

Investigating the Effect of Storytelling on Academic Engagement and Academic Buoyancy of Elementary School Students in Babol

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ABSTRACT

The purpose of this study was to examine the effect of storytelling on academic engagement and academic buoyancy among male elementary school students in the city of Babol. This applied research was a quasi-experimental study. The statistical population of this research included all male elementary school students in Babol in 2022, totaling 18,900 individuals. Out of this population, 30 students were selected through convenience sampling and divided into two groups: an experimental group and a control group. The intervention consisted of twelve two-hour sessions over a period of 60 days, based on the protocol by Mousavi and Baghuli (2019). Data collection tools included the standardized Academic Engagement Questionnaire by Fredricks, Blumenfeld, and Paris (2004), and the standardized Buoyancy Questionnaire by Martin and Marsh (2006). Both questionnaires demonstrated high validity and reliability, with Cronbach's alpha coefficients of 0.88 and 0.86, respectively. Data were analyzed using descriptive statistical techniques (frequency tables, bar charts, central tendency indicators such as mean and mode, and dispersion indicators like standard deviation) and inferential statistics (ANCOVA and MANCOVA models) in SPSS 22 software. The results of this study indicated that storytelling positively impacts the academic engagement and academic buoyancy of male elementary school students in Babol.

Keywords: *Storytelling, Academic Buoyancy, Academic Engagement.*

1. Introduction

One of the most important factors influencing academic performance and a prerequisite for learning is academic engagement, which is considered a positive factor in students' academic success and is often used as a motivational construct that reflects a learner's commitment to education. The concept of academic engagement falls within the scope of positive psychology and was first introduced to understand and explain academic failure and dropout, serving as a foundation for reformative efforts in education (Almurumudhe et al., 2024; Fatimah et al., 2024; Haseli Songhori & Salami, 2024). Academic buoyancy is a relatively new psychological construct rooted in resilience literature, originating from the work of Martin and Marsh (2008). Martin and Marsh (2008) argue that academic buoyancy generally refers to an individual's capacity to respond constructively and rationally to significant challenges and obstacles (Emami Khotbesara et al., 2024; Hirvonen et al., 2020; Hu, 2024). This concept applies to the majority of students and is relevant to all. Thus, the concept of buoyancy pertains to a student's reaction to academic failure, challenges, and pressures, distinct from resilience and adaptability. For example, chronic laziness or dissatisfaction with school may require a flexible response, whereas poor grades or low motivation may necessitate a response involving academic buoyancy. Academic buoyancy is positively related to adapting educational outcomes, including higher self-confidence, planning, persistence, and reduced anxiety. Based on the significance of academic buoyancy as a variable, this study aims to predict academic performance based on students' academic buoyancy and hopefulness. (Suharsono, 2024).

Stories can be effective by influencing these shared symbols. In therapeutic sessions, Erickson narrated stories that aligned with the client's psychological state and believed that by retelling these stories, constructive and positive forces become accessible to the client's unconscious. Although stories are also used in adult psychotherapy, they are more widely applicable in child psychotherapy due to their special resonance with the world of childhood. Stories offer children opportunities to identify with characters, externalize conflicts, release emotions, and gain insight (Sotoudehiyan, 2022; Taras et al., 2022; Vatandoust & Yousefi, 2023). A review of the research literature shows that child therapists employ storytelling, both within play therapy and as an independent approach, for both treatment (for children with sexual abuse trauma,

learning disorders, emotional disabilities, etc.) and teaching specific skills (such as problem-solving skills, self-regulation skills, emotional recognition, anger control, etc.) (Amiran & Attaran, 2022; Dinarvand & Golzari, 2019; Firoozi, 2023; Ghashghaei, 2016; Greene, 1996; Saberi Dehkordi et al., 2019; Sotoudehiyan, 2022; Taras et al., 2022; Vatandoust & Yousefi, 2023).

In this study, the effect of storytelling on the academic engagement and academic buoyancy of elementary school students in Babol is examined.

2. Methods and Materials

2.1. Study Design and Participants

This study falls within the realm of applied research and is classified as a descriptive survey study, as field data is used to test the research hypotheses. The statistical population of this study includes elementary school students in Babol, totaling 18,900 individuals. A convenience sampling method was used to select 30 students (15 in the experimental group and 15 in the control group). For this purpose, two groups of elementary students in Babol willing to participate were identified, with two schools selected for the sample. Thirty students in these two schools were divided into an experimental group and a control group (15 students in each). The inclusion criteria were that the students be elementary students residing in Babol, while the exclusion criteria included any disabilities or unwillingness to continue participation in the test.

In this study, after obtaining permission from the Department of Education in Babol, elementary schools across the city were visited to select sample participants. Two schools willing to cooperate were identified among the elementary schools in Babol. In each of these schools, a class of 15 students was selected as the sample. Then, one group was chosen as the control and another as the experimental group. Finally, questionnaires were distributed and collected at the pre-test and post-test stages for both the experimental and control groups.

2.2. Measures

2.2.1. Academic Buoyancy

The Student Buoyancy Scale, developed by Martin and Marsh (2006), assesses the overall well-being and enthusiasm of students in an educational context. This scale consists of 10 items, with subscales for measuring physical energy, emotional health, and intellectual buoyancy. Each

item is scored on a 5-point Likert scale, with scores ranging from 1 (not at all) to 5 (very much). Higher scores indicate a higher level of buoyancy. The validity and reliability of this scale have been confirmed in prior research, with studies on samples of over 200 students yielding a Cronbach's alpha coefficient of 0.86, supporting both reliability and validity (Emami Khotbesara et al., 2024).

2.2.2. Academic Engagement

The Academic Engagement Questionnaire, developed by Fredricks, Blumenfeld, and Paris (2004), is designed to assess students' active participation and emotional and cognitive involvement in academic activities. The questionnaire consists of 22 items covering three subscales: behavioral engagement, emotional engagement, and cognitive engagement. Responses are scored on a 5-point Likert scale, with scores ranging from 1 (never) to 5 (always). Higher scores indicate greater engagement in school activities. Previous studies have confirmed the high reliability of this tool; for example, in a sample of 250 elementary students, Cronbach's alpha values for the subscales ranged from 0.86 to 0.92 (Emami Khotbesara et al., 2024), confirming its reliability and construct validity.

2.3. Intervention

2.3.1. Storytelling

For storytelling, the storytelling protocol developed by Mousavi and Baghuli (2019) was used over twelve two-hour sessions conducted over 60 days (Amiran & Attaran, 2022; Saberi Dehkordi et al., 2019; Taras et al., 2022; Vatandoust & Yousefi, 2023).

Session 1: This initial session is designed to introduce group members to each other and inform the children about the activities planned for future sessions. It also introduces them to a basic understanding of different types of emotions, providing a foundation for emotional awareness.

Session 2: This session focuses on understanding the role and purpose of emotions. Children explore the causes of various emotions and learn how emotions influence thoughts and actions.

Session 3: In this session, children review positive events and the pleasant aspects of life. They are introduced to problem-solving skills, emphasizing the benefits of reflection and the use of creativity to achieve positive outcomes.

Session 4: This session focuses on understanding the consequences of maladaptive behaviors, such as resistance. The therapist introduces a story where the main character faces difficulties due to resistant behavior. The story is left unfinished, and children are asked to draw a solution to complete the story, encouraging them to think creatively and empathetically.

Session 5: This session continues to address the negative impacts of maladaptive behaviors, encouraging children to think about alternative solutions and consider various ways to approach challenges.

Session 6: This session further explores the negative outcomes of behaviors like stubbornness and resistance. Children are guided to develop an understanding of others' emotional and cognitive perspectives, fostering empathy and awareness of how behavior affects others.

Session 7: In this session, children receive training in social skills, focusing on responsibility. They discuss the responsibilities of the story's hero, clarifying the scope of responsibility and the importance of accountability.

Session 8: This session introduces coping skills, teaching children strategies for dealing with challenges. Children learn about the importance of seeking guidance, emotional support, and thinking through options to find more effective solutions.

Session 9: This final session confronts children with the emotions that counterproductive behavior can evoke in others. The therapist shares a story where the main character displays resistant behavior, leaving the story incomplete. The children are given two options and are asked to choose one to help the character resolve the issue and conclude the story. This is followed by a discussion on the emotions experienced by both the hero and those around them for each option, encouraging reflection on emotional impact and decision-making.

2.4. Data analysis

To describe the findings, frequency tables and bar charts were used. Additionally, central tendency indices such as mean and mode, as well as dispersion indices like standard deviation, were employed to describe the data better. To answer the research questions and meet the research objectives, statistical methods such as univariate and multivariate covariance analysis in SPSS 22 software were used.

3. Findings and Results

The highest proportion of participants was in the third grade of elementary school, accounting for 13.33%. The largest age group was nine years old, making up 26.67% of the sample. The Kolmogorov-Smirnov test was used to assess whether the research components followed a normal distribution. The assumption of normality for the distribution of relevant components was accepted, allowing

for the use of parametric ANCOVA tests to examine the research hypotheses. A multivariate analysis of covariance (MANCOVA) test was conducted to investigate this hypothesis. Initially, we examined the means and standard deviations of academic engagement and academic buoyancy variables for the two groups before and after the intervention. Table 1 displays these results.

Table 1

Mean (Standard Deviation) of Research Variables

Variable	Mean	Standard Deviation	Time
Academic Engagement	97.73	11.183	Pre-test
	130.27	24.887	Post-test
Academic Buoyancy	25.33	5.715	Pre-test
	34.67	7.807	Post-test

The results of the Wilks' Lambda test indicate a significant difference between the groups before and after the intervention in at least one of the variables: academic engagement or academic buoyancy. According to the results of Levene's test, the assumption of homogeneity of variance

across all variables was confirmed with a significance level greater than 0.05. The MANCOVA results for academic engagement and academic buoyancy variables are presented in Table 2.

Table 2

Results of Multivariate Analysis of Covariance for Academic Engagement and Academic Buoyancy

Component	Sum of Squares	Degrees of Freedom	Mean Squares	F-Statistic	Significance
Academic Engagement	9322.700	1	9322.700	29.972	.000
Academic Buoyancy	775.661	1	775.661	18.220	.000

Based on Table 2, the significance level of differences in academic engagement and academic buoyancy before and after training is less than 0.05, rejecting the assumption of equality in academic engagement and buoyancy between the pre-training and post-training groups. However, the significance level for differences in academic engagement between pre- and post-training in the experimental group is greater than 0.05, suggesting that storytelling does not significantly impact academic engagement in male elementary students.

4. Discussion and Conclusion

Based on the results obtained in this study, for the experimental group, the significance level for academic engagement and academic buoyancy was smaller than 0.05, whereas it was greater than 0.05 for the control group. Therefore, the main research hypothesis is accepted, indicating that storytelling significantly affects the academic engagement and buoyancy of male elementary school students. However, for academic engagement in the

experimental group, the significance level was greater than 0.05, indicating that storytelling does not significantly affect academic engagement in male elementary students. Given the mean scores of academic engagement and buoyancy before storytelling training (97.73 and 25.33, respectively) and after storytelling training (130.27 and 34.67, respectively), it can be concluded that storytelling has had a positive impact on academic engagement and buoyancy among elementary students in Babol. Previous studies also support these findings (Amiran & Attaran, 2022; Dinarvand & Golzari, 2019; Firoozi, 2023; Ghashghaei, 2016; Greene, 1996; Saberi Dehkordi et al., 2019; Sotoudehiyan, 2022; Taras et al., 2022; Vatandoust & Yousefi, 2023).

The findings of this study suggest that storytelling, as an indirect approach to providing a framework for self-understanding, efficacy, and integrative experiences, plays a role in children's and adolescents' development. The present study aimed to explore the impact of story therapy on children's mental health. In story therapy, it is believed that each individual's life is made up of a collection of stories,

resembling a novel with multiple chapters, each with a beginning, middle, and end. The fundamental concept in narrative therapy is that "the problem is the problem, not the person" (Saber Dehkordi et al., 2019).

Based on the findings, storytelling training significantly affects academic engagement among elementary students in Babol which aligns with prior research (Amiran & Attaran, 2022; Dinarvand & Golzari, 2019; Firoozi, 2023; Ghashghaei, 2016; Greene, 1996; Saber Dehkordi et al., 2019; Sotoudehiyan, 2022; Taras et al., 2022; Vatandoust & Yousefi, 2023).

This study explored the impact of storytelling on academic engagement and buoyancy among elementary students in Babol. Both academic engagement and buoyancy were measured in experimental and control groups. Overall, the findings indicate that storytelling significantly enhances academic engagement and buoyancy among elementary students in Babol. In other words, storytelling training has improved academic engagement and buoyancy in these students. For the control group, however, no significant improvement was observed in academic engagement or buoyancy.

In interpreting these results, storytelling therapy can be considered an indirect method for enhancing self-awareness, creativity, and reducing shyness and anxiety, particularly social anxiety in children and adolescents. It has a substantial effect on the future personality of children and adolescents. This raises the question: what is storytelling therapy, and how can it reduce social anxiety in children and adolescents? Social anxiety often leads children or adolescents to avoid social situations, potentially leading to future personality and behavioral issues (Dinarvand & Golzari, 2019; Sotoudehiyan, 2022).

This study was conducted to examine the impact of storytelling on academic engagement and buoyancy among elementary students in Babol. As data were collected from elementary students in Babol, generalizing these results to other populations should be done cautiously. Due to the limited timeframe of this study, further research on this topic at various times is needed to reach more definitive conclusions. It is recommended that storytelling methods be incorporated into student education. Training programs for teachers on storytelling techniques before the school year and video programs on storytelling strategies developed by experts could be beneficial.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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