Research Article

Learning Style in relation to Test Anxiety among XI Standard Students

Dr. Sr. S. Nirmala Grace Rani

Assistant Professor of Computer Science, Stella Matutina College of Education, Chennai, TN, India

ORCID: https://orcid.org/0009-0003-3473-0079

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ABSTRACT

This study investigates the connection between XI Standard Students' learning styles and test anxiety. With a growing recognition of how individual differences impact educational outcomes, understanding this dynamic is crucial for educators and policymakers. The research employed a mixed-methods approach, utilizing surveys to assess students' preferred Learning Styles and standardized measures to evaluate Test Anxiety levels. The findings indicate significant correlations between certain Learning Styles specifically Visual and Kinesthetic learners and elevated levels of Test Anxiety. This paper discusses the implications for teaching strategies and the need for tailored interventions to support students in managing anxiety and optimizing their learning experiences. The sample for this study comprised 300 XI standard students. The study revealed no significant difference in learning style with respect Gender and Stream of Study. Similarly, there was no significant difference in Test Anxiety with respect to Gender and Stream of Study.

***Keywords*:** Learning Styles, Test Anxiety, Student Performance, Academic Stress, Individual Differences, Anxiety Management

Introduction

Education and learning form the foundation of intellectual and personal growth, shaping students' academic and emotional development. Modern education focuses on nurturing inherent abilities within a social environment, moving away from traditional rote learning. Understanding diverse learning styles - visual, auditory, kinesthetic, and more is

crucial for educators, as these preferences impact how students absorb information and cope with challenges, including test anxiety. When learning methods align with students' styles, they build confidence and reduce stress. Conversely, mismatches can heighten anxiety. By fostering adaptive learning strategies, offering feedback, and promoting resilience, educators can help students thrive academically and emotionally.

Learning and the Learning Process

Learning is a continuous and dynamic process that shapes individuals' knowledge, skills, behaviors, and attitudes. It involves acquiring new information or modifying existing knowledge through experience, practice, or training. Psychologists define learning as a "relatively permanent change in behavior" brought about by repeated exposure to experiences.

The learning process is not uniform; students have different learning styles such as visual, auditory, or kinesthetic that influence how they best absorb and retain information. Effective learning involves engagement, reflection, and adaptability, ensuring that individuals can apply what they learn to real-world situations. By understanding this process, educators can better cater to students' needs, fostering both personal and intellectual growth.

Learning Style

Learning style refers to an individual's preferred way of receiving, processing, and retaining information. It reflects how students best absorb new knowledge and engage with educational content. Understanding learning styles is crucial for tailoring educational approaches to meet the diverse needs of students, enhancing both engagement and academic success.

Here are the common types of learning styles:

1. **Visual (Spatial) Learners**: Prefer using images, diagrams, charts, and other visual aids to understand concepts.
2. **Auditory (Aural) Learners**: Learn best through listening to lectures, discussions, and audio materials.
3. **Reading/Writing Learners**: Favor learning through written words, reading texts, and note-taking.
4. **Kinesthetic (Physical) Learners:** Prefer hands-on activities, experiments, and movement to grasp new concepts.

Recognizing these styles allows educators to adopt a more flexible and inclusive teaching approach, accommodating different learning preferences**.**

Test Anxiety

Test anxiety is a psychological disorder causing extreme distress and discomfort during exams, affecting students' performance and well-being. While some anxiety can sharpen focus, excessive anxiety can hinder concentration and memory, leading to poor test results. It is characterized by fear of failure, worry, tension, and self- deprecating thoughts. This condition can make students feel overwhelmed either before or during an exam, often referred to as situational or evaluation anxiety. Sadly, extreme cases of test anxiety have led to tragic consequences, with some students experiencing severe emotional distress, and even suicidal thoughts, highlighting the urgent need to address this issue.

Need and Significance of the Study

Learning styles significantly influence how students absorb, process, and retain information. Understanding individual learning styles can help tailor educational approaches, making learning more effective and engaging. At the same time, test anxiety is a common issue among students, which can impair academic performance, mental well-being, and self-confidence. XI standard is a crucial stage for students as they face increased academic pressures and prepare for board exams. Test anxiety, if left unaddressed, can hinder their academic success and overall development. Insights from the study can guide teachers and institutions to adopt differentiated instruction methods that cater to diverse learning styles, thereby reducing test anxiety and improving student performance. Students who understand their learning styles and manage test anxiety will be better prepared to face future academic challenges and competitive exams with confidence.

Review of Related Literature

Learning Style

Padmavathi and Sunny (2011) conducted study on a relationship between learning environment and learning styles of the standard IX pupils of Kundapur Taluk in Udupi Dist. The sample selected for the study consisted of 400 students of IX standard. There were 200 boys and 200 girls in the sample. The tool was used to in the present study rating scale was

constructed by the investigator was used to measure the learning style among the students of standard IX.

Major findings of the study were:

- Urban and rural school did not differ significantly in their learning style.
- There exist a positive relationship between the learning environment and learning style of pupils of standard IX.

Mahdi and Zahed-Babelan (2010) conducted a study on the role of learning styles in second language learning among distance education students. The objective of the study was to find out learning style among distance education students. The sample consisted of 112 - English language students of Payame Noor University (PNU), Ardabli center, Iran. Memletics questionnaire was used as a tool for the study. The major find of the study was that listening, writing structure and reading mean scores of students with different learning styles was different significantly.

Amirtharaj and Jesudoss (2010) conducted a study on Learning styles and academic achievement of X standard students. The survey adopted for the study. A sample of 200 X standard students form seven schools Virudhunagar Educational District was selected. A General data Sheet and learning style inventory were used as tools. Percentage analysis 't' test were the statistical techniques used.

The major findings were

- The level of learning styles and their dimensions in X standard students with regard to sex is average.
- There is no significance difference between boys and girls in their learning style.
- There is no significance difference rural and urban students in their learning style.

Test Anxiety

Alam (2013) conducted how test anxiety and self-esteem affect academic performance. Three hundred and twenty randomly selected students of class 12 of the government inter colleges in Darbhanga town were involved in the study. They were asked to complete the Test Anxiety Inventory (Spielberger et al., 1980) and the Coppersmith Self-Esteem Inventory (Coppersmith, 1987) in a classroom environment during regular school hours. Their aggregate marks of 11th class were also collected. The data were then analyzed using descriptive, co-relational and

inferential statistics. The study discovered that overall (i) low test anxiety students (boys, girls, rural and urban) had higher academic performance than high test anxiety students (boys, girls rural and urban); (ii) there is a positive relationship between self-esteem and academic performance of the students (boys, girls, rural and urban); (iii) there is a negative relationship between test anxiety and self-esteem of students (boys, girls, rural and urban); (iv) boys have least test anxiety, better self-esteem and better academic performance than girls; and (v) urban students have least test anxiety, better self-esteem and excellent academic performance in comparison to their rural counterparts.

Olatoye (2013) investigated the relative and combined influences of test anxiety and motivation for examinations on science achievement of selected Junior Secondary School students in Ogun State, Nigeria. Twelve secondary schools were randomly selected from the list of secondary schools in all the four divisions of Ogun State. A sample of three hundred and sixty students selected from twelve schools participate in the study. Three instruments were used to collect data. Test anxiety and motivation for examinations accounted for 14.6% of the total variance in science achievement. (R square = 0.146, $P<0.05$). This percentage is statistically significant. There is negative significant relationship between test anxiety and science achievement ($r= -0.228$, $P<0.05$) and positive significant relationship between motivation for examinations and science achievement ($r=+0.333$, $P<0.05$). Teachers and counselors should motivate students for examinations by providing necessary materials and equipping them with techniques of tackling questions.

Abbas, Zahra and Ehsan (2013) attempted to investigate the relationship between Test Anxiety (TA) and Listening Comprehension (LC) among EFL learners of Shahid Bahonar and Islamic Azad universities of Kerman. Gender was taken into account, regarding males and females use of TAS. 97 Iranian EFL students studying at Shahid Bahonar and Islamic Azad universities of Kerman took part in this study. The students were junior and senior students majoring in English Translation and English Literature. To achieve the required data the following scales were capitalized on Sarason's (1975) test anxiety scale (TAS) and a 50-item listening test taken from Longman Complete Course for the TOEFL Test. The findings revealed that there was a significant negative relationship between TA and LC. Furthermore, it was revealed that female subjects were more test anxious that their counterparts. In sum, TA yielded a negative relationship with LC with the female subjects being more test anxious.

Objective of the Study

To examine the difference in the Learning Style and Test Anxiety of XI Standard Student owing to the difference in Family Type and Types of School.

Hypotheses

- There is no significant difference in their Learning Style owing to the differences in Family Type.
- There is no significant difference in their Learning Style owing to the differences in Types of School.
- There is no significant difference in their Test Anxiety owing to the differences in Family Type.
- There is no significant difference in their Text Anxiety owing to the differences in Types of School.

Tools Used for the Study

The data for the current study was gathered using the following Inventory

- The Inventory of Perceptual Learning Styles by J.M. Reid.
- Test Anxiety scale collected from Student Learning Assistance Center (SLAC) counselor and Student Learning Assistance Center (SLAC) Lab.
- Personal data sheet prepared by the investigator.

Methodology

The current study is a descriptive study on "Learning Style in relation to Test Anxiety among XI Standard Students in Chennai" with the variable of Gender and Stream of Study in Chennai district.

The Learning style inventory consist of 30 statements top assert the differential preferences for the five modes of learning (5 statements each for auditory and visual modes, 7 statement each for kinesthetic / tactile and individual Learning modes, 6 for group learning modes); the details of which are presented below showing the items under different perceptual modes of learning and social interaction learning styles.

Table: 1 Category of Learning and Item Numbers

Category of Learning Style	Item Numbers
Auditory	1,7,9,16,19
Visual	6,10,12,23,28
Kinesthetic / tactile	2,8,11,14,15,21,24
Individual learning	13,17,25,26,27,29,30
Group learning	3,4,5,18,20,22

Analysis and Interpretation of the Data

Hypothesis 1 There is no significant difference in their Learning Style owing to the differences in Family Type.

Table: 2 Table showing the difference in Learning Style of XI Standard Students owing to Family Type

Variable	Family type	N	Mean	Standard Deviation	df	t	Sig. level
Learning style	Joint	75	122.27	15.304	298	.395	.693
	Nuclear	225	121.53	13.44			

From the above table the significant value 0.693 is greater than 0.05 which is not significant at 5% level. So the null hypothesis is accepted. Hence there is no significant difference in learning style respect to Family Type.

Hypothesis 2

There is no significant difference in their Learning Style owing to the differences in Types of School.

Table: 3 Table showing the difference in Learning Style of XI Standard Students owing to Types of School

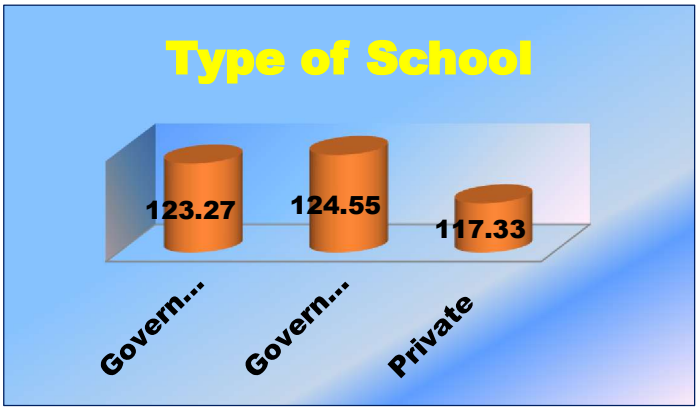
Variable	Type of School	N	Mean	Standard Deviation
Learning style	Government	100	123.27	14.203
	Government Aided	100	124.55	12.594
	Private	100	117.33	13.928

Table: 4 One-way ANOVA showing the difference in Learning Style of XI Standard Students with respect to Type of Schools.

Variable		Sum of Squares	df	Mean Square	F	Sig. level
Learning Style	Between Groups	2968.347	2	1484.173	8.032	.000
	Within Groups	54878.570	297	184.776		
	Total	57846.917	299			

From the above table the significant value 0.000 is less than 0.01 which is significant at 1% level. So the null hypothesis is not accepted. Hence there is significant difference in learning style with respect to Type of School favouring Government Aided School students.

Figure: 1 Bar Diagram Showing the Mean Difference in Learning Style of XI Standard Students with respect to Type of Schools



Hypothesis 3

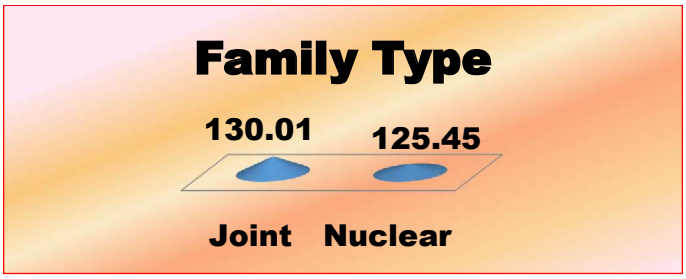
There is no significant difference in their Test Anxiety owing to the differences in Family Type.

Table: 5 Table showing the difference in Test Anxiety of XI Standard Students owing to Family Type

Variable	Family type	N	Mean	Standard Deviation	df	t	Sig. level
Test Anxiety	Joint	75	130.01	27.030	298	1.285	.200
	Nuclear	225	125.45	26.478			

From the above table the significant value 0.200 is greater than 0.05 which is not significant at 5% level. So the null hypothesis is accepted. Hence there is no significant difference in Test Anxiety with respect to Family Type.

Figure: 2 Bar Diagram Showing the Mean Difference in Test Anxiety of Higher Secondary School Students owing to Family Type



Hypothesis 4

There is no significant difference in Test Anxiety of XI Standard Students owing to the differences in Types of School.

Table: 6 showing the difference in Test Anxiety of XI Standard Students owing to Types of School

Variable	Type of School	N	Mean	Standard Deviation
Test Anxiety	Government	100	125.07	31.003
	Government Aided	100	133.12	23.629
	Private	100	121.59	23.537
	Total	300	126.59	26.645

Table: 7 One-Way ANOVA showing the difference in Test Anxiety of Xi Standard School Students with respect to Type of Schools

Variable	Type of School	Sum of Squares	df	Mean Square	F	Sig. level
Test Anxiety	Between Groups	6995.127	2	3497.563	5.06	.007
	Within Groups	205277.260	297	691.169		
	Total	212272.387	299			

From the above table the significant value 0.007 is less than 0.01 which is significant at 1% level. So the null hypothesis is not accepted. Hence there is significant difference in Test Anxiety with respect to Type of School favouring Government Aided.

Delimitations of the Study

- The sample is restricted to 300 students.
- The study is restricted only to XI Standard students.
- The study is restricted only to Six schools of Chennai.
- The study included only Government, Government Aided and Private schools.

Major Finding of the Study

- There is no significant difference in learning style respect to Family Type.
- There is significant difference in learning style with respect to Type of School favouring Government Aided School students.
- There is no significant difference in Test Anxiety with respect to Family Type.
- There is significant difference in Test Anxiety with respect to Type of School favouring Government Aided.

Education Implications of Present Study

- It is the goal of a teacher to establish a rapport with their students so that they will feel at ease approaching them for assistance.
- Teacher should provide suitable co-curricular activities for the enrichment of learning styles.
- It is important to encourage friendly relationships between teachers and students as well as between students.
- It is recommended that educational institutions and administrative bodies support students in utilizing the available learning resources to enhance their learning preferences.
- Schools need to develop a profile of each students learning style.
- Instructional materials must be developed to appeal to Visual, Auditory and Kinesthetic sensory modes.
- Collaborative learning should be included to improve learning style.
- Awareness programmes to parents to improve learning style of children.

Conclusion

The results of this investigation highlight the important connection between learning styles and test anxiety among XI standard students. Visual and kinesthetic learners, in particular, displayed heightened anxiety levels, suggesting that their preferred modes of learning may not align with traditional assessment formats. This highlights the necessity for educators to adopt differentiated instructional strategies that accommodate various learning preferences, thereby mitigating test anxiety and enhancing academic performance. Future research should further explore specific interventions tailored to diverse learning styles, aiming to create a more inclusive educational atmosphere that supports all students in managing anxiety effectively and achieving their full potential.

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Research Article

A Multi-Dimensional Perspective on Learning Satisfaction in Secondary Education

Ms. S. Parameshwari[1] & Dr. S. Arockia Elizabeth Josephine[2]

[1] Ph. D. Research Scholar, Stella Matutina College of Education, Ashok Nagar, Chennai, TN, India.

[2] Assistant Professor & Research Supervisor, Stella Matutina College of Education, CH, TN, India.

ORCID: https://orcid.org/0009-0008-3371-1411

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Abstract

Learning satisfaction plays a crucial role in shaping students' academic engagement, persistence, and overall achievement. This study adopts a multi-dimensional perspective to examine learning satisfaction among secondary school students, focusing on four core dimensions: content relevance satisfaction, learning opportunities satisfaction, motivation satisfaction, and feedback and personal growth satisfaction. Using a sample of 350 students from government, government-aided, and self-financed schools, the research employed quantitative methods to analyze variations across demographic and institutional factors. Findings reveal significant differences in satisfaction levels across dimensions, highlighting the interplay between instructional practices, supportive learning environments, and student motivation. The study underscores the need for holistic educational strategies that address multiple aspects of the learning experience to enhance student satisfaction and success.

Keywords: Learning satisfaction, secondary education, motivation, feedback, content relevance, multi-dimensional perspective.

Introduction

Student satisfaction is often regarded as a short-term attitude that reflects learners' subjective assessments of how well their educational experiences meet or surpass their initial expectations (Elliot & Healy, 2001; Elliot & Shin, 2002). Since students develop a variety of expectations about their learning environment, researchers increasingly view satisfaction as a multidimensional construct, encompassing different aspects of the educational experience