PREFERENCES OF TECHNOLOGY USAGE

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Abstract

This study was conducted to find out the Preferences of Technology Usage among adolescents. A random sample of 550 adolescents studying in the higher secondary schools of Kadapa district, Andhra Pradesh, India, was selected for the study. Preferences of Technology Usage Questionnaire (PTU) was used which was designed and constructed by the Investigator and Dr.K.Sailleela. PTU consists of 27 items designed with dichotomous answering options: ‘Yes’ or ‘No’. The data were analyzed using statistical techniques like Percentage analysis, Mean, Standard Deviation, t-test, ANOVA. The findings of this study are that Boys Preferences of Technology Usage are greater than girls’. Urban students’ Preferences for Technology Usage is greater than Rural students. Private school students’ Preferences for Technology Usage is greater than Government school students. Students whose Parents’ income is 50001 and above have greater Preferences for Technology Usage. Students whose Fathers Education and Mothers Education had a college education have greater Preferences for Technology Usage.

Keywords: Preferences of Technology Usage, Adolescents.

I INTRODUCTION

Technology enables students to access information quickly. Search engines and e-books are replacing traditional textbooks. In the absence of classes, they can access various forms of coaching or lectures in the e-mode. To flourish in the 21st-century work environment, students need to know the emerging technological tools, that make them sophisticated learners. By integrating these technologies into the regular curriculum, institutions are ensuring that their students are prepared for the future digital world. On the other side excess use of mobiles/
tablets/laptops has some effect on children’s brains as drugs do. Using technology can become a mania. Some of them could develop an addiction and suffer consequences similar to that of substance abuse. Studies have shown that as internet addiction deteriorates, so does the probability of developing a substance use disorder. Studies published by media reports state that the increase in people’s screen time can lead to various physical and mental health issues. Screen time of such sorts is detrimental to the human body. Nitin Anand et.al., studied among the 682 adolescents, 36.6% (248) met the criterion on IAT (Internet Addiction Test) for mild Internet addiction/PIU (Problematic Internet Use), 31.96% (218) for moderate Internet addiction/PIU, and 2.93% (20) for severe Internet addiction/PIU. PIU was higher among adolescents who accessed the net several times a day and had experienced psychological stress. The primary use of the net by adolescents was to access social networking sites (344 participants showed this behaviour), social media applications (by 401 participants), and online gaming (by 129 participants). Gender was not found to be significantly associated with addictive use. Therefore, to prevent the unwanted emergence of physical and mental health issues in our human bodies, we need to find ways to work with screens by having more consideration towards our health. In this condition, students need to use their technological gadgets only when required.

II Methodology

The descriptive-survey study was conducted to find out Preferences of Technology Usage among adolescents. The sample of the study comprises 550 adolescent students studying in the higher secondary schools of Kadapa district, Andhra Pradesh, India, they were selected by random sampling technique.

As the investigators aimed at collecting the data from the adolescents studying in the higher secondary schools, the data were collected using

(i) Personal data form,

The Personal Data collection form was used to collect the demographic information such as
Gender, Location, Institution, and Monthly Income of the respondents.

- Based on Gender, the respondents were categorized as Boys and Girls.
- Based on Location the respondents were categorized as Urban and Rural
- Based on Institution the respondents were categorized as Private and Government
- Based on Monthly Income, categorized as less than 25000, 25001-50000 and 51000 and above

(ii) The Preferences of Technology Usage (PTU) Questionnaire had 27 items designed with dichotomous answering options: ‘Yes’ or ‘No’. The response ‘Yes’ was assigned the value of one and ‘No’ was assigned zero. The maximum possible score of the PTU is 27 and the minimum is zero.

III Data Analysis and Interpretation

III (a) Preferences of Technology Usage (PTU)

Among 550 samples

1. 88% (N=485) responded yes to the statement, I use mobile phones for entertainment
2. 66.90% (N=368) responded yes to the statement, I browse for my projects on my computer
3. 93.27% (N=513) responded yes for the statement, I prefer browsing for my Assignments
4. 94.72% (N=521) responded yes for the statement, I use scanners in my mobile to scan my study materials
5. 84.36% (N=464) responded yes for the statement, I prefer to learn from the image than a photocopy (Xerox)
6. 86.18% (N=474) responded yes for the statement, I prefer to learn sometimes through Online
7. 79.81% (N=439) responded yes for the statement, I connect with teachers and friends through Social media

8. 73.81% (N=406) responded yes for the statement, I use mobile to communicate with others

9. 33.81% (N=186) responded yes for the statement, I use email to share messages and Materials

10. 41.45% (N=228) responded yes to the statement, I update my everyday activities on Facebook

Fig. 1: Preferences of Technology Usage of students for 1-10 statements (provided ‘yes’ responses only)

11. 70.90% (N=390) responded yes for the statement, I get a large amount of information through Social Media

12. 50.18% (N=276) responded yes to the statement, I use WhatsApp daily for chatting

13. 47.27% (N=260) responded yes to the statement, I usually read forward messages and
14. 49.09 % (N=270) responded yes for the statement, I make Video calling to my friends and relatives

15. 29.09% (N=160) responded yes to the statement, I spend time tweeting regularly

16. 22% (N=121) responded yes to the statement, I read tweets regularly of whom I am Following

17. 54.54% (N= 300) responded yes to the statement, I follow famous personalities in social media

18. 0.09% (N=50) responded yes to the statement, I have performed short-form videos in TikTok/Dub smash

19. 21.45% (N=118) responded yes to the statement, I often update and share snaps on Snapchat

20. 36.55 % (N=201) responded yes to the statement, I share stories on Instagram

![Preferences of Technology Usage](image_url)

Fig. 2: Preferences of Technology Usage of students for 11-20 statements

(provided ‘yes’ responses only)
21. 66.90% (N=368) responded yes to the statement, I update my status on WhatsApp
22. 76.90% (N=423) responded yes to the statement, I watch YouTube videos frequently
23. 39.09% (N=215) responded yes to the statement, I will create and upload videos in YouTube
24. 78.73% (N=433) responded yes for the statement, I stay updated because of Social Media
25. 68.90% (N=379) responded yes to the statement, I used to download and watch films on my mobile
26. 42.72% (N=235) responded yes to the statement, I use apps for ordering foods
27. 54.54% (N=300) responded yes to the statement, I know to book tickets through apps

Fig. 3: Preferences of Technology Usage of students for 21-27 statements (provided ‘yes’ responses only)
III (b) Differential Analysis

**Gender**

The following null hypotheses were formulated and the test of significance was used to find out if there is any significant difference between the means of Preferences of Technology Usage of the students in terms of Gender.

\[ H_0: \text{There is no significant difference in the Preferences of Technology Usage of the students in terms of Gender} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>S. D</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferences of Technology Usage</td>
<td>Boys</td>
<td>300</td>
<td>18.18</td>
<td>4.961</td>
<td>9.671</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>250</td>
<td>14.59</td>
<td>3.441</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is seen from Table-1 that there is a significant difference between the means of the Preferences of Technology Usage scores of Boys and Girls (p<0.05). It is inferred from Table 1 that the p-value (.000) is less than the 5% level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is a significant difference in the Preferences of Technology Usage of the students in terms of Gender

**Location**

The following null hypotheses were formulated and the test of significance was used to find out if there is any significant difference between the means of Preferences of Technology Usage of the students in terms of Location.

\[ H_0: \text{There is no significant difference in the Preferences of Technology Usage of the students in terms of Location} \]
Table-2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Location</th>
<th>N</th>
<th>Mean</th>
<th>S. D</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferences of</td>
<td>Urban</td>
<td>383</td>
<td>17.89</td>
<td>4.550</td>
<td>11.257</td>
<td>.000</td>
</tr>
<tr>
<td>Technology Usage</td>
<td>Rural</td>
<td>167</td>
<td>13.47</td>
<td>3.377</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is seen from Table-2 that there is a significant difference between the means of the Preferences of Technology Usage scores of Urban and Rural students (p<0.05). It is inferred from Table 2 that the p-value (.000) is less than the 5% level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is a significant difference in the Preferences of Technology Usage of the students in terms of Location.

Institution

The following null hypotheses were formulated and the test of significance was used to find out if there is any significant difference between the means of Preferences of Technology Usage of the students in terms of Institution.

H₀: There is no significant difference in the Preferences of Technology Usage of the students in terms of Institution.

Table-3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Institution</th>
<th>N</th>
<th>Mean</th>
<th>S. D</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferences of</td>
<td>Private</td>
<td>261</td>
<td>18.05</td>
<td>4.902</td>
<td>7.471</td>
<td>.001</td>
</tr>
<tr>
<td>Technology Usage</td>
<td>Government</td>
<td>289</td>
<td>15.19</td>
<td>4.042</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It is seen from Table-3 that there is a significant difference between the means of the Preferences of Technology Usage scores of Private and Government school students (p<0.05),

It is inferred from Table-3 that the p-value (.001) is less than the 5% level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is a significant difference in the Preferences of Technology Usage of the students in terms of Institution

**Parents Income**

The following null hypotheses were formulated and the test of significance was used to find out if there is any significant difference between the means of Preferences of Technology Usage of the students in terms of Parents Income.  

H_{0}: There is no significant difference in the Preferences of Technology Usage of the students in terms of Parents Income

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parents Income</th>
<th>N</th>
<th>Mean</th>
<th>S. D</th>
<th>F-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferences of</td>
<td>25000 and below</td>
<td>250</td>
<td>18.48</td>
<td>4.397</td>
<td>45.272</td>
<td>.000</td>
</tr>
<tr>
<td>Technology Usage</td>
<td>25001 to 50000</td>
<td>264</td>
<td>15.00</td>
<td>4.248</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50001 and above</td>
<td>36</td>
<td>14.47</td>
<td>4.766</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is seen from Table-4 that there is a significant difference between the means of the Preferences of Technology Usage scores in terms of Parents Income (p<0.05), It is inferred from Table-4 that the p-value (.000) is less than the 5% level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is a significant difference in the Preferences of Technology Usage of the students in terms of Parents Income

**Fathers Education**

The following null hypotheses were formulated and the test of significance was used to find out if there is any significant difference between the means of Preferences of Technology Usage of the students in terms of Fathers Education
Table-5

**Difference in the Preferences of Technology Usage of the students in terms of Fathers Education**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Fathers Education</th>
<th>N</th>
<th>Mean</th>
<th>S. D</th>
<th>F-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferences of Technology Usage</td>
<td>Illiterate</td>
<td>103</td>
<td>15.11</td>
<td>3.898</td>
<td>14.714</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>School Education</td>
<td>288</td>
<td>16.22</td>
<td>4.340</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>College Education</td>
<td>159</td>
<td>18.08</td>
<td>5.335</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

H0: There is no significant difference in the Preferences of Technology Usage of the students in terms of Fathers Education.

It is seen from Table-10 that there is a significant difference among the means of the Preferences of Technology Usage scores in terms of Fathers Education (p<0.05). It is inferred from Table 1 that the p-value (.000) is less than the 5% level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is a significant difference in the Preferences of Technology Usage of the students in terms of Fathers Education.

**Mothers Education**

The following null hypotheses were formulated and the test of significance was used to find out if there is any significant difference between the means of Preferences of Technology Usage of the students in terms of Mothers Education.

H0: There is no significant difference in the Preferences of Technology Usage of the students in terms of Mothers Education.

Table-5

**Difference in the Preferences of Technology Usage of the students in terms of Fathers Education**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mothers Education</th>
<th>N</th>
<th>Mean</th>
<th>S. D</th>
<th>F-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferences of Technology Usage</td>
<td>Illiterate</td>
<td>200</td>
<td>15.56</td>
<td>4.240</td>
<td>15.122</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>School Education</td>
<td>264</td>
<td>16.56</td>
<td>4.471</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>College Education</td>
<td>86</td>
<td>18.80</td>
<td>5.532</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is seen from Table-5 that there is a significant difference among the means of the Preferences of Technology Usage scores in terms of Mothers Education (p<0.05). It is inferred from Table-
that the p-value (.000) is less than the 5% level of significance. Hence the respective null hypothesis is rejected. Thus, the result shows that there is a significant difference in the Preferences of Technology Usage of the students in terms of Mothers Education

IV Discussion

This study reveals that students have switched from traditional practices to technological access for all their activities. Boys Preferences of Technology Usage is greater than girls. Urban students’ Preferences for Technology Usage is greater than Rural students. Private school students’ Preferences for Technology Usage is greater than Government school students. Students whose Parents’ income is 50001 and above have greater Preferences for Technology Usage. Students whose Fathers Education and Mothers Education had a college education have greater Preferences for Technology Usage. In another study by Nathan Wallis, 2021, expresses that Screen time (70 percent), social media (24 percent), and texting (21 percent) were among the main addictive tendencies seen in girls, while gaming (53 percent) and screen time (42 percent) were among the main addictive tendencies displayed by boys. Muhammad Tanveer Afzal & Nazia Fardous’s (2016) study indicates that students were well aware of the use of social media in the teaching and learning process. The findings of research recommend that before the integration of the technological applications in the learning process a careful analysis of social media may be performed. Mirriahi, N., & Alonzo, D. (2015) findings reveal that students like more use of technologies, especially mobile technologies for efficient and convenient access to content, communication, and assessment that can not only inform academic development and course design for fully online and blended learning courses, but also for the growing number of massive open and online courses (MOOCs) in the education landscape. Matthew Andrew, (2018), findings suggest that participants enjoy learning about how to use new technology, believe it improves learning and prepares them for future jobs. Books/paper were the most preferred resources for learning, followed closely by laptops, while tablets and smartphones were much less preferred for specific educational tasks. The data also revealed that respondents preferred learning through a combination of traditional resources (e.g. books, paper) and digital technological tools (e.g. laptops, tablets). In the general population, the distribution of the three learning styles is 65% visual, 30% auditory, and 5% kinesthetics. As 65% are visual learners, and students are attracted towards attractive content for their learning. More Digital contents are to be created by the teachers for students learning. But in a study by C. Sangeetha & K. Saileela found a study that among 750 faculties, 30% of the Faculties use Laptop for their use and 69.6% of Faculties use only Mobiles. So, Institutions
should provide Laptops/desktops for faculty professional Development along with digital skill training, so that they can meet the challenges of digital era students.

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