PROBLEMS FACED BY HIGH SCHOOL STUDENTS IN USE OF ICT IN THEIR ONLINE CLASSES: AN ANALYTICAL STUDY

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Abstract

This study focuses on exploring the specific ICT related challenges encountered by the students of high school during online classes, with a particular emphasis on level of problems and gender of ICSE and CBSE board By identifying these challenges, the research aims to contribute in establishment of more effective and equitable online learning strategies that can support all students in achieving their educational goals in digital world. "ICT in online class" constructed by the researcher and administered on high school students of Lucknow district, U.P, India. This study has 300 respondent and descriptive survey method has been administer in this study. Researcher try to know that, is there any exist any difference in high school students in use of ICT in their online classes. Finding revealed that: males have high level of problems in ICSE board and in CBSE board female have high level of problems.

Keywords: ICT, Online classes

Introduction

The amalgamation of ICT in academics has fundamentally changed the traditional classroom, particularly with the rise of online learning. ICT encircle a wide scale of digital devices and sources, including computers, internet, software applications, and communication platforms, that facilitate the creation, storage, and transmission of information. In the context of education, ICT has become a crucial component of modern teaching and learning processes, enabling educators to deliver content more interactively and students to access a wealth of resources beyond the physical confines of the classroom.

The shift to online classes, expedite by universal affairs like Covid-19 epidemic, has emphasize the consequence of ICT maintaining educational continuity. Through platforms like LMS (learning management system), Zoom and Google Classroom, students and teachers are able to engage in virtual learning environments that mirror many aspects of face to face education. However, the transition to online learning has also exposed significantly challenges, particularly related to the accessibility and effective use of ICT.

Challenges faced by students while using ICT in their online classes

For students, these challenges can be especially pronounced as they navigate the dual demands of academic rigor and technological proficiency. Issues such as inconsistent internet access, limited availability of digital devices, financial issues and varying levels of digital literacy can impede the learning process and exacerbate educational inequalities. Moreover the reliance on ICT for online classes has introduced new stressors and problems, ranging from technical difficulties to the lack of direct social interaction, all of which can impact students' academic performance and overall well-being.

Objectives

1. Study about problem level faced by students of high school in use of ICT in their online classes on the basis of ICSE board students'.
2. Study about problem level faced by students of high school in use of ICT in their online classes on the basis CBSE board students'.
3. To study the problems faced by high school students in use of ICT in their online classes on gender basis of ICSE board.
4. To study the problems faced by high school students in use of ICT in their online classes on gender basis of CBSE board students'.

Hypothesis

1. The problem level faced by students (male & female) of ICSE board are not significant.
2. The problem level faced by students (male & female) of CBSE board are not significant.
3. The problem faced by high school students in usage of ICT in their online classes, gender based of ICSE board are not significant.
4. The problem faced by high school students in usage ICT in their online classes, gender based of CBSE board are not significant.

Review literature

Hashemi, Aminuddin et al. (2022) "Gender differences on the acceptance and barriers of ICT use in English language learning: Students' perspectives" research reveals, participant have positive attitude towards usage of ICT and also shows common barriers that come in way of using ICT like inadequate internet facility, unavailability of technological devices, time management and lack of confidence in using ICT.

Gnambs Timo, (2021) "The development of gender differences in information and communication technology (ICT) literacy in middle adolescence" findings revealed that, there exist a slight distinction in ICT proficiency among girls and boys

Cai Zhihui et al. (2017) "Gender and attitudes toward technology use: A meta-analysis" findings shows that males have favourable attitude towards usage of ICT in comparison to female.

Khedekar, Sandhya & Magre, Sunita. (2012) "A Study of information and communication technology awareness and academic performance of secondary students" this research the positive relation among academic performance and ICT awareness in SSC, CBSE and ICSE secondary students.

Cooper, J. (2006) "The digital divide: the special case of gender." Journal of Computer Assisted Learning, Volume- 22, Issue 5. Findings interpret that female category students face various barriers related to technical aspect, as well as they are less confident in their abilities to solve problem and this lack of confidence lower their access to technology.

Volman et al. (2001) "Gender equity and information technology in education: The second decade" this research highlights that male student have more access to computers and internet at home than female students.

Research methodology

After reviewing the objectives, researcher used descriptive survey method for the collection of data. To collect the data researcher has constructed a questionnaire "ICT in online class: A questionnaire" which has basically five dimensions namely: (1) Usage of ICT for academic purpose (2) Students attitude towards usage of ICT (3) Parental socio- economic status (4) Trouble

faced by students in usage of ICT (5) Ease of understanding subject content by using ICT. Data were collected from high school students of ICSE and CBSE board, and sample consist of 300 students. There are forty statements which are based on five point Likert scale. Descriptive statistics was calculated by Mean, SD and t-test were employed to compute inferential statistics from the collected data.
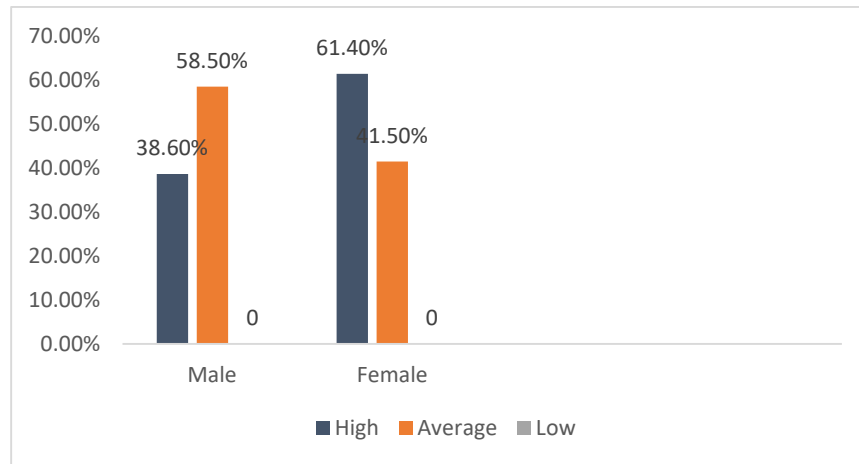
Data analysis and interpretation
Objective1: Study the problem level faced by students of high school in use of ICT in their online classes on the basis of ICSE board students.
Table1.1 showing the percentage analysis of high school students, use of ICT in their online classes on the basis of board of ICSE board students

Gender	Level of Problems			Total No. of Students
	High	**Average**	**Low**	
Male	22 (38.6%)	38 (58.5%)	0	60
Female	35 (61.403%)	27 (41.5%)	0	62

The table above shows the problem level which is faced by students of high school is much higher among female students in comparison to male students. In case of average level of problems faced by male possess 58.5% and female possess 41.5%. Again in case of low level of problems faced by male and female students is 0. Hence, it shows students of female category possess high level of problems in comparison to male students. The graphical representation shown in figure 1.1


Objective2: Study the problem level faced by students of high school in use of ICT in their online classes on the basis of CBSE board students.
Table1.2 showing the percentage analysis of high school students, use of ICT in their online classes on the basis of board of CBSE board students

Gender	Level of Problems			Total No. of Students
	High	**Average**	**Low**	
Male	44 (57.89%)	40 (39.22%)	0	84
Female	32 (42.11%)	62 (60.78%)	0	94

The table above display the problem level which is faced by students of high school is much higher among female students in comparison to male students. In case of average level of problems faced by male possess 39.22% and female possess 60.78%. Again in case of low level of problems faced by male and female students is 0. Hence, it shows students of male category possess high level of problems in comparison to female students. The graphical representation shown in figure 1.2
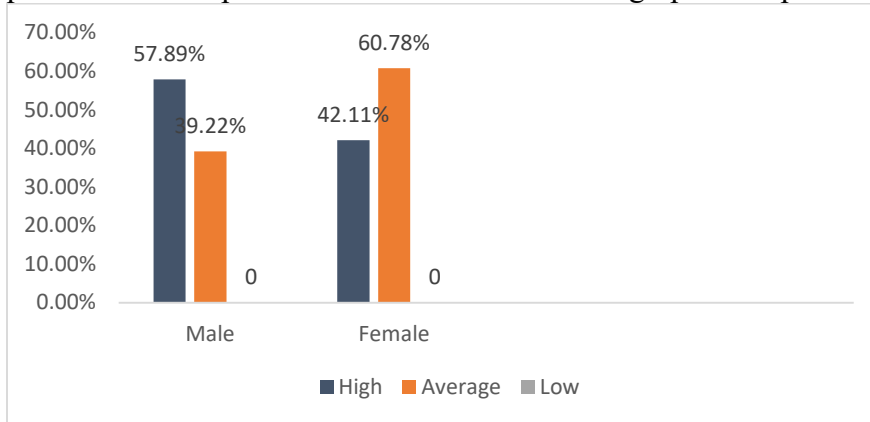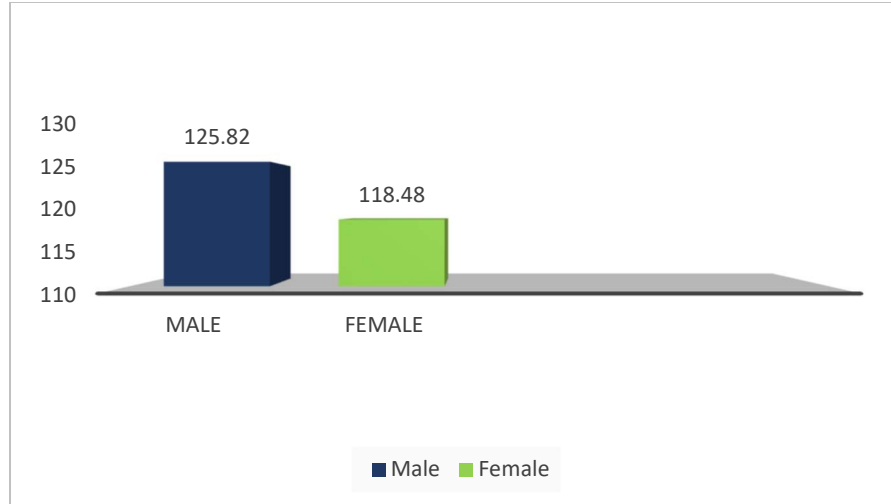

Objective3: To study the problems faced by high school students in use of ICT in their online classes on gender of ICSE board.
Table1.3 showing t-value of problems faced by ICSE male and female students of high school use of ICT in their online classes.

Gender	N	Mean	Std. Dev.	df	t value	Significance
Male	60	125.82	9.447	120	3.603	Significant
Female	62	118.48	12.735			

The table above shows the mean score values and standard deviation values of problems faced by students of high school in use of ICT in their online classes on gender basis of ICSE board. Obtained t value is 3.603 and tabulated value is 1.980 which is less than, calculated t- value, which is not significant. So, the H_0 (null hypothesis) is rejected. Analysis also depicts a variation between male and female in the problems faced by ICSE students regarding use of ICT. The graphical representation is shown below in figure 1.3

Objective4: To study the problems faced by high school students in use of ICT in their online classes on gender basis of CBSE board.

Table1.4 showing t-value of problems faced by CBSE male and female students of high school use of ICT in their online classes.

Gender	N	Mean	Std. Dev.	df	t value	Significance
Male	84	120.68	13.523	176	2.255	Significant
Female	94	125.69	15.865			

Above table shows the mean score values and standard deviation values of problems faced by students of high school in use of ICT in their online classes on gender basis of CBSE board. Obtained t value is 2.255 and value in table is 1.980 which is less than the calculated t- value, which is not significant (0.05 level). So, H_0 is rejected. Analysis also depicts the variation between male and female in the problems faced by CBSE students regarding use of ICT. The graphical representation is shown below in figure 1.4
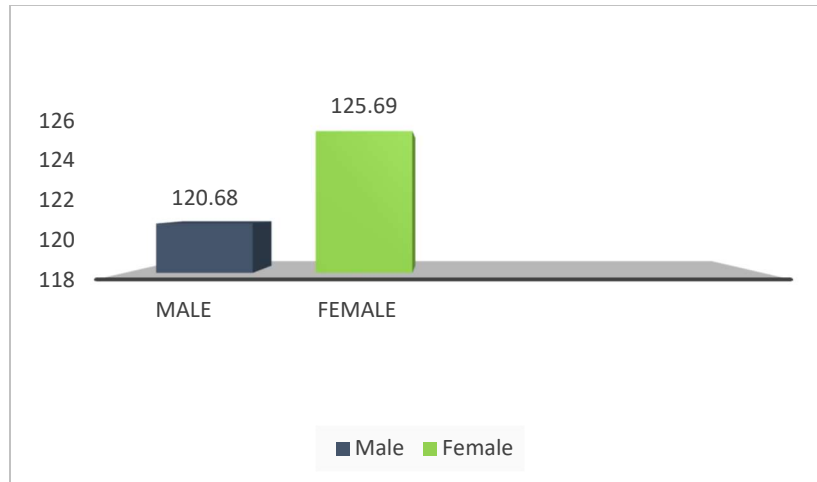
Conclusion

The study explored the challenges faced by students of high school in usage of ICT for e- classes, with a focus on gender differences across ICSE and CBSE boards. The result shows that ICSE male reported high problems compared to female students, suggesting that male students might encounter specific barriers, such as difficulties with time management or technical issues, more acutely. Conversely, CBSE female students experience more significant challenges than their male counterparts, potentially due to factors such as lower confidence in using technology, limited access to devices or additional responsibilities. The gender specific challenges underscore the complexity of integrating ICT effectively in online education. The results highlights that male and female students experience and perceive the usage of ICT in their virtual differently, influenced by both their educational board and broader societal factors. Addressing these differences is crucial to make sure that every student has equal opportunity to benefit from digital education, without being disproportionately burdened by its challenges.

Acknowledgement

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