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INTERNET USAGE AMONG ADOLESCENTS: A STUDY OF HIGHER SECONDARY STUDENTS IN IMPHAL WEST DISTRICT OF MANIPUR

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ABSTRACT

The world witnesses a massive surge of internet users in the post Covid-19 global pandemic, particularly among adolescent students for various purposes and is integral to their social and educational life. Keeping this in view, the aim of the present study was to examine the internet usage of higher secondary students in the Imphal West District of Manipur and an attempt has also been made to compare the differences in internet usage of higher secondary students based on their gender and social categories. The descriptive research method was adopted to study the internet usage of 100 (male=53, female=47) randomly selected higher secondary students from three schools in Imphal West District of Manipur. The Internet Usage Scale (IUS-SSKP, 2017) developed by Shaloo Saini and Prof. (Dr.) Parminder Kaur (2017) was used to measure the internet usage of higher secondary students. Hypotheses were tested using a t-test and ANOVA (2-tailed at 0.05 significance level). The result reveals that higher secondary students have an average level of Internet usage and confirmed a clear increasing trend of internet usage among students. The higher secondary school of Imphal West District of Manipur is not influenced by their gender and social category. The study suggested the integration of internet-based tools in the classroom, promoting digital literacy programs and addresses gaps in internet usage, and informing educators, school administrator, policy makers and parents about the patterns of internet usage and digital behaviors of adolescent students.

Keywords: Internet Usage, Higher Secondary, Students, Gender, Social Categories, IUS-SSKP

1. INTRODUCTION

The Internet is a vast, network of networks (Toutain & Minaburo, 2013) not owned by any single person, group, or organization Janevski, 2014; Stix & Lacob, 1999). .It is a system of interconnected computer networks that rely on standard Internet protocols which connect billions of users worldwide (Angelescu, 2010; Novick et al., 2008; Gralla, 1998) and regarded as the purest form of cyber democracy (Kersting, 2012). It is one of the most impactful technologies of modern times (Brownsword & Goodwin, 2012), an integral parts to personal and professional lives (C & B, 2019; Michelle, 2016; PhD, n.d.; Schell, 2006) and it is a valuable resource for students, educational institutions, scientists, and professionals to access information for research and general purposes.

Internet usage has become integral in the daily activities of modern society, growing rapidly in size and number of users worldwide (Kakhaber, 2023). College students have used internet for various purposes having greater tendency to use for educational and entertainment purposes (Singh, 2021). There was also widespread increase of internet usage

among adolescent students (Rosen et al., 2015). The adolescent students uses internet through various devices for gathering information or communication (Kokka et al., 2021), learning material and academic works (Almasi et al., 2017), and entertainment purposes (Aslanidou & Menexes, 2008) and suggested gender difference in the usage pattern (Singh, 2021). Moreover, the COVID-19 pandemic has forced billions of adolescents globally to use internet for daily activities due to closure of schools, which make them exposed to excessive use or internet addiction.

Internet usage among students can be beneficial and support their development if effectively utilized (Picciano, 2016; Crawley, 2012) and increase learning opportunities especially to those who struggle, to learn better (UNESCO, 2014). However, despite its advantages and ability to enhance productivity, excessive use or addiction to the Internet could negatively affect their mental and physical health Canestrari et al., 2023; Deng et al., 2023; C.-C. Tsai & Lin, 2003) and also their academic engagement (Deng et al., 2023; Gu et al., 2023; Otta, 2022), academic aspiration and self-esteem (Mo et al., 2020). It was also reported that those students who were high internet users tend to have a low level of emotional maturity and vice versa.(Saini & Kaur, 2017).

The influence of internet usage among students, especially among adolescents, needs academic and professional intervention. Therefore, the present study attempts to measure the internet usage among adolescent higher secondary students in the Imphal West district of Manipur. Further, internet usage will be compared among the adolescent higher secondary students based on their gender and social category.

2. REVIEW OF RELATED LITERATURE

Literatures on internet usage reported that there was widespread internet usage among individuals ages 11-14 years (Javed et al., 2020), students spent 4.48 hours daily in average and suggested that increased internet use does not necessarily equate to greater academic use (Ayub et al., 2014). B.Ed students used internet in an average level(Begum & Ramachandran, 2018). However, student's academic performance was associated with high internet usage (Siraj et al., 2015; Torres-Díaz et al., 2016), and it was positively influenced by internet usage (Almasi et al., 2017; Amponsah, 2022) and students were labelled as habitual and recurring Internet users (Haque et al., 2016).

Moreover, literature also reported that no significant difference of internet usage among adolescent on the basis of their gender (Lin & Yu, 2008; Ogur et al., 2017). However, studies also reported significant gender difference in internet usage (Jhala & Sharma, 2016; Mir & Paray, 2018) in which boys (Male) used the internet more frequently than girls (Females) (Anwar, 2014; Dufour et al., 2016; Saini & Kaur, 2017; Baishya, 2022) and reported a different level of internet usage in terms of e-learning portals (Shahzad et al., 2021). Literatures also reported increased in internet usage as students advance in their grade level in which boys used the internet more often and spent more time online than their female counterparts (Vani Prasanthi, 2021) and boys were found more likely to engage in dangerous online activities like cyber bullying and accessing inappropriate content.

3. OBJECTIVES OF THE STUDY

1) To study the level of internet usage among the higher secondary students in Imphal West district of Manipur.
2) To compare the difference in the internet usage among the higher secondary students based on their gender.
3) To compare the difference in the internet usage among the higher secondary students based on their social category.

4. HYPOTHESES OF THE STUDY

1) There is no significant difference in the level of internet usage among the higher secondary students in Imphal West district of Manipur.
2) There exists no gender-based difference in the internet usage among the higher secondary students.
3) There exists no difference in the internet usage among the higher secondary students based on their social category.

5. MATERIAL AND METHODS

5.1. METHOD USED

The descriptive research method was employed in the present study to study the internet usage among higher secondary students in the Imphal West district of Manipur.

5.2. POPULATION AND SAMPLE

All the higher secondary students in the Imphal West district of Manipur, who are enrolled in Class XII Science stream, formed the population of the present study. The population and the district of study was purposefully selected based on the assumption that students at this academic level frequently use the internet for both academic and non-academic purposes, making them relevant participants for investigating patterns of Internet Usage. And due to constraints of time, location and permissions from educational institutions, the accessible population was limited to students from few selected higher secondary schools in the Imphal West district of Manipur. This investigation consists of 100 randomly selected students (53 male and 47 females) studying class XII science from 3 higher secondary schools in Imphal West District, Manipur- Competitive Success Academy, Uripok, A.C.I School, Kwakeithel and Ramlal Paul Higher Secondary School, Keishamthong. The samples were 15-18 years of age. They belonged to different social categories, including 25% percent of students from unreserved (UR), 44% percent of Other Backward Classes (OBC), 8% percent of Scheduled Tribe (ST) and 23% percent belonging to Scheduled Caste (SC) categories respectively.

5.3. TOOLS

The Internet Usage Scale (IUS-SSKP, 2017) developed by Shaloo Saini and Prof. (Dr.) Parminder Kaur was used to measure the internet usage of higher secondary students. IUS-SSKP, 2017 consists of 20 items having five response options as - Rarely-1, Occasionally-2, Frequently-3, Often-4, and Always-5. An individual's score is the sum of the scores of all the 20 items of the scale, ranging from 20 to 100, with higher scores indicating higher internet usage level. The Cronbach Alpha reliability of IUS-SSKP scale was 0.806 with scale mean= 50.97±12.649 and scale variance of 160.009 units.

Table 1 Reliability and scale Statistics

Cronbach's Alpha	Mean	Variance	Std. Deviation	N of Items
0.806	50.97	160.009	12.649	20

5.4. PROCEDURE FOR DATA COLLECTION

The investigator personally gathered all the data needed for the current study in February 2023, following formal approval from the principals of selected schools. A class-by-class visit was conducted to gather data. Students were informed of the significance of the research prior to the data collection. They were assured that all responses would remain confidential and utilized solely for this academic purpose. The information was gathered from regular class XII Science students after providing instructions to the sampled students and building a rapport with them. Completing the questionnaire took around 20 to 30 minutes. They were also given the choice to withdraw at any stage of the process without any consequences, since participation in this study was entirely a voluntary act.

5.5. STATISTICAL TECHNIQUES USED

Descriptive and inferential statistical techniques were used to analyze and interpret the data. Mean, Standard deviation, z-score and percentage methods were adopted for describing the trends and patterns of the collected data, t-test and Analysis of Variance (ANOVA) test were used to test hypothesis. Data analysis was done with the help of the Statistical Package for Social Science (SPSS) 27.

6. OBJECTIVE WISE ANALYSIS AND INTERPRETATION OF DATA

Objective no. 1: To study the level of internet usage among the higher secondary students in Imphal West district of Manipur.

To determine the level of internet usage among the higher secondary students in Imphal West district of Manipur, a null hypothesis was advanced i.e. There is no significant difference in the level of internet usage among the higher secondary students in Imphal West district of Manipur. Firstly, the raw scores of Internet Usage were standardized using z-scores and classified into three categories- Low Usage, Average Usage and High Usage. The z-score norm for the classification of Internet Usage is shown in Table No. 2.

Table 2 Level of Internet Usage

	z-Score Range	Frequency	Percent	Valid Percent	Cumulative Percent
Low Usage	-1.97 to-0.45	37	37.0	37.0	37.0
Average Usage	-0.44 to 1.08	45	45.0	45.0	82.0
High Usage	-1.09 to 2.61	18	18.0	18.0	100.0
Total		100	100.0	100.0	

The above table No. 2 presents the distribution of respondents based on their level of internet usage. The largest proportion of participants reported average usage (45.0%), followed by low usage (37.0%) and high usage (18.0%). In other word, the respondents use the internet at an average to low level, with fewer people using it heavily. A one-way analysis of variance (ANOVA) was conducted to examine the significant differences in Internet Usage among three groups: Low Usage, Average Usage, and High Usage.

Table 3 Descriptives of Internet Usage

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Low Usage	37	39.00	5.447	.895	37.18	40.82	26	45
Average Usage	45	52.73	5.738	.855	51.01	54.46	46	64
High Usage	18	71.17	5.639	1.329	68.36	73.97	65	84
Total	100	50.97	12.649	1.265	48.46	53.48	26	84

The above table no. 3 shows the descriptive of internet usage among higher secondary students revealed that the Low Usage group (n = 37) had a mean Internet Usage score of 39.00 ± 5.45, 95% CI [37.18, 40.82]. The Average Usage group (n = 45) had a mean of 52.73±5.74, 95% CI [51.01, 54.46], while the High Usage group (n = 18) reported the highest mean score of 71.17±5.64, 95% CI [68.36, 73.97] respectively.

Table 4 ANOVA test of Internet Usage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12783.610	2	6391.805	202.795	**0.000**
Within Groups	3057.300	97	31.519		
Total	15840.910	99			

Further, the result of ANOVA test in table no. 4 revealed a statistically significant difference in internet usage among groups, $F(2, 97) = 202.80$, $p < .001$.Since, the p=0.000 was less than 0.01 and 0.05 (2-tailed test at 99% and 95% Confidence Interval), the null hypothesis i.e. there is no significant difference in the level of internet usage among the higher secondary students, was rejected. This difference was further analyzed to find out pair wise difference through Post Hoc Analysis (Tukey HSD).

Table 5 Multiple Comparisons Internet Usage

Dependent Variable: Internet Usage						
Tukey HSD						
(I) Level of Internet Usage	(J) Level of Internet Usage	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low Usage	Average Usage	-13.733*	1.246	**0.000**	-16.70	-10.77
	High Usage	-32.167*	1.613	**0.000**	-36.01	-28.33
Average Usage	Low Usage	13.733*	1.246	**0.000**	10.77	16.70
	High Usage	-18.433*	1.566	**0.000**	-22.16	-14.71
High Usage	Low Usage	32.167*	1.613	**0.000**	28.33	36.01
	Average Usage	18.433*	1.566	**0.000**	14.71	22.16
*. The mean difference is significant at the 0.05 level.						

The above table no.5 shows the result of Tukey's Honest Significant Difference (HSD) test which revealed all pair wise comparisons were statistically significant at the $p < .001$ level. These findings confirm that Internet Usage significantly increases across the categorized levels of Internet Usage. Thus, it can be concluded that the higher secondary students in the Imphal West district of Manipur exhibits average level of internet usage and the mean score follow a clear increasing trend from Low to High - Low (39.00) < Average (52.73) < High (71.17).

Objective no. 2: To compare the difference in the internet usage among the higher secondary students based on their gender.

For comparing the level of internet usage among higher secondary students on the basis of their gender, a null hypothesis was generated - There exists no gender-based difference in the internet usage among the higher secondary students. An independent sample t-test was conducted to compare the mean difference among groups.

Table 6 Group Statistics

	Gender of Students	N	Mean	Std. Deviation	Std. Error Mean
Internet Usage	Male	53	52.43	12.976	1.782
	Female	47	49.32	12.198	1.779

The above table no. 6 presents the group statistics of Internet usage scores for male and female students. Males (n = 53) had a slightly higher mean Internet usage (M = 52.43 ± 12.98) as compared to females (n = 47; M = 49.32 ± 12.20). The standard error of the mean was similar for both groups (~1.78).

Table 7 Independent Samples Test of Gender

	t-test for Equality of Means						
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Internet Usage	1.232	98	0.221	3.115	2.528	-1.902	8.131

Moreover, the table no. 7 shows the result of independent samples t-test which compares Internet usage scores between male and female students. The result of t-test revealed that there is no significant difference in the level of internet usage among the higher secondary students based on their gender $t(98) = 1.232$, $p>0.05$. Since the p-value = 0.221 is greater than 0.05 (2-tailed test at 95% confidence interval), the null hypothesis i.e. there exists no gender-based difference in the internet usage among the higher secondary students, was accepted. Therefore, it can be concluded that the internet usage of the higher secondary students at the Imphal West District of Manipur was not influenced by their genders.

Objective No. 3: To compare the difference in the internet usage among the higher secondary students based on their social category.

In order to compare the differences in the internet usage among the higher secondary students on the basis of their social category, a null hypothesis was generated-There exists no difference in the internet usage among the higher secondary students based on their social category.

Table 8 Descriptives of Internet Usage

Internet Usage								
Variables	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Unreserved	25	52.28	14.267	2.853	46.39	58.17	30	84
Other Backward Classes	44	50.36	13.825	2.084	46.16	54.57	26	82
Scheduled Tribe	8	57.63	12.637	4.468	47.06	68.19	36	74
Scheduled Caste	23	48.39	6.920	1.443	45.40	51.38	35	63
Total	100	50.97	12.649	1.265	48.46	53.48	26	84

The above table no. 8 indicated the descriptive statistics of internet usage across social categories, the mean and standard deviation of unreserved category (N = 25) was 52.28±14.27), OBC (N=44) was 50.36±13.83), ST (N=8) was 57.63±12.64 and SC (N=23) was 48.39±6.92 respectively.

Table 9 ANOVA test of Internet Usage

Internet Usage					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	566.335	3	188.778	1.186	0.319
Within Groups	15274.575	96	159.110		
Total	15840.910	99			

It was found out from the result of ANOVA test in Table No. 9 that there was no statistically significant difference across groups F(3,96)=1.186, p=0.319, p>0.05. Since, the p-value = 0.319 was greater than 0.05 (2-tailed test at 95% Confidence Interval) the null hypothesis i.e. there exists no difference in the internet usage among the higher secondary students based on their social category, was accepted. Thus, the social category of students does not play a significant role in determining their internet usage.

7. RESULTS AND DISCUSSIONS

1) The higher secondary students in Imphal West District of Manipur exhibit an average level of internet usage, in which the mean scores follow a clear increasing trend, from Low to High.
2) The internet usage of the higher secondary students in the Imphal West district of Manipur is not influenced by their gender.
3) The social category of the higher secondary students in the Imphal West District of Manipur has nothing to do with their internet usage.

The first finding of this study, i.e. the higher secondary students in Imphal West district of Manipur possesses an average level of internet usage and the mean scores follow a clear increasing trend – from Low to High. This finding is in agreement of Saini & Kaur, 2017; S Shahithunisa Begum & Dr. R Ramachandran, 2018. This study's second finding i.e , the internet usage of the higher secondary students in the Imphal West District of Manipur is not influenced by their gender is in disagreement with the findings of Anwar,2014 ; Dufour et al., 2016; Saini & Kaur, 2017 and Baishya, 2022. This finding may be because of the widespread use of the internet technology by students in the recent years. During the Covid-19 pandemic, most parents bought mobile phones for the students especially for joining online classes and the students have started relying on the internet for academic purposes and continue to introduce themselves in other online activities like social networking, online gaming, online shopping etc. However, further research is warranted to study the pattern of how the students used the internet.

The last finding i.e, the social category of the higher secondary students in the Imphal West District of Manipur has nothing to do with their internet usage, which may be due to the fact that there is no discrimination on the basis of caste

and social category in our Manipur society. People from various caste and social categories live together fostering an inclusive environment and they often share their thoughts, experiences, and values with one another, promoting mutual understanding and respect.

8. CONCLUSION

The study ended with interesting findings that a significant proportion of the higher secondary students in Imphal West district of Manipur falling into an average level of Internet usage and confirmed a clear increasing trend of internet usage among students. Further, gender and social category of the students has nothing to do with their internet usage level. The result of the present study contribute to the existing body of knowledge by challenging earlier assumptions about gender- and social categories as factors responsible for digital divides. It appears that inclusive societal dynamics and shared educational needs have led to more equitable digital practices among the higher secondary students. The findings of the study can inform educators, school administrator, policy makers and parents about the patterns of internet usage and digital behaviors by the student. The result may also guide the integration of internet-based tools in the classroom, promoting digital literacy programs and address gaps in internet usage. However, it is essential to note that future studies are encouraged to explore how internet usage patterns influence academic performance, digital literacy, and psychosocial wellbeing to inform targeted interventions and policies.

CONFLICT OF INTERESTS

None.

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