

Impact of Attitude towards Online Learning on Self Efficacy of 11th Standard Students

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Abstract—Quality of the life is enhanced by science and technology providing convenience, easy way to solve the problems, easy access to sources and so on. Blending the science and technology with education also enhance the quality of the education. The quality of education increases when the information and communication technology is used in education. The present generation is technology oriented and technology dependent generation. The rise in usage of technology brought the change in learning technology acquiring knowledge and sources. In education, technology has brought tremendous change in the traditional classroom learning. Students started using internet and learning through online. School students who are low in self-efficacy tend to see difficult tasks as threats they should avoid. Because of this, they also tend to avoid setting goals and have low levels of commitment to the ones they do make. Therefore the investigator decided to carry out the research to find out the impact of attitude towards online learning on self efficacy. To carry out this research descriptive survey method was adopted. 11th class students studying in Kanchipuram district are the population of this study. Stratified random sampling technique was used to choose 250 students as a sample of this study. The investigators constructed a tool to assess the attitude towards online learning. Self efficacy scale which was developed and standardised by Dr.G.P. Mathur and Dr. Rajkumari Bhatnagar, published by Manasvi Agra was used to assess self efficacy. The results indicate that the gender and locality are not influencing the attitude towards online learning and self efficacy. Science group students possess better attitude towards online learning than arts group students. Moreover attitude towards online learning and self efficacy are correlating each other.

Index Terms—Attitude Towards Online Learning and Self Efficacy

I. INTRODUCTION

The integration of science and technology into various sectors has significantly enhanced human life, providing comfort and innovative solutions for problem-solving and decision-making. This transformation has notably influenced the educational landscape, particularly for students, as they navigate a complex social environment characterized by rapid technological advancements. The shift towards e-learning has redefined study habits, allowing students to access information and resources online without waiting for traditional classroom interactions (Newton, 2003).

Online learning encompasses a variety of pedagogical methods and technologies, continuously evolving to meet the demands of learners and educators. The COVID-19 pandemic further accelerated the adoption of online learning, as physical classes were suspended globally. In India, the government quickly adapted to this new reality by leveraging existing online learning infrastructures, such as Diksha and Swayam Prabha Channel, to facilitate online education (MHRD). Despite the benefits of online learning, students' attitudes towards it can vary significantly. Positive attitudes towards technology are linked to increased usage, while negative sentiments can hinder engagement (Workman, 2005). The evolution of online learning can be traced back to correspondence courses in the late 19th century, which have since transformed into sophisticated online learning platforms (Banas et al, 1998). As educational institutions expand their courses offering online, understanding students' attitudes towards online

learning becomes crucial for enhancing learning outcomes (Burns, 1997).

Human existence has been greatly improved by the incorporation of science and technology into many fields, offering comfort and creative approaches to decision-making and problem-solving. As students traverse a complicated social milieu marked by rapid technological breakthroughs, this transition has had a significant impact on the educational landscape. Students can now access information and tools online without having to wait for typical classroom interactions thanks to the transition towards e-learning or online learning, which has completely changed how they study (Newton, 2003).

Self-efficacy is the belief in one's own capacity to plan and carry out a course of action necessary to accomplish a desired goal. Self-perception of one's own abilities is crucial when pursuing objectives and exercising influence over one's surroundings. Self-efficacy is a person's evaluation of their ability to plan and carry out the actions necessary to reach effective performance levels (Bandura, 1986). People are seen to have high self-efficacy if they believe they can complete a task in a given circumstance.

High self-efficacy is consequently quite easy to recognize because those who have it typically accomplish, succeed, and achieve more frequently than others. For instance, a student who believes she can learn a subject well even though she is not very gifted in it. Most research on self-efficacy has likely been done in a classroom setting. This is for a good reason: in order to fully profit from self-efficacy, many other qualities and abilities must be established at a young age. If the learner believes in himself, he can do a lot in life. For students to recognize their own self-efficacy, they need to be driven on both an affective and cognitive level. One needs unwavering confidence in order to live a well-organized life.

The improvement of the intellect, body, and soul should be the modern definition of education. A person with a high feeling of self-efficacy has the following characteristics, according to Bandura (1997): 1. They see difficult challenges as tasks they must complete. 2. They become curious enough to delve deeply into the issue to discover a solution. 3. They have creative ways of thinking.

Self-efficacy serves as an internal incentive to overcome obstacles (Phillips and Lindsay, 2006). Academic performance is excellent for gifted

individuals who exhibit higher levels of intrinsic drive (Clinkenbeard, 2012). Therefore, it is proposed that parents and teachers be held accountable for motivating kids to keep an eye on their own academic progress.

There are five factors affecting self efficacy, they are socio-economic status, motivation, education, peers and comments.

II. REVIEW OF RELATED LITERATURE

The attitudes and learning efficacy of 120 undergraduate management students enrolled in synchronous e-learning through Zoom were investigated by Carmi, G. (2024). According to the study, students' attitudes, satisfaction, and comprehension of the subject matter were all greatly impacted by their prior e-learning experience. Skills, advantages, and participation were similarly impacted by the extent of open camera use in the classroom.

Kaur, H. (2024) examined the connection between study habits and attitudes toward e-learning among 292 Punjabi college students. Students with better study habits had more positive views about e-learning, according to the data, which showed a considerable difference in opinions based on study habits.

Behera and Seth (2023) investigated the attitudes of undergraduate students regarding e-learning with an emphasis on academic streams and gender. Thirty percent of the 120 kids in the study had a very negative attitude.

Charumuki, S. et al. (2023) examined how self-efficacy and self-esteem affected 153 students' online learning during COVID-19. The study discovered a strong correlation between the online learning environment, self-efficacy, and self-esteem.

Using a sample of fifty students, Saher and Alim (2023) investigated gender and stream variations in teenagers' views regarding e-learning. With no discernible gender disparities, the results showed that science students had more positive attitudes regarding e-learning than students from other fields.

Zhu (2019) examined adult learners' self-efficacy and self-esteem in online learning environments and found no discernible variations according to age, gender, or educational attainment. In online learning environments, regular computer use was found to have a beneficial impact on self-efficacy and self-esteem,

which in turn were favorably correlated with overall self-esteem.

Using the ATEL scale, Konwar (2017) investigated college students' attitudes toward e-learning. The findings showed a generally positive attitude, with a minor preference for female and urban students over their peers.

When Kour (2017) investigated how teenage students felt about the value of e-learning in the classroom, she discovered that 100 students had a favorable attitude with no discernible gender disparities.

When Thakkar and Joshi (2017) looked into the attitudes of diploma engineering students toward e-learning, they found a strong preference that was unaffected by socioeconomic class, region, or gender. Dhamija (2016) used a sample of 300 undergraduate students to assess their attitudes on e-learning. Overall, the study indicated positive attitudes, with notable variations according to location and gender.

In their analysis of 200 college students' opinions regarding e-learning, Rani and Bhandari (2015) found considerable disparities across several educational streams but no significant differences depending on geography or gender.

Kar et al. (2014) evaluated the views of 308 students at four West Bengali universities toward e-learning. The findings revealed a generally favorable attitude toward e-learning that was unaffected by individual factors like gender or field of study.

Hasanah (2023) This study aims to determine the relationship between Academic Stress and Academic Self Efficacy in Raden Paku Wringinanom. Vocational High School students.. The results of the data analysis of this study indicate a correlation coefficient of -0.186 with a significance of 0.008, which is smaller than 0.05, meaning that there is a negative relationship between Academic Stress and Academic Self-Efficacy.

Yesuf (2023) conducted study on examined students' mathematics self-efficacy and associated predictors among high school students in Addis Ababa. In the study it was found that students have more than average mathematics self-efficacy even though significant numbers of students (44.2%) have low mathematics self efficacy.

Ningsih(2021) The purpose of this study was to see how self-efficacy of students towards the learning process online amid the Covid-19 outbreak. In general,

the self-efficacy of Indonesian SMP / MTs students in learning online is quite good.

In order to ascertain if academic self-efficacy played a mediating role in the association between academic burnout and perfectionism, Yu, Chae, and Chang (2016) examined the relationship between self-efficacy, perfectionism, and academic burnout in medical school students.

Goulao (2014) investigated the connection between adult learners' academic accomplishment and self-efficacy, as well as the academic self-efficacy of an adult learners group in an online learning environment with their actual performance and found that students have a high degree of self-efficacy and that there is a significant correlation between academic achievement and self-efficacy ($r=0.286$, at the 0.05 level).

Orkett, Hatt, and Benevides (2011) investigated the connection between student ability, teacher self-efficacy, and student self-efficacy. There was no correlation between students' literacy self-efficacy and their literacy ability.. Lastly, there was a strong correlation between the teachers' self-efficacy and their assessment of the students' self-efficacy.

III. RATIONAL OF THIS STUDY

Usage of internet is increased by both teachers and students. Getting knowledge and resources through e-learning by teachers and students are increased nowadays. The e- learning plays a crucial role in the present education system. The online education brings the easy and convenient way learning by the learners. The current social dynamics also reshaped the students approach on their studies the way of the learning and their study habits. The students should understanding the online learning and also develop the attitude towards online learning.

As the online resources and courses are available plenty in the education market, Online learning has become an integral part of education and also essential to explore more and more in their education to acquire in-depth knowledge on their own. This brought the habits of time management, goal setting, organisational skills and communication skills. So the development of positive attitude towards online learning is essential and integral part of learning in the present era.

Students with poor self-efficacy often view challenging assignments as dangers that should be

avoided. As a result, they often frequently avoid establishing goals and show little dedication to those they do. They often quit easily when they encounter obstacles. They are more prone to feel depressed and like failures because they lack confidence in their own abilities. Additionally, people who have poor self-efficacy are less resilient and less likely to recover from stressful situations. The antithesis of self-efficacy is learned helplessness.

It can arise when people believe they have no control over a situation. They give up and act passively rather than seeking out ways to alter the course of events. Students have an obligation to increase their self-efficacy in order to set and achieve their goals. After failing, one can bounce back fast while still trying to achieve his objectives. Lack of self-efficacy hinders personal development and has an impact on an individual's self-efficacy.

IV. SIGNIFICANCE OF THE STUDY

Web technologies and the Internet have made online learning a reality. It is comparable to the idea of distance education. Terms like "online learning" and "distance learning" are used more frequently in the current digital era, although it is frequently challenging to tell them apart. As the name suggests, distance learning is about learning remotely. Online learning, or e-learning, is another name for this type of learning. One of the quickly growing areas of education nowadays is distance learning, often known as online study (Purcell, K., Rainie, L., Heaps, A., Buchanan, J., Friedrich, L., Jacklin, A., & Zickuhr, K. (2012)). The key distinction is that they occasionally incorporate in-person instruction into their studies.

Online learning courses, on the other hand, are completely online and offer a great deal of freedom. Where, when, and how students learn are all up to them. In order to finish the degree, students receive extra support or academic assistance. Lectures are never in-person, although they can have live online meetings. Higher academic standards, new technologies, creative teaching and learning methods and a more thorough comprehension of the material are all necessary for online learning.

Our children's ability to think and behave purposefully, be morally upright, be academically engaged and how they lead and face life will determine the future of our nation. Numerous recent reports

indicate that our schoolchildren are involved in a variety of activities, including substance abuse, dropping out of school, participating in needless arrests, and using violence. A person will achieve more academically if they remain focused on their studies. The aim of this study is to determine the connection between Attitude towards online learning and self-efficacy.

V. OBJECTIVES

1. To find out the significant difference in attitude towards online learning of 11th class students with respect to their gender.
2. To find out the significant difference in self efficacy of 11th class students with respect to their gender.
3. To find out the significant difference in attitude towards online learning of 11th class students with respect to their locality.
4. To find out the significant difference in self efficacy of 11th class students with respect to their locality.
5. To find out the significant difference in attitude towards online learning of 11th class students with respect to their subject.
6. To find out the significant difference in self efficacy of 11th class students with respect to their subject.
7. To study the significant correlation between attitude towards online learning and self efficacy of 11th class students.

VI. HYPOTHESES

1. There is no significant difference in attitude towards online learning of 11th class students with respect to their gender.
2. There is no significant difference in self efficacy of 11th class students with respect to their gender.
3. There is no significant difference in attitude towards online learning of 11th class students with respect to their locality.
4. There is no significant difference in self efficacy of 11th class students with respect to their locality.
5. There is no significant difference in attitude towards online learning of 11th class students with respect to their subject.
6. There is no significant difference in self efficacy of 11th class students with respect to their subject.

7. There is no significant correlation between attitude towards online learning and self efficacy of 11th class students.

VII. RESEARCH METHODOLOGY

To carry out this research descriptive survey method was adopted. 11th class students studying in Kanchipuram district are the population of this study. Stratified random sampling technique was used to choose 250 students as a sample of this study. The investigators constructed a tool to assess the attitude towards online learning. The scale consists of 35 statements with five alternative answers. Test retest method was used to establish the reliability. The reliability is 0.82. The validity is 0.90. The statements were assigned with strongly agree, agree, uncertain, disagree and strongly disagree with a weightage of 5, 4, 3, 2 and 1 respectively for the positive items. The negative items were scored reversely.

Self-efficacy scale was developed and standardised by Dr.G.P. Mathur and Dr. Rajkumari Bhatnagar published by Manasvi Agra was used to assess self efficacy. The Likert type 5 point scale was deemed to be more suitable for the purpose of simplicity and clarity in the application and analysis of the scale, and hence the five point scale was created. Reliability coefficient of the scale was measured by test-retest on a sample of 600 (300 male and 300 female). In male it ranges between 0.73 to 0.81 and in female 0.79 to 0.86 and is significant at 0.01 level of significance. To obtain validity of co-efficient of self-efficacy, the scale was compared with the views of experts rating. Validity ranges in male from 0.73 to 0.81 and in female from 0.76 to 0.83.

Analysis: Minimum score of the attitude towards online learning of 11th class students is 68 and maximum is 162. The mean score is 110.64 and standard deviation is 12.22. This shows that the attitude towards online learning of 11th class students is normally distributed. The Mean Score indicate that the present 11th class students have average level of attitude towards online learning.

Minimum score of the self efficacy of 11th class students is 54 and maximum is 97. The mean score is 72.97 and standard deviation is 6.4. This shows that the self efficacy of 11th class students is normally

distributed. The Mean Score indicate that the present 11th class students have average level of self efficacy.

Hypothesis: 1

There is no significant difference in the attitude towards online learning of 11th class students with respect to their gender

Table: 1

N, M, SD, df and t-values of Attitude Towards Online Learning with respect Gender

Gender	N	Mean	SD	df	t-value
Male	127	110.83	11.54	248	0.261*
Female	123	110.43	12.92		

*Not Significant at 0.05 level.

From the above table 1, it is evident that the t-value 0.261 is not significant at 0.05 level. It reflects that the mean attitude towards online learning scores of male and female 11th class students are not differing significantly. The analysis of t-test reveals that gender does not influence attitude towards online learning. Hence the null hypothesis is accepted with respect to gender. Further 11th class male and female students are not significantly differing in their attitude towards online learning.

Hypothesis: 2

There is no significant difference in the self efficacy of 11th class students with respect to their gender

Table: 2

N, M, SD, df and t-values of Self Efficacy with respect to Gender

Gender	N	Mean	SD	df	t-value
Male	127	72.98	6.71	248	0.031*
Female	123	72.95	6.09		

*Not Significant at 0.05 level.

From the above table 2, it is evident that the t-value 0.031 is not significant at 0.05 level. It reflects that the mean self efficacy scores of male and female 11th class students are not differing significantly. The analysis of t-test reveals that gender does not influence self efficacy. Hence the null hypothesis is accepted with respect to gender. Further 11th class male and female students are not significantly differing in their self efficacy.

Hypothesis: 3

There is no significant difference in the attitude towards online learning of 11th class students with respect to their locality.

Table: 3

N, M, SD, df and t-values of Attitude towards Online Learning with respect to Locality

Locality	N	Mean	SD	df	t-value
Urban	135	109.89	12.06	248	0.894*
Rural	115	111.27	12.36		

*Not Significant at 0.05 level.

From the above table 3, it is evident that the t-value 0.894 is not significant at 0.05 level. It reflects that the mean attitude towards online learning of 11th class students is not differing significantly. The analysis of t-test reveals that locality is not influences attitude towards online learning of 11th class students. Hence the null hypothesis is accepted in respect to locality. Further 11th class rural and urban students are not significantly differing in their attitude towards online learning.

Hypothesis: 4

There is no significant difference in the self efficacy of 11th class students with respect to their locality.

Table: 4

N, M, SD, df and t-values of Self Efficacy with respect to Locality

Locality	N	Mean	SD	df	t-value
Urban	135	72.40	6.59	248	1.286*
Rural	115	73.45	6.21		

*Not Significant at 0.05 level.

From the above table 4, it is evident that the t-value 1.286 is not significant at 0.05 level. It reflects that the mean self efficacy of 11th class students is not differing significantly. The analysis of t-test reveals that locality does not influence self efficacy of 11th class students. Hence the null hypothesis is accepted with respect to locality. Further 11th class rural and urban students are not significantly differing in their Self Efficacy.

Hypothesis: 5

There is no significant difference in the attitude towards online learning of 11th class students with respect to their subject.

Table: 5

N, M, SD, df and t-values of Attitude Towards Online Learning with respect to Subject

Subject	N	Mean	SD	df	t-value
Arts	122	109.07	11.51	248	1.985**
Science	128	112.12	12.72		

** Significant at 0.05 level

From the above table 5, it is evident that the t-value 1.985 is significant at 0.05 level. It reflects that the mean attitude towards online learning scores of 11th class students is differing significantly. The analysis of t-test reveals that subject influences attitude towards online learning of 11th class students. Hence the null hypothesis is rejected with respect to subject. Moreover 11th class students studying Science subject are possessing higher attitude towards online learning than 11th class students studying Arts subject.

Hypothesis: 6

There is no significant difference in the self efficacy of 11th class students with respect to their subject.

Table: 6

N, M, SD, df and t-values of Self Efficacy with respect to Subject

Type of Management	N	Mean	SD	df	t-value
Arts	122	72.95	6.42	248	0.031*
Science	128	72.98	6.39		

** Significant at 0.05 level

From the above table 6, it is evident that the t-value 0.031 is not significant at 0.05 level. It reflects that the mean attitude towards online learning of 11th class students is not differing significantly. The analysis of t-test reveals that subject does not influence self efficacy of 11th class students. Hence the null hypothesis is accepted with respect to Subject. Further 11th class Arts and Science students are not significantly differing in their Self Efficacy.

Hypothesis: 7

There is no significant correlation between attitude towards online learning and self efficacy of 11th class students.

Table: 7

Variables	Correlation coefficient	Level of Significance
Attitude towards online learning	1.56	Significant at 0.05 level
Self Efficacy		

From the above table 7, it is evident that the t-value 1.56 is significant at 0.05 level. It reflects that the attitude towards online learning and self efficacy of 11th class students are correlating significantly. Hence the null hypothesis is rejected. It is concluded that the attitude towards online learning and self efficacy of 11th class students are correlating significantly.

Findings: The present study explored that the present 11th class students have average level of attitude towards online learning. 11th class male and female students are not significantly differing in their attitude towards online learning. 11th class male and female students are not significantly differing in their self efficacy. 11th class rural and urban students are not significantly differing in their attitude towards online learning. 11th class rural and urban students are not significantly differing in their Self Efficacy. 11th class students studying Science subject are possessing higher attitude towards online learning than 11th class students studying Arts subject. 11th class Arts and Science students are not significantly differing in their Self Efficacy. Attitude towards online learning and self efficacy of 11th class students are correlating significantly.

Educational Implications: The study strongly advised the government and private school administrators to support 11th class students' attitudes toward online learning and identify problems and solutions pertaining to their technological knowledge and use of computers, the internet, and other devices in order to improve their attitude toward online learning and have very high levels of self-efficacy. Additionally, they hold training sessions to increase technical expertise. Additionally, they ought to establish an atmosphere that fosters a favorable attitude toward online education.

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