Perception Of Secondary School Students About Online Education

*[1]Utkal Keshari Sahoo, [2]Prof. (Dr.) Jyoti Sankar Pradhan, [3]Dr. Kulamani Sahoo

[1]Research Scholar, [2]Professor and Former Head, [3]Assistant Professor

[1]P.G. Department of Education

[1]Fakir Mohan University, Balasore, Odisha, India

Abstract

Online class is a type of class wherein teaching-learning process conducted through virtual mode. During COVID-19 Pandemic, face-to-face class was not possible to conduct. Therefore, online class was taken by teachers to continue the education process. At that time, online education becomes more popular at school level. This research paper aimed to examine the perception of secondary school students towards online education with including various dimensions of online education, such as: teachers' methods in online learning, convenience in online learning, learning motivation of students in online learning, effectiveness of online learning. The researcher adopted descriptive survey research for conducting this study. Sample of the study consists 80 secondary school students including boys and girls from both rural and urban areas. These sample were selected through using stratified random sampling techniques and the researcher used a self-made questionnaire tool to collect the data from the participants. Furthermore, the purpose of analysis and interpretation of the data the researcher used percentage analysis, Mean, Standard Deviation and t-test. The findings of the study pointed out that most of the students perceived positive perception regarding teaching methods of teachers and most students found the materials accessible, understandable, and applicable, and participated actively in discussions. Similarly, Students perceived moderate to high convenience in online learning, particularly in completing assignments and engaging with forums. However, communication issues and teacher responsiveness to students' personal obstacles emerged as significant challenges. Overall, students perceived a high level of attention and motivation regarding online education, while perceived a negative to moderate perception towards the effectiveness of online education compared to physical class. This research study also founded that there is no significant difference between the perception of male and female secondary school students towards online education but there is significant

difference between the perception of rural and urban secondary school students towards online education. Rural secondary school students possessed more favourable perception towards online education.

Key Words: Online Education, Perception, Secondary School Students

Introduction

Online learning is a type of learning in where students and teachers do not attend the class in regular or face-to-face mode. They are attending this teaching-learning process in virtual mode rather than physical mode. Online education is the electronically supported learning that relies on the internet for teacher/student interaction and the distribution of class materials. Online learning is learning that is done online which can be done anytime and anywhere (White, 2007). In COVID-19 pandemic time, mode of teaching-learning situation is changed. At that time online learning plays a crucial role and mainly made popularity and it was one of the essential mediums through which we continued the formal education. (Chauhan & Thakur, 2023) In other word, we can say that when the teaching-learning process is school level was going to be collapsed due the great impact of COVID-19, at that time online learning is considered as the only one option to continue the education for the school going students. Online teaching has offered an opportunity of new beginning for both teachers and students with its advantages and challenges. While online teaching-learning offering flexibility and convenience, it has also courted students' engagement, interaction, and academic integrity. (Irfan & Rahim, 2023) Teachers, meanwhile, have been thrust into a new teaching situation with not much or no beforehand preparation and experience in online teaching. In case of students (particularly school level student) this education mode was totally a new phase of learning. (Irfan & Rahim, 2023) So, students may face various problem and issues regarding this situation of online learning. It is therefore crucial to explore students' perceptions towards online education.

Background of the Study

Online education was most popular during the covid time to continue the educational process. At the same time various research studies were conducted upon online education to know the perception of teachers and students towards online learning and their attitudes upon the online education. Some research studies also be conducted to examine the effect of online learning on students' academic achievement, motivation, classroom engagement etc.

There are many researches have already conducted related to online education. After reviewing various articles and journals the researcher found that many research studies have addressed the problem, impact and perception of students related to online education in higher education. Almahasees. et al. (2021), Lade. et al. (2022), Omar. et al. (2021), founds that online education is useful, majority of students preferred online education and have positive perception towards online education. Several researchers (Lade et al., 2022; Asif et al., 2022; Mohammed et al., 2022; Vaidya et al., 2021) found that students appreciated the flexibility, time-saving nature, and self-directed learning opportunities that online education offered. However, the shift was not without challenges. Poor internet connectivity, lack of proper learning devices, and digital illiteracy significantly hindered and affected the learning experience, especially in rural and remote areas (Harefa et al., 2022; Masud et al., 2021; Barik, 2022; Mehra & Baliya, 2023). Similarly, some research founded that online learning is considered less effective because of communication network problem and online

education cannot replace the traditional classroom education. (Kulal, et al., 2020; Harefa, et al. 2022). Psychological and physical issues like screen fatigue, stress, and feelings of isolation were also reported and it affected the learning process during online classes (Bharadwaz et al., 2021; Mehra & Baliya, 2023). These studies have focuses on different aspect of online education. Furthermore, most of secondary school going students showed negative attitudes towards online education, failed manage time-table, didn't feel motivated during online education and missed concepts due to poor network. (Mehra & Baliya, 2023) Similarly, a research study found that students opined that online classes were not effective as it requires self-motivation as well as a lack of direct interaction with the teachers and fellow-mates are the major issues related to online education. (Barik, 2022) In contrast to it, in a study it was found that students perceived positively towards online education environment and stated positive perception towards various factors of education environment in online mode such as educational process, mode of delivering the session and its effectiveness, assessment process, institutes administration, teacher as a facilitator and co-curricular activity. (Nandedkar & Jhawar, 2024). Some studies (Sarkar et al., 2022; Surapuramath, 2021) indicated demographic variations, with female and urban showing comparatively more favourable attitudes than their counterparts. Similarly, research by Gopal et al. (2021) emphasized the importance of instructional quality, feedback mechanisms, and course design in enhancing student satisfaction and performance. While some students preferred hybrid models or continued online education (Giday & Perumal, 2024), others expressed dissatisfaction due to lack of engagement and interaction. Setiyono et al. (2021) observed perceptual differences between types of high school students, reported that although students had a generally positive outlook, they faced multiple practical challenges. Post-pandemic research (Nandedkar & Jhawar, 2024) has highlighted students' growing acceptance of online environments, especially in higher education settings. After reviewing these research articles, it has been shown that perception of students towards online education varying at different levels of education and findings of the study is mainly inconsistence, contextual and depended upon different grade of students, geographical area, environment of that particular school, competency of teachers, student's motivation etc.

But there are few researches conducted on the perception of secondary school students towards online education. So present study is mainly conducted to emphasis on what are the perception of secondary level 9th class students towards online education with reference their gender and locality. Output of those students may vary with respect to their gender and area. After studying reviews, the researcher also found that there are a very few numbers of research conducted in Odisha context. But there are no feasible researches are still conducted particularly in Bhadrak District of Odisha. Thus, the present study is conducted to study the perception secondary school students towards online education.

Operational Definition of the Terms Used

Perception: Perception means how one individual perceives something about a phenomenon. In this study perception refers to how secondary school students perceives and what are their way of looking, opinion and understanding towards online education.

Secondary School Students: Secondary school student refers to those students who are studying in both 9th 10th class. But in this study secondary school students refers to only 9th class student of Bhadrak Block.

Online Education: Online education is a process of teaching learning which is done through virtual mode. But in this study online education refers to the process of virtual conversation between teacher and student which is conducted through various online medium like WhatsApp, Google meet, Zoom etc.

Objectives of the Study

1. To study the perception of secondary school students towards online education.

2. To study the perception of secondary school students towards online education with reference to gender (male & female).

3. To study the perception of student of secondary school towards online education with reference to locality (urban & rural).

Hypotheses of the Study

Ho1: The perception of secondary school students about online education do not significantly differ based on their gender (male & female).

Ho2: The perception of secondary school students about online education do not significantly differ based on their locality (Urban & Rural).

Methodology

In the present study, the researcher adopted Descriptive Survey Design to investigate the perception of secondary school students about online education in Bhadrak Block of Odisha. For this purpose, the researcher developed a self-constructed four-point Likert Scale questionnaire tool in both Odia and English Language and collected data from the participants. This tool is comprising 30 items related to various dimensions of online education. Initially, 50 items were developed by the researcher, out of which 30 were selected by experts for the final tool. In this questionnaire total there were 4 responses included, which were: Disagree, Neutral, Agree, and Strongly Agree.

The population for the study included all the secondary school students those were studying in 9th class of Bhadrak Block, while the accessible population comprised students from four selected schools—two urban and two rural. Using Stratified Random Sampling Techniques, a total of 80 students were selected as the sample. After the selection of sample, the questionnaire served as the primary tool to these students to collect their perception regarding online education, and data was gathered through direct administration of the survey in the selected schools.

Delimitation of the Study

1. The study is delimited to Bhadrak Block only.

2. Further, the study is delimited to 9th class students only.

3. The study is delimited to 4 Govt. secondary schools (2 rural &2 urban) only.

Statistical Techniques Used

After collecting the data next step is to analyse the data. In this research percentage analysis and t-test were used for the analysis the data. In this study the researcher followed a quantitative analysis process for the data analysis.

Analysis And Interpretation

Analysis of the data means studying the tabulated material in order to determine inherent facts or meanings. The purpose of analysis is to find out the relationship between variables, which lead to the verification of hypothesis. This is achieved by logical organization of the data and use of relevant statistical techniques. In this study the quantitative data as analysed through t-test.

Table-1: Students Perception on Teachers' Methods in Online Learning

Statement	Disagreed		Neutral		Agreed	
	N	%	N	%	N	%
1.I obtain and find out all the teaching materials/ learning materials delivered by the teacher when studying online	9	11.25%	15	18.75%	56	70%
2. Understanding of the materials presented by the teacher when studying online studied	7	8.75%	15	18.75%	58	72.5%
3.I can re-described the materials that has been provided in online by the teacher on time	11	13.75%	12	15%	57	71.25%
4. Responding to questions that appear in discussion forum of subject matter provided by the teacher during online learning	6	7.5%	11	13.75%	63	78.75%
5. I apply the subject matter delivered by the teacher in every day	3	3.75%	11	13.75%	66	82.5%

Table-1: showed about students' perception on teaching methods during online education. Out of 80 students, 56 students (70%) agreed that they obtained and found out all the teaching and learning materials provided by teacher during online class. Which indicates that teachers were more aware about that teaching and learning material is very essential for students during online session. Similarly, 58 (72.5%) secondary school students agreed that they understood the teaching materials which provided by the teacher at the time of online learning. Which indicated that most of the students agreed that teaching method of the teachers were effective for them. However, about 27.5% either stayed neutral or disagreed, which highlights the need for further improvement in instructional clarity or support mechanisms. Furthermore, out of total students (N=80), around 71.25% students (N= 57) agreed that they could re-described the teaching-learning materials effectively that has been previously provided by the teachers during the online class. It means, students

attained online class actively and listen the teaching of their educators. Additionally, most of the students 78.75% (N= 63) also agreed that they responded teachers question which was appearing discussion forum of subject matter in the time of virtual classes and out of these students 66 secondary school students (82.5%) respondent that they applied subject matter delivered by teachers in their day-to-day life, a minimal percentage (3.75%) disagreed, while 13.75% remained neutral. Overall, the main results of this discussion pointed out that most of the students perceived positive perception regarding teaching methods of teachers and most students found the materials accessible, understandable, and applicable, and participated actively in discussions.

Table-2: Students Perception on Their Convenience in Online Learning

Statement	Disagreed		Neutral		Agreed	
	N	%	N	%	N	%
6. I can communicate smoothly with the teacher during online learning	21	26.25%	13	16.25%	46	57.5%
7. I can ask directly to the teacher when I do not understand the subject matter during online learning	13	16.25%	13	16.25%	54	67.5%
8. I always get a good response from teacher during the online class	10	12.5%	23	28.75%	47	58.75%
9. I enjoy doing assignment given by the teacher on online learning	10	12.5%	13	16.25%	57	71.25%
10. I feel comfortable because the teacher always understands the obstacles experienced when learning online (for example network barriers and data packets)	28	35%	19	23.75%	33	41.25%
11. Active in following class discussion forum created by the teacher during online learning	9	11.25%	20	25%	51	63.75%

Table-2: showed about students' perception on their convenience in online learning. Out of total number of students, around 57.5% students agreed that they could communicate smoothly with teachers during online session, while a notable 26.25% disagreed and 16.25% students remained neutral. This suggested that communication between students and teachers quite challenging for over a quarter of the learners. Similarly, 67.5% of students reported that they could asked directly to the teacher when they did not understand the subject matter, However, 16.25% disagreed and the same proportion remained neutral, indicating that not all students feel confident or able to interact openly with educators. Furthermore, 58.75% of students pointed that they always got a good response from teacher during the online class, while 28.75% of students remained neutral and 12.5% of students disagreed about this. Which revealed inconsistency of providing feedback to the students during online session. Majority of the students (71.25%) agreed that they enjoyed

doing assignments in the online setting, which showed a positive indicator of engagement and motivation, despite the learning environment. Similarly, out of all students, only 41.25% of students agreed that teachers understood their online learning challenges, 23.75% of students quite neutral about it, while 35% disagreed about this statement and felt uncomfortable during the time of online session due to the inability of understanding the barriers by the teachers' during online class. Which highlighted a critical area needing improvement, such as better empathy or accommodations for issues like poor connectivity or lack of resources. Similarly, about 63.75% of students claimed to actively follow discussion forums, although 25% were neutral and 11.25% disagreed. Overall, Students generally perceived moderate to high convenience in online learning, particularly in completing assignments and engaging with forums. However, communication issues and teacher responsiveness to students' personal obstacles emerged as significant challenges.

Table-3: Students' Perception on Learning Motivation in Online Learning

Statement	Disagreed		Neutral		Agreed	
	N	%	N	%	N	%
12. I always do my camera on during online learning	19	23.75%	28	35%	33	41.25%
13. I pay attention when teacher provides learning explanations during online classes	5	6.25%	2	2.5%	73	91.25%
14. I participate in discussion group study assignment which is formed by the teacher during online class.	10	12.5%	13	16.25%	57	71.25%
15. I always submit assignments given by the teacher on time	15	18.75%	10	12.5%	55	68.75%
16. I learn guidelines about learning online from internet	6	7.5%	13	16.25%	61	76.25%
17. I sit calmly during online learning in front of laptop/cell-phone until the time set by the school/teacher	6	7.5%	14	17.5%	60	75%

Table-3: reflected about students' perception on learning motivation in online learning. Which showed that only 41.25% of students agreed that they always turn on their cameras during online classes. While, a significant 35% of students remained neutral, and 23.75% disagreed. This indicated that visual engagement was relatively low, possibly due to issues like poor internet connectivity or discomfort with appearing on camera. More ever, a great majority of students (91.25%) agreed that they paid attention when teacher provides learning explanations during online classes. Similarly, majority of students (71.25%) agreed that they participated in discussion group study assignment which is formed by the teacher during online class and 12.5% of students quite disagreed, while, 16.25% remained neutral. Which indicated that a small portion of students may feel disconnected from collaborative learning activities. Regarding assignment submission,

68.75% of students claimed to submit assignments on time, but 18.75% disagreed. This shows that most students manage deadlines well, though a notable minority may struggle with time management or motivation. Out of all students, 76.25% of students agreed that they seek out online learning guidelines from the internet, reflecting a high degree of self-directed learning and adaptability to digital learning environments. Additionally, around 75% of students agreed that they sit calmly during online learning in front of laptop/cell-phone until the time set by the teacher. Overall, students perceived a high level of attention and motivation regarding online education.

Table-4: Students' Perception on Effectiveness of Online Learning

Statement	Disagreed		Neutral		Agreed	
	N	%	N	%	N	%
18. I like online learning as compare to face-to-face learning	52	65%	11	13.75%	17	21.25%
19. The interaction of online teaching and learning is better than face-to-face learning	40	50%	19	23.75%	21	26.25%
20. Online learning facilities always support both in terms of equipment (for example mobile/laptop) or network	26	32.5%	20	25%	34	42.5%
21. During online class teacher asks questions and clear all ours doubt like physical class	5	6.75%	15	18.75%	60	75%
22. I prefer my online class as they are very structured with set due dates similar to face-to-face learning	19	23.75%	22	27.5%	39	48.75%
23. Online environment makes it easier for me to communicate with my teacher than classroom	28	35%	19	23.75%	33	41.25%
24. I am very comfortable responding to questions during online class than physical class or face-to-face classroom teaching.	22	27.5%	21	26.25%	37	46.25%
25. My technical skills has increased since attending online classes	10	12.5%	24	30%	46	57.5%
26. I spend more time on my homework after online class in comparison with regular classroom	13	16.25%	20	25%	47	58.75%

27. Online class create more interaction and greater ability to concentration than physical (face-to-face) classes	14	17.5%	27	33.75%	39	48.75%
28. Teachers are giving more time in online learning rather than physical (face-to-face) class	25	31.25%	25	31.25%	30	37.5%
29. Learning is same in classroom teaching and at home on the internet	46	57.5%	14	17.5%	20	25%
30. Online classes help me comprehend the course materials compared to classroom learning	22	27.5%	23	28.75%	35	43.75%

Table-4 reflected about the how students perceived about the effectiveness of online education. While majority of students agreed that they found all the learning materials, understand the lesson provided by teacher and communicate smoothly but at the same time most of the students, around 65% of students disagreed that they prefer online learning over face-to-face learning and only 21.5% agreed, while 13.75% quite neutral about this statement. Which indicated that students still agreed that real classroom learning is better than online education and showed a more positive attitudes towards face-to-face class. Similarly, around 50% of total students disagreed that interaction is better in online class compared to physical class, but only 26.25% agreed and 23.75% students remain neutral. Which indicated that interaction process in online classes is lacking as compare to offline class. Furthermore, 42.5% agreed that equipment and network facilities support their online learning, yet 32.5% disagreed. This showed a significant number of students face infrastructural issues during online classes. After such problem, a strong 75% students agreed that teacher ask questions and clarify doubts during online class as they do in physical classes, which reflecting the positive teacher engagement in the online sessions. Almost 48.75% students agreed that their online classes are structured like offline one, though 23.75% disagreed and 27.5% were neutral, indicting mixed perception about the organisation of online sessions. Similarly, only 41.25% students found it easier to communicate with teacher in online class, while 35% students disagreed and 23.75% quite neutral remaining communication process during online sessions. Which indicates that communication remains challenges for many students in the virtual setting. Furthermore, 46.25% of total students felt more comfortable responding to questions during online classes than in physical ones. However, 27.5% disagreed, suggesting that a sizeable number of students still feel more confident in traditional settings. 57.5% of students agreed their technical skills improved due to online education. Which indicates a positive effect of online learning on making students technically sound. Similarly, 58.75% of students reported that they were spending more time on their homework after online classes compared to physical class, suggesting increased academic involvement of students. 48.75% of students agreed that online class offer better concentration and interaction, though 33.75% were neutral. Only 37.5% of students felt that teachers are giving more time online than in physical classrooms, with 31.25% both disagreed and neutral. A significant number of

students (57.5%) disagreed that learning outcomes are the same in both online and face-to-face classrooms, with 17.5% neutral. Only 43.75% of students agreed that online classes help them comprehend course material is better than physical classes, while 27.5% disagreed and 28.75% remained neutral regarding this statement. Which indicates that the role of physical class quite important to comprehend the course material as compared to online one. Overall, students perceived a negative to moderate perception towards the effectiveness of online education compared to physical class.

Table No. 5: Comparison between Male and Female Students Perception towards Online Education.

GENDER	N	MEAN	S.D	t-value	Two-Tailed P-Value	df	REMARK
MALE	34	47.38	16.53	0.0185	0.9853	78	Not significant at 0.05 level
FEMALE	46	47.33	10.59				

The above table indicates that the mean difference between the perception of male and female students of secondary school towards online education. In the above table there are total 80 students. Out of 80 students, there were 34 male students and 46 female students. According to this independent sample t-test the mean for the 34 male students was 47.38 with a Standard Deviation of 16.53. Similarly, the mean for the 46 female students was 47.33 with a standard deviation of 10.59. After calculating the t-test, the researcher found that the computed 't- value is 0.0185, which is less than the t-critical value which is 1.99 and the calculated value needed to reach 5% Level of significance, making it non-significant at the 0.05 level and hence it is not significant at 0.05 level. Therefore, the null hypothesis cannot be disproved and accepted as a result. So, it can be said that view-points of the male and female students towards online learning is not founded statistically significant. That indicates means didn't differ significantly at 0.05 level. Consequently, the null hypothesis cannot be rejected.

Hence, it can be concluded that there is no significant difference in perception between male students and female students towards online education.
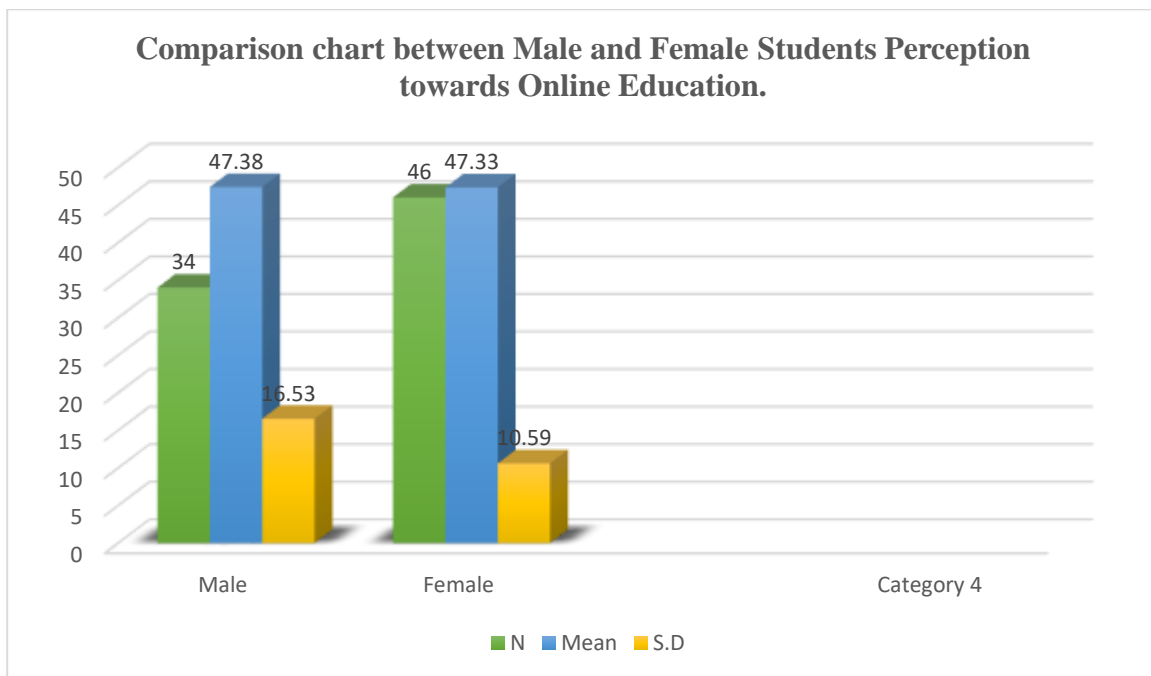
Comparison chart between Male and Female Students Perception towards Online Education.

Table No. 6: Comparison between Rural and Urban Students Perception towards Online Education.

LOCALITY	N	MEAN	S.D	t-value	Two-tailed P Value	df	Remark
RURAL	36	52.25	13.49	3.133	0.0024	78	Significant at 0.05 level
URBAN	44	43.34	11.93				

It is observed from Table-6 that there are total 80 respondents including 36 rural students and 44 urban students. The result of independent sample 't-test' analysis revealed that 36 Rural Students achieved the average score of 52.25, Standard error of mean of 2.25, and standard deviation of 13.49. and 44 Urban students achieved the mean score of 43.34, standard error of mean of 1.80 and standard deviation of 11.93. According the df value (i.e. 78) t-critical value at 0.05 level is 1.99 and t-value at 0.01 level is 2.64. But here the computed t-value i.e. 3.133 is greater than both 1.99 and 2.64. So, we can say that here computed t-value is greater than the table value. Hence, it is significant at 0.05. That indicates means differ significantly at 0.05(as computed t-value > table value). Consequently, the null hypothesis can be rejected.

Hence, it can be concluded that there is significant difference in perception between Rural students and Urban students towards online education.

Comparison chart between Rural and Urban Students Perception towards Online Education.
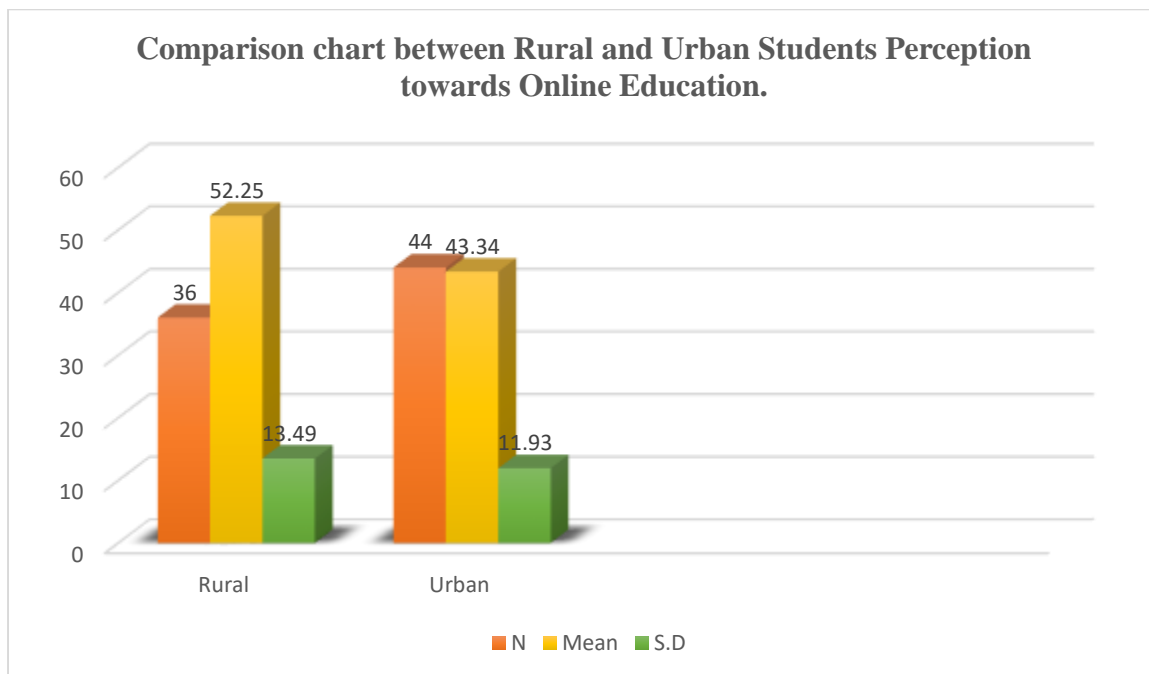
Major Findings of the Study

After the analysis of the data and interpretation of the data with regards to objectives of the study, the researcher reached at the following findings-

1.   The main results of this discussion pointed out that most of the students perceived positive perception regarding teaching methods of teachers and most students found the materials accessible, understandable, and applicable, and participated actively in discussions.

2.   Students generally perceived moderate to high convenience in online learning, particularly in completing assignments and engaging with forums. However, communication issues and teacher responsiveness to students' personal obstacles emerged as significant challenges.

3.   Overall, students perceived a high level of attention and motivation regarding online education.

4.   Students perceived a negative to moderate perception towards the effectiveness of online education compared to physical class.

5.   There is no significant difference between the perception of male and female secondary school students towards online education.

6.   There is significant difference between the perception of rural and urban secondary school students towards online education. Rural secondary school students possessed more favourable perception towards online education.

Educational Implications

1.   Due to the varying perceptions across different learners (e.g. Rural or Urban), school can develop differentiated learning strategies to suit diverse learners' needs in online environments.

2.   Based on students' feedback on assessment process, school may need to adopt more flexible, suitable, formative assessment methods.

3. Negative perceptions due to poor internet connectivity, lack of proper devices or learning platform usability issues emphasize the usefulness of investing in digital infrastructure, especially in rural or underprivileged areas.

4. Study indicates a need for more multimedia use, gamification or experiential e-learning tools can be used to make online education more interactive and effective.

5. Some areas relating to online session, where some students struggle with online instruction of teachers that reflects the needs for teacher training in digital pedagogy, including effective communication, online assessment techniques and content delivery.

Conclusion

It is concluded that almost all the secondary school students are aware of Online Education and perceived positive perception regarding teaching methods of teachers, perceived moderate to high convenience in online learning and a high level of attention and motivation regarding online education. While, negative to moderately perceived towards the effectiveness of online education compared to physical class. The findings of the study also revealed that there is no significant difference between the perception of male and female students towards online education. However, there is existed a significant difference between the perception of rural and urban students towards online education. Both areas students give positive perceptions on online education. But the rural area students give more favourable perceptions towards online education.

References

1. Asif, M., Khan, M.A., Habib, S. (2022). Students' Perception towards New Face of Education during this Unprecedented Phase of COVID-19 Outbreak: An Empirical Study of Higher Educational Institutions in Saudi Arabia. *European Journal of Investigation in Health Psychology and Education.* 12(1), 835-853.

2. Almahasees, Z., Mohsen, K., Amin, M.O., (2021). Faculty's and Students' Perception of Online Learning during COVID-19. *Frontiers in Education.* 6(1), 1-10.

3. Barik, P. (2022). Perception and Preference of School Student's towards E-Classrooms in India during COVID-19 pandemic. *Indian Journal of Educational Technology.* 4(1), 179-191.

4. Bharadwaz, S., Preetha, S., Sridevi, G., & Prathap, L. (2021). Impact of Online Classes on the Mental Health of School Students during COVID-19 in Chennai. *Journal of Pharmaceutical Research International.* 33(5), 20-27.

5. Chauhan, S., & Thakur, S. (2023). Students' Perception Towards Online Teaching and Learning: A Study of Universities in Rural Areas. *International Journal of Education and Development using Information and Communication Technology,* 19(2), 124-135.

6. Cresswell, J.W. (2014). Educational Research-Planning, Conducting and Evaluating Qualitative and Quantitative Research (4th Edition). NEW JERSY, *USA Pearson Education Inc.*

7. Giday, D.G., & Perumal, E. (2024). Students' Perception of Attending Online Learning Sessions Post-pandemic. *Social Sciences & Humanities Open.* 9(2), 1-12.

8. Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of Online Classes on the Satisfaction and Performance of Students during the Pandemic Period of COVID-19. *Education and Information Technology.* 26(1), 6923-6947.

9. Harefa, S., Sihombing, G. L. A. (2022). Students' Perception of Online Learning Admist the COVID-19 Pandemic: A study of Junior, Senior High School and College Students in a Remote Area. *F1000Research.* 2022, 10:867.

10. Irfan, T., & Raheem, M.A. (2023). Perception of Students and Teachers Regarding Online Teaching-learning During Covid-19 at University Level. *Middle East Journal of Applied Science & Technology,* 6(2), 9-19.

11. Kaul, L. (2009), Methodology of Educational Research (4th Revised Edition). *New Delhi: Vikash Publishing House Pvt. Limited.*

12. Kulal, A., Nayak, A. (2020). A Study on Perception of Teachers and Students towards Online Classes in Dakshin Kannada and Udupi district. *Asian association of Open Universities Journal.* 15.(03), 285-296.

13. Lade, K., Gaglani, H., Khare, S., Muley, S., Jha, R. (2022). Perception of Students towards Online Learning during COVID-19 Pandemic. *International Journal of Health Sciences.*6(S2), 473-480.

14. Mangal, S.K. (2008). Statistics in Education and Psychology; *New Delhi: Paragan International Publisher.*

15. Masud, N.A., & Suborna, T. N. (2021). Impact of Online Learning During Covid -19. *International Journal of Creative Research Thoughts.* 9(03), 3245-3249.

16. Mehra, N., Baliya, J.N. (2023). Perception of Secondary School Students Towards Online Education by Using E- Learning Platforms of Teaching. *International Journal of Creative Research Thoughts (IJCRT).* 11(11), 154-160.

17. Mohammed, A.M.E., Ahmed, N.O., & Mohammed, O.H. (2022). Study on the Impact of Online Learning on Student's Academic performance. *Asian Journal of Multidisciplinary Research & Review.* 3(2), 167-183.

18. Nanda, G.C. & Khatoi, P.K. (2005). Fundamentals of Educational Research and Statistics. *New Delhi: Kalyani Publishers.*

19. Nandedkar, T., & Jhawar, N. (2024). Post-Pandemic Research on Students Perception towards Online Education Environment. *Indian Journal of Educational Technology.* 6(2), 346-357.

20. Omar, N. H., Thomas, B., Jusoh, M. Z., Jalil, S. Z. (2021). Students' Perception and Preference for Online Learning in Sabah during COVID-19 Pandemic. *International Journal of Academic Research in Business and Social sciences.* 11(11), 270-292.

21. Sarkar, S., & Barman, P. (2022). Attitude of Higher secondary School students towards Online Education in the District of Dakshin Dinajpur, West Bengal. *The Online Journal of Distance Education and e-learning.* 10(3), 334-340.

22. Setiyono. J., Sukarni, S., & Ngafif, A. (2021). Online Learning Perception during COVID-19 Pandemic Viewed from High School Students. *English Review: Journal of English Education.*10(1), 75-82.

23. Surapuramath. K. A. (2021). A study of Attitude towards Online Learning of Higher Secondary Students during COVID-19. *International Journal of Multidisciplinary Educational Research*. 5(1). 153-157.

24. Vaidya, A., Patil, A., & Vaidya, A. (2021). Perception of Online Education during the COVID-19 Pandemic in India. *International Journal of creative Research Thoughts*. 9(7), F8-F17.