Research Article

Academic Achievement Motivation: A Comparative Study of Government and Private Secondary School Students during Pandemic Online Classes

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Abstract

The unexpected situation of uncertainty caused by COVID-19 forced the Indian education system to switch to online teaching mode to fill the gap created by the suspended formal offline mode of teaching across the country. The Covid-19 pandemic had a significant impact on the secondary level school education. The present study is focused on the impact of online teaching on the academic achievement motivation of secondary level students during Covid-19. Academic achievement motivation reflects to the need for a student's academic achievement and his/her readiness to accomplish important and valuable tasks to achieve perfect results. The data collected through a self-constructed questionnaire of academic achievement motivation relates to online teaching and learning. The sample of 200 secondary-level students, including boys and girls of private and government schools, was chosen by purposive sampling method in the present study. The data collected was analyzed on the basis of statistical measures such as mean, standard deviation, frequency polygon, skewness, kurtosis and CR test. The study reveals that during the COVID-19 era, the academic achievement motivation of private school students was significantly higher than that of government school students at the secondary level. Further, the academic achievement of secondary-level female students was significantly higher than boy students.

Keywords: Covid-19, online teaching, offline mode of teaching, academic achievement motivation, secondary-level school education.

Introduction

In 2020, the Indian education system was switched to the online mode of education to alleviate the loss in studies of students because of the unintended situation caused by the COVID-19 pandemic. There were many factors during Covid-19 which affected student's academic achievement at the school level. Academic achievement motivation is the motivation attained by academic activities. Academic achievement motivation significantly influences academic performance (Pandey, S. et.al 2018). Students who are motivated are likely to excel in their academic activities.

In Mothibi, G.'s 2015 study, the focus was on examining the connection between e-learning and students' academic performance in higher education. The results of this research highlighted a notable and favorable influence of ICT (Information and Communication Technology) on students' overall academic achievements. Similarly, Rajaee Harandi, S. in 2015, delved into the realm of e-learning's impact

on students' motivation within higher education. The outcomes of this investigation corroborated that e-learning serves as a pivotal factor influencing students' motivation levels. Amidst the pandemic, the primary avenue for education was through online teaching, which demanded students embrace qualities of independence, responsibility, and persistence. These requirements inevitably influenced the motivational dynamics among students. In a study by Elshareif et al. (2021), titled "Effects of E-Learning on Students' Motivation to Learn in Higher Education," notable findings emerged. The research showcased noteworthy and positive correlations between the fundamental facets of e-learning and the motivation of students of Ajman University to engage in learning.

This study, which was conducted soon after the COVID-19 pandemic lockdown aims to find out the impact of online teaching on academic achievement motivation among secondary-level school students during a pandemic.

Literature Review

The literature review of e-learning, achievement motivation and academic achievement is presented in the following two subsections.

Related work on e-learning & achievement motivation:

In recent years, after covid-19 the impact of online education at different levels of education has been the subject of many researches. Goswami, M. P. et.al. (2021) revealed in their study that student motivation (Attention, Relevance, Confidence, and Satisfaction) and student outcomes (knowledge, skills, and attitudes) are significantly affected by e-Learning systems (Technical and electronic requirements, personal requirements, perceived value, and credibility of e-Learning) during Covid-19 period. They also found that constraints of online education are associated with gender and caste. The quantitative findings of the study done by Yahiaoui F. et.al (2022) revealed that personal requirements and the perceived value of e-Learning have a significant effect on students' motivation and outcomes. They investigated that there is an indirect significant effect of the perceived value of e-learning on student outcomes through student motivation. Their qualitative findings validated the usefulness of e-learning systems in motivating students and increasing their outcomes, especially when used in conjunction with an in-person learning system. In a study done by Kumar & Bajpai ((2015) the factors of gender and Socio-Economic Status (SES) produce significant differences in achievement motivation of college students of Sikkim state in relation to e-learning. The interaction between Gender and SES indicates the difference in achievement motivation of the students. They observed that male students have greater achievement motivation than females; the students of the upper SES group have a greater achievement motivation compared to the students of the lower SES group. Harandi (2015) investigated that in higher education there is a significant relationship between e-learning and students' motivation. Her findings indicated that when teachers apply e-learning, more motivation is generated by students and vice versa.

Related work on achievement motivation & academic achievement:

Karlina et.al. (2021) studied the impact of achievement motivation (AM) on learning achievement in accounting courses. The results indicated that there is an influence of AM on achievement among Economic Education in accounting course students at the University of Lampung, Indonesia.

Sivrikaya, A.H. (2019) studied the relationship between AM and academic achievement of the students. They found that according to gender, there was no significant difference in academic motivation scores and sub-dimensions. Pandey, S. & Singh, P. (2018) studied the effect of academic achievement motivation (AAM) on academic performance of students. The study aimed to find out the effect of age, gender and AAM on the academic performance of students. Results revealed the effect of AAM on academic performance. It was found that highly motivated students performed very superior in academic performance. In spite of this, the effect of age and gender on academic performance was found to be partially significant. Arulmoly, C. & Branavan, A. (2017) examined the impact of AM on students' academic achievement and learning outcomes in Mathematics among secondary school students in Paddiruppu Educational Zone in the Batticaloa District, Sri Lanka**.** The findings of this study revealed the effect of gender difference when mathematics learning outcomes were compared and also the effect on AM. It was also examined that academic achievement in mathematics is affected by the degree of motivation. Kumar, A. & Yadav, D. (2015) studied the academic achievement motivation (AAM) of senior secondary students. They found that private school students had more AAM than government school students at the senior secondary level. It was also found that girls had more AAM than boys at senior secondary level.

Oyedotun (2020) suggested that during a pandemic, the rapid change to online pedagogy in developing countries created inequities in the education sector due to a lack of devices and internet access in rural areas and limited training among teachers to impart teaching on the online platform. In this study, the main aim is to examine the impact of online teaching on the academic achievement motivation of girls and boys students studying in government and private secondary-level schools.

Definition of the Term used

Extrinsic and intrinsic motivations stand as foundational pillars in the realm of achievement motivation. Extrinsic motivation encompasses engagement that stems from external stimuli, such as incentives and rewards. Conversely, intrinsic motivation involves undertaking activities driven by the inherent pleasure or satisfaction derived from the activities themselves. Extensive research consistently demonstrates that extrinsic rewards frequently erode intrinsic motivation. As posited by experts in the field, a paramount element within the landscape of achievement motivation is the sense of self-directed competence.

Students' academic success is heavily influenced by their academic achievement motivation. This motivation, encompassing cognitive, emotional, and behavioral aspects of their investment in education, plays a central role in academic engagement (Tucker, Zayco & Herman, 2002).

As stated by Kumar, S. (2017), within an academic setting, achievement motivation embodies the passion for learning and the keenness to gain knowledge while fostering personal development. This dynamic factor ignites within a child the aspiration to excel and accomplish their goals.

Operational Definition

In the context of online classes, academic achievement motivation can be understood as the internal drive to excel in various academic pursuits, encompassing demanding assignments, exhaustive homework, virtual classroom engagements,

collaborative discussions, independent study, and online examinations. This motivation is rooted in one's self-determination to thrive across these academic endeavours.

Objectives of the Study

The objectives of the study are:

1. To compare the academic achievement motivation of government and private secondary level students during online classes.
2. To compare the academic achievement motivation among girls and boys of secondary level schools during online classes.

Methodology & Tool of the Study

The method used is a Descriptive survey based on an ex post facto approach. In this method, information is collected without changing the environment (i.e., nothing is manipulated). This information is collected by using a self-constructed questionnaire because there is no standardized tool available to measure the effect of online teaching on the AAM of secondary-level students. The scale consisted of 30 items. The scale was classified into six dimensions and tabulated in table-1–

Table-1: Dimensions of Academic Achievement Motivation Scale

S.No.	Dimensions
1.	Persistence & Engagement
2.	Eagerness
3.	Competitiveness
4.	Confidence in success
5.	Goal setting & status orientation
6.	Compensatory effort

The scores range from 0-30. The first draft of the questionnaire was developed through discussion with the supervisor. Item analysis and validation were done by the 7 experts in the field of psychology, education and language. The tool items rated by the experts on the preliminary draft helped in establishing the content validity. For establishing validity the researcher first calculated the Item Content validity Index (ICVI). Then, the SVI, that is, the Scale Validity Index was calculated and found to be 0.82.

The reliability of this tool was established by the test-retest method. The coefficient of the reliability of the full scale was determined by Karl Pearson correlation Coefficient and the coefficient of reliability was 0.92.

Sample

For this study, schools were selected on the basis of purposive sampling method whereas simple random sampling was adapted for selecting the students from government and private secondary schools. The survey was conducted just after the lockdown period when schools were re-opened. The sample size for analyzing the responses of the students was 200, in which 100 students (50 boys+50 girls) were taken from government schools and 100 (50 boys+50 girls) from private schools. To

calculate the data for finding out the effect of online teaching on the academic achievement of students, the sample was selected from the secondary level irrespective of their streams.

Results

On the basis of statistical analysis of the collected data the following analysis and interpretation was drawn with reference to the objectives of the study.

Academic Achievement motivation of secondary level students

One of the objectives of the study was to investigate the academic achievement motivation of secondary-level students. In relation to this objective, the analysis carried out is detailed under the following headings

Nature of Distribution of Academic Achievement Motivation Scores

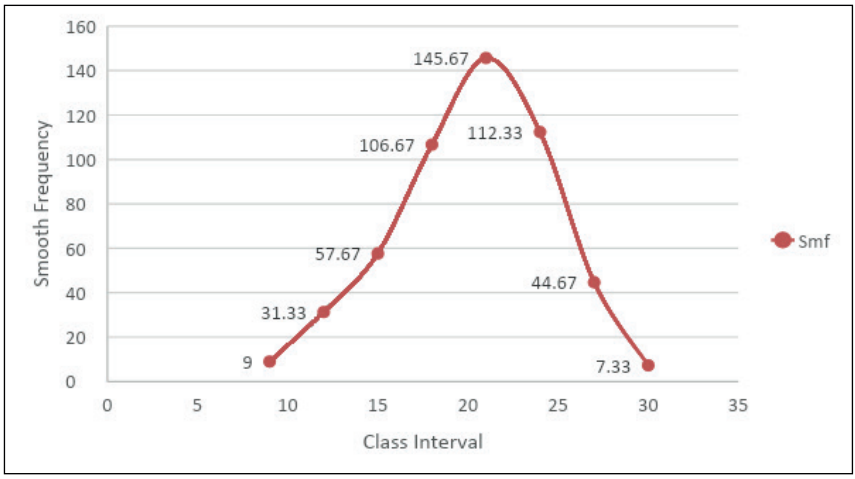
In order to scrutinize the nature of Academic achievement motivation scores in the selected population of government & private secondary school girls and boys, the scores procured on the self-constructed Academic achievement motivation scale were assorted in a tabular form. A frequency distribution of the scores was prepared, which is given in the table below:

Table-2: Frequency distribution of Academic Achievement Motivation Scores

Class Interval	Frequency	Smooth Frequency
29-31	0	7.33
26-28	22	44.67
23-25	68	112.33
20-22	67	145.67
17-19	32	106.67
14-16	23	57.67
11-13	8	31.33
8-10	1	9
Total	200	

The above table-2 reveals that the scores of academic achievement motivation are normally distributed, as most of the frequencies are concentrated at the centre and gradually decrease towards both ends of the distribution. To further ensure the representativeness of the sample frequency a polygon curve of the obtained score was prepared and studied (vide figure-1). The pictorial representation of the obtained scores on the academic achievement motivation scale confirmed the normal distribution of the sample.

Figure-1: Frequency distribution of Academic achievement motivation scores



Further to see the distribution divergence the values of mean, median, standard deviation, skewness and kurtosis were also computed which are shown in the table given below:

Table-3: Descriptive Statistical measures of Academic Achievement Motivation scores

Statistical Measure Variable	N	Mean	Median	Std. Dev.	Skewness	Kurtosis
Academic Achievement Motivation	200	21.09	22	3.94	-0.66	-0.35

Table 3 reaffirms the fact that the scores of total samples are accumulated at the centre of the distribution, besides the slight and insignificant negative skewness and slight platykurtosis in the distribution of scores of Academic Achievement Motivation. The value of skewness of achievement motivation scores was -0.66, which means the distribution was left/negatively skewed and the value of kurtosis was 0.03, which indicates the slight platykurtic nature of the distribution. Though there is a slight skewness and platy kurtosis in the scores of academic achievement motivation, this can be considered negligible, as these are very low which might be due to sample fluctuation and size of the sample overall. It is evident from the above mentioned statistical facts that scores of the study are almost normally distributed in the population.

The values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010). Hair et al. (2010) and Bryne (2010) argued that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7.

Comparison of the academic achievement motivation of government and private secondary school students

Hypothesis: 1

There is no significant impact of online teaching on the academic achievement motivation of government and private school secondary school students.

Table-4: Academic Achievement Motivation of Government and Private Secondary School Students

Category	N	Mean	Mean Difference	S_{ED}	CR	df	P	Interpretation
Government School	100	19.06	3.32	0.499	6.658	198	>.05	H_O Rejected
Private School	100	22.38						

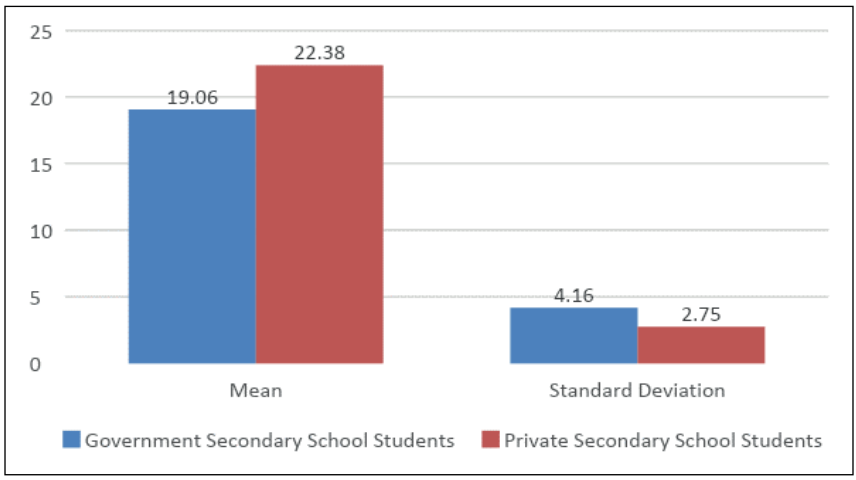
The above table-4 shows that the obtained t value, i.e. 6.658, is more than the table value with df 198 at .05 level i.e. 1.96 and .01 level, i.e. 2.59. This means that students of government and private secondary schools differ significantly in academic achievement motivation. Hence, Hypothesis No. 1, "There will be no significant impact of online teaching on the academic achievement motivation among government and private schools secondary level students" is rejected.

Table-5: Mean and Standard Deviation Values of Academic Achievement Motivation of Government and Private Secondary School Students

Categories	Mean	Standard Deviation
Government Secondary School Students	19.06	4.16
Private Secondary School Students	22.38	2.75

The mean value of achievement motivation scores obtained by government school students and private school students were found to be 19.06 and 22.38 respectively. It is clear from the above table-5 and figure-2 that government school students have a lower mean value than private school students. The standard deviation of both types of school were 4.16 and 2.75 which indicates more deviation in government school students than the private school students from their mean value.

Figure-2: Academic Achievement Motivation of Government and Private Secondary School Students



It has been found that there is a significant impact of online teaching on academic achievement motivation among government and private schools secondary level students. It can be concluded that students of government and private secondary schools differ significantly in their academic achievement motivation. This result is inconsistent with the findings of Pandey, S & Singh, P (2018) who found that the significant effect of AAM on academic performance and the findings of Kumar, A. & Yadav, D. (2015) who found that private school students had more AAM than government school students at senior secondary level.

Comparison of the academic achievement motivation among girls and boys of secondary level schools

Hypothesis: 2

There is no significant impact of online teaching on the academic achievement motivation of secondary level girls and boys.

Table-6: Academic Achievement Motivation among Girls and Boys of Secondary School

	N	Mean	Mean Diff.	SED	CR	df	P	Interpretation
Boys	100	19.85	1.79	0.532	3.36	198	>.05	HO Rejected
Girls	100	21.64						

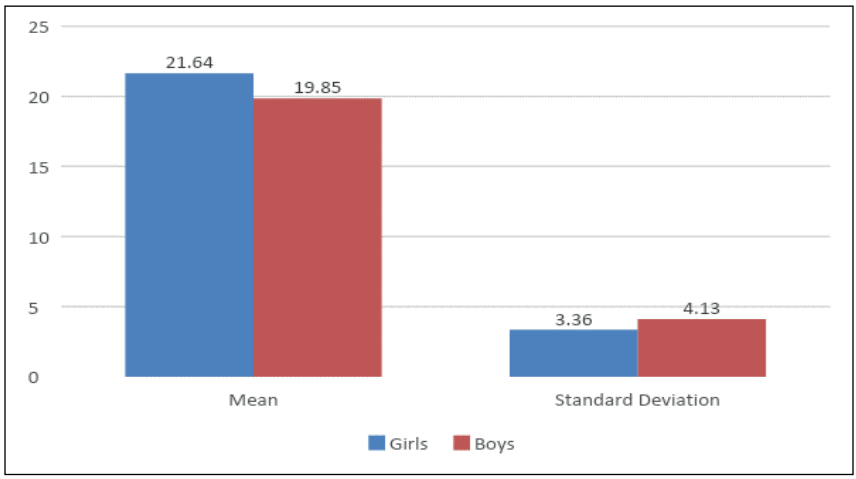
The above table-6 shows that the obtained t value i.e. 3.36 is more than the table value with df 198 at .05 level i.e. 1.96 and .01 level i.e. 2.59. It means boys and girls students of secondary school differ significantly in academic achievement motivation. Hence, Hypotheses No. 2, "There will be no significant impact of online teaching on the academic achievement motivation among boys and girls students of secondary schools" is rejected.

Table-7: Mean and Standard Deviation Values of Academic Achievement Motivation of Boys and Girls of Secondary Schools

	Mean	Standard Deviation
Girls	21.64	3.36
Boys	19.85	4.13

The mean value of achievement motivation scores obtained by girls and boys were 21.64 and 19.85, respectively. It is clear from the above table-7 and figure-3 that girls have a higher mean value than the boys group. The standard deviations of girls and boys were 3.36 and 4.13 which indicates more deviation in boys' group from their mean value.

Figure-3: Academic Achievement Motivation among boys and girls of Secondary School



It has been found that there is a significant impact of online teaching on academic achievement motivation among boys and girls of secondary schools. It can be concluded that male and female secondary school students differ significantly in their motivation for academic achievement. This result is consistent with the findings of Arulmoly & Branavan (2017) who revealed a significant gender difference when mathematics learning outcomes were compared and accounted for a significant effect on academic motivation and the findings of Kumar, A. & Yadav, D. (2015) who revealed that girls had more AAM than boys in senior secondary schools. The following findings are contrary to the findings of Sivrikaya, A. H. (2019), who revealed that there was no significant difference according to gender in academic motivation scale scores. Whereas Kumar, N. & Bajpai, R. P. ((2015) concluded that the factors of gender and SES produce significant differences in achievement motivation. The interaction between gender and SES being significant indicated that the difference in achievement motivation of the students was there due to the interaction effect of gender and SES. They observed that the achievement motivation of males was greater than that of females; the students of the upper SES group had a greater achievement motivation compared to the students of the lower SES group.

Limitations and Future Research

The present study has some limitations which could not be overcome due to a lack of time and resources that can provide direction for future studies. This study is delimited to the pandemic period. The finding of this study cannot be generalized to the entire population, but it does provide an overview of how students were managed with online teaching during the COVID-19 period. Future studies can be conducted on a broader scale to generalize the findings of the study. Future researchers should also consider other variables.

Discussion & Conclusion

The result of this study reveals that private secondary school students showed higher academic achievement motivation than government school students during the covid-19 lockdown period when online teaching was the only option to continue the education of the students. This might be due to the better facilities available to the

students studying in private schools in comparison to the students studying in government schools. The availability of devices and internet access and training among teachers of private schools to impart teaching on the online platform as compared to government schools are the factors responsible for the difference in academic achievement motivation.

The result also shows that girls have more academic achievement for motivation than boys. This might be because girls are more concerned about their studies as compared to boys.

On the basis of the analysis of interpreted data, this conclusion has been drawn that online teaching was an effective and most important factor that affected the academic achievement motivation level of students during covid-19 lockdown.

Educational Implications of the Study

Teachers and students are the basic and essential units of the educational system whereas modes of teaching are fundamental spare parts. Furthermore, no teaching mode works until students and teachers are willing to receive that knowledge, this would happen only if motivation is there. Findings of the present study have a number of implications for stakeholders.

- After Covid-19 situation, there is need that the government should facilitate the alternatives of offline mode of teaching and learning in government schools.
- Teachers should use the appropriate teaching tools and soft skills in order to meet the needs, desires and requirements of the students. Moreover, they should be well-oriented towards the use of various digital tools and techniques of imparting information to the students. Teachers should provide opportunities for learning with alternative sources or other materials.
- Teacher's competencies and skills should be increased through teacher training programmes regarding the use of new technological methods of teaching so that they can be capable of catering for the needs of today's learners. This incorporation of digital tools in teacher training programmes can enhance the teaching skills, knowledge and abilities of pre-service teachers.
- Furthermore, in-service teachers should be more oriented towards the use of the latest tools and technology of teaching and learning by extension lectures by proficient educationist and other technical experts. They should be arranged frequently to impart upgraded knowledge about the new technological developments that can help the in-service teachers to enhance their teaching- learning strategies.
- Learners should be motivated to use computers and other digital tools for their basic requirements, for preparing assignments and projects, etc. This will enable them to understand the new technology in a better way.

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