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Attitude Towards E-Learning Among Secondary School Students in East Godavari District of Andhra Pradesh

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Abstract
This study investigates the attitudes of secondary school students in East Godavari district towards e-learning, focusing on how these attitudes vary across different demographics. Descriptive Survey method has been used in this study. Survey was conducted with a sample of 200 students selected through stratified random sampling technique. The investigator used a standardised tool i.e. E-Learning Attitude Scale, developed and standardised by Ms. Sania Bhalla and Dr. Franky Rani consisting of 65 items was used as a tool for data collection. The collected data were analyzed using percentage, mean, standard deviation, t-test in SPSS software. The study examines variations in attitudes based on the key factors: gender, class, locality, social status, school management, birth order, parental status, and mother and father educational status. The findings underscore the importance of developing targeted e-learning strategies to improve student engagement and effectiveness. These insights are intended to guide educational practices and inform policy enhancements to better address the diverse needs of students in the digital learning environment.

Key Words: Digital, Environment, Excellence, Information, Learning, Social Status, Technology.

Introduction

The urge to live and develop for excellence and better perfection in life makes man more inventive and creative. This spirit of inventiveness makes man adopt new methods and techniques of science and technology for a better life, efficiency, and improvement. Every aspect of modern education is inspired and influenced by technological means, methods, and principles. The increasing use of technology in modern education has thrown a challenging responsibility on the teacher and the taught. It is in a position to remove the old traditional views and outlook of education and develop a scientific attitude towards the mechanism of human learning. Modern education is not only based on psychology but also on the technology of learning. There are various technological means and modes of education and information being used in our personal and social lives. One such means is e-learning.

E-learning is an innovative contribution to the modern education system. Using information and communication technology tools in education means using such tools through electronic media. Electronic media such as the Internet, and computers are essential everywhere. As these tools are conducted through electronic media, they are called e-tools and the learning provided using these tools is called e-learning. E-learning is learning delivered specifically through an internet connection, i.e. online. This learning is driven by a large network of students and teachers and teaching tools and technology. It is not just an interaction between a small number of students and a teacher. Rather, e-learning is a much more extensive systematic process.

In e-learning, many students can access the same facilities at the same time. E-learning methods are important determinants of the academic achievement of students. E-learning is a call of the times nowadays. The success of an education system is largely determined by the perception, attitude, role, and involvement of all the stakeholders. One important stakeholder of any education system is the students. Hence, for successful implementation of e-learning in the

teaching-learning process of the present time is largely determined by the attitude of the students.

Need and Importance of the study

21st century education encourages the further development of literacy beyond what may have been commonly taught during our school years. This includes learning about finance media social/emotional growth fitness ecology, and innovation. Books, print publications, radio, and later television were the sole sources of information and knowledge needed in the past. Today a great deal of technology has been developed and is consistently being developed. One such product of modern technology in the field of education is the practice of e-learning. Today's plethora of knowledge leads to an influx of ideas and concepts, which will probably keep knocking on an individual's door and so e-learning is a great help to this. How students' attitudes affect the successful implementation of e-learning: since e-learning courses are largely student-centered, they are more effective. Without positive attitudes from students, there is little chance of learning proficiently. To carry out any kind of educational work smoothly, students' mental preparation is required, and one important factor in this preparation is attitude. Attitude is a special type of mental organization through which students show a special and permanent type of behaviour towards a particular object like e-learning. That's why, this study aims to provide comprehensive insights into the attitudes of secondary school students towards e-learning, thereby contributing to the enhancement of digital education practices and policies.

Statement of the Problem:

The problem of the study has been titled "A Study on Attitude of Secondary School Students towards E-Learning."

Objectives of the study:

1. To study the level of Attitude towards E-learning among Secondary School Students.
2. To study the significant difference among the attitude of students according to their demographic variables viz., Gender (Male/Female), Class (IX/X), Locality (Rural/Urban/Tribal), Social Status (OC/BC/SC/ST), School Management (Government / Aided / Private) , Birth Order (Only Child/First Child/Second Child/ Third & above)., Parental Status (Mother Alive/Father Alive / Both are Alive), Mother Educational Status (No Education / Classes I to V/ Classes VI to X/ Intermediate and above) and Father Educational Status (No Education / Classes I to V/ Classes VI to X/ Intermediate and above) towards E-learning in Secondary School of East Godavari district of Andhra Pradesh.
3. To suggest means for strengthening Attitude towards E-learning among Secondary School Students.

Hypotheses of the present study

1. There is a high level of Attitude towards E-learning among Secondary School Students.
2. There is no significant difference between the attitude of male and female category students towards E-learning in Secondary Schools of East Godavari District.
3. There is no significant difference between the attitude of IX and X class students towards E-learning in Secondary Schools of East Godavari District.
4. There is no significant difference among the attitude of students based on their locality towards E-learning in Secondary Schools of East Godavari District.
5. There is no significant difference among the attitude of students based on their social status towards E-learning in Secondary Schools of East Godavari District.
6. There is no significant difference among the attitude of students based on their school management towards E-learning in Secondary Schools of East Godavari District.
7. There is no significant difference among the attitude of students based on their birth order towards E-learning in Secondary Schools of East Godavari District.
8. There is no significant difference among the attitude of students based on their parental status towards E-learning in Secondary Schools of East Godavari District.

9. There is no significant difference among the attitude of students based on their mother educational status towards E-learning in Secondary Schools of East Godavari District.
10. There is no significant difference among the attitude of students based on their father educational status towards E-learning in Secondary Schools of East Godavari District.

Review of Related Literature

Neelam Karanwal & Ms. Priya Mishra (2026) studied on "Attitudes of Secondary School Students toward E-Learning: A Gender-Based Comparative Analysis". The present study aimed to examine and compare the attitudes of secondary school students toward e-learning with reference to gender. The findings revealed that although male students obtained slightly higher mean scores across most dimensions, the differences were not statistically significant at either the 0.05 or 0.01 levels. Thus, the null hypotheses were accepted for overall attitude and all four dimensions. The study concludes that gender does not significantly influence secondary school students' attitudes toward e-learning.

Anbalagan, S. (2024) studied on "Attitude towards E-Learning among Secondary School Students in Madurai District". The study examines variations in attitudes based on three key factors: gender, locality, and medium of instruction. Analysis reveals significant differences in students' perceptions, indicating that attitudes towards e-learning are influenced by these demographic factors. The findings underscore the importance of developing targeted e-learning strategies to improve student engagement and effectiveness.

Singh and Riza (2022) conducted a study on the attitude of Rajiv Gandhi University students towards e-learning. The main findings of this study are (i) there was a significant difference between the attitude of male and female students towards e-learning and no difference was found based on tribal status, settlement, and subject background.

Konwar (2017) studied the attitude of college students towards e-learning with special reference to the North Lakhimpur district of Assam. The sample consists of 200 college students from North Lakhimpur district. Attitude towards E-leaning Scale constructed and standardized by Dimple Rani was used to collect the data. It was found from the study that college students have a positive attitude towards e-learning and gender as well as locality is not the contributory factor regarding the attitude of college students towards e-learning.

Design of the Study

The researcher followed the survey method of the descriptive research. For this investigation the standardised tool (Questionnaire) had been considered as a suitable tool for the collection of data. The questionnaire consisted of 65 statements as perceived by the students.

LIMITATIONS OF THE STUDY

The study is limited to find out the Attitude towards E-Learning of the demographic variables, viz., Gender, Class, Locality, Social Status, Management, Birth Order, Mother Qualification and Father Qualification of the secondary school students in East Godavari district of Andhra Pradesh.

DELIMITATIONS OF THE STUDY

The study is confined to 200 students (100 male and 100 female) selected secondary schools located in East Godavari District of Andhra Pradesh.

METHODOLOGY

(a) Method of Research

Since the present study involves collecting data with the help of survey, the investigators used Descriptive Survey method for the present investigation.

(b) Sample

The sample consisting of 200 students (100 male and 100 female) has been

selected from identified secondary schools located in East Godavari district of Andhra Pradesh using 'Stratified Random Sampling' technique. In this method, no significant group is left unrepresented and this gives a greater control over the sample.

(c) Research Tool
The researchers used E-Learning Attitude Scale (ATELS-RD), developed and standardised by Ms. Sania Bhalla and Dr. Franky Rani (English version) consists of 65 statements.

(d) Administration of the tool
The tool was administered to 200 students (100 male and 100 female) in selected secondary schools located in East Godavari district of Andhra Pradesh using 'Stratified Random Sampling' technique. Necessary instructions were given in filling the tool. All the respondents followed the instructions and filled the tool by reading the all the items carefully.

Method of Scoring:
The scale was scored as prescribed by its authors. For positive statements, scores of 5 to 1 were given for responses from Strongly Agree to Strongly Disagree; for negative statements, this scoring was reversed.

The total attitude score of a respondent was obtained by adding the scores on all 65 statements, so that a higher score indicates a more favourable attitude towards e-learning, and a lower score a less favourable one.

Administration of Tool:
The tool was administered among secondary school students, necessary instructions were given in filling the tool.

All the respondents followed the instructions and filled the tool by reading the all the items carefully.

Data Collection:
The investigator personally visited the sampled schools and administered the tool among the sampled respondents. The data collected through questionnaire was used for analytical purposes.

Statistical Techniques Used:
The statistical techniques used mainly for analytical purposes were means, standard deviations were used To study the significant differences in between the socio-economic variables, 't'-test and 'F-test (ANOVA) have been used by the investigator with the help of Statistical Package for Social Sciences (SPSS).

Table 1: Level of attitude toward E-learning among Secondary School students

S.NO.	Levels	Range Score	N	Percent
1	Very High	274-325	7	3.50
2	High	222-273	75	37.50
3	Average	170-221	114	57.00
4	Low	118-169	3	1.50
5	Very Low	65-117	1	0.50

Table 1 shows the distribution of students according to the levels of Attitude towards E-learning. From the table, it is observed that the majority of students, 57.00%, possess an average level of attitude towards E-learning with score range 170-221, followed by 37.50% of students who possess a high level of attitude with score range 222-273.Only 3.50% of students fall under the very high level category with score range 274-325. The percentage of students in low level (118-169) is 1.50% and very low level (65-117) is only 0.50%. Thus, it can be inferred that most of the students have average to high level of positive attitude towards E-learning.

Table 1: Level of attitude toward E-learning among Secondary School students

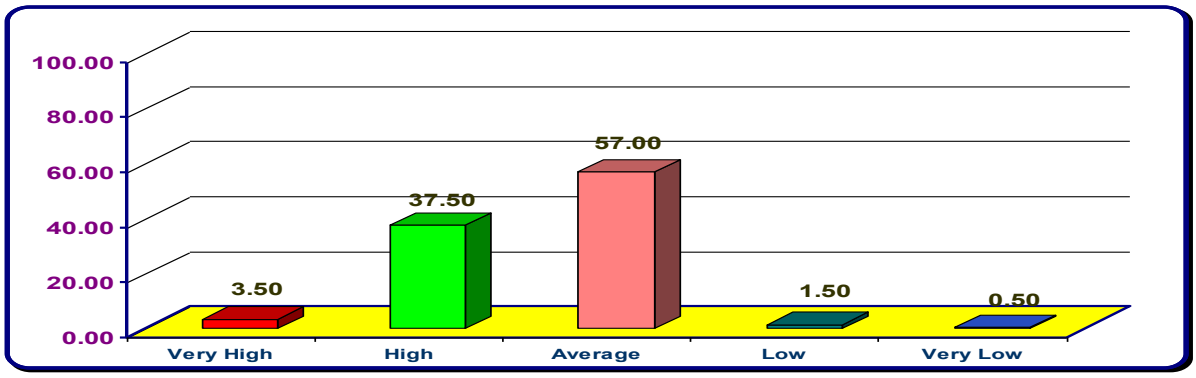

Table 2. Significant difference between the mean attitude scores of male and female category students towards E-learning in Secondary schools of East Godavari District.

Gender	N	Mean	SD	t-Value	p-value
Male	100	212.65	20.10	6.82**	0.00
Female	100	218.20	18.86		

Table 2, observed that, the mean attitude score of male category students towards E-Learning is 212.65 whereas it is for female category students was 218.20 and the SD values are 20.10 and 18.86 respectively. The 't'-value was 6.82 and the p-value was 0.00, which was significant at 0.01 level. This shows that, there is a significant difference between male and female category students attitude and female category students are high attitude than that of male category students towards E-Learning.

Table 2. Significant difference between the mean scores of male and female category students attitude towards E-learning in Secondary schools of East Godavari District.

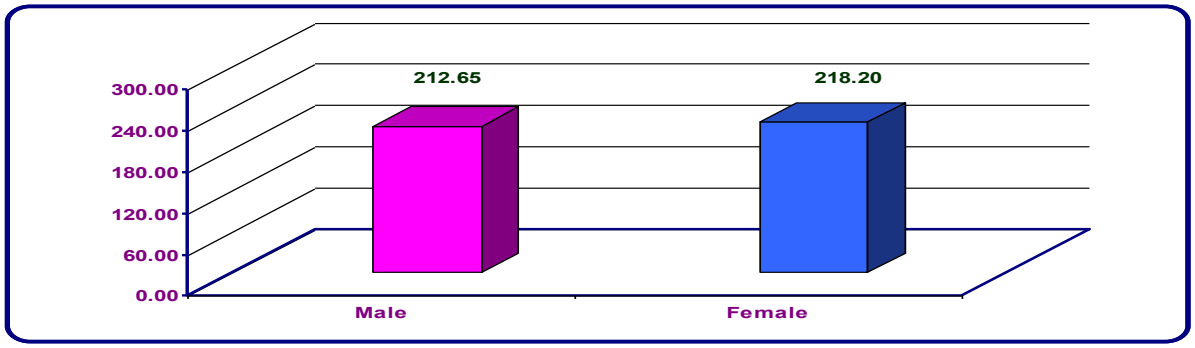

Table 3. Significant difference between the mean scores of male and female category students attitude towards E-learning in Secondary schools of East Godavari District.

Class	N	Mean	SD	t-Value	p-value

IX Class	100	217.40	20.62	3.14**	0.00
X Class	100	219.06	19.07		

Table 3, observed that, the mean attitude score of IX class students towards E-Learning is 217.40 whereas it is for X class students was 219.06 and the SD values are 20.62 and 19.07 respectively. The 't'-value was 3.14and the p-value was 0.00, which was significant at 0.01 level. This shows that, there is a significant difference between IX and X class students attitude and X class students are high attitude than that of IX class students towards E-Learning.

Table 3. Significant difference between the mean scores of male and female category students attitude towards E-learning in Secondary schools of East Godavari District.

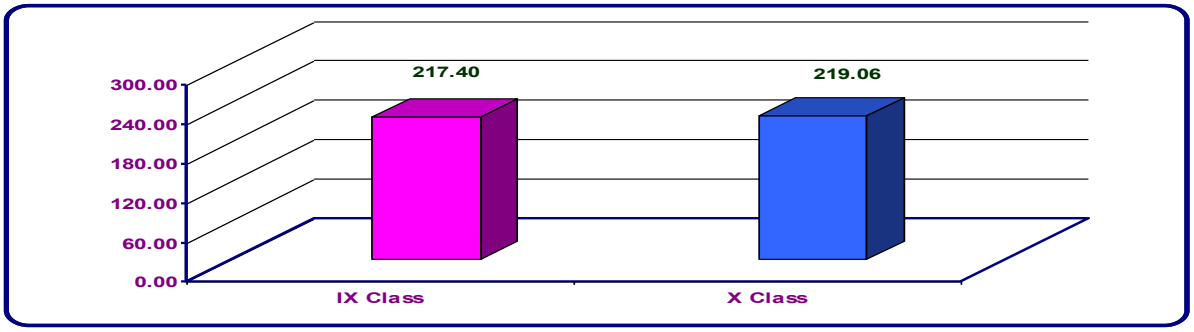

Table 4. Significant difference among the students attitude based on their locality towards E-learning in Secondary schools of East Godavari district.

Locality	N	Mean	SD	F-Value	p-value
Rural	100	217.65	19.90	11.07**	0.00
Urban	75	215.21	16.05		
Tribal	25	222.32	28.14		

Table 4, observed that, the mean attitude scores of rural area students towards E-Learning was 217.65 whereas it was for urban area students was 215.21 and Tribal area students was 222.32 and the SD values are 19.90, 16.05 and 28.14 respectively. The 'F'-value was 11.07 and the p-value was 0.00, which was significant at 0.01 level. This shows that, there is a significant difference among the attitude of students attitude score based on their locality and Tribal area students are having high attitude than that of the rest towards E-Learning.

Table 4. Significant difference among the students attitude based on their locality towards E-learning in Secondary schools of East Godavari district.

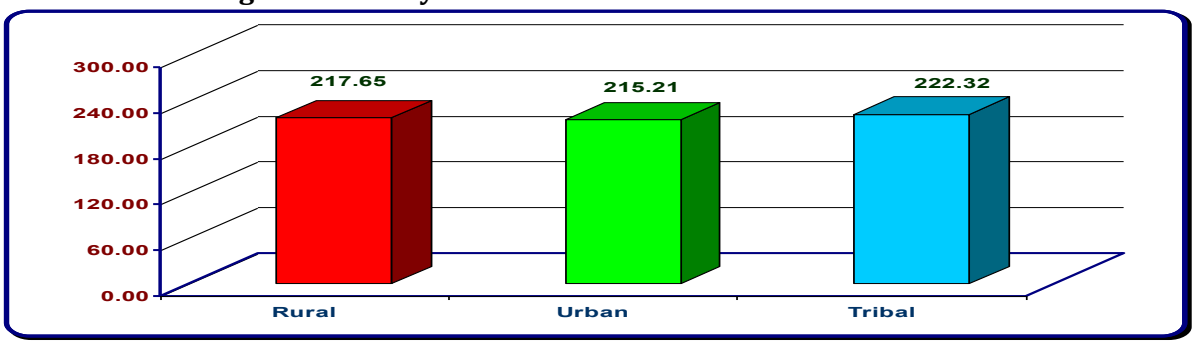

Table 5. Significant difference among the students attitude based on their social status towards E-learning in Secondary schools of East Godavari district.

Social Status	N	Mean	SD	F-Value	p-value

OC	38	218.94	18.76	6.96**	0.00
BC	127	216.14	16.70		
SC	23	217.42	21.46		
ST	12	223.37	27.38		

Table 5 revealed that, the mean attitude score of OC caste category students on E-Learning is 218.94, for BC caste category students is 216.14, SC caste category students is 217.42, and ST caste category students is 223.37. The S. D values are 18.76, 16.70, 21.46 and 27.38 respectively. The obtained 'F'- value is 6.96 and the p-value is 0. 00, which is significant at 0. 01 level. So there is a significant difference among the attitude of students based on their social status. ST caste category students are having high attitude than that of the rest towards E-Learning.

Table 5. Significant difference among the students attitude based on their social status towards E-learning in Secondary schools of East Godavari district.

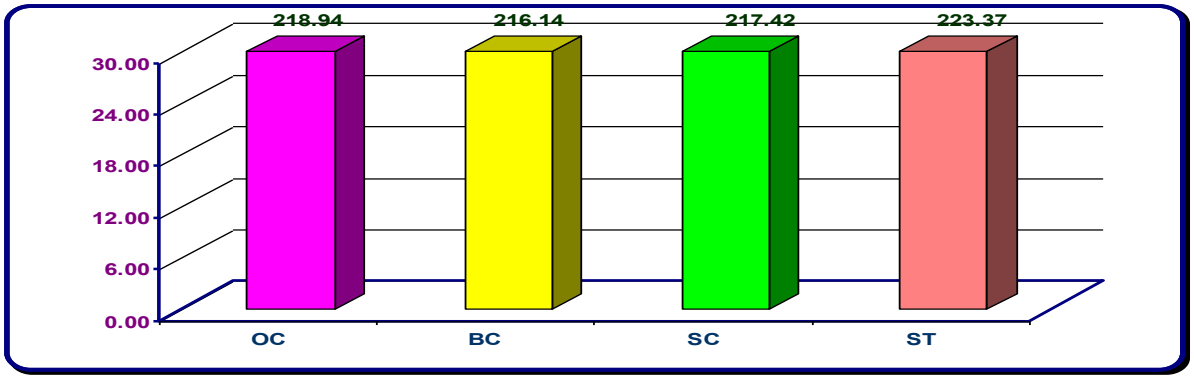

Table 6. Significant difference among the students attitude based on their management towards E-learning in Secondary schools of East Godavari district.

Management	N	Mean	SD	F-Value	p-value
Government	100	220.86	20.88	3.26*	0.05
Aided	50	218.20	13.06		
Private	50	217.35	16.25		

Table 6 revealed that, the mean attitude score of Government school students on E-Learning is 220.86, for Aided school students is 218.20 and Private school students is 217.35. The S. D values are 20.88, 13.06, and 16.25 respectively. The obtained 'F'- value is 3.26 and the p-value is 0. 05, which is significant at 0. 05 level. So there is a significant difference among the attitude of students based on their management. Government school students are having high attitude than that of the rest towards E-Learning.

Table 6. Significant difference among the students attitude based on their management towards E-learning in Secondary schools of East Godavari district.

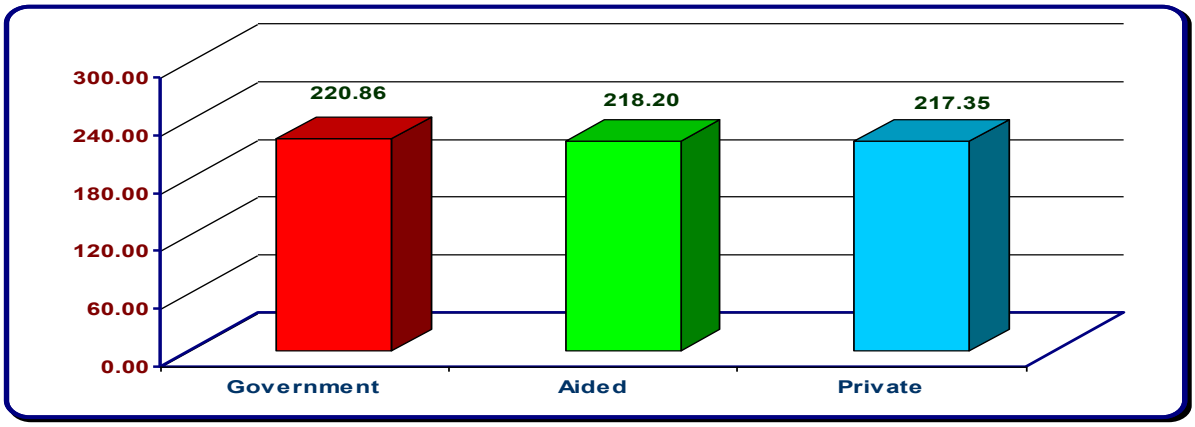

Table 7. Significant difference among the students attitude based on their birth order towards E-learning in Secondary schools of East Godavari district.

Birth Order	N	Mean	SD	F-Value	p-value
Only Child	14	223.75	19.38	7.54**	0.00
First Child	96	219.40	18.86		
Second Child	61	218.24	20.21		
Third and above	29	222.38	24.57		

Table 7 revealed that, the mean attitude score of only child birth order of students on E-Learning is 223.75, for First Child is 219.40, Second Child is 218.24, and Third and above is 222.38. The S. D values are 19.38, 18.86, 20.21 and 24.57 respectively. The obtained 'F'- value is 7.54 and the p-value is 0. 00, which is significant at 0. 01 level. So there is a significant difference among the attitude of students based on their birth order. Second Child birth order of students are having high attitude than that of the rest towards E-Learning.

Table 7. Significant difference among the students attitude based on their birth order towards E-learning in Secondary schools of East Godavari district.

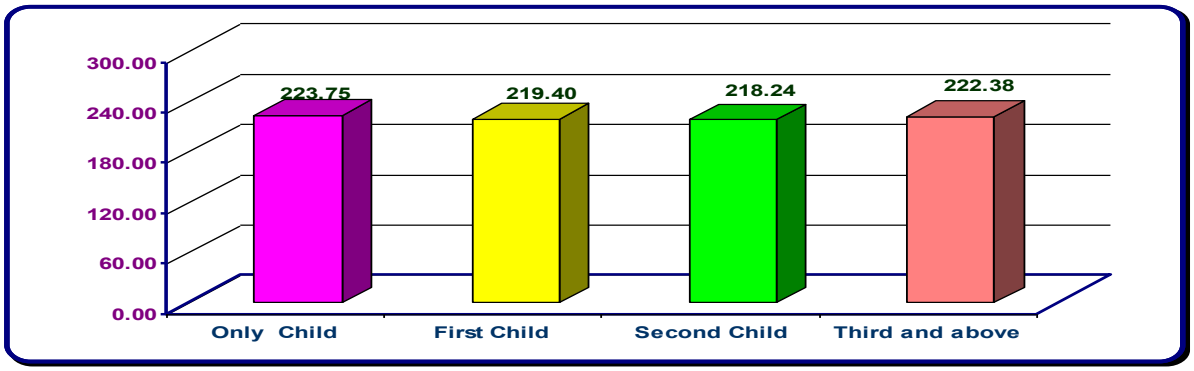

Table 8. Significant difference among the students attitude based on their parental status towards E-learning in Secondary schools of East Godavari district.

Parental Status	N	Mean	SD	F-Value	p-value
Mother Alive	11	224.08	20.60	2.78*	0.05
Father Alive	6	214.30	18.64		

Both Parents Alive	183	218.56	19.83		

Table 8 revealed that, the mean attitude score of students whose mothers are alive on E-Learning is 224.08, for father alive is 214.30 and for both parents alive is 218.56. The S. D values are 20.60, 18.64, and 19.83 respectively. The obtained 'F'- value is 2.78 and the p-value is 0. 05, which is significant at 0.05 level. So there is a significant difference among the attitude students based on their parental status and students whose mother alive are having high attitude than that of the rest towards E-Learning.

Table 8. Significant difference among the students attitude based on their parental status towards E-learning in Secondary schools of East Godavari district.

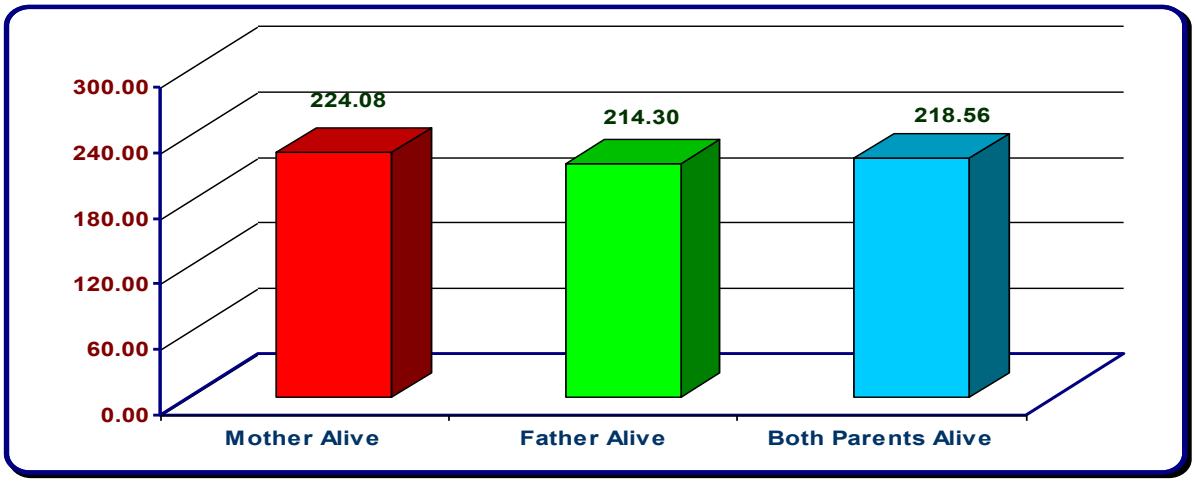

Table 9. Significant difference among the students attitude based on their mother educational status towards E-learning in Secondary schools of East Godavari district.

Mother Educational Status	N	Mean	SD	F-Value	p-value
No Education	27	223.25	19.95	2.99*	0.05
Classes I to V	63	221.34	23.19		
Classes VI to X	92	220.23	17.53		
Intermediate and Above	18	218.08	19.77		

Table 9 revealed that, the mean attitude score of students whose mother are having no education on E-Learning is 223.25, for Classes I to V is 221.34, for Classes VI to X is 220.23, and Intermediate and above is 218.08. The S. D values are 19.95, 23.19, 17.53 and 19.77 respectively. The obtained 'F'- value is 2.99 and the p-value is 0. 05, which is significant at 0. 05 level. So there is a significant difference among the attitude of students based on their mother educational status. Students whose mothers qualified Intermediate and above having high attitude than that of the rest towards E-Learning.

Table 9. Significant difference among the students attitude based on their mother educational status towards E-learning in Secondary schools of East Godavari district.

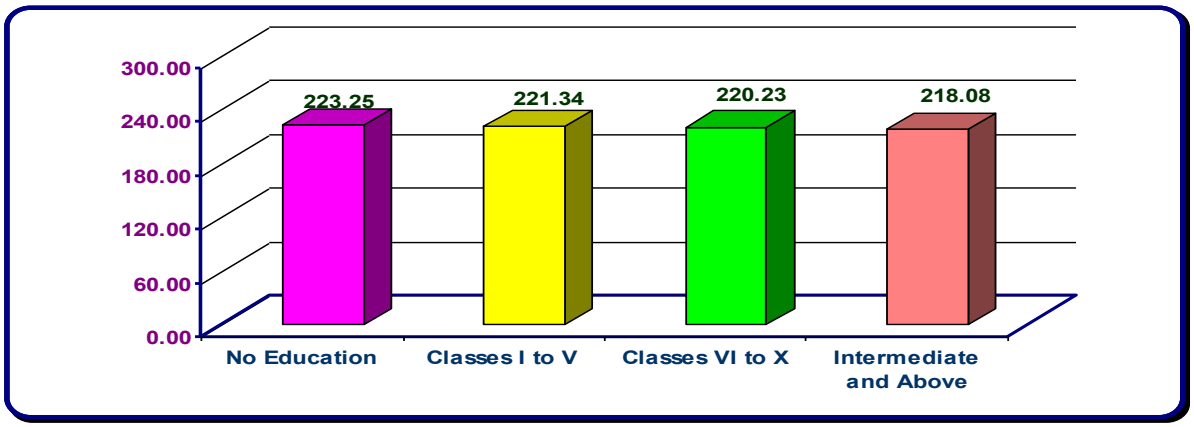

Table 10. Significant difference among the students attitude based on their father educational status towards E-learning in Secondary schools of East Godavari district.

Father Educational Status	N	Mean	SD	F-Value	p-value
No Education	23	221.91	19.76	4.85**	0.00
Classes I to V	47	219.09	19.19		
Classes VI to X	101	220.65	21.62		
Intermediate and Above	29	217.37	17.12		

Table 10 revealed that, the mean attitude score of students whose fathers are having no education on E-Learning is 221.91, for Classes I to V is 219.09, for Classes VI to X is 220.65, and Intermediate and above is 217.37. The S. D values are 19.76, 19.19, 21.62 and 17.12 respectively. The obtained 'F'- value is 4.85 and the p-value is 0. 00, which is significant at 0. 01 level. So there is a significant difference among the attitude of students based on their father educational status. Students whose fathers qualified Intermediate and above are having high attitude than that of the rest towards E-Learning.

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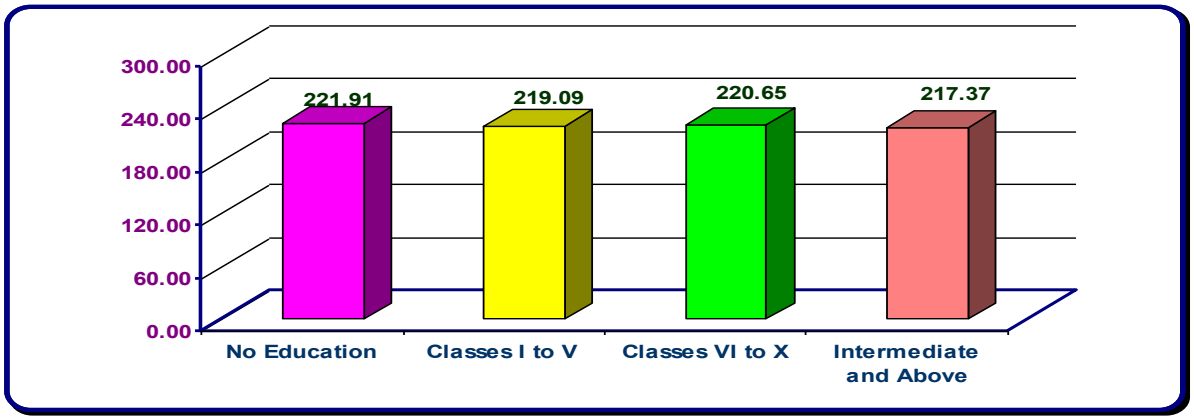

Major Findings:

1. Majority of students, 57.00%, possess an average level of attitude towards E-learning with score range 170-221, followed by 37.50% of students who possess a high level of attitude with score range 222-273.Only 3.50% of students fall under the very high level category with score range 274-325. The percentage of students in low level (118-169) is 1.50% and very

low level (65-117) is only 0.50%. Thus, it can be inferred that most of the students have average to high level of positive attitude towards E-learning.

2. There is a significant difference between male and female category students attitude and female category students are high attitude than that of male category students towards E-Learning.
3. There is a significant difference between IX and X class students attitude and X class students are high attitude than that of IX class students towards E-Learning.
4. There is a significant difference among the attitude of students attitude score based on their locality and Tribal area students are having high attitude than that of the rest towards E-Learning.
5. There is a significant difference among the attitude of students based on their social status. ST caste category students are having high attitude than that of the rest towards E-Learning.
6. There is a significant difference among the attitude of students based on their management. Government school students are having high attitude than that of the rest towards E-Learning.
7. There is a significant difference among the attitude of students based on their birth order. Second Child birth order of students are having high attitude than that of the rest towards E-Learning.
8. There is a significant difference among the attitude students based on their parental status and students whose mother alive are having high attitude than that of the rest towards E-Learning.
9. There is a significant difference among the attitude of students based on their mother educational status. Students whose mothers qualified Intermediate and above having high attitude than that of the rest towards E-Learning.
10. There is a significant difference among the attitude of students based on their father educational status. Students whose fathers qualified Intermediate and above are having high attitude than that of the rest towards E-Learning.

Conclusion

In the end this study has managed to give an insight into the attitudes of secondary school students towards e-learning. The results show that students like e-learning because of its flexible and accessible nature. Really the students have a positive attitude towards e-learning demonstrates that they are ready and open to this form of learning. Although this may be the case, there is need to put up the necessary infrastructure and offer enough support and equip both students and the teachers with the appropriate technological skills. Educational institutes and other stakeholders must seriously consider these factors when designing e-learning programmes. By tackling the challenges encountered and at the same time taking advantage of the positive sides of e-learning, a more interactive, inclusive, and effective learning environment can be created for the learners. I think this study has managed to show the importance of students' attitude as something important in the successful implementation of e-learning. Further studies will need to focus more on the aspect of students' attitude towards e-learning to find out what more can be done to establish long term effects and ways to counter some of the challenges that this research has identified.

Suggestions:

1. Schools and teachers promote the effective use of e-learning platforms and strengthen technological support to encourage a more favourable attitude.
2. Schools build adequate ICT infrastructure and provide training to both teachers and students.
3. Improving digital infrastructure, encouraging technology-based teaching, and motivating students to make fuller use of e-learning platforms.
4. Establish E-learning Lab in all secondary schools

5. Systematic evaluation of online programmes together with better technological support and resources to improve participation and attitude.
6. Inclusion of metacognitive-training strategies in digital education.
7. It was suggested that, stronger digital infrastructure, better accessibility, engaging e-learning environments, user-friendly tools, and supportive ecosystems.

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