SOCIAL SCIENCE REVIEW ARCHIVES

Effects Of Brainstorming Strategy on Students Engagement in English Subject at Elementary School Level at District Malakand

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Abstract

The purpose of the study was to investigate how the brainstorming methodology affected the English language proficiency of elementary school pupils in District Malakand. With sixty students chosen by match pair sampling, a quasi-experimental pretest-posttest comparable group design was employed. Thirty students in the control group received instruction using the conventional technique, while thirty students in the experimental group received instruction through brainstorming. The duration of the intervention was two weeks. The experimental group's mean score (M = 8.36) was greater than the control group's (M = 3.06), according to the results. A significant difference between the groups was confirmed by the t-test (t = 16.58, p <.0001), and the effect size was quite big (Cohen's d = 4.41). These results have significant ramifications for elementary school English language teachers since they show that the brainstorming technique significantly increased children' engagement with the language as compared to traditional teaching techniques.

Keywords: interaction, engagement, brainstorming

Introduction

In contemporary education, student engagement—especially in English language instruction—has become a crucial area of concern. According to Fredricks et al. (2004), engagement is commonly characterized as the level of focus, curiosity, interest, and active participation that students exhibit during the learning process. English is taught as a compulsory subject at all educational levels in Pakistan. Low student engagement in the classroom, particularly at the elementary level, is a problem that many English teachers encounter. In addition to impeding language acquisition, this disengagement lowers students' general academic achievement (Noor et al., 2023). The brainstorming technique is one of the most effective ways to increase student engagement among them. Brainstorming strategy fosters creativity, critical thinking, and teamwork by allowing students to produce a variety of ideas without fear of quick rejection (Widiastuti et al., 2022). Brainstorming is very helpful for language acquisition because it gives pupils the chance to practice speaking aloud, expand their vocabulary, and freely express their thoughts.

Statement of the Problem

In many Pakistani elementary schools, teacher-centered methods still predominate in the classroom, despite the significance of student engagement in learning. Students consequently frequently stop being active participants and start becoming more like passive listeners. Reduced motivation, less interaction, and subpar learning results are caused by this lack of engagement. Although research from throughout the world shows that brainstorming can improve student involvement, there isn't

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much actual data from Pakistan, especially when it comes to English classrooms at the elementary school level. Because of this disparity, a methodical investigation is required to gauge how brainstorming affects students' interest in studying English.

Objective of the Study
To measure the effect of the brainstorming strategy on students' engagement in English classes at the elementary level.

Hypothesis
H01. The brainstorming strategy has no significant effect on the engagement of students in the English subject at the elementary level.

Significance of the Study
The study is significant for all elementary school teachers, future researchers, curriculum developers, and policymakers. It may develop curiosity among students to take active participation, improve their English language competency, develop social skills, build trust, improve interaction habits, and become self-directed. The study may also be beneficial to acquire competencies in interactive learning to improve language competency and meet the standards of the 21st century.

Delimitation of the Study
The study was delimited to 7th grade because of financial and time constraints students of public sector schools in district Malakand. It was further delimited to Government Girls Middle School Sherkhana. Brainstorming strategy were used to experimental group. While traditional teaching methods were used for control group for the same course of study during the two weeks treatment.

Conceptual Framework

Brainstorming strategy		Students engagement
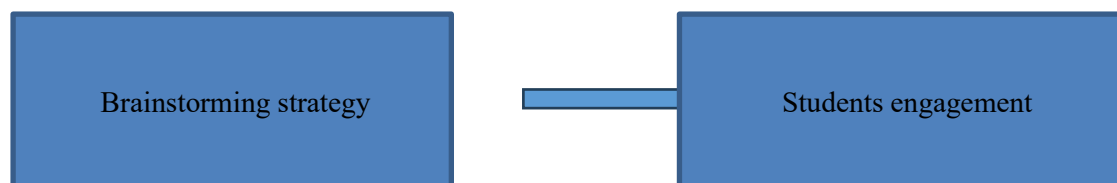
Review of Literature
Educational scholars have defined and examined the multifaceted concept of student participation in a number of ways. Engagement has three dimensions, according to Fredricks et al. (2004): behavioral, emotional, and cognitive. Engagement in social, extracurricular, and academic activities is reflected in behavioral engagement. While cognitive engagement shows a student's commitment to learning, effort, and use of deep learning strategies, emotional engagement is associated with how students respond to teachers, peers, and learning assignments.

In Pakistan, traditional education, especially in government institutions, mainly depends on teacher-centered techniques such grammar translation and lectures. These methods emphasize rote learning and memorization, which hinders the growth of critical thinking, creativity, and communication skills (Ahmad, 2011). Students who use such techniques frequently become disengaged and passive listeners. Interactive approaches, on the other hand, put the students at the center of the instruction. Students can actively participate, work together with peers, and exercise their creativity through strategies including cooperative learning, role-playing, and brainstorming (Prince, 2004). One of the most successful interactive strategies has been brainstorming. Originally developed as a group practice to promote idea development without fear of judgment. Brainstorming was first introduced by Osborn in 1953. In a classroom setting, it enables students to openly exchange ideas, develop critical and divergent thinking abilities, and work together with classmates. Additionally, especially

while learning a language, it helps lessen the fear of making mistakes. Brainstorming is useful for vocabulary acquisition, reading comprehension, writing assignments, and oral practice in English classes since it fosters creativity and teamwork, according to (Isaksen et al., 2005). Numerous empirical research attest to brainstorming's efficacy in a variety of educational settings. According to Hesami and Gheitasi (2014), brainstorming helped EFL students write better and have more productive class discussions. According to Al-Jar (2009), brainstorming helped students come up with ideas for writing assignments more successfully, which increased their originality and level of engagement. Miller and Dumford (2016) found that higher levels of student involvement in higher education were associated with brainstorming and other creative activities. Similarly, Umar and Majeed (2018) demonstrated its effectiveness in Pakistan, were brainstorming enhanced participation in scientific classrooms. When taken as a whole, these studies show that brainstorming is an effective strategy for raising student interest in language and content-based classes. Although brainstorming is supported by evidence from throughout the world, little is known about its efficacy in Pakistan, especially in English language classes at the basic level. The majority of local research has been on cooperative learning or conventional grammar translation techniques, which has left a study void around brainstorming as a strategy for increasing engagement. Using a pretest–posttest approach, the current study fills this gap by examining how brainstorming affects primary children' involvement with English language learning. This study is based on the constructivist learning theory, which holds that students actively create knowledge through engagement and interaction. Furthermore, the importance of social contact in cognitive development is emphasized by Vygotsky's sociocultural theory (1978). By fostering idea sharing, scaffolding, and peer learning, brainstorming increases participation and engagement (Yildiz, T. 2025).

Research Design
This study used a quasi-experimental pretest–posttest control group design to investigate how the brainstorming strategy affected elementary school students engagement in English classrooms. To determine baseline levels of involvement, a pretest was used to evaluate both the experimental and control groups in this design. After that, the control group was instructed using the conventional lecture approach, while the experimental group was taught using the brainstorming strategy. A posttest was given to both groups at the conclusion of the intervention, and the groups' differences were compared. Because it allows researchers to adjust for initial differences between the groups and measure changes in involvement levels before and after the intervention, this approach was used(Tola Chala et al.,2025).

Population
Population comprise of total no of elementary school students of district Malakand are (168,885) among them no of boys' student are (87,760) while girls' students are (81,125). Only girls' students of Government elementary schools in the district Malakand was the target population of the study. The target population of the study consisted of all students enrolled in 7th grade in Government Girls Middle School Sherkhana, located in the district of Malakand. This population was selected due to its accessibility and relevance to the research objectives.

Sample and Sampling Procedure
The sample comprised 60 students from Class 7 of Government Girls Middle School Sherkhana. A convenient sampling technique was used to select the school, considering the researcher's affiliation and accessibility. To ensure baseline equivalence between the experimental and control groups, the matched-pair technique was employed. Students' pre-test scores were arranged in descending order, and closely scoring students were paired. From each pair, one student was assigned to the experimental group and the other to the control group. This approach ensured that both groups had comparable ability levels prior to the intervention.

Data Collection Instruments

The experimental group used the brainstorming methodology after pre-tests were conducted to measure baselines for both groups. The researcher made pretest as general to check the level of understanding before the intervention. After treatment of experimental group, post-test administered from both groups and compared engagement level between two groups.

Validity And Reliability of Instruments

Validity of the research instrument done by different experts. They checked pretest, posttest thoroughly and made minor changes. which the researcher incorporates. The researcher conducted pilot study to verify the reliability of the research instruments. Then the reliability of the pre-test and post-test were checked based on test-retest method. After marking the researcher used SPSS Cronbach Alpha it was found out the reliability of pre-test was 0.75 which showed a high strong correlation among the test items. Similarly, the reliability of post-test was 0.77 showing a strong correlation among the items of the test which establishes the inter-rater reliability.

Data Analysis Technique

The most important part of the research was the analysis/ interpretation of the data. To perform Statistical Package for Social Sciences (SPSS) version 20 was used to analyze the gathered data and recommendations were provided accordingly. Following statistics was applied for analyzing data:

Descriptive Statistics

The researcher utilized Standard deviation (SD) and mean to analyze the data gathered using pretest and posttest.

Inferential Statistics

Independent t-test was utilized to compare both groups on post-test data. Practice was performed prior to treatment for the comparison of data. Prior to beginning treatment, the researcher ranked scores of pretest in descending order through match paired sampling technique, then Control and Experimental groups were developed. After two weeks of treatment, post-test was administered by the researcher to both the groups. The researcher computed Experimental and Control group post-test scores and their SD, means and effect size were determined then t-value was computed to examine further the difference in scores.

Effect Size Calculation (Cohen's D)

The degree of difference between the groups was determined by the effect size (Cohen's d) and was computed in writing the significant differences in the value of their means between Experimental and Control groups. Effect size value is shown as under.

Table 1: Effect Size Interpretation

Effect Size Interpretations and Values Cohen's d	Effect Size Interpretation
0.00-0.20	Ignored
0.21-0.50	Small
0.51-0.80	Moderate
0.80-1.30	Large
1.31	above Very Large

(Yelpaze & Yakar, 2020).

Pre-Test

The researcher held a Pretest from sixty students of class seven. After marking the test, the researcher applied the matched pair technique to separate the students into Experimental and Control group. The number of students in each group was 30. Tests were constructed to measure the understanding of both groups before treatment. Pretest, was administered by the researcher to both groups at the same time to avoid any distracting elements that may skew the test.

Intervention/Treatment in Experimental Group

After the pre-test, traditional method was applied on the Control group and brainstorming applied on the Experimental group. The experimental group underwent treatment for duration of 2 weeks. The researcher applied conventional pedagogical practice on control group.

Post-Test

The test of achievement was developed to measure student learning following instruction with brain storming method. The test items were carefully constructed with an alignment to the instructional aims of the lessons to maintain content validity. For validation, the test was tested with subject experts who scrutinized the relevance, clarity, and suitability of the items.

Results

Research Objective

To measure the effect of the brainstorming strategy on students' engagement in English classes at the elementary level.

H01: The brainstorming strategy has no significant effect on the engagement of students in the English subject at the elementary level.

Comparing Post-Test Scores of Control and Experimental Group on Brainstorming Strategy

Method	Group		N	Mean	SD	t	p	Cohen's d
Brainstorming Strategy	Con. Group		30	3.06	1.38	16.58	.0001	4.41 (Very Large)
	Exp. Group		30	8.36	1.06			

Table 2 indicates the results of independent sample t-test to find out the post-test scores of control and experimental group about the effect of brainstorming strategy on students' English subject at elementary level. The results showed that the mean score of the control group post-test was (M=3.06) less than the mean sore of experimental group (M=8.36), and calculated t value was t=16.58 which is greater than table value of p.< 0001. It means that there was a significant difference in the post-test scores of control group and experimental group based on brainstorming strategy. The (Cohen's d = 4.41) size effect was at very large level to be considered.

Discussion and Conclusion

The purpose of this study was to investigate how elementary children' engagement in English classes is impacted by brainstorming strategy. The finding demonstrated that when compared to conventional education, the brainstorming strategy of teaching made an effect on students; classroom engagement (Alam & Mohanty, 2024). This finding supports the findings of previous studies that it provides more time for students to share their view. Other studies have stated that brainstorming method has the capacity to generate high order critical thinking space for students. in this way students become able to share their ideas easily through free thinking individually and collaborative work (Huang & Liu, 2014).

This study aimed to assess how the brainstorming strategy affected elementary school pupils' engagement in English classrooms. Using a pretest–posttest approach, the study discovered that students who participated in brainstorming exercises were much more engaged than those who were taught using conventional techniques. As an interactive teaching style, brainstorming offers chances for active participation, teamwork, and creative thinking, all of which improve student engagement with learning activities, according to the results. The results lend credence to the more general educational view that emphasizing student engagement is essential to enhancing learning outcomes rather than just a consequence of instruction. Students' motivation, focus, and excitement for learning English are increased when brainstorming is used to make sure they become active participants rather than passive recipients.

Recommendation
- Teachers may engage students by using brainstorming strategy.
- Interactive methods such as brainstorming to curriculum and school improvements may be encouraged by policymakers, curriculum developer and stakeholders.
- Textbook curriculum designers might include more student-centered activities.
- One of the main components of teacher training programs may be brainstorming strategy
- The effects of brainstorming approaches on learning can be tracked and assessed by school administrators.

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