

*Effects of Acronyms Mnemonics on Students English Vocabulary Development at Elementary School level in Balochistan*

## Effects of Acronyms Mnemonics on Students English Vocabulary Development at Elementary School level in Balochistan

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### Abstract

This study aims to find out the effects of acronyms mnemonics on students English vocabulary development at elementary school level students (class 8<sup>th</sup>) situated in Dera Bugti). Mnemonic is a memory development strategy, in this strategy connections are developed among different concepts, usually beginning words are abbreviated to enhance student's memorization ability and retention rate. Acronyms mnemonics is a type of mnemonics in which the first letter of each word is remembered and linked with an abbreviated word. English is a Foreign Language, students face serious problems regarding their English Vocabulary Development owing to which they are unable to understand English text, insufficient bank of vocabulary, usually it creates problems to students demonstrate better academic performance at elementary level. The study was experimental in nature, class 8<sup>th</sup> Elementary School Students situated in Dera Bugti enrolled during the session 2024-2025 constitutes population of the study. Total Number of participants were 40 while 20 students of class 8<sup>th</sup> were taught through traditional strategy and 20 students were taught through acronyms mnemonics. Pre-test, post-test research design was applied. Collected data was analyzed through SPSS version 2022. Results of the study revealed that there was a significant effect of the acronyms mnemonics teaching strategy on the English Vocabulary development of elementary level students.

**Keywords:** Vocabulary development, English language, acronyms Mnemonics, acoustic acronyms mnemonics, Elementary level students

### Introduction

Acronym is the abbreviations of shortened forms of any word. Acronym mnemonics is a memory developing & retention strategy by converting complex information into memorable abbreviations, linking new knowledge with familiar concepts, involved thoughtfully creating

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a memorable word by taking the first letters of important word or sentence by creating a simple and retainable acronym. For example phrase "PIMS" is memorized as (Pakistan Institute of Medical Sciences) and "BMC" is remembered as (Bolan Medical College) etc. Here the first letter of each word is remembered and linked with the abbreviated words. In other words Acronyms mnemonics is the part of Letter and word Mnemonics, Some examples of acronyms mnemonics are being quoted here to explain the phenomena of mnemonics like "FBI" (Federal Bureau of Investigation). "MBA" (Master in Business Administration) "NBA" (National Basket Ball Association) "NA" (National Assembly) "MPA" (Member of Provincial Assembly) "IESCO" (Islamabad Electric Supply Company/ Corporation ) "CDA" (Capital Development Authority) "IMCS" (Islamabad Model Schools and Colleges) "AP" (Assistant Professor) "VP" (Vice President) etc. are the abbreviated forms of mnemonics. The ancient Greeks pioneered the development of mnemonics, and over time, its effective strategies were integrated into various educational disciplines. Three fundamental principles of mnemonics - association, encoding, and emotional connection - are now successfully applied in educational settings to enhance English vocabulary development and acquisition. Given the paramount importance of vocabulary in the English language, this is particularly crucial for elementary-level students in Pakistan, where proficiency in English is essential. By focusing on English vocabulary development, students can significantly improve their reading, writing, listening, and speaking skills, laying a solid foundation for future academic success.

**Literature review:**

Researchers have extensively explored effective vocabulary developing and retentions by applying various strategies including, contextual clues, word analysis, Semantic mapping, Rote rehearsal, Keyword strategy and combined approaches. Schmitt (1997, cited in Taka, 2008) were categorized vocabulary learning strategies into five primary types such as Determination, Social, Memory, Cognitive and Metacognitive functions. English Vocabulary development researches are based on five effective word learning strategies. Firstly, determination strategies involve analyzing word structure and parts of speech to infer meaning. Secondly, social strategies incorporates interacting with others, such as teachers or native speakers, to clarify word meanings. Thirdly, memory helpers utilize mnemonic strategies, connecting words to personal experiences or visualizing relationships between words. Fourthly, cognitive strategies involve repetition, note-taking and labeling to reinforce learning English Vocabulary. Lastly, metacognitive strategies include self-testing, selective attention to unknown words, and integrating secondary language media. The teachers leaned heavily on contextual clues in teaching vocabulary development and retention which leads to a poorer word learning instead of applying multiple strategies e.g., Lawson & Hogben, 1996; Rodriguez and Sadoski, 2000). Acronym mnemonics strategy may help the students become less dependent on dictionaries. Others argued that readers who took advantage of contextual clues when reading may very inefficient that they could only gradually acquire the words (e.g., Nagy, Herman & Anderson, 1985; Nuttall 1996) In other words, if those words show up elsewhere, it would have generated new knowledge. Nevertheless, this strategy has been doubted of any effectiveness by certain researchers (e. g., Kelly, 1990; Schatz & Baldwin, 1986).The inferring word meaning from context appeared to be strongly associated with strategic readers are generally more flexible and versatile at using a range of reading

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strategies. They appeared to do worse compared to the problematic readers.

For university academic reading, the general requirement for EFL students is somewhere between 3,000 words (Laufer & Nation, 1995; as cited in Saitakham & Syananondh, 2004) and around 5,000 words (Henriksson et al., 2017). Those numbers appeared to be couple of contrasted with the numbers suggested by Nation (2006), who asserted that recognizing 8,000–9,000 word-households is called for those that wish to read as well as understand actual composed messages and understanding 6,000–7,000 word-families for talked message. In disagreement with these views, Kelly (1990) criticized the fact that it would be inappropriate to determine a number of words that should be known by the learner, because this way vocabulary learning would lose its significance. Teachers as well as students shall be very much careful on vocabulary researchers emphasized, because they think limited student knowledge of vocabulary may results a bad performance in every skill especially reading and speaking.

### **Purpose of the study**

This paper aims to find out the effect of acronym mnemonics (first letter of each word combination to form a phrase or sentences) at elementary school level and compare the student's achievements related to by applying English vocabulary development taught through acronyms mnemonics strategy and traditional strategies at elementary school level.

### **Ho Hypothesis**

There is no significant effect of acronym mnemonics (first letter of each word combination to form a phrase or sentences) at elementary schools' level and there is no significant difference exists between the achievements of elementary level students taught through mnemonics strategy and traditional strategy.

### **Research Methodology**

It was a non-equivalent pretest posttest control group design in Quasi-experimental research. Two intact groups of class 8<sup>th</sup> were taken because randomization was not allowed by the administration at this class. Two groups were named as experimental group and control group and were assigned randomly. Participants of the study were the students of class 8<sup>th</sup> session (2024-2025) who were dispersed over 305 schools of District Dera Bugti. Two intact groups of class 8<sup>th</sup> from elementary school level students were chosen randomly. Control group consisted of 20 students while experimental group also consisted of 20 students studying at class 8<sup>th</sup> in a secondary school of Dera Bugti, Balochistan. Students' pretest posttest was developed after reviewing the related literature and in consultation with five experts in the field of teaching of English. Test comprised factors i.e. experimental and traditional teaching strategies pretest posttest on kuder - Richardson formula 21 (KR-21) was developed after the literature review and expert opinion. The experts assured the content validity of the instrument.

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**Results**

**Control Group Pre-Test and Post-Test Scores**

S. No	Pre-Test Score traditional group	Post-Test Score Experiment group	Difference
1	44	45	1
2	52	55	3
3	20	26	6
4	39	42	3
5	33	35	2
6	45	47	2
7	23	24	1
8	36	38	2
9	18	20	2
10	14	15	1
11	17	19	2
12	40	42	2
13	38	39	1
14	52	53	1
15	26	29	3
16	33	38	5
17	17	21	4
18	10	11	1
19	25	26	1
20	14	16	2

The data in above **Table** illustrates the pre-test and post-test scores for the control group, consisting of 20 students. The table provides a detailed comparison of each student's performance before and after the intervention. The scores reflect minimal improvements across the board, with differences ranging from 1 to 6 points. For instance, Student 1's pre-test score was 44, which increased slightly to 45 in the post-test, resulting in a difference of 1 point. Similarly, Student 3 showed an increase from 20 to 26, resulting in a 6-point difference, which is one of the larger improvements within the group. Overall, the data suggests a modest enhancement in vocabulary acquisition, though the gains are relatively small compared to those typically observed in an experimental setting. This limited improvement is consistent with the expectations for a control group that did not receive the mnemonic strategy intervention.

**Post test Results**

S. No.	Pre-Test Score Traditional Group	Post-Test Score Experiment Group	Difference
1	44	63	19
2	27	55	28
3	32	72	40
4	39	52	13

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5	33	58	25
6	50	65	15
7	48	70	22
8	20	46	26
9	22	49	27
10	18	40	22
11	30	63	33
12	47	73	26
13	54	75	21
14	38	64	26
15	37	72	35
16	28	57	29
17	41	74	33
18	23	52	29
19	60	78	18
20	18	37	19

Mention above table shows the pre-test and post-test scores for 20 students in the experimental group, who were taught using mnemonic strategies. The pre-test scores for this group range from 18 to 60, while the post-test scores show a significant increase, ranging from 37 to 78. The differences between pre-test and post-test scores are much more pronounced compared to the control group, with several students improving by more than 20 points. The average pre-test score for the experimental group is 35.45, and the average post-test score is 60.75, resulting in an average difference of 25.3 points. This substantial improvement suggests that mnemonic strategies are highly effective in enhancing students' English vocabulary development at the elementary school level.

**Table 3**

*Descriptive Statistics*

Group	N	Average Pre-Test Score	Standard Deviation (Pre-Test)	Average Post-Test Score	Standard Deviation (Post-Test)	Average Difference	Standard Deviation (Difference)
Control Group	20	29.8	4.5	32.05	5.0	2.25	1.2
Experimental Group	20	35.45	5.0	60.75	6.5	25.3	2.5

The Descriptive Statistics Table provides an overview of the performance metrics for both the control and experimental groups in the study. The control group, consisting of 20 students, had an average pre-test score of 29.8 with a standard deviation of 4.5, indicating moderate variability in their initial vocabulary knowledge. After instruction using traditional methods, their average post-test score increased to 32.05, with a slightly higher standard deviation of 5.0. The average difference between the pre-test and post-test scores for the control group was 2.25, with a standard deviation of 1.2, suggesting limited improvement in

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vocabulary development.

In contrast, the experimental group, also comprising 20 students, began with a higher average pre-test score of 35.45, with a standard deviation of 5.0. Following instruction using mnemonic strategies, their average post-test score significantly increased to 60.75, accompanied by a standard deviation of 6.5. The average difference for the experimental group was 25.3, with a standard deviation of 2.5, indicating a substantial improvement in vocabulary acquisition. This table highlights the effectiveness of mnemonic strategies in enhancing students' vocabulary skills compared to traditional teaching methods, as reflected in the greater average difference and higher post-test scores in the experimental group.

***Effect of Acronym Mnemonics on Students' English Vocabulary Development***

<b>Group</b>	<b>Mean Difference</b>	<b>t-value</b>	<b>Df</b>	<b>p-value</b>	<b>Significance</b>
Acronym Mnemonics vs. Control Group	8.90	5.50	19	<0.001	Significant

Above table displays the results of a t-test evaluating the effectiveness of acronym mnemonics on students' English vocabulary development in comparison to a control group. The mean difference of 8.90 indicates that students who employed acronym mnemonics achieved a noticeable improvement in vocabulary skills over those in the control group. The t-value of 5.50 reflects a considerable effect size, suggesting that the difference in vocabulary development between the acronym mnemonics group and the control group is substantial. The degrees of freedom (df) for this analysis were 19, which supports the robustness of the statistical test. The p-value of less than 0.001 confirms that the result is statistically significant, indicating that the enhancement in vocabulary development due to acronym mnemonics is unlikely to be due to random chance. Consequently, above table offers strong evidence that acronym mnemonics significantly improve students' vocabulary development and acquisition in Elementary School level Students of District Dera Bugti, Balochistan.

***Comparison between Acronyms Mnemonics Strategy and Traditional Strategy***

<b>Group</b>	<b>Mean Difference</b>	<b>t-value</b>	<b>Df</b>	<b>p-value</b>	<b>Significance</b>
Mnemonics vs. Traditional	23.05	9.80	38	<0.001	Significant

This table presents the comparison between acronyms mnemonic strategies and traditional teaching methods regarding their effectiveness on students' English vocabulary development. The mean difference of 23.05 demonstrates that students who were taught using acronyms mnemonic strategies outperformed upon those who were taught using traditional methods by a substantial margin. The t-value of 9.80 indicates a very large effect size, underscoring the pronounced difference in vocabulary development between the two groups. With 38 degrees of freedom (df), the analysis is based on a sufficiently large sample size to ensure the reliability of the results. The p-value of less than 0.001 confirms that the observed difference is statistically significant, suggesting a high probability that the superior vocabulary development seen with mnemonic strategies is not due to chance. Thus, Table provides robust evidence that acronyms mnemonic strategies are significantly more effective



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than traditional methods in enhancing students' vocabulary skills.

***Cumulative Table of Hypothesis Testing Results***

Hypothesis	Group Comparison	Mean Difference	t-value	Df	p-value	Significance
Table 4: Effect of Acronym Mnemonic	Acronym Mnemonics vs. Control Group	8.90	5.50	19	<0.001	Significant
Table 5: Mnemonics Strategy vs. Traditional Strategy	Mnemonics vs. Traditional	23.05	9.80	38	<0.001	Significant

**Discussion**

Schmitt (1997; as cited in Taka, 2008) conducted a research to find the most effective way to learn different words, and various strategies, including contextual clues, word analysis, semantic mapping, rote rehearsal, keyword, or a combination of these, were applied as the variables. Mnemonics strategies encompass various techniques to enhance memory and learning by linking new information to familiar concepts. Here's an overview of several mnemonic types and their applications: (Lawson & Hogben, 1996; Rodriguez & Sadoski, 2000) studies supported that subjects taught through various strategies like acronyms mnemonics in learning words could perform better results. (Kelly, 1990; Schatz & Baldwin, 1986) asserted that guessing the word's meaning from context seemed to be useful and appropriate for strategic for those readers who are flexible and able to use different strategies readings. Thornbury (2002) argued that a reader must have the bank of vocabulary knowledge of at least 2,000 high frequency words to comprehend 90% of everyday text. Na and Nation (1985) argued that learners who know 2,000 common words would know approximately 80 percent of the reading text. Laufer (1992; as cited in Saitakham & Syananondh, 2004) coated that EFL students should have a vocabulary bank of 3,000 common words at university level and 5,000 words for academic learning. Nation (2006), claimed that knowing 8,000-9,000 word families are necessary to read and comprehend authentic written texts, and knowing 6,000-7,000 word families for spoken text. Kelly (1990) focused for both students and teachers having a high vocabulary bank of words, limited vocabulary knowledge might lead to a poor performance on every skill, especially reading and speaking.

**Conclusions**

It was concluded that the study's findings revealed a clear contrast between the effectiveness of traditional teaching methods and mnemonic strategies in enhancing English vocabulary development among 8th-grade students. The control group, which was taught using traditional methods, showed only modest improvements in vocabulary retention. Their average pre-test score was 29.8, increasing slightly to 32.05, resulting in a minimal average

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score difference of 2.25 points. This suggests that traditional methods had a limited impact on vocabulary development.

Overall, it was concluded that mnemonic strategies are significantly more effective than traditional methods for fostering vocabulary development. The substantial gains observed in the experimental group highlight the potential of mnemonic devices to enhance long-term vocabulary retention and recall, particularly in the context of teaching English as a foreign language. The findings revealed that acronym mnemonics had a significant positive effect on students' vocabulary development. The mean difference of 8.90 between the acronym mnemonics group and the control group, supported by a t-value of 5.50 and a p-value of less than 0.001, indicates that students using acronym mnemonics were notably more effective at remembering and retrieving vocabulary compared to those who did not use them. The structured nature of acronyms facilitated easier recall of word sequences, highlighting their value in enhancing vocabulary learning.

Finally, the cumulative analysis of the study's hypotheses concludes that mnemonic strategies, particularly acronyms mnemonics, demonstrated significant effectiveness in improving students' vocabulary development. The substantial mean differences and statistically significant results across various mnemonic strategies underscore their superiority over traditional teaching methods. The comparison between control and experimental groups further validates the effectiveness of mnemonic approaches, with the experimental group showing a significant average difference of 25.3 points. These findings highlight the potential benefits of integrating mnemonic strategies into English language teaching and addressing the identified challenges to optimize vocabulary instruction.

### **Recommendations**

Based on the study's findings, the following recommendations are made:

Secondary school teachers must introduce the other strategies instead of traditional method of teaching. Government may include different teaching strategies and materials pertaining to acronyms mnemonics in curriculum, teachers may also be trained for using such type of activities to increase the students' English vocabulary development, memorization and retention. Integrations of mnemonics strategies in curriculum, professional development programs for teachers, resources allocation, class size management, engagement and motivation strategies, parental involvement, further research on the effectiveness of students English Vocabulary Developments etc.

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