

Impact of Synectic Model of Teaching on Reducing Test Anxiety Among Elementary Students

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Abstract

The Synectics model of teaching, developed by William J.J. Gordon and his associates, is a powerful instructional strategy. This model uses metaphorical and analogical thinking in minimizing test anxiety because it helps students to break away from conventional thought patterns and helps in developing divergent thinking skills. In this model content is delivered with the help of analogies that helps students to understand abstract concepts in a meaningful and easy manner. This model is basically student-centered. The cultivation of cognitive skills during instruction does not constrain the exploration of diverse student perspectives and the acknowledgment of the different opinions or solutions that emerge in the learning environment. The implementation of the Synectic model of teaching allows students to think freely and in a novice manner. The students feel boredom and lack interest in studies due to complex concepts and terms. It helps in creating positive classrooms environment to foster higher order thinking skills that results in alleviating test anxiety. The main objective of the present paper is to investigate the role of the Synectic model of teaching in alleviating test anxiety in among elementary school students. The present paper is thematic in nature. The data was collected through secondary sources. Various thesis, research papers, journals, books etc were considered and studied. The findings of the study suggest that the Synectic model of teaching enhances higher order thinking skills, improves academic performance and reduces test anxiety among elementary students. This study contributes to the growing body of literature advocating for innovative instructional methods to develop essential 21st-century skills among students.

Keywords: Synectic Model of Teaching, test anxiety, higher order thinking skills, elementary students.

INTRODUCTION

The Synectic teaching model meets contemporary educational needs and reflects the requirements of Industry 4.0. This model has become essential for the modern education. It empowers students to enhance their thinking skills and manage their abilities effectively. The students are encouraged to explore their potential, able to strengthen their cognitive and skill-management capacities. This approach promotes independent thinking and helps learners to refine their skills efficiently. It is a learner centered teaching model (Rufaida et al., 2021). As we know “Anxiety” has emerged as a pervasive and deeply entrenched concern or a challenge in contemporary society, to the extent that the present era is frequently described as “the Age of Anxiety,” reflecting its widespread psychological and social impact (Zeidner, M. and

Matthews, G. 2011). During the learning process, students may sometimes experience anxiety, which can hinder their ability to perform successfully in examinations. This type of anxiety, which occurs in testing situations, is commonly known as test anxiety. Moreover, students experience test anxiety in the studies because students consider some concepts less interesting and which increases boredom. Social Science is often considered difficult because it has a wide and extensive syllabus. The subject involves a large amount of content that requires memorization, including numerous dates, events, and factual details. Many of its concepts are abstract in nature, which makes them harder for students to understand. In addition, examinations usually demand lengthy, descriptive answers. Students also tend to rely on rote learning of dates and facts. Unlike Science or Mathematics, Social Science is often taught in a theoretical manner without sufficient practical activities, which can make the learning process less engaging and more challenging. The Synectic model of teaching consists of several phases that are highly effective in facilitating the learning of complex and abstract concepts that is helpful in reducing test anxiety among elementary students.

Elementary students are children aged 6–14 years studying in Classes I to VIII, as defined by the Government of India under the RTE Act, 2009 (GOI,2009)

Theoretical background

The Origin of the term: The Synectic model of teaching

William J. J. Gordon and his associates developed a creative thinking model known as “Synectics” in the year 1961. The term Synectics is derived from a Greek word that means bringing together different or diverse ideas. This model is commonly referred to as “reasoning by analogy.” It systematically employs similes to construct insightful and imaginative comparisons between seemingly unrelated objects, concepts, processes, or phenomena. It builds creative connection between diverse concepts (Dabell, 2018). This model basically helps to strengthen analytical reasoning, artistic expression and encourage more original thought. Moreover, a structured cognitive processes helps to develop problem-solving abilities, higher-order thinking skills, enhances fluency, flexibility, communication skills and elaboration . This approach is a student-centered learning strategy that facilitates the development of ideas an original and creative manner among students. This model has certain steps and at every stage a learner is actively engaged, thus it promotes student’s engagement and there is no space of passive learning. Besides, this model helps to involve students group discussion also.

Literature review

The Synectic model

Djumingin (2015) conducted a study on developing learning device in writing short story with Synectic model. A short story writing instruction enables learners to express their ideas and personal experiences within a cultural context, thereby contributing to the development of their individual character. This study aimed at to developing instructional media for short story writing based on the Synectic model of teaching. The findings indicated that: (1) the validity of the learning model products was high, with the planning model scoring 4.7 (very valid), the material model 4.5 (very valid), and the evaluation model 4.6 (very valid); (2) all practicality aspects related to the syntactic components of the Synectic model were fully satisfied; and (3) the developed learning media was found to be effective.

Rufaida et al. (2021) examined a study on application of Synectic Models in the Learning Process: A Systematic Literature Review. This model helps students in developing higher-order thinking skills.

Various analogies were used and with the help of these students were able to understand abstract thinking. In this, diverse opinions or answers that arouse in the learning process were appreciated. Students learned in a contextual manner. This study used the literature review concept through a systematic literature review technique. Based on the results of a systematic literature review, it was found that the application of the Synectic learning model is generally used to build one's creative thinking. Thinking creativity is one of the higher thinking skills needed in learning in the era of the industrial revolution 4.0.

Munir (2022) conducted a study on Using Synectic strategy to improve the student's vocabulary to improve learners' vocabulary ability. It was an experimental study. The investigator used pre-test and post-test. The sample were students of class X MAN 1 Barru in the academic year 2022/2023. Cluster random sampling was used in this research. The outcome of this study proved that there was a significant difference between students' scores before treatment and learners scores after treatment were evident from the students' pre-test normal scores (56,88) and should be lower than the post-test means (87,04). In addition, by using a Synectic strategy, students can remember words, train students' creativity, and were effective in teaching vocabulary at MAN 1 Barru Keywords— Synectic Strategy and improve Vocabulary.

Khosla (2024) examined a study on the effect of synectics and awareness training model on achievement in English and self-esteem of senior secondary school students. This model gave plenty of chances to develop their creative abilities in all areas. It provided a new learning environment with lot of activities. Students shared thoughts, ideas with the classmates. Learners came to know about their innate abilities and learned new concepts and it was found that the synectics was significantly effective than traditional teaching method.

Kurniawan et al. (2024) investigated a study on Improving student higher order thinking skills using Synectic HOTS-oriented learning model. This study aimed to examine the differences between the Synectic–HOTS learning model and the conventional learning model in physics. A quasi-experimental design was employed, specifically a pre-test–post-test non-equivalent control group design. The findings indicated that the Synectic–HOTS learning model significantly enhanced students' higher-order thinking skills compared to the conventional learning model.

Ertinawati et al. (2025) conducted a study on A Synectic Approach to Listening Learning: Integrating Local Culture and Audiovisual Technology in Indonesian Language Education. A Research and Development (R&D) approach guided by the ADDIE model i.e are Analysis, Design, Development, Implementation, and Evaluation. Data were gathered through surveys, interviews, observations, and expert reviews, and were examined using both qualitative and quantitative analysis techniques. The results revealed that incorporating local cultural elements with audiovisual technology significantly improved students' listening abilities while also boosting their motivation and encouraging greater active engagement. When instructional content was culturally relevant, engaging, and interactive, it fostered greater student interest, active involvement, and sustained motivation throughout the learning process.

Tan et al. (2025) investigated a study on A Systematic Review of Test Anxiety Identification and Levelling in Children and Adolescents. Test anxiety occurred in performance-oriented situations, such as examinations and assessments, where individuals feel nervous and worried about the possibility of failure or poor outcomes. The study examined the approaches used to identify students in Grades 1–12 (or equivalent levels) according to their differing levels of test anxiety. The data gathered from the selected studies comprised the methods used to determine different “levels” of test anxiety, information about the assessment tools applied, and the research approaches most frequently utilized to investigate students categorized by specific levels of test anxiety. The findings of this analysis revealed considerable variation

in the procedures and instruments employed to determine student levels. They highlighted several important areas requiring improvement before strong confidence can be placed in most existing levelling strategies.

Kaur (2025) conducted a study on the Effect of Synectic Model of teaching on Higher Order Thinking Skills in Mathematics, Mathematical Communication and Mathematical Anxiety among elementary school students. This study was experimental and conducted on 190 grade VI students studying in rural and urban schools of Shillong district in Meghalaya which was affiliated to the Central Board of Secondary Education, New Delhi. 11-13 years of age students were taken for this study. This model promoted innovative pedagogical practices that helped to foster curiosity and reflective thinking. It helped in reducing rote learning because various analogies were used in the teaching. It helped in reducing Mathematical Anxiety, helps in bridging gender, economic and cultural gaps in Achievement in Mathematics. This model had positive effect on academic achievements. The outcome of the study was that model had a positive effect in teaching of Mathematics as compared to Conventional method of teaching.

Wei et al. (2026) investigated a study on Test anxiety spares behavioral performance but alters ERP response in working memory updating. It was found that Individuals with high test anxiety might invest more cognitive effort than individuals with low test anxiety when performing working memory updating tasks. The findings of the study showed that test anxiety alters neurophysiological processes involved in working memory updating, as indicated by ERP changes, while behavioral performance remains intact.

Hou et al. (2026) investigated a study on Self-compassion, mindful self-compassion intervention, and test anxiety in adolescent students: Combining latent profile analysis and network analysis. Test anxiety was a widespread issue among school-aged students and significantly impacted their mental health worldwide. This study explored the relationship between self-compassion and test anxiety through two complementary studies. The results highlighted the heterogeneous nature of self-compassion and suggested that targeted interventions focusing on bridging symptoms were effective in reducing test

To sum up the above data, Synectic model of teaching helps on reducing test anxiety among elementary students. It boosts motivation, increases academic achievement, self-compassion, strengthens teacher-students relationship and helps in reducing negative emotions among elementary students

Methodology

This study employs a systematic literature review to identify the use of Synectic model of teaching helpful in reducing test anxiety among elementary students and to suggest directions for future research. A previously published studies were selected and analyzed as part of this review. The review also analyses relevant research findings and identifies gaps in the literature to propose directions for future research. The data for this thematic paper were collected from secondary sources, and the review was conducted using multiple academic databases, including Web of Science, Scopus, Shodhganga, Eric and Google Scholar etc. Besides, Important terms and keywords related to “The Synectic model of teaching”, “Test anxiety”, “Elementary School Students”, “Reducing”, “Systematic Literature Review”, searched and explored in depth in the specific database requirements.

Objective of the study

- To find out the impact of the Synectic Model in reducing test anxiety among elementary students.
- To explore how the Synectic Model promotes active participation, imagination, and divergent thinking

among elementary students.

Research Questions

1. Does the use of the Synectic model of teaching reduces test anxiety among elementary students?
2. Is there any difference in reducing test anxiety among elementary students taught through the Synectic Model and with traditional methods?

Research on the Synectic model of a teaching, test anxiety among elementary students remains relatively limited and highlighting the need for focused scholarly attention in this area. So, addressing this gap is very important to better understand the nature, causes, and consequences of test anxiety among elementary students.

Discussion of the result

This section reviews and synthesizes prior research using systematic literature review method and identifies the principal themes and sub-themes emerging from the analyzed systematic literature review. The in-depth review reveals many existing studies which primarily concentrate on examining the prevalence, causes, and effects of test anxiety among students. Various factors contributing to test anxiety have been identified, including inadequate study skills, low self-confidence, poor time management, negative self-perception, lack of motivation, and unsupportive learning environments. Numerous interventions and coping strategies have been implemented by educators and institutions to reduce test anxiety. These include cognitive behavioural therapy, relaxation training integrated into the curriculum, self-monitoring techniques, participation in social activities, health and fitness practices, positive self-talk, development of effective study habits, and the creation of supportive and environmentally positive classroom settings. The outcomes of such interventions generally indicate improvements in students' test anxiety, emotional regulation, academic confidence, and overall performance. In relation to the Synectic Model of Teaching, these findings gain further significance. The Synectic approach, which emphasizes creative thinking through analogies and metaphorical connections, fosters a positive and engaging classroom climate.

Educational Implications

- Fosters critical thinking
- Encourages self-compassion
- Manages negative emotions
- Increases High order thinking skills
- Enhances Students' Emotional Health
- Promotes a Stress-Free Learning atmosphere

Conclusion

In a nutshell, I would like to conclude that the study has certain limitations; future research articles may include a broader range of studies and incorporate empirical investigations to identify the specific factors contributing to test anxiety. By encouraging imaginative exploration, collaborative learning, self-expression, motivation, self-efficacy and active participation of the learners, the model strengthens both intrapersonal and interpersonal skills. Consequently, this model can serve as an effective pedagogical strategy to address several antecedents of test anxiety and promote positive academic and psychological

outcomes. Moreover, the findings of this study offer a foundation for policymakers and educational stakeholders to design and implement interventions, particularly in underprivileged areas. Last but not the least, the recommended measures hold significant potential to reduce test anxiety among elementary school students, promote a positive and supportive learning environment, and improve overall academic achievement.

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