

A Study on the Attitude of High School Students Towards Online Learning with Respect to Some Selected Variables

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Abstract: *Online learning has rapidly become an integral part of the school education system across the globe, accelerated in particular by the COVID-19 pandemic and sustained thereafter through blended and hybrid models of instruction. The success of any online learning initiative depends considerably on the attitude that learners hold towards it, since attitude shapes motivation, engagement, and ultimate learning outcomes. Attitude, being a relatively enduring predisposition comprising cognitive, affective and behavioural components, determines the degree to which students accept, participate in, and benefit from technology-mediated instruction. While online learning offers flexibility, accessibility and a wide repository of learning resources, it also raises concerns relating to cognitive, affective, teacher support, technical and infrastructure support and behavioural aspects, particularly among adolescent learners at the high school stage. Hence, the researcher intended to study the Attitude of High School Students towards Online Learning and the factors that shape it.*

Keywords: Attitude, Online Learning, High School Students, Gender, Locality of School, Type of School Management, Cognitive, Affective, Behavioural, Teacher Support and Technical Factor

1. Introduction

The rapid advancement of information and communication technology has transformed the manner in which teaching and learning take place across the world. Online learning, which refers to instruction delivered through digital platforms and the internet, has moved from being a supplementary mode of education to a mainstream pedagogical practice at the school level. It offers learners the flexibility to access instructional content beyond the boundaries of the physical classroom, at their own pace and convenience.

However, the mere availability of online learning platforms does not guarantee effective learning; the attitude of students towards this mode of instruction plays a decisive role in determining its success. Attitude is a psychological tendency expressed by evaluating a particular entity with some degree of favour or disfavour, comprising cognitive, affective, and behavioural components. A student who holds a favourable attitude is more likely to be self-motivated and regular in participation, whereas an unfavourable attitude may result in disengagement and poor academic performance.

2. Need and Significance of the Study

The transition to online and blended learning, which gained unprecedented momentum during the COVID-19 pandemic, continues to shape school education in the post-pandemic period. Student attitude is one of the strongest predictors of engagement and achievement in online environments, more so than the sophistication of the technology itself. High school students, being at a formative stage of development, respond differently to online learning as compared to college-going learners; issues such as limited self-regulation,

dependence on parental supervision, and unequal access to devices considerably influence their disposition. Disparities in digital infrastructure between government, government-aided and private schools, as well as between urban and rural areas, are also likely to result in differing attitudes among students. Hence, the researcher intended to undertake a study on the 'Attitude of High School Students towards Online Learning'.

3. Conceptual Framework of the Study

- **Attitude:** Attitude refers to a person's learned tendency to evaluate a person, object, event, or situation in a favourable or unfavourable way. In education, it reflects the way that students think about learning, how they feel about it, and how they respond to it in practice. Attitude is not an inborn quality; it is formed through experience, social influence, and repeated exposure to situations. In the context of online learning, students may develop a positive attitude if they find it convenient, useful, and supportive or a negative attitude if they experience poor connectivity, lack of interaction, confusion, or stress.
- **Online Learning:** Online learning is referred to as e-learning or digital learning. It is a mode of education in which instruction and learning activities take place through the internet rather than in a traditional classroom. It enables students and teachers to connect, interact, and exchange knowledge using digital platforms such as Google Classroom, Zoom, Microsoft Teams, Moodle, and other web-based tools, removing the barrier of physical presence.
- **Cognitive Factor:** Refers to what students know and believe about online learning - its usefulness, its ability to broaden access to resources, and its effectiveness compared with traditional instruction.

- **Affective Factor:** Relates to feelings and emotional responses - interest, enjoyment, anxiety, boredom, and the sense of isolation from reduced face-to-face interaction.
- **Behavioural Factor:** Concerns actual engagement - regularity of participation, willingness to complete assignments, and self-discipline in managing study schedules.
- **Technological Factor:** Covers comfort and confidence with digital devices, access to reliable connectivity, and technical skill in navigating learning platforms.

4. Review of Related Studies

Shivangi Dhawan (2020), examined the transition to online learning necessitated by the COVID-19 pandemic and observed that student attitude, digital readiness and institutional support were the strongest determinants of successful adoption, more so than the technological sophistication of the platform used.

Hodges, Moore, Lockee, Trust and Bond (2020), distinguished between planned, well-designed online learning and emergency remote teaching, arguing that hastily implemented online instruction often produces a less favourable student attitude on account of poor pedagogical design rather than the online medium itself.

Muilenburg and Berge (2005), in a large-scale factor-analytic study, identified administrative and instructor issues, social interaction, technical skills, learner motivation and time management as the principal barriers perceived by students in online learning environments, several of which map onto the affective and behavioural dimensions considered in the present study.

Cole, Shelley and Swartz (2014), reported that student satisfaction in online courses was closely associated with perceived instructor presence and timely feedback, suggesting that the affective dimension of attitude is particularly sensitive to the quality of teacher-student interaction in the online mode.

Studies conducted in the Indian school context have similarly noted a wide variation in digital access and parental support across government and private schools, and between urban and rural localities, which is likely to shape the technological and behavioural dimensions of student attitude differently across these sub-groups.

5. Research Gap

A considerable number of studies have examined in respect of student attitude towards online learning at school education level, particularly following the shift to remote instruction during COVID-19. Comparatively fewer studies have focused specifically on high school students, who differ from college students in self-regulation and digital independence. Further, very few Indian studies have simultaneously examined how gender, type of school management and locality (urban/rural) jointly relate to the cognitive, affective, behavioural and technological dimensions of attitude towards online learning. Based on the

review of literature, the researcher intended to study this gap.

6. Objectives of the Present Study

- To find the level of attitude of high school students towards online learning.
- To find whether there is any significant difference in the attitude of high school students towards online learning with respect to gender.
- To find whether there is any significant difference in the attitude of high school students towards online learning with respect to type of school management.
- To find whether there is any significant difference in the attitude of high school students towards online learning with respect to locality.

Hypotheses of the Study

Ho1: There is a moderate level of attitude among high school students towards online learning due to its factors.

Ho2: There is no significant difference in the attitude of high school students towards online learning with respect to gender.

Ho3: There is no significant difference in the attitude of high school students towards online learning with respect to type of school management.

Ho4: There is no significant difference in the attitude of high school students towards online learning with respect to locality.

Method and Sample of the Study

The descriptive survey method was adopted for the present study. A simple random sampling technique was employed, and a sample of 600 high school students (Standards IX and X) was drawn from schools under Government, Government Aided and Private management, located in Chennai and Kanchipuram Districts of Tamil Nadu, India.

Table 1.1: Sample Distribution of High School Students Attitude towards Online Learning with Respect to Type of School Management

Type of School	Freq.	%
Government	228	38
Government Aided	198	33
Private	174	29
Total	600	100

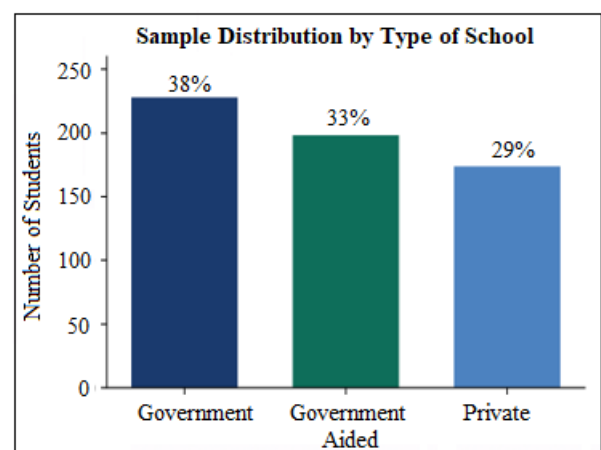


Figure 1.1: Sample Distribution by Type of School Management

It is observed that of the 600 students, 57% belonged to urban schools and 43% to rural schools, as shown below.

Table 1.2: Sample Distribution of High School Students Attitude towards Online Learning with Respect to Locality of School

Locality	Freq.	%
Urban	342	57
Rural	258	43
Total	600	100

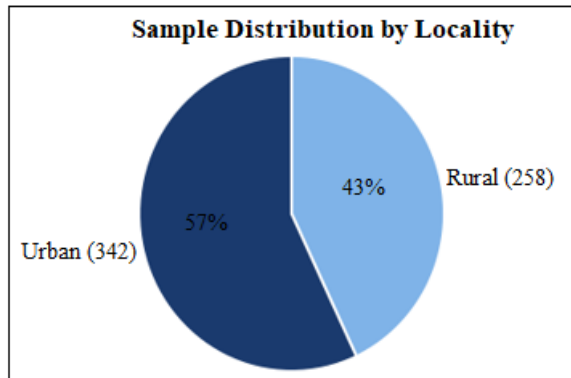


Figure 1.2: Sample Distributions by Locality of School

It is observed that of the 600 students, 43% belongs to rural and 57% belongs to urban.

Tool used in the Study

The following instrument was administered for the present study: High School Students' Attitude towards Online Learning Scale (ATOLS), constructed and validated by the researcher.

Reliability and Validity

Reliability

The test-retest method was adopted through a pilot study on 50 samples, with an interval of two weeks between administrations. The correlation coefficient obtained was 0.79, significant at the 0.01 level, indicating high reliability.

Validity

Content validity was established by distributing the tool and objectives to subject experts, teacher educators, language experts and school teachers, whose suggestions were incorporated for clarity in the final draft. In addition, following the convention of estimating validity from the coefficient of reliability (Garrett, 1981), a validity index was computed 0.964, indicating a high degree of validity.

Level of Significance

The investigator adopted the 0.05 and 0.01 levels of significance for testing the hypotheses of the study.

Table 1.3: Dimensions of Attitude towards Online Learning Scale

Dimensions	Mean	SD	Rank
Cognitive	28.42	7.14	2
Affective	24.16	8.35	4
Behavioural	26.78	7.92	3
Technological	31.05	6.58	1

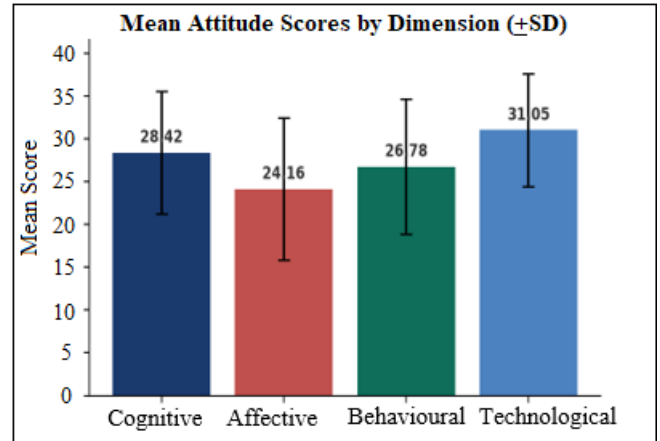


Figure 1.3: Mean Scores of Attitudes by Dimensions

It could be observed that the most favourable dimension is the technological factor, followed by cognitive, behavioural and affective factors respectively.

Level of Attitude and its Factors

Ho1: There is a moderate level of attitude among high school students towards online learning due to its factors.

Table 1.4: Level of Attitude among High School Students towards Online Learning due to its Factors

Dimensions	Low	Average	High
Cognitive	18.50%	36.20%	45.30%
Affective	39.70%	34.80%	25.50%
Behavioural	25.10%	37.60%	37.30%
Technological	12.40%	28.90%	58.70%

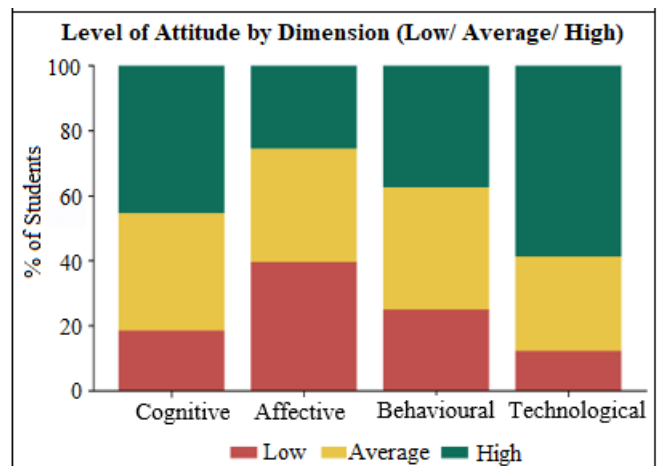


Figure 1.4: Level of Attitude by Dimensions

It is observed that 18.5% of the cognitive factor is low, 36.2% average, 45.3% high. 39.7% of the affective factor is low, 34.8% average, 25.5% high. 25.1% of the behavioural factor is low, 37.6% average, 37.3% high. 12.4% of the technological factor is low, 28.9% average, 58.7% high.

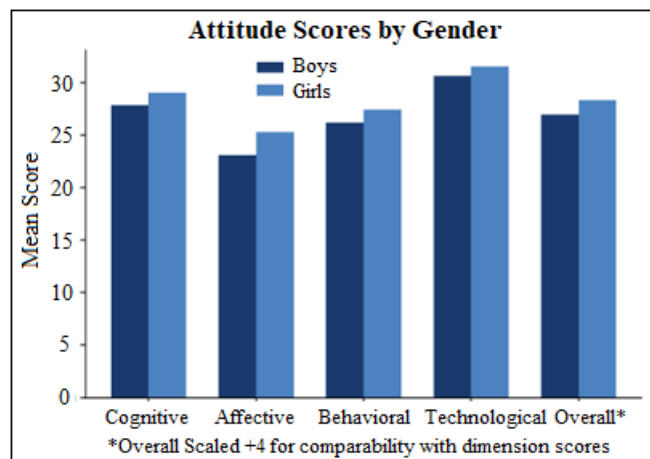
Therefore, the hypothesis Ho1 is partially accepted for the cognitive and behavioural factors, and partially rejected for the affective factor (predominantly low) and technological factor (predominantly high).

Attitude and Gender

Ho2: There is no significant difference in the attitude of high school students towards online learning with respect to gender.

Table 1.5: Attitude of High School Students towards Online Learning with Respect to Gender

Dimensions	Gender	N	Mean	Calculated 't' Value	Result
Cognitive	Boys	312	27.85	1.12	NS
	Girls	288	29.02		
Affective	Boys	312	23.1	2.18	S
	Girls	288	25.31		
Behavioural	Boys	312	26.2	1.34	NS
	Girls	288	27.41		
Technological	Boys	312	30.62	1.42	NS
	Girls	288	31.53		
Overall	Boys	312	107.77	1.98	S
	Girls	288	113.27		

**Figure 1.5:** Attitude Scores by Gender and Its Dimensions

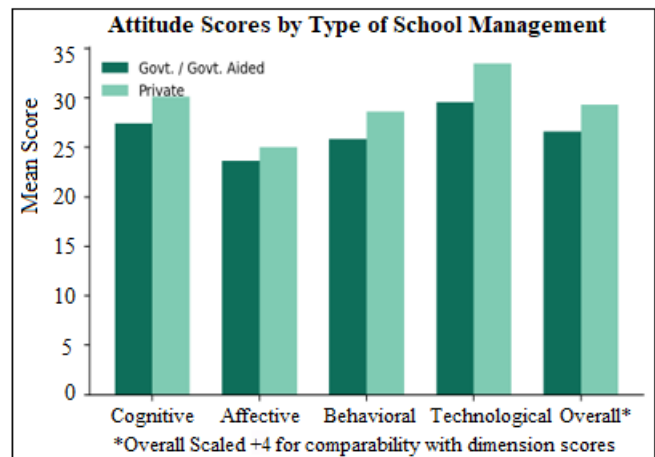
The calculated 't' values for the affective factor (2.18) and overall attitude (1.98) are significant at the 0.05 level, whereas cognitive, behavioural and technological factors are not significant. Girl students display a more favourable overall attitude and affective response than boy students.

Attitude and Type of School Management

Ho3: There is no significant difference in the attitude of high school students towards online learning with respect to type of school management.

Table 1.6: Attitude of High School Students towards Online Learning with Respect to Type of School Management

Dimension	Type of School Management	N	Mean	Calculated 't' Value	Result
Cognitive	Govt.	426	27.41	2.34	S
	Private	174	30.12		
Affective	Govt.	426	23.62	1.28	NS
	Private	174	25.01		
Behavioural	Govt.	426	25.87	2.61	S
	Private	174	28.64		
Technological	Govt.	426	29.58	3.02	S
	Private	174	33.47		
Overall	Govt.	426	106.48	2.85	S
	Private	174	117.24		

**Figure 1.6:** Attitude Scores by Type of School Management

The calculated 't' values for the cognitive (2.34), behavioural (2.61), technological (3.02) factors and overall attitude (2.85) are significant at the 0.05 level, whereas the affective factor (1.28) is not significant. Students studying in private schools display a more favourable attitude across most dimensions than those in government and government-aided schools, which may be attributed to better digital infrastructure, device availability and technical support in private institutions. Hence, the null hypothesis Ho3 is rejected for the cognitive, behavioural, technological factors and overall attitude, and partially accepted for the affective factor.

Attitude and Locality

Ho4: There is no significant difference in the attitude of high school students towards online learning with respect to locality.

Table 1.7: Attitude of High School Students towards Online Learning with Respect to Locality

Dimension	Locality	N	Mean	Calculated 't' Value	Result
Cognitive	Urban	342	29.35	2.05	S
	Rural	258	27.12		
Affective	Urban	342	24.55	0.94	NS
	Rural	258	23.62		
Behavioural	Urban	342	27.3	1.19	NS
	Rural	258	26.05		
Technological	Urban	342	33.02	3.48	S
	Rural	258	28.24		
Overall	Urban	342	114.22	2.42	S
	Rural	258	105.03		

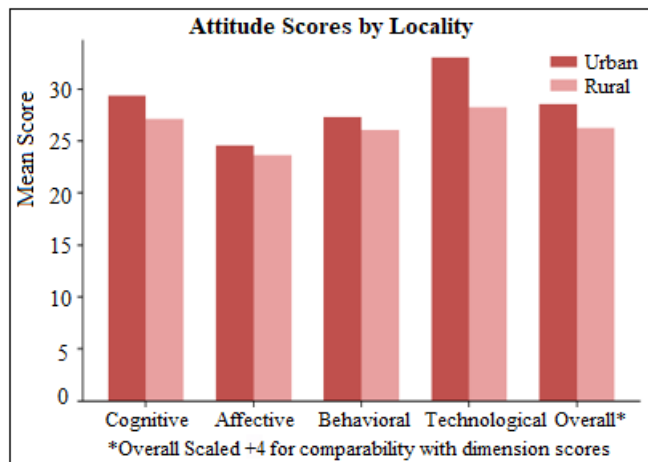


Figure 1.7: Attitude Scores by Locality

The calculated 't' values for the cognitive factor (2.05), technological factor (3.48) and overall attitude (2.42) are significant at the 0.05 level, whereas the affective (0.94) and behavioural (1.19) factors are not significant. Urban students display a more favourable cognitive and technological attitude than their rural counterparts, most plausibly reflecting disparities in internet connectivity and device access between urban and rural households. Hence, the null hypothesis Ho4 is rejected for the cognitive and technological factors and overall attitude, and accepted for the affective and behavioural factors.

7. Discussion

The overall pattern of findings suggests that high school students' attitude towards online learning is shaped less by a generalised acceptance or rejection of the medium and more by the specific dimension under consideration. The comparatively strong technological and cognitive scores indicate that most students today possess reasonable digital familiarity and recognise the informational value of online resources. However, the persistently weaker affective scores point to an unmet socio-emotional need - students appear to miss the immediacy of face-to-face interaction, peer collaboration, and the emotional reassurance that a physical classroom provides. This is consistent with Muilenburg and Berge's (2005) observation that social interaction remains one of the most cited barriers in online learning contexts.

The significant differences observed with respect to school management and locality reinforce the role of infrastructural and socio-economic context in shaping attitude. Private and urban schools, which are typically better resourced in terms of devices, bandwidth and technical support, appear to translate this advantage into a more favourable student attitude, particularly on the technological and cognitive dimensions. This raises equity concerns: without targeted infrastructural investment in government and rural schools, the benefits of online learning may accrue disproportionately to already-advantaged student groups, widening rather than narrowing the digital divide in education.

8. Educational Implications

- Schools should design online sessions that deliberately build in opportunities for peer interaction, group

discussion, and real-time teacher feedback to strengthen the affective dimension of student attitude.

- Government and government-aided schools require targeted investment in digital infrastructure, device distribution schemes, and teacher training to narrow the attitudinal gap with private schools.
- Rural schools would benefit from improved internet connectivity initiatives and offline-compatible learning resources to bridge the urban-rural gap in technological and cognitive attitude.
- Teacher orientation programmes should specifically address strategies to sustain student motivation and emotional engagement in online and blended learning formats.

9. Findings of the Study

- Technological (58.7% high) and cognitive (45.3% high) factors reflect a favourable attitude among high school students, while the affective factor is predominantly low to average (74.5% combined) and the behavioural factor is fairly evenly distributed.
- Girl students hold a significantly more favourable overall attitude and affective response than boy students, with no significant difference in the cognitive, behavioural and technological factors.
- Students in private schools display significantly more favourable cognitive, behavioural, technological and overall attitude than those in government and government-aided schools; the affective factor does not significantly differ by management type.
- Urban students display significantly more favourable cognitive and technological attitude, and overall attitude, than rural students; the affective and behavioural factors do not significantly differ by locality.

10. Recommendations For Further Study

- The present study is limited to high school students of one geographic region (Chennai & Kanchipuram Districts) and relies on self-report data.
- Future research could extend this investigation to a wider geographic sample.
- Could employ longitudinal designs to track attitude change over time, and
- May examine additional variables such as parental education, household income and teacher digital competence as further correlates of student attitude towards online learning.

11. Conclusion

Based on the findings, it is concluded that high school students generally hold a favourable attitude towards the technological and cognitive dimensions of online learning, while their affective response remains comparatively less favourable, largely due to reduced peer interaction. Gender, type of school management, and locality are each significantly associated with one or more dimensions of attitude, with girls, private-school students, and urban students displaying comparatively more favourable dispositions. The study underscores the need for schools and policy makers to strengthen the emotional and behavioural

dimensions of online learning through interactive pedagogy, while simultaneously addressing infrastructural inequities across school types and localities so that the benefits of online learning are more equitably distributed.

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