

The Credibility of Rote Learning in Enhancing Primary School Learners' Learning Achievements. The Case of Al- Nadjah Primary School- Bougtob

La crédibilité de l'apprentissage par cœur dans l'amélioration des réalisations d'apprentissage des élèves du primaire. Le cas de l'école primaire Al-Nadjah à Bougtob

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Received: 19/04/2024,

Accepted: 19/09/2024,

Published: 10/12/2024

Abstract

This study sheds light on primary school learners' learning outcomes and achievements, while being exposed to a mechanical leaning process by their teachers at Al Nadjah Primary School- Bougtob Primary school learners are familiarized to imitate and repeat their "in- class" instructional input. They find it difficult to accommodate any less emphasized feedback delivered by their teachers. These learners contextually fail to perceive and comprehend any instruction provided by their teachers. They get perplexed, they can not construct their output relying on their cognitive abilities. The researcher, however uses a descriptive, statistical and empirical approaches to conduct this study; standing on a triangulation of research tools as classroom observation, questionnaires and an interview. Findings then, are interpreted and represented using graphs and charts. Pupils at Al Nadjah Primary School accommodate and perform better any input already memorized and consolidated in their classes by their teachers.

Keywords: cognitive abilities- learning achievements- mechanical learning- memorization- feedback.

Résumé

Cette étude met en lumière les résultats d'apprentissage et les réalisations des élèves du primaire, tout en étant exposés à un processus d'apprentissage mécanique par leurs enseignants à l'école primaire Al Nadjah - Bougtob. Les élèves sont familiarisés avec l'imitation et la répétition. Ils trouvent difficile d'accepter tout retour d'information moins souligné fourni par leurs enseignants. Ces apprenants ont du mal à comprendre contextuellement toute instruction fournie par leurs enseignants. Ils sont incapables de construire leur production en s'appuyant sur leurs capacités cognitives. Le chercheur utilise des approches descriptives, statistiques et empiriques pour mener cette étude; se basant sur une triangulation d'outils de recherche tels que l'observation en classe, les questionnaires et un entretien. Les résultats sont interprétés et représentés à l'aide de graphiques et de tableaux. Les élèves de l'école primaire Al Nadjah intègrent et réalisent mieux toute entrée déjà mémorisée et consolidée dans leurs classes par leurs enseignants.

Mots- clés : capacités cognitives - réalisations d'apprentissage - apprentissage mécanique - mémorisation - rétroaction.

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Introduction

Learning is a cognitive process through which individuals acquire new knowledge, skills, behaviors, or attitudes, often through experience, study, or instruction. It is a fundamental aspect of human cognition and development, enabling individuals to adapt to their environment, solve problems, and improve their abilities over time.

Learning is a lifelong process that occurs across various contexts, including formal education, work, social interactions, and personal experiences. It is influenced by factors such as motivation, attention, memory, and feedback, and it plays a crucial role in individual development, adaptation, and success.

Learning can take various forms, including formal education in schools, colleges, and universities, as well as informal learning through self-study, observation, experimentation, and interaction with others. It encompasses not only the accumulation of facts and data but also the development of critical thinking, problem-solving skills, creativity, and adaptability.

Gaining knowledge goes beyond mere memorization; it involves deepening our understanding of the world around us and ourselves. Knowledge empowers us to make informed decisions, navigate complexities, and contribute meaningfully to society. It provides us with insights into different cultures, disciplines, and perspectives, fostering empathy, tolerance, and appreciation for diversity.

The process of learning, rote learning and memorization are fundamental themes discussed by linguists as Skinner (1913), Jean Piaget (1953), Sternberg (1995), Pritchard (2005), Watkins (2009) and Schunk (2012). Learning is axiomatically linked to other mechanical process: imitation and repetition.

Primary school teachers emphasize in some extent on memorization and mechanical learning to help their learners maintaining what is delivered as input. Rote learning advocates here the implementation of the Reward Punishment System, coined by the Behaviorists; Ivan Pavlov (1897), Skinner in his Operant Conditioning (1947), and the Audio-lingual teaching method in the 1950's.

This study is then an enquiry about the effectiveness of rote learning in education among primary school learners, determining the extent of memorization in boosting adequate learning. Indeed, this work aims to answer questions about this mechanical way of gaining knowledge, meanwhile proposing alternative, credible strategies, basing on those learners' cognitive abilities and implementing other alternative teaching styles and strategies that could foster learnability.

1. Literature Review

Learning and gaining knowledge are fundamental aspects of human growth and development. At its core, learning involves the acquisition of information, skills, understanding, or competencies through study, experience, or teaching. It is a dynamic process that occurs throughout our lives, shaping our perspectives, abilities, and behaviors.

2. Notional Definitions to Learning

Learning is a cognitive process, it is perceived as a complex phenomenon, making it challenging to provide a precise definition. Consequently, there remains no universally accepted definition of learning. Different perspectives and beliefs contribute to varied

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understandings of this process. Watkins et al (2007, p.11) suggest that learning involves constructing meaning, understanding circumstances, and acquiring knowledge or comprehension. Similarly, Pritchard (2009, p.1) describes learning as the acquisition of knowledge or skills, yet acknowledges its complexity, particularly for those engaged in experimentation and investigation.

Sternberg (1995, p.236) proposes that learning encompasses any lasting change in behavior, thoughts, or emotions resulting from experience. In essence, learning manifests as behavioral changes acquired through individuals' direct participation in specific activities throughout their lives. Schunk (2012, p.3) aligns with this view, defining learning as a lasting alteration in behavior or the capacity to behave in a particular manner, stemming from practice or other experiential forms. Therefore, learning entails change, endurance over time, and occurs through experiential engagement and in various forms:

- **Explicit learning** involves intentional and conscious efforts to gain knowledge or skills, such as studying for an exam or attending a training session.
- **Implicit learning**: occurs unconsciously through exposure to stimuli in the environment, without deliberate intention, such as learning to speak a language as a child or picking up social cues.
- **Experiential learning** is learning through direct experience and reflection, where individuals engage in activities or tasks and derive insights from their observations and interactions.
- **Observational learning** also known as social learning, this involves acquiring knowledge or skills by observing and imitating others' behaviors, often through role models or peers.
- **Associative learning** it is learning through the association of stimuli and responses, such as classical conditioning (associating two stimuli) or operant conditioning (associating a behavior with its consequences).
- **Cognitive learning** involves the acquisition of mental processes and strategies for problem-solving, decision-making, and information processing.

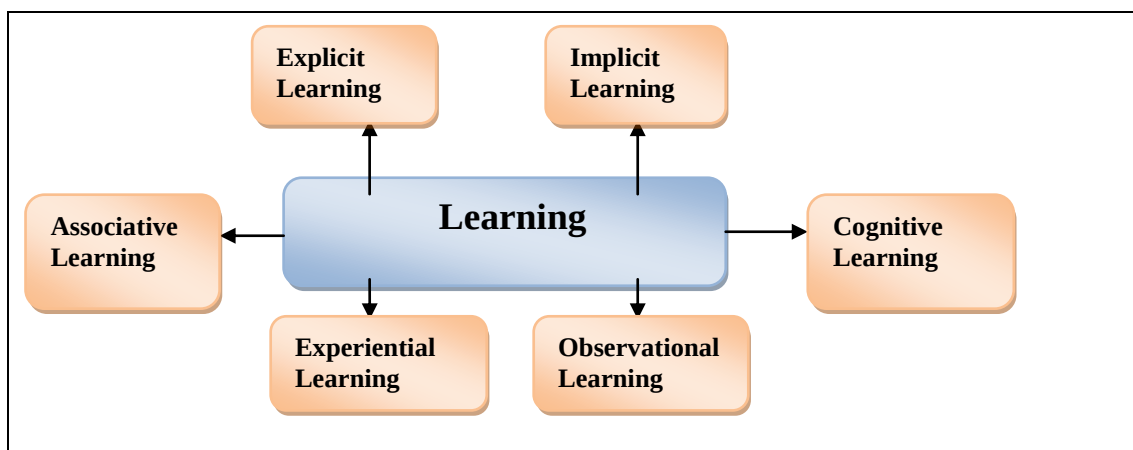


Figure 01. The different forms of learning.

3. Learning according to the Behaviorists

Behaviorism is considered as the first learning theory that emerged in the early twentieth century. As its name implies, implied by its name, behaviorism examines the learning process primarily through observable behaviors. Essentially, this theory asserts that learning entails observable changes and dismisses the influence of any internal mental processes (Pritchard, 2009, p.5).

Behaviorists dismiss the importance of the mental processes in the learning process because they perceive psychology as a science. Therefore, they argue that psychology should adhere to a scientific approach, focusing solely on observable and measurable phenomena to maintain objectivity. Consequently, behaviorism opposes the prominence of the cognitive processes in learning. Boeree (2006, as cited in Woolard, p.19) supports this notion by asserting that behaviorism, with its emphasis on experimental methods, concentrates on variables that are observable, measurable, and manipulable, while avoiding subjective, internal, and elusive aspects.

Woolard (2010, p.1) views that learning can be defined as the acquisition of new behaviors or the modification of existing ones as a result of teaching, training, or instruction. Learning is evidenced by learners' behaviors and their reactions to external stimuli.

In essence, behaviorists assert that the basics of the learning process are the observable behavioral changes in learners and their interaction with the external environment. The main contributors of the behaviorist theory are categorized into two forms of conditioning: classical conditioning and operant conditioning.

3.1. Classical Conditioning

Classical conditioning is led by the Russian psychologist Ivan Pavlov, involves learning through association, where two natural responses are combined to form new stimuli (Moreno, 2010, p.156). Pritchard (2009, p.7) outlines four stages in classical conditioning theory:

- Acquisition, the initial phase of learning a conditioned response.
- Extinction, the diminishing of a conditioned response due to repetition.
- Generalization, reacting to a new stimulus similarly to a previous one, for instance, fearing all dogs after being bitten by one.
- Discrimination, the ability to differentiate between similar stimuli and respond selectively.

3.2. Operant Conditioning

Operant conditioning is introduced by the American psychologist Burrhus Frederic Skinner in the 1930s (Schunck, 2012, p.88), is considered the primary form of behaviorist theory (Pritchard, 2010, p.7). Unlike classical conditioning, operant conditioning emphasizes the relationship between behaviors and consequences. It is more flexible and focuses on the reinforcement of desirable behaviors and the reduction of undesirable ones:

Reinforcement strengthens desirable behaviors through rewards, promoting their repetition.

Punishment aims to decrease the likelihood of undesirable behaviors by presenting unfavorable outcomes after each occurrence.

4. Behaviorism and Rote Learning

According to Lim, Tang, and Core (2012, p.1040), rote learning is defined as "*a method of instruction characterized by concepts of systematic repetition.*" In simpler terms, rote learning is associated with the practice of "drill and practice," where learners engage in repetitive rehearsal until information is firmly memorized. This approach relies on constant repetition of a single item until it becomes ingrained in the learner's memory, resulting in the acquisition of new knowledge through rote.

"Drill and practice" is an inherent element of behaviorism, as noted by Lim, Tang, and Core (2012, p.1041), who argue that it emphasizes imitation and practice to establish strong habits. "Drill and practice" aligns with the behaviorist belief in learning through repetition, leading to automatic and effortless responses. Therefore, it can be concluded that rote learning embodies a behaviorist model, involving the repetition-based acquisition of information (PHD, 2017, para.1).

Rote learning means is a mechanical way of learning. Rote means repetition, where memorization occurs without necessarily understanding the material. Additionally, Li (2004, p.52) describes rote learning as a mechanical use of memory without deeper comprehension, leading to surface-level learning. Sinhaneti and Kyaw (2012, p.5) point out that rote learning is a cultural preference and an effective method for acquiring basic knowledge in language learning's early stages.

From these definitions, rote learning emerges as a superficial learning strategy reliant on repetition to form habits. It involves passive memorization for later recall without engaging in analysis or understanding of the material. Rote learning lacks processes that promote comprehension, analysis, or selection of information. While effective for acquiring basic knowledge, rote learning is primarily a method for memorizing information devoid of inherent meaning.

5. Basics of Rote Learning

Li (2004, p.9) suggests that rote learning strategies encompass three key components: repetition, memorization, and practice. Repetition pertains to the method of acquiring knowledge, while memorization involves storing and recalling information. Practice, on the other hand, involves utilizing knowledge in specific ways.

5.1. Repetition

Repetition involves the repeated performance of an action, speech, or task. Wenden (1991, p.21) defines repetition as the imitation of a language model, which includes both overt practice and silent rehearsal. Gairns and Redman (1986, p.93) outline various forms of repetition in rote learning:

- Silent or oral reading
- Writing down items multiple times
- Learning in list format or using flashcards for portable study
- Employing typical examples
- Finding translation equivalents and definitions
- Grouping paired items
- Memorizing irregular verbs

5.2. Memorization

Memorization, as described by Hornoby (2010, p.959), involves learning something carefully to enhance memory retention. Wang (2009, p.82) defines memorization as a cognitive process that encodes, retains, retrieves, and decodes information in long-term memory. Rote learning, as described by Wu (2014, p.295), can be seen as a cyclical repetition technique, where items are repeated continuously to facilitate learning and memory storage. However, if the repetition cycle is abandoned, new information may be forgotten (Schmitt, 2000, p.137). Moore (2000, p.1) emphasizes that rote learning entails both repetition and memorization, highlighting their connection to the mental process of memory storage and retrieval.

Eventually, rote learning means mechanical learning, which is stressed by the Audio-lingual teaching method in the 20th century. Rote learning stands on both factors: repetition and memorization.

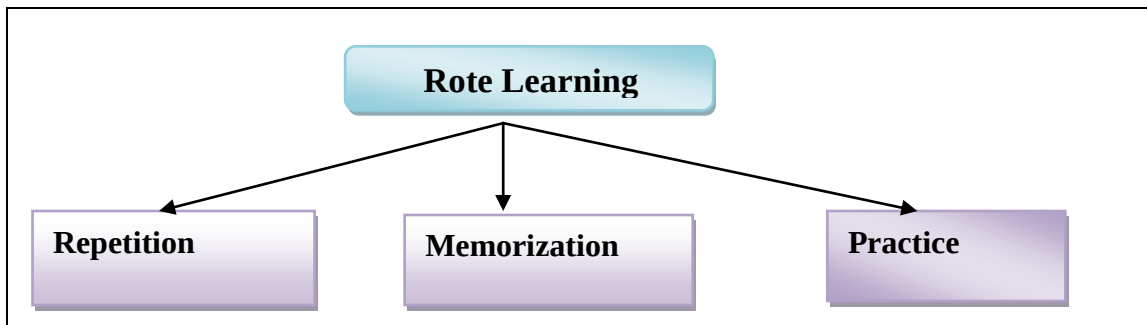


Figure02. Factors of rote learning.

6. Learning Situation and Background of the Study

6.1. Research Questions

This study attempts to determine the effectiveness of rote learning in the primary education, Al Nadjah primary school in Bougtob is a case study. To get insightful and credible outcomes, the researcher is going to base on the following research questions:

- Which learning styles do primary school teachers undertake to deliver their input?
- How do primary school learners accommodate their assignments and their intake?
- What do Al Nadjah primary school teachers do when any instruction is not perceived?
- What measures and alternatives do primary school teachers at Al Nadjah adopt to maintain the teaching learning process?
- What possible pedagogical criteria should be implemented in primary school education to foster motivating and successful learning outcomes?

6.2. Method

In this investigation, the researcher employs a descriptive, empirical study, basing on a qualitative and a quantitative approach while administering the research tools. Indeed, data are interpreted and analyzed statistically.

6.3. Instruments

Empirically, the researcher builds up this study on determining the credibility of rote learning in the primary education background, relying on a triangulation of research tools: class observation- questionnaires administered to Al Nadjah primary school teachers at Al Nadjah and their learners, plus a structured interview designed for those teachers. An idea to focus on here, this study and its research tools are conducted in Arabic, since English is not commonly understood by the respondents.

6.3.1. Classroom Observation

Observing classrooms is a cost-effective means of gaining insight into students' behaviors and how they utilize their surroundings. Through observation, researchers can uncover new details about the individuals being studied, as everything is laid out directly in front of the observer. The main objective of these observations is to provide descriptions. This approach relies on six distinct tools: the Physical Environment Form, Running Record Form, Classroom Checklist, Post-Observation Teacher Interview, Observer Comments, and Post-Observation Summary.

6.3.2. Questionnaires

The survey tool, known as a questionnaire, is highly valued in research for its effectiveness in extracting information from participants. It comprises a set of questions and prompts designed to collect data. Questionnaires offer several advantages, including cost-effectiveness, ease of administration compared to verbal or telephone surveys, and standardized responses facilitating data compilation. Nonetheless, the rigid format of standardized answers might pose challenges for users.

6.3.3. Interview

A structured interview, also referred to as a standardized interview or researcher-administered survey, is a quantitative research technique commonly utilized in survey studies. Its primary objective is to ensure uniformity across interviews by presenting identical questions in the same sequence. This methodology guarantees consistency in responses, facilitating reliable aggregation and confident comparisons between sample subsets or across various survey timeframes.

Structured interviews serve as a method for gathering data in statistical surveys, employing qualitative means to engage individuals in dialogue (Questions vs. Responses). Consequently, this interview format is deemed highly advantageous for investigators seeking comprehensive data collection.

6.4. Participants

In this work, the researcher relies upon two groups of participants. The first informants are six (06) primary school teachers at Al Nadjah- Bougtob. The six teachers assign to teach different levels, and thirty (30) pupils of the same school and from different levels, bearing in mind in addition to the preparatory grade, there are five stages in the primary education have been approved after the Algerian educational reform in 2003. Participants however are selected randomly.

7. Results

The informants of this study are the primary school pupils, studying in Al Nadjah School and their teachers. In this study, a triangulation of research tools is undertaken (questionnaires-a class observation and a structured interview). The findings then, are analyzed and interpreted in a statistical way, employing both approaches; the quantitative and the qualitative one

7.1. Class Observation Conduct and Upshots

The researcher attended two sessions at Al Nadjah primary school, one with the pupils of the second year level and the second session was with the fourth year level. The first session was Mathematics, while the second session was Islamic education. The following charts resume all the points concluded in those sessions of observation:

7.1.1. Level Two Class Observation Outcomes

As it has been stated before, the first class observation session was with the pupils of the second year primary education, the chart below recapitulates all the remarks registered:

Level: Second Year Primary Pupils.	
Composition	34 Pupils: 18 Girls + 16 Boys
Subject Matter	Mathematics
Subject Matter Theme	Arithmetic Operations on the Multiplication Table
Session Duration	45 minutes
Pupils' Collaboration	Fairly good
Pupils' Responsiveness	Positive, effective, valuable
Pupils' Attitudes and Learnability	- A rare reliance on the cognitive critical thinking. - Random and less organized answers. - Memorized arithmetic operations provided. - Frequent repeated and memorized arithmetic assignments.
Learning Outcomes Evaluation	- Pupils did fairly well. - Reinforced instructions were accommodated. - No creative cognitive thinking. - Instantly, what was recycled, was perceived through repetition.

Table 01. Second year level recapitulative class observation outcomes.

7.1.2. Level Four Class Observation Outcomes

The second session of class observation was devoted to the fourth year primary education learners, the teacher exposed his pupils to a session of Islamic education, in which the topic was about the pillars of "Iman" beliefs, referring to the last verses of "Surah ALBAQARA", the main common remarks are presented in the chart below:

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Level: Fourth Year Primary Pupils.	
Composition	33 Pupils: 15 Girls + 18 Boys
Subject Matter	Islamic education
Subject Matter Theme	" Arkan Iman" " The Pillars of Correct Beliefs" based on the last verses of "Surah EL BAQARA"
Session Duration	45 minutes
Pupils' Collaboration	Excellent and responsive.
Pupils' Responsiveness	Effective, motivating, and competitive.
Pupils' Attitudes and Learnability	- Involved and impressed by the motivational topic. - What was memorized, easily perceived. - Improvisational responses. - Spontaneous answers and a satisfactory both intake and output.
Learning Outcomes Evaluation	- Pupils perceived the content of the lesson. - Considerable ability in memorizing. - The pillars were repeated and memorized. - Verses of the holy Coran were learnt by heart. - Harmonious learning.

Table 02. Fourth year level recapitulative class observation outcomes.

Analytically, both levels contributed to ensure effective learning objectives. Starting with the second year primary pupils, these learners memorized the multiplication operations. Their teacher assigned some pupils to recall these multiplications. Hence, those pupils with no thinking recited their assignments. Besides that, guided arithmetic activities were done on the slates and what was noticed with no pauses of thinking, the pupils wrote their feedback. It seemed that the teacher familiarized her learners with this way of mechanical learning.

Concerning the second session with the fourth year pupils, the last verses of "Surah AL BAQARA" were explicitly memorized. When the teacher was asked about that way of reciting those verses, he added that training learners to repeat facilitated their memorization and then their involvement of the topic. Indeed, the teacher recommended that the specificity of such subject matters as Islamic education, History, Natural phenomena, Civic education and even chunks of arithmetic advocated repetition to be reinforced and then accommodated.

7.2. Analysis of the Questionnaires

The investigator addressed two respondents in this study; the primary school teachers (06 teachers) and their pupils (30 pupils were randomly chosen, representing different primary school levels).

7.2.1. Analyzing the Teachers' Questionnaire

Six teachers collaborated in responding to the questions structuring this work; their responses came as the questions below:

Q1: How do you find your learners' schooling level?

The researcher questioned the six teachers about their pupils' schooling level, their responses came as follows:

	Excellent	Very good	Good	Average	Mediocre	Not good
Teacher 01		✓				
Teacher 02				✓		
Teacher 03		✓				
Teacher 04			✓			
Teacher 05			✓			
Teacher 06				✓		

Table 03. Teachers' evaluation to their learners' level.

Q2: What learning style (s) do you implement in your class to get your learners involved and creative? (You may refer to more than ONE learning strategy)

The investigator asked the six participants about the learning strategies, they relied on to motivate their learners, their responses were as follows:

	Individual work	Pair work	Group work	Whole class work
Teacher 01	✓	✓		
Teacher 02	✓		✓	✓
Teacher 03	✓	✓		✓
Teacher 04			✓	
Teacher 05	✓			
Teacher 06		✓		

Table 04. Teachers' in- class learning styles.

The following chart illustrates each strategy with its percentage of implementation:

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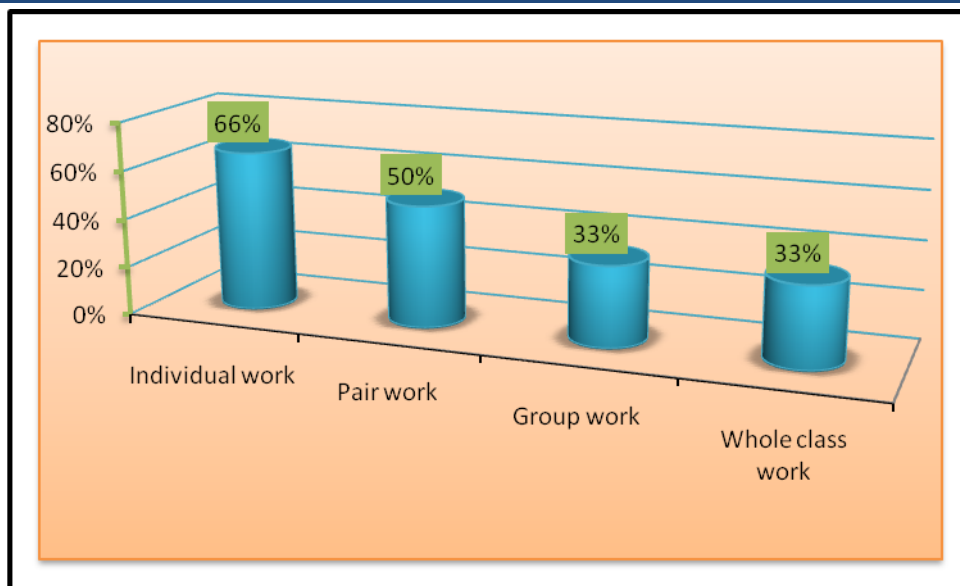


Figure 03: Learning strategies' implantation at Al Nadjah primary school.

Q3: What techniques do you adopt in your class to attain a satisfactory feedback from your learners?

The investigator asked the teachers about the techniques they utilized in their classes, they saw encouraging and facilitating learning, the table below explains these findings:

	Learning Techniques			
	Simplificati on of the Input	The Use of Demonstrative Teaching Equipments	Mechanical Learning: Repetition and Memorization	Extensive "In- class Assignments"
Teacher 01	✓		✓	✓
Teacher 02	✓	✓	✓	✓
Teacher 03			✓	
Teacher 04	✓		✓	
Teacher 05	✓			✓
Teacher 06			✓	

Table 05: The frequent learning techniques used by the primary school teachers.

Based on the findings collected from table, rote learning ranked first with 83 %, while simplifying the input scored 66 %. Primary school teachers stressed implementing extensive "In-class" assignments as a third technique with a rate of 50 %. Whereas integrating supplementary teaching materials was apparently nonexistent and rarely designed. That technique scored 16 %. The figure below recapitulates these outcomes:

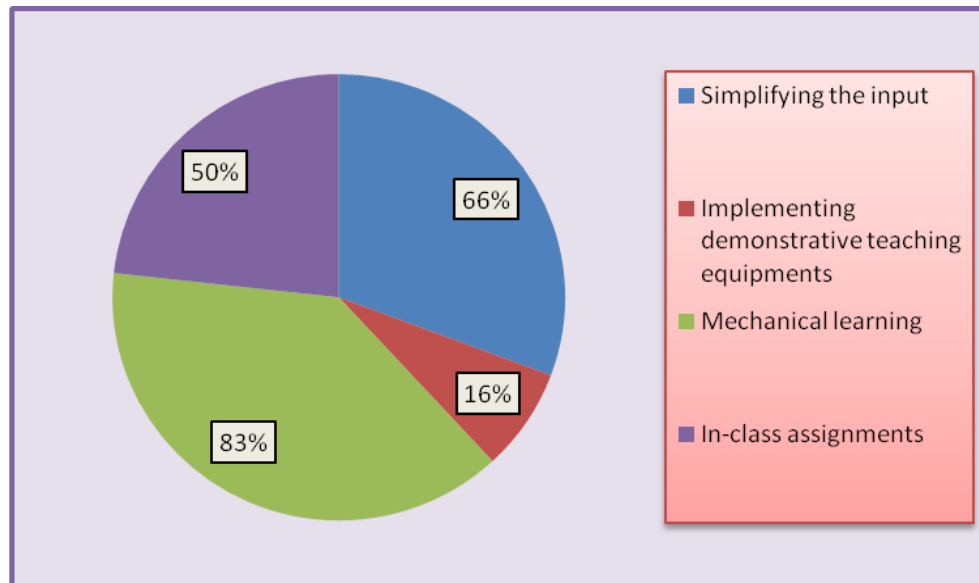


Figure 04: The learning tactics used by Al Nadjah primary school teachers.

7.2.2. Analyzing the Pupils Questionnaire:

In this study, the researcher leaned on 30 pupils, studying at Al Nadjah primary school. These 30 informants were chosen randomly, representing different level. This random choice aimed at attaining reliable findings. The questionnaire was done in the Arabic language, since the English language was not understood among those learners.

Q1: Which subject (s) among the list below do you perceive best and easily?

	Learners' perception	
	Number of learners	Percentages
- Islamic education	22	73 %
- Civic education	18	60 %
- History and Geography	17	56 %
- Arabic grammar	12	40 %
- Natural education	10	33 %
- French	08	26 %

Table 06: Learners' perception to the provided subject matters.

Through the findings and the percentages obtained above, the informants preferred the subjects, which did not require too much thinking. High percentages were scored by History and Geography, Islamic education the same as the Civic education. Arabic ranked fourth with a percentage of 40 %, while lower scores were marked by Natural education 33 % and 26 % for French. These classifications are represented in figure below:

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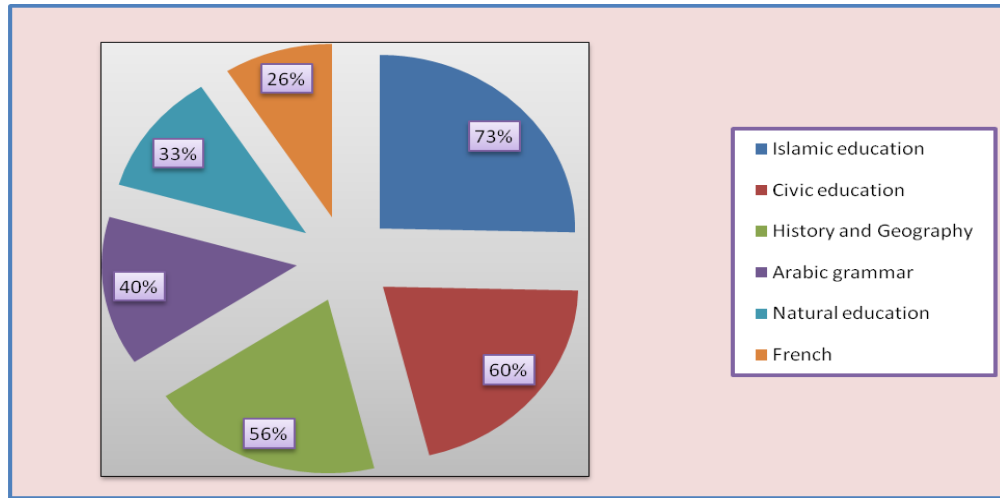


Figure 05: Learners' classifications to their subject matters.

Q2: Which learning techniques do you frequently rely on when you revise? (Put ticks ✓ to select you appropriate answer)

	Learners' perception	
	Number of learners	Percentages
- Repetition and memorization	27	90 %
- Analyzing the instruction	15	50 %
- Paraphrasing the intake	14	46 %
- Summarizing the course content	14	46 %
- Referring to YouTube channels	13	43 %
- Note taking	04	13 %

Table 07: Learners' preferable styles during revision.

Considering the outcomes stated above, a high rate was registered by the learning technique "Repetition and memorization" with a rate of 90 %. Learners relied on learning by heart to accommodate their instructions. Referring to the cognitive analysis and deciphering the instruction ranked second with a percentage of 50 %. Third, the two techniques "Paraphrasing" and "Summarizing" scored similar percentage of 46 %. When asking learners about using the you tube as a supplementary tool to revise, 43 % responded with "yes", while a minority of the same participants used "Note taking" during their revision, and this achieved 13 % of the total informants. The following figure illustrates those findings:

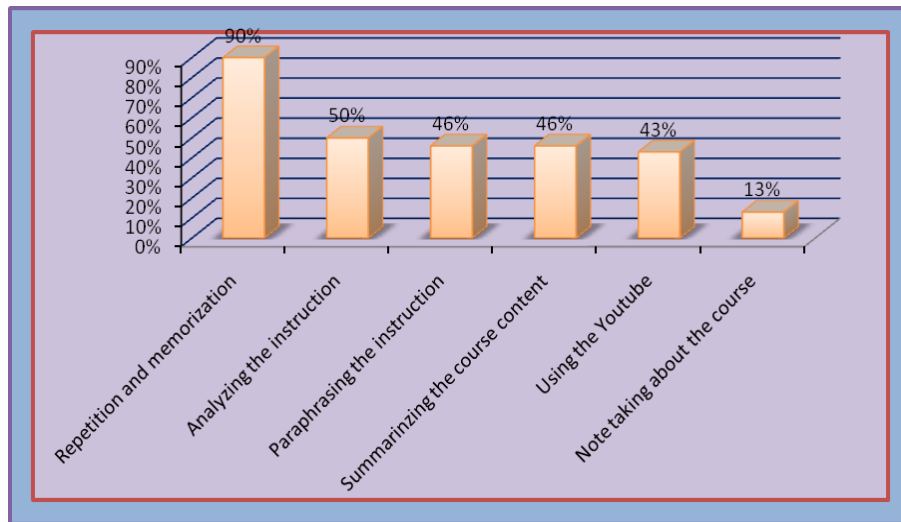


Figure 06: Learners' ranking learning styles.

Q3: How do the duo of techniques: Repetition and Memorization contribute to foster your feedback and learning achievements? Tick (✓) what you see relevant to your answer:

	Learning Achievements	
	Number of learners	Percentages
- Effective and accessible	21	70 %
- Reliable, serving learnability	17	56 %
- Practical, ensuring high scores	22	73 %
- Undermining the learner's cognitive competencies.	18	60 %
- Impedimental to the learners' critical thinking process	23	76 %

Table 08: Learners' views about their learning achievements.

Considering the findings attained in the chart above, the majority of the respondents with a percentage of 76 % considered "Repetition" and "Memorization" as an impedimental step towards their critical learning process. In the same vein, 60 % of the same informants viewed both factors of mechanical learning undermining their cognitive competencies. On the contrary, those participants assumed that both processes beneficial and positive; 73 % of them saw that repetition and memorization were practical, ensuring high grades in their both formative and their summative assessments. In the same issue, 70 % of the learners considered both processes effective and easy to rely on while retrieving any previous input, provided by their teachers, and while 56 % of the informants regarded repetition and memorization trustworthy, fostering the leaning outcomes. The following figure recapitulates those findings.

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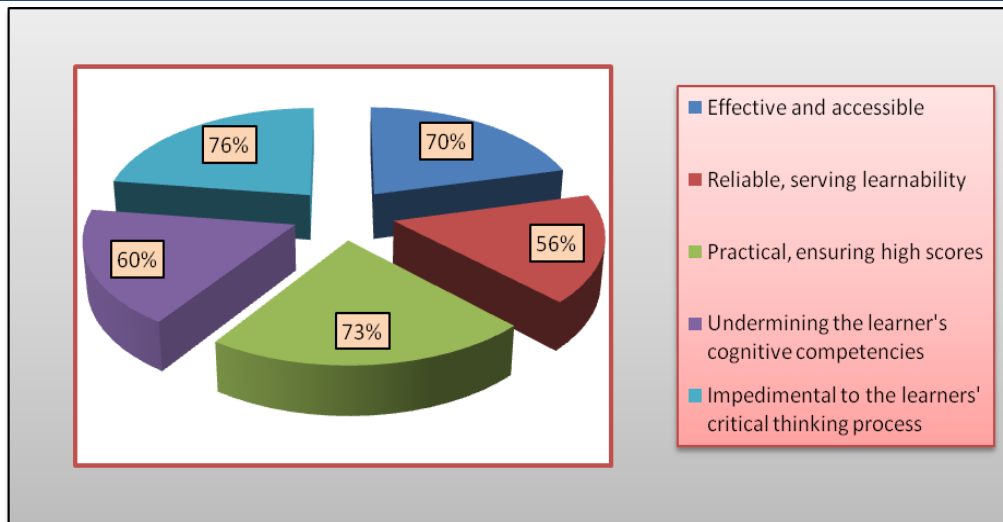


Figure 7: The learners' views about repetition and memorization in boosting the learning outcomes.

7.3. Analysis of the Teachers' Structured Interview:

In this research, the investigator maintained the same 06 teachers as respondents to the structured interview. The teachers assigned to teach different levels. The researcher designated the ones teaching from the second year to the fifth year of the primary education.

Q1: Do you think that mechanical learning optimizes the learning achievements?

	Rote learning	
	Yes	No
- Teacher 01	✓	
- Teacher 02		✓
- Teacher 03		✓
- Teacher 04		✓
- Teacher 05		✓
- Teacher 06	✓	

Table 09: Teachers' attitudes towards rote learning.

Based on the attained outcomes provided above, 04 participants admitted that mechanical learning could not hinge on the learning achievements; however 02 informants considered repetition and memorization encouraging factors, aiming to foster learnability. The figure supplied below resumes these results:

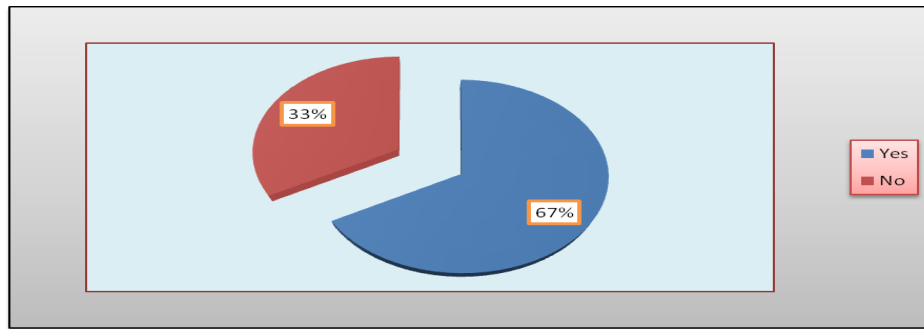


Figure 08: Teachers' attitudes towards mechanical learning.

Q2: What measures do you undertake as post procedural acts while assessing your learners?

	Learning Achievements
- Smiles and special gifts.	✓
- Additional summative grades in their tests.	
- Applauses and praising.	✓
- Hugs and warm kisses.	✓
- Pinches on the skin.	
- Physical punishments.	✓
- Classroom detention.	
- Debiting grades from their tests and exams.	✓
- Arraigning the parents.	

Table 10: Teachers' responses to their learners' output.

When reviewing previous lessons and assignments, primary school teachers shared common points, whether in positive and satisfactory learners' output delivery or in inadequacy of that feedback. These informants rewarded their learners, smiling when the responses of their learners were correct, applauding and praising positive responses. Contrary to that, physical punishments, debiting grades from future exams were drastically set.

Q3: Which of the learning tenets do you think assist primary school learners and contribute to enhance the learning achievements?

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Learning Tactics	Teachers					
	T01	T02	T03	T04	T05	T06
- Rote learning				✓	✓	✓
- Cognitive learning		✓				✓
- Constructive learning	✓	✓			✓	✓
- Reward Punishment System way of learning.			✓			
- Learning through reinforcement and consolidation.	✓	✓	✓	✓	✓	✓
- Blended learning.		✓			✓	
- Flipped learning			✓			

Table 11: Primary school teachers' preferable learning trends.

When the investigator questioned the participants about the learning styles seemed valuable, serving the learning process in terms of engagement, involvement and productive, creative output, their responses came as described in the following chart:

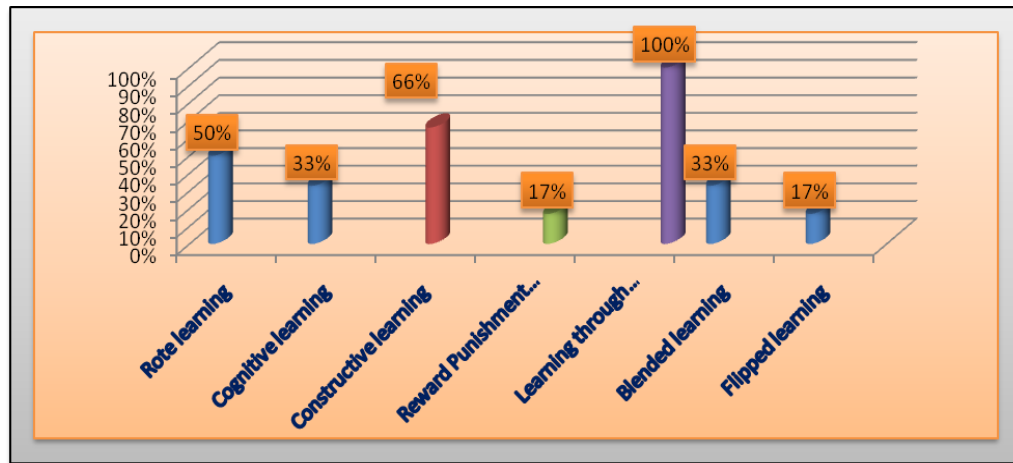


Figure 09: Teachers' prior learning styles towards for learning achievements.

8. Discussion and Solutions for Improvements

Learning is a cognitive process; it is to transmit knowledge from the teacher; the source provider to the learner; the center and the essence of the instructional process. It is noticeable that primary education classroom conduct is teacher- centeredness process. Those teachers familiarized their learners to learn by heart, memorize all what had been taught before, and this was noticed during classroom observation.

During the first classroom observation, second year primary school pupils mechanically repeated the arithmetic multiplication operations. They did not give themselves a second to think or calculate any arithmetic assignment. Mathematics was done through repetition, consolidation and then memorized before recycled.

In the second classroom observation session, pupils were exposed to Islamic education class, which was about the pillars of "Al Iman" beliefs, based on the last verses of Surah "AL BAQARA". Pupils of the fourth grade primary education demonstrated high memorization

abilities. Even as a review of the previous lesson, those learners repeated spontaneously what had been done. Learners however responded promptly to their teachers' assignments with no slight moments of thinking.

Moreover, primary school teachers stressed rote learning in conducting their classes. So, 83% of those teachers emphasized repetition and memorization processes in their teaching. Despite the way they simplified their input and amount of assignments recommended to their learners. What was noticed in their teaching, no supplementary teaching equipments were imparted to their learners, to boost the instructional process.

In addition to that, pupils in the primary education prioritized the subjects that are memorized and which do not necessitate too much cognitive thinking as Islamic education, Civic education, History and Geography and with less importance to the Arabic grammar. Those learners showed little attention to natural education as well as French. So, the nature of the subjects intrinsically stimulated learners to prioritize subject than another. Explicitly, what can be memorized was easy to learn then what required attention and conscious thinking. In the same vein, learners at Al Nadjah primary school placed first "Repetition and memorization" as successful techniques while revising. 90 % of those students were in favor for rote learning, since this way of acquiring knowledge is effective, accessible, and reliable; serving learnability. More than 70 % of the pupils considered mechanical learning satisfactory and successful tactics that ensured encouraging scores during their summative assessments and therefore contributed to achieve satisfactory learning outcomes.

Furthermore, rote learning was not an issue adopted by the pupils of Al Nadjah primary school. This way of learning was leaned on by their teachers, since 04 of those teachers out of 06 preferred mechanical learning and implemented it their classroom conducts. Always with the classroom atmosphere, those teachers implicitly took by choice the tenets advocated by the behaviorists in terms praising the learners' satisfactory feedback and punishment if the feedback was mediocre.

In the same context, all the primary school teachers focused on learning through reinforcement and consolidation. 100 % regarded mechanical recycling of the instruction as a bridge toward learning achievements. Little awareness was imparted to the learner's cognitive abilities. Only 33 % of the whole teachers considered cognitive processes a path toward adequate effective learning outcomes.

Pedagogically, supporting any learning tenets should be built on valuable basics, which serve the learners and hinge on the learning objectives. According to Slavin (2006, p.190), assessing the effectiveness of any learning method requires careful consideration of its advantages and disadvantages. Consequently, numerous positive aspects of the rote learning strategy have been highlighted.

Gairns & Redman (1986, p.93) emphasize that repetition plays a crucial role in the early stages of language learning. It allows students to engage with both oral and written language forms, fostering a sense of progress and achievement. Thus, repetition is regarded as fundamental for acquiring knowledge from the outset of language learning.

Biggs (1998, p.726-727) asserts that achieving thorough mastery of characters entails a deep understanding of their functioning. Learning characters involves two primary principles. Firstly, the engagement of the five sensory organs is crucial for effectively understanding and recalling characters: the eyes perceive their formation, the ears discern their pronunciation, the hand reproduces their shape, the mouth articulates their sound, and the mind processes their

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meaning. Secondly, contextualization is vital; phonemes and words follow specific rules in forming sentences, underscoring the rule-governed nature of language. Learners must comprehend and produce grammatically and contextually appropriate sentences.

Similarly, Nation (2001, p.74&76) highlights the importance of repetition in vocabulary learning. Given the depth of knowledge required for each word and the need for fluent access to vocabulary, repetition is essential for both enhancing the quality and strengthening the quantity of knowledge.

Supporters of rote learning hold positive beliefs about its effectiveness, suggesting that this method is crucial for constructing knowledge. Researchers advocating for the rote learning strategy argue that it goes beyond mere meaningless repetition; rather, it incorporates elements that can assess learners' comprehension.

Despite the favorable opinions surrounding rote learning, numerous researchers still view it as an ineffective approach to learning. Rote learning is often perceived as a superficial method that prioritizes memorization over meaningful understanding, consequently leading to the development of passive learners.

The debate over rote learning is a contentious topic in academia, with questions arising regarding its ultimate purpose: whether it solely aims to facilitate memorization or to foster genuine understanding. While rote learning may prove beneficial for memorizing and retaining information, its utility diminishes when the goal is to apply learned concepts to solve problems in new contexts. Mayer (2002, p.277) conducted an experiment involving a participant named Becky, who employed rote learning strategies.

Despite successfully memorizing the content of a chapter on electrical circuits, Becky struggled to apply this knowledge when asked to solve essay questions or diagnose problems. This highlights the limitation of rote learning, as it primarily enables remembering and recalling information, whereas true understanding involves the ability to evaluate, compare, analyze, and apply knowledge to solve diverse problems.

Eventually, teachers not only in the primary cycle need to think million times about the convenient and the most relevant styles those contribute to attain satisfactory learning achievements. As possible alternatives, the researcher suggests the following:

- **Fostering learners' Engagement:** This principle recommends pupils to actively participate in classroom activities, voice their opinions, engage in discussions on relevant topics, and participate in daily conversations.
- **Integrating Supplementary Teaching Materials:** The implementation of teaching learning equipments helps to create real-life instructional environment. Authentic materials facilitate learning and motivate learners.
- **Familiarizing Learners to critically work:** Training learners to perceive, to decipher, to analyze and then create and produce leads to valuable learning achievements and these are the recommendations of the constructive way of learning.
- **Setting Autonomous Learning:** Teachers are invited to minimize their extreme conduct to their classes; learners have to be prepared and trained to be autonomous, sharing knowledge with their teachers and partners in the instructional process.
- **Utilizing Effective Teaching Approaches:** It is important to employ productive strategies and incorporate teaching methods that foster students' autonomy, reflection, and problem-solving skills for effective learning.

- Ensuring Learners' Self-Assurance: Teachers are invited to challenge their pupils, and giving them opportunities to show their capacities and competencies. This principle optimizes autonomous learning and self confidence.

Conclusion

Learning is an ongoing, progressive and dynamic process, affected by various factors as age, the psychological situation of the learner, readiness, the socio-cultural background and of course the teacher's competencies. Different theories in the field of learning tried to conceptualize learning and how it can be transmitted to learners.

Rote learning is needed when dealing with vocabulary building. Teachers assign their learners to learn lexis with a prominent awareness. Rote learning is effective for memorizing basic facts, figures, and formulas, which can be useful in subjects like mathematics, language vocabulary, or historical dates. Rote learning can provide a foundational understanding of a topic or subject, which can then be built upon with more complex and nuanced learning approaches.

Mechanical learning fosters skill development by helping learners to memorize sequences of steps or procedures. Rote learning can facilitate immediate recall of information; retrieve potential knowledge, already acquired through memorization.

Behaviorism in 1913 represented by Skinner, Thorndike, Watson, and Pavlov brought diligent tenets revolutionized the teaching learning process. Matching learning with repetition and memorization seems a mistaken tenet, since rote learning neglects the learner's innate and cognitive abilities.

Rote learning represented by the duo processes "Repetition" and "Memorization" undermines other individual factors as creativity, productivity, critical thinking, innovation, and consciousness. A learner according to the behaviorists is as parrot, repeating what was reinforced and consolidated.

Eventually and despite the minor privileges and the limited benefits of rote learning, this style of learning often focuses on memorization without fostering a deeper understanding of the underlying concepts. This can lead to superficial knowledge that is easily forgotten or misunderstood. Memorized information acquired through rote learning may be quickly forgotten once the immediate need for recall has passed, especially if learners have not engaged in deeper processing or meaningful connections with the material.

Rote learning can be monotonous and uninspiring for learners, leading to boredom and disengagement from the learning process. Knowledge gained through rote learning may be difficult to transfer to new situations or apply in real-world scenarios where understanding and adaptability are required.

The investigation entitled "The Credibility of Rote Learning in Enhancing Primary School Learners' Learning Achievements". The Case of Al Nadjah Primary School - Bougtob demonstrated anomalies, rather than encouraging perspectives. Rote learning or rote memorization undermines the learners' cognitive competencies and hinders creativity.

Primary school teachers and even instructors in all the cycles are advised to foster learner-centeredness, minimizing their extreme guidance to their classes, and maximizing their learners' role in the course conduct. These pedagogical features will not be assured unless new alternatives to be set up as meaningful learning, implying communicative teaching methods and utilizing creative learning by leaning on the tenets of cognitivism and constructivism, in

which the learner actively builds new knowledge and understanding based on his prior experiences, interactions, and interpretations of the world around him.

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