them to play the part of Simon (CNP, 2022).

It is worth noting that one single teaching method or strategy cannot carter all students’ learning styles variations, teachers have to balance between the teaching approaches using varied activities and strategies specially for multimodal learners who do not have one single preferred learning style and need a combination from all the styles (VARK) to process information whether it is written, audible or displayed on video. Therefore, teachers must pay attention to their students’ changes to ensure academic achievements. The more teachers know about their pupils’ learning styles and their preferred teaching strategies, the better they will have an improvement in their students’ outcomes.

Conclusion:

This chapter emphasizes the significance of understanding the different learning needs and how they can be affected by the VARK model during the teaching- learning process it also highlights the relationship between students' learning styles and teaching strategies. Teachers should modify their methods and activities to accommodate students' various learning styles. This will ultimately enhance and improve the outcomes of the learning.

Chapter Three : Research Methodology

Introduction.....	39
3.1. The Design	39
3.2. The Sample	39
3.3- Data Collection.....	41
3.4- Data Analysis	34
3.5- Discussion of the Findings	52
Conclusion.....	54

Introduction:

This chapter deals with the practical part of the study, it includes the design, sample, data collection and analysis and discussion of the findings.

3.1- The Design:

This research adopts the descriptive analytical that is used to analyze, describe and discuss the findings of the classroom observation checklist and the interview, which are designed to provide quantitative and qualitative data. The observation is conducted to investigate the pupils' VARK learning styles that address their common learning needs.

3.2- Sample:

The population of this study consists in 3rd grade pupils at EL Mojahid ELtayeb ELRezma Primary School, in the province of Ghardaia and their teacher of English. The sample of the study comprises 69 pupils divided into two classes during the academic year 2022-2023. The number of pupils studied in the observation is 64. The most important reason behind choosing this sample is to test and apply the VARK model to meet the pupils' main learning needs and to support their learning styles by applying effective strategies and methods since, in their case; English is taught for the first time.

3.3- Data Collection:

3.3.1- Classroom Observation:

Within the framework of this research, we employed an engaging approach with a structured-participant classroom observation held on consecutive Tuesdays over a three-week span. We developed a checklist derived from the VARK learning styles model and the pupils' common learning needs. We explored each of the three sections in detail. The first section is about classroom management, it is concerned with the classroom atmosphere and how the teacher deals with different situations such as controlling the pupils' behaviors and checking for their comprehension. The two last sections focus on a pair of learning styles (visual- auditory / Read-write - Kinesthetic) and includes a set of targeted activities to evaluate the impact of these styles on three crucial learning needs: motivation, attention/concentration, and cognition utilizing a rating scale (from 0 to 5).

The activities are drawn from the 3rd-grade textbook and selected according to their VARK learning styles. Some modifications are made to avoid the combination of styles in each activity.

3.3.2- Teacher' Interview:

In addition to the classroom observation, a face-to-face interview with the teacher is done to dive deeply in understanding the VARK model. It involves a semi-structured interview guided by four open- ended questions which focus mainly on the teacher' view and how familiar she is with the VARK learning styles model. We delved into her techniques for addressing diverse learning needs in the classroom, and uncovered insights on how she evaluates the effectiveness of tailoring teaching strategies to cater to various learning styles.

3.4- Data Analysis:

3.4.1- Classroom Observation Analysis:

- Section one: General observation of the Classroom management.

Item One: The classrooms' setting is clean, comfortable, light and visually appealing.

Table 3.1: Describing the physical setting of the classroom.

Sessions	First	Second	Third
Rating Scale (0-5)	4	4	4
Percentage	80%	80%	80%

Based on our observation, the classrooms' physical setting is evaluated with a rate of 4 out of 5. The overall environment was organized, colourful, light and visually appealing which attract the pupils to the learning environment. However, the classrooms lack a bit of cleanliness.

Item Two: The teacher warms up before starting the lesson.

Table 3.2: Teacher's warming up before getting started.

Sessions	First	Second	Third
Rating Scale (0-5)	4	4	4
Percentage	80%	80%	80%

After observing both classes, we noticed that the teacher was reminding the pupils with the previous lessons, by throwing some hints to refresh their minds and familiarize them with the new lesson. A rate of 4 out of 5 indicates

that the teacher's warming up routine is generally effective, engaging and relevant bearing in mind the influence of some external factors (such as noise) which made the pupils somehow distracted.

Item Three: The teacher is active and checks for comprehension.

Table 3.3: The mental and physical presence of the teacher

Sessions	First	Second	Third
Rating Scale (0-5)	4.5	3	4
Percentage	90%	60%	80%

According to the table above, different rates were given to each session. In the first sessions (visual/ auditory) received a rating of 4 out 5, indicating a high level. The teacher was active and able to check most pupils' comprehension through repetition, showing images, drills and questioning. The second sessions (read/ write) suggest an average level with a rate of 3 out of 5. The teacher was less conductive since the given activities were time consuming and needed the pupils to be active by getting to the board and perform a reading task in addition to checking their answers written in the slates during the writing activity. For the last sessions (kinesthetic), the rate of 4 out 5 indicates a good level. The teacher was actively involved with the pupils since the activity matches their energy.

Item Four: The teacher is able to manage the pupils' behaviors.

Table 3.4: The teacher's control of the classroom

Sessions	First	Second	Third
Rating Scale (0-5)	3	2	3
Percentage	60%	40%	60%

From the above table, we note that the teacher was not highly able to control the pupils' unaccepted behaviors in the first and the third sessions, she used verbal warnings to manage the situation, but not all of the pupils complied. For the second session, warnings were not enough to stop the disruption; therefore the teacher resorted to punishments.

- Section Two: Visual/ Auditory Styles.

A- Visual Style:

Item One: Pupils show more attention when they see images.

Table 3.5: Pupils' attention

Sessions	First
Rating Scale (0-5)	3
Percentage	60%

The data presented in the table focuses specifically on pupils' attention observed during the visual activity in the first sessions. Pupils displayed an average level of attentiveness (3 out 5) towards the images in the textbook. They show some interest and engagement towards images, but get distracted at times.

Item Two: Pupils' motivation to perform the activity

Table 3.6: Pupils' motivation rating for visual activity

Sessions	First
Rating Scale (0-5)	4
Percentage	80%

The table provides an overview of the motivation rating of pupils engaged in the visual activity. It indicates relatively a high level of motivation among the

majority of pupils, the data presented shows the effectiveness of the visual activity. It gives a rate of 4 out of 5, indicating the level of motivation that could be observed without mentioning the exact number of pupils. However, most of the pupils were highly motivated, while few of them were less enthusiastic because the activity may not match their interests.

Item Three: They understand the activity and get the correct answers.

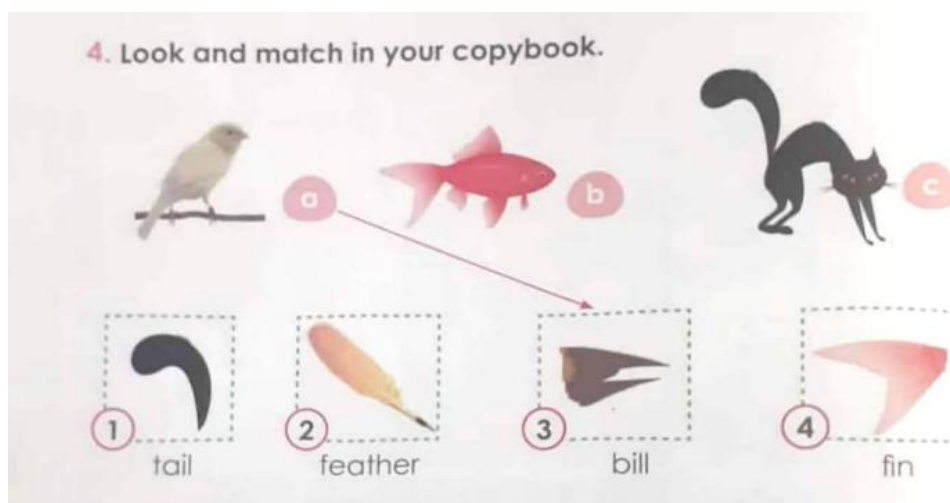


Figure 3.1: The visual activity (Tamrabet & Chenni, 2022, p. 46).

Table 3.7: Pupils' understanding of the activity

Sessions	First
Rating Scale (0-5)	5
Number of pupils	56/56
Percentage	100%

The table shows that the pupils displayed an exceptional level of understanding in the visual activity, earning a perfect rating of 5 out of 5 (100 %). Moreover, some pupils' responses were not totally accurate due to the type of activity which contains an already answered item that was not remarkable by few of them.

Item Four: Pupils' excitement to participate in the correction of the activity

Table 3.8: Pupils' excitement for the correction

Sessions	First
Rating Scale (0-5)	3.5
Percentage	70%

This table provides an overview of the pupils' excitement level in participating in the correction of the visual activity. The excitement level gives a rate of 3.5 out 5, indicating a moderate level of enthusiasm among the pupils.

B- Auditory\Aural Style:

Item One: Pupils are all ears while the teacher is pronouncing the words before the activity.

Table 3.9: Pupils' attention rating during words pronunciation

Sessions	First
Rating Scale (0-5)	3
Percentage	60%

In this table, the pupils' engagement during the words pronunciation activity is rated 3 out of 5, indicating an average level of concentration and active listening, showing some interest and attentiveness to the teacher's words, neither exceptionally high nor low.

Item Two: Pupils show their motivation by mumbling what the teacher is saying during the activity.

Table 3.10: Pupils' motivation through mumbling

Sessions	First
Rating Scale (0-5)	2.5
Percentage	50%

This table indicates the pupils' motivation by repeating what the teacher was saying during the auditory activity based on a rate of 2.5 out of 5. This low level of motivation falls below what would be considered satisfactory.

Item Three: Pupils' comprehension of the activity

Note: The question of the activity was modified from "listen and say" into "listen and circle" so that pupils could do it individually to be assessed later.

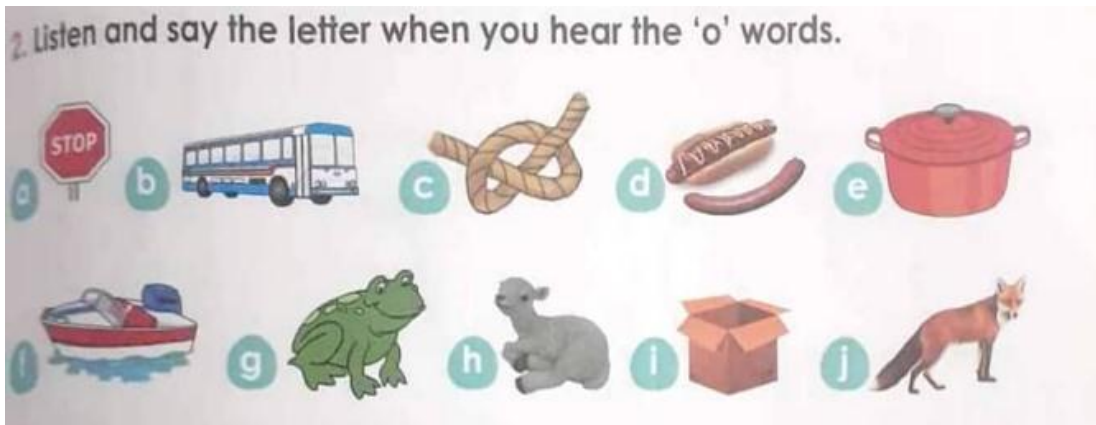


Figure 3.2: The auditory activity (Tamrabet & Chenni, 2022, p. 49).

Table 3.11: Pupils' comprehension of the activity

Sessions		First
Rating Scale (0-5)		3.57
Number of Pupils (56)	correct	40
	wrong	16
Percentage		71.43%

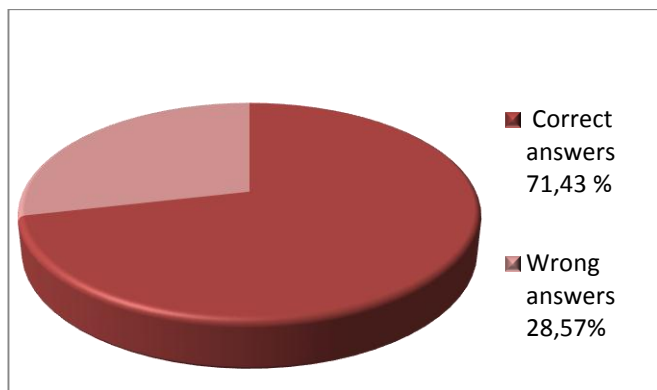


Figure 3.3: The results of the auditory activity

The table and the figure above reflect the rating of pupils' comprehension in the auditory activity; the average rating achieved was 3.57. Out of 56 pupils, 40 had correct answers (71.43%) and 16 had wrong answers (28.57%). The majority of pupils demonstrated an accepted level of understanding. However, some performed above the average and others below it.

Item Four: Pupils' excitement to participate in the correction of the activity

Table 3.12: Pupils' excitement for the correction

Sessions	First
Rating Scale (0-5)	3.5
Percentage	70%

This table demonstrates a reasonable amount of interest and engagement that pupils showed when correcting the auditory activity with a rating of 3.5 out of 5.

3.4.3- Section Three Read- Write / Kinesthetic Styles.

A- Read /Write:

Item One: Pupils are interested and enjoy reading the words written on the board.

Table 3.13: Pupils' interest in the reading activity

Sessions	Second
Rating Scale (1-5)	2
Percentage	40%

The table provides a rating of 2 out of 5, indicating a relatively low level of interest when it comes to reading the words written on the board during the

second session. This indicates that some pupils may show curiosity and engagement, but it is not high among both classes.

Item Two: They are able to pronounce the words correctly.

The activity includes reading these words which were written on the board:

Dog- cat- rabbit- fish- canary- hamster- chick

Table 3.14: Pupils’ ability to pronounce the words.

Sessions		Second
Rating Scale (0-5)		2.55
Number of Pupils (37)	Correct	19
	In between	6
	Wrong	12
Percentage		51.35%

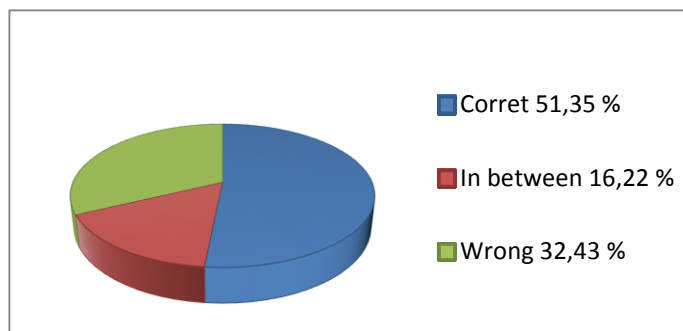


Figure 3.4: Words’ pronunciation.

Based on the table and the figure above, the rating of pupils’ pronunciation of words was 2.55 out of 5, indicating a mixed performance. A majority of 19 (51.35%) pupils pronounce the words correctly, which is a positive aspect of their performance. Some pupils (6 in total 16.22%) have a moderate level of proficiency in pronunciation, showing a room for improvement. While 12 (32.43%) struggle with pronunciation, which is an indication of a need for additional support and practice. Due to the limited time, a sub-sampling of 37 pupils was drawn from 64 pupils.

Item Three: They spell the letters properly

The activity given to pupils was about spelling letters on their slates, the teacher was dictating each letter individually. Then we counted their answers, each letter separately. The results are described as follow:

Table 3.15: Pupils’ answers in the writing activity

Sessions	Second					
Letters	M	T	E	I	A	O
Correct	57	29	6	0	11	27
Incorrect	7	35	58	64	53	37
Rating (0-5)	4.45	2.25	0.45	0	0.85	2.1
Percentage of the correct answers	89.07%	45.32%	9.38%	0%	17.19%	42.19%

In this table, each row represents a different letter. According to the data provided, the letter “M” received the highest rating of 4.45 out of 5, with 57 pupils (89.07%) answering it correctly and 7 of them (10.93) answered incorrectly. The “T” received a rating of 2.25, 29 of pupils (45.32%) answered it correctly while 35 (54.68) were incorrect. On the other hand, the letters “E”, “i”, and “A” received a rating of 0, 6 correct answers (9.38%) and 58 (90.62) incorrect for the letter “E”. No correct answers (0%) for the letter “i” and all of them were incorrect. The letter “A” got 11 correct answers (17.19%) while 53 (82.81) were incorrect. The letter “O” received a rating of 2.1, and 27 pupils (42.19%) answered it correctly while 37 (57.81) were incorrect. As a result, the total percentages of the incorrect answers are higher than the correct ones.

Note: Most of the incorrect answers were about writing vowels (E, i, A).”E” was replaced by the French letter “i”. Most of the answers of the vowel “i” were replaced by “a”/ “A”. For the vowel “A”, it was replaced by “i”/ “I”.

B- Kinaesthetic:

Item One: Pupils prefer to jump straight into the task and get started:

Table 3.16: Pupils excitement to do the activity

Sessions	Third
Rating Scale (0-5)	3
Percentage	60%

The table provides a rate of 3, which indicates an above average level of interest and excitement of the pupils during the third sessions.

Item Two: They are active use physical gestures while acting out.

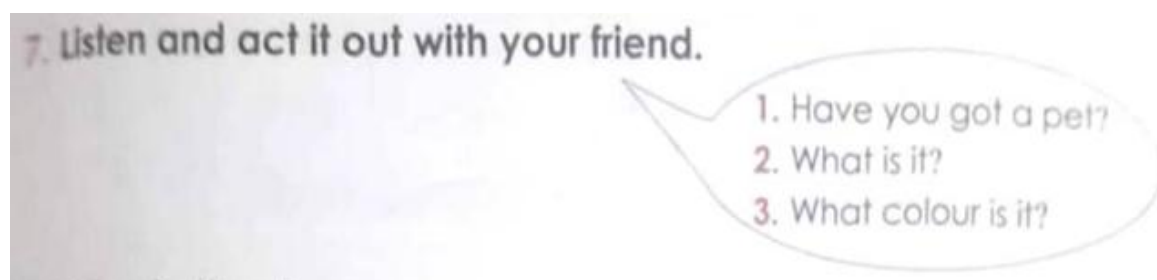


Figure 3.5: The Kinaesthetic activity (Tamrabet & Chenni, 2022, p. 47)

Table 3.17: Pupils’ performance

Sessions		Third
Rating Scale (0-5)		1.95
Number of Pupils	Good	17
	In between	9

(43)	Bad	17
Percentage		39.53%

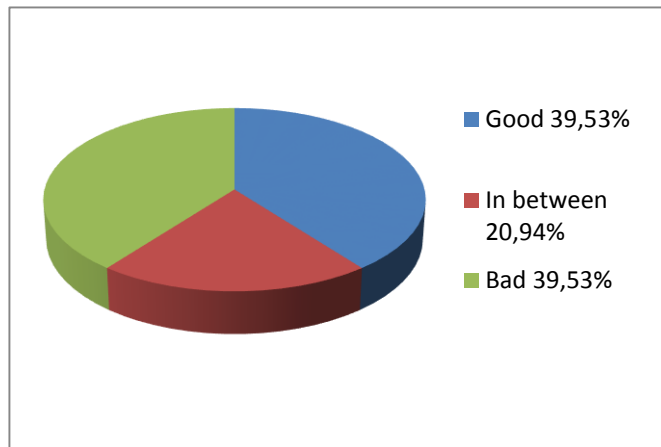


Figure 3.6: Pupils' performance

In this item, a sub-sampling of 43 pupils was selected from 64. The table above gives a rate of 1.95, indicating a relatively low overall performance. 17 pupils (39.53%) showed good performance, actively using physical gestures with a clear voice while acting out. However, 17 pupils (39.53%) demonstrated a lower performance level, possibly displaying a less engagement such as low voices, limited use of physical gestures, fear, and waiting for the teacher's help. 9 pupils (20.94%) fell in between, displaying an average level of activeness and physical gestures while acting. This suggests that a significant portion of the pupils did not fully engage or utilize physical gestures effectively.

3.4.2- Analysis of the Interview:

This section provides qualitative data gathered from the teacher's answers in the interview.

Q1: How familiar are you with the VARK model of learning styles? Could you provide a brief overview of VARK and its different learning preferences?

The teacher answered that familiarity with the VARK learning model develops over time and through multiple sessions. Diversifying learning

strategies is the ultimate goal of the English curriculum when dealing with young learners, especially since their attention spans tend to be quite short.

Q2: How do you currently address the diverse learning needs of your students in your English classes?

According to the teacher, the majority of young learners tend to favor the kinesthetic learning style. Despite their limited language skills, they show interest in activities involving movement and role-playing. Additionally, the visual learning style is highly appealing to children, as colors and drawings capture their attention more effectively than audio scripts.

Q3: In your opinion, what are the benefits of investigating learning styles, such as VARK, in understanding and meeting the individual needs of your students?

According to the teacher, the learning needs of children at this age regarding foreign language acquisition are unclear to them. They are not aware of their specific needs in learning a new language. Therefore, it is the responsibility of the teacher to determine and choose the appropriate learning needs for his/her students.

Q4: How do you assess the effectiveness of your teaching strategies tailored to different learning styles? What kind of feedback do you receive from your students?

The teacher answered that tailoring teaching strategies to different learning styles is highly effective. By understanding how each pupil learns best, she can adapt her methods to engage and support them. She added that pupils respond positively to this approach and show improved understanding and

participation. Also they provide feedback indicating increased engagement, enjoyment, confidence, and better academic progress.

3.5- Discussion of the Findings:

The findings from the classroom observation validate the presence of the four learning styles (VARK) among 3rd grade students in primary school. While there are noticeable differences in the proportions of these styles, none of the styles are completely absent, aligning with our initial hypothesis that students have varying preferences for learning styles as outlined by the VARK model.

Furthermore, the results for the visual style indicate that students displayed less attentiveness at the beginning of the session due to various distractions such as the awareness of being observed and frequent attempts by the teacher to control unaccepted behaviors. However, their motivation was relatively high, which was reflected in their excellent performance during the activity and its subsequent assessment. This suggests that the visual style is the predominant learning style among the other VARK styles, reinforcing our previous hypothesis that "the majority of children tend to process and retain information more effectively when presented with visual cues."

Regarding the auditory style, the level of attention was reasonably acceptable. However, the act of mumbling alone was not sufficient to assess the students' motivation for engaging in the activity, as they may have mentally repeated the sounds they heard, not necessarily through audible mumbling. Overall, their participation in the correction process and their performance in the activity

were accepted. Consequently, the auditory style can be classified as the second most dominant style after the visual style.

As for the read/write style, motivation and attention levels were relatively low, possibly due to students' unfamiliarity with read/write activities and the limited emphasis on this style in their curriculum. Nonetheless, their performance was not as poor as initially assumed, warranting its classification as the third style, following the visual and auditory styles.

Unexpectedly, the results for the kinesthetic style revealed that while students exhibited above-average motivation, their performance was poor. This may indicate that factors such as fear, shyness, and limited language skills influenced their performance. Considering that their weak performance does not necessarily categorize them as non-kinesthetic learners. However, children are naturally active and may display excitement which does not indicate that they are kinesthetic learners. Consequently, these outcomes contradict our initial expectations.

The interview findings suggest that familiarity with the VARK learning model develops over time and through experience. In the English curriculum for young learners, diversifying learning strategies is crucial due to their short attention spans. The interviewee claims that young learners show a preference for kinesthetic and visual learning, with movement-based activities and visual materials capturing their attention effectively. She additionally mentioned that the specific needs of young learners in foreign language acquisition are unclear to them, making it the teacher's responsibility to identify and address those needs. Eventually, Tailoring teaching strategies to different learning styles

leads to improved understanding, engagement, enjoyment, confidence, and academic progress for young learners. Customizing teaching strategies to match different learning styles is highly effective, resulting in improved understanding and participation from students. Implementing interventions based on the VARK model leads to increased engagement, enjoyment, confidence, and better academic progress, supporting the hypothesis of positive impacts on children's learning needs and outcomes.

Conclusion:

To conclude, the findings derived from the classroom observation and the interview with the teacher supports our initial assumptions as they demonstrate the existence of all four VARK learning styles within the 3rd grade student population. The visual learning style emerged as the most prominent, closely followed by the auditory style. Surprisingly, the read/write style ranked third, whereas the kinesthetic style yielded unforeseen outcomes.

General Conclusion

The present research aimed to examine the learning preferences (VARK) of third-grade pupils at EL Mojahid ELTayeb ElRezma primary school in the subject of English by conducting a classroom observation and an interview with the pupils' teacher of English. This research focused on identifying the VARK learning styles of children to address their common educational needs in acquiring a foreign language.

The following research questions were addressed:

- What can the VARK model add to the teaching methods to address learners' needs?
- In which extent the VARK learning styles model can improve the students' performance?
- How can we support or apply the VARK model in classrooms?
- What are the gaps educators and learners may encounter during the teaching-learning- process?

In order to give an answer to the aforementioned research questions, this research was based on the following research hypotheses:

- Children may have different preferred learning styles, as identified by the VARK model (Visual, Auditory, Reading/Writing, and Kinesthetic).
- Majority of children may tend to process and retain information more effectively when presented with visual cues.
- Implementing interventions based on the VARK model may positively impact children's learning needs and outcomes.
- Read/write style may be the least existed learning style among the other learning style.

The findings from the classroom observation confirm the presence of all the four learning styles (visual, auditory, read/write, and kinesthetic) among 3rd grade pupils. Visual style appears to be the most dominant, with pupils initially showing lower attentiveness but high motivation and excellent performance. Auditory style is the second most dominant, with acceptable attention levels and good participation and performance. Read/write style has lower motivation and attention levels, but students' performance was better than expected. Surprisingly, kinesthetic style showed above-average motivation but poor performance, suggesting other factors may have influenced their results. The present study signifies that the VARK model can help teachers address children's learning needs by tailoring instruction to their preferred styles. It promotes differentiated instruction, multi-sensory approaches, varied materials, personalized learning, collaboration, and diverse assessment strategies. As a result, all of our hypotheses have been confirmed with exception of the hypothesis stating that “read/write style is the least existed learning style among the other learning styles” which has been rejected.

Educators may encounter challenges in addressing the learning needs of their pupils, particularly in terms of understanding each student's individual needs and selecting appropriate strategies to enhance their comprehension of instructions. Additionally, educators should consider accommodating diverse learning strategies in order to effectively cater to the preferences of their learners. Pupils may differ in their levels of motivation and engagement with the learning process. Therefore, educators need to create an inclusive and stimulating learning environment that encourages active participation, promotes intrinsic motivation, and addresses individual learner needs to bridge

this gap. Time constraints within the curriculum can limit the depth and breadth of instruction, making it challenging for educators to cover all the necessary content. Teachers should prioritize essential concepts, employ effective time management strategies, and use instructional techniques that optimize learning within the available time. Addressing these gaps requires a student-centered approach, differentiated instruction, ongoing assessment, and a commitment to creating an inclusive and supportive learning environment that caters to the diverse needs of learners.

We anticipate that our research will provide significant assistance to future researchers. Also, by exploring the following research perspectives, they can contribute to a more comprehensive understanding of learning styles, their implications for education, and the development of targeted interventions to meet diverse learning needs:

- We recommend to future researchers the investigation of the VARK model to different levels and ages in order to provide a larger sample size of students/ teachers and dedicating a more time to get a deep understanding about the VARK.
- We suggest investigating how cultural and socio-economic backgrounds influence learning styles and preferences among children can provide valuable insights. This research could explore how diverse cultural contexts shape learning styles.
- We also recommend exploring how the VARK model can be applied to children with special educational needs, such as autism spectrum

disorders, attention deficit hyperactivity disorder (ADHD), or dyslexia.

- We suggest that further researchers explore how adaptive learning systems and intelligent tutoring systems can be tailored to individual learning styles.

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Appendices

Appendix A



Classroom Observation Checklist

Name of the Research Project: Investigating Learning Styles (VARK) to Address Children's Learning Needs.

General Objective: To investigate the variations of the VARK model and their impact on covering 3rd year primary school pupils' common learning needs.

School: EL Mojahid ELtayeb ELRezma Class: _____ Time: _____

Teacher: Manel AMIEUR Starting Date: ___/___/___ Observers: - Amina AMIEUR

Ending Date: ___/___/___ - Fatima.Z BRIHMAT

Section One: Classroom Management	Rate 0- 5 (0 is low, 5 is high)
1- The classroom setting is clean, comfortable, light and visually appealing.	
2- The teacher is active and checks for comprehension.	
3- The teacher warms up before starting the lesson.	
4- The teacher is able to manage the pupils' unacceptable behaviors.	
Section Two: Visual Style	Rate 0- 5 (0 is low, 5 is high)
1- Pupils show attention more when they see images.	
2- Pupils' motivation to do the activity.	
3- They understand the activity and get the correct answers.	
4- Pupils' excitement to participate in the correction of the activity.	

Auditory/Aural Style	Rate 0- 5 (0 is low, 5 is high)
1- Pupils are all ears while the teacher is pronouncing the words before the activity.	
2- Pupils show their motivation by mumbling what the teacher is saying during the activity.	
3- Pupils' comprehension of the activity.	
4- Pupils' excitement to participate in the correction of the activity	
Section Three: Read/ Write Style	Rate 0- 5 (0 is low, 5 is high)
1- Pupils are interested and enjoy reading the words written on the board.	
2- They are able to pronounce the words correctly.	
3- They spell the letters properly.	
Kinesthetic Style	Rate 0- 5 (0 is low, 5 is high)
1- Pupils prefer to jump straight into the task and get started.	
2- They are active and use physical gestures while acting out.	

Appendix B

Teacher's interview

- Q1: How familiar are you with the VARK model of learning styles? Could you provide a brief overview of VARK and its different learning preferences?
- Q2: How do you currently address the diverse learning needs of your students in your English classes?
- Q3: In your opinion, what are the benefits of investigating learning styles, such as VARK, in understanding and meeting the individual needs of your students?
- Q4: How do you assess the effectiveness of your teaching strategies tailored to different learning styles? What kind of feedback do you receive from your students?

الملخص

تهدف هذه الدراسة إلى استكشاف نموذج أنماط التعلم فارك وتطبيقه على طلاب الصف الثالث من التعليم الابتدائي. وتؤكد على أهمية فهم أنماط التعلم الفردية للتلاميذ وتبني أساليب تدريس مصممة خصيصاً لتلبية احتياجاتهم التعليمية. تم جمع البيانات من خلال مراقبة الفصل الدراسي وإجراء مقابلة مع معلمة اللغة الإنجليزية ، تشمل الدراسة 59 تلميذاً من ابتدائية المجاهد الطيب الرزمة الحكومية لولاية غرداية ، تشير النتائج إلى أن أنماط التعلم البصرية والسمعية هي الأكثر انتشاراً بين المتعلمين الصغار ، بينما أظهرت نتائج غير متوقعة بالنسبة لأنماط القراءة و الكتابة والحركية. بناءً على هذه النتائج، تؤكد الدراسة ضرورة وجود بيئة تعلم شاملة ومشوقة تعزز المشاركة الفعالة والدافع الداخلي لتلبية احتياجات التلاميذ التعليمية.

الكلمات المفتاحية : أساليب التعلم ، الإحتياجات التعليمية ، نموذج فارك ، التعلم الفعال.