SHIFTING PERCEPTIONS OF UNDERGRADUATE STUDENTS FOR E-LEARNING IN TOP-TIER EDUCATIONAL INSTITUTIONS OF INDIA

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E-learning plays a very important role in education in recent years as it facilitate learning by students at all levels. Though e-learning the learners can access information anywhere and anytime. The growth of new mobile and electronic devices have increased the signification of e-learning methods as an innovative method of learning devices for students opting for higher education. The present study was conducted to explore the students perceptions towards e-learning practices as compared to traditional methods of learning. The paper also examines the time spent by students on these electronic devices as well as for academic purposes and whether gender has any influencing role on it or not. To facilitate this data was collected from 91 undergraduate students. Data was analysed through descriptive statistics, cross tabulation and Chi-square tests. The finding shows that perception of undergraduate students toward e-learning is positive and gender has no influence over it. Also students are spending a significant time on these devices for academic use.

Keywords- E-Learning, students perceptions, higher education, time spent on mobile devices

I. INTRODUCTION

E-learning has been defined as the use of electronic gadgets for academic purposes such as watching online tutorials, accessing e-books, data analysis etc. With the use of electronic gadgets, it has been made possible to access information anywhere and anytime.

Though the basic purpose of the mobile phones is enhancing communication, it now also serves as a potential device for gaming and web browsing. Now, electronic gadgets have been designed so as to take up our exact geographical location and show us content uploaded by people living in our city or country.

The availability of various kinds of applications has enabled people to perform most of their tasks online such as payment and networking. There are applications that play music, contain novels or set regular reminders for our tasks. We can perform online shopping or order food through these applications.

Students have been using smartphones and other similar electronic gadgets for contacting their faculty and the administration as well as watching online lectures and solutions for typical problems. Not only does the smartphones help in surfing the internet but also in routine scheduling. Electronic devices offer a large storage space.

However, the constant use of these devices is said to have a deteriorating effect on the health of the user. It is said to cut us off from the real world. It is believed in many areas that electronic gadgets are a mere distraction for students.

The aim of this research is to find out the perception of students in top-tier colleges of India regarding the use of electronic gadgets in academic purposes.

II. OBJECTIVES

1. To study the time spent by higher education students on electronic gadgets for e-learning.

2. To analyse the perception of students towards e-learning practices as compared to traditional methods of learning.
3. To explore the relationship between Gender and time spent by higher education students on electronic gadgets

4. To assess the average time spent on electronic devices for academic purposes and opinion of students in enhancing the learning process.

III. LITERATURE REVIEW

Mills H. (2005) found out that by integrating electronic gadgets and teaching methods, students can learn more effectively. Rossing et al.’s survey (2012) showed that the use of electronic gadgets by students is preferred as it helps them to adjust the pace of the course according to themselves. Miller (2012) found out that the applications and softwares not only help students prepare short notes and reminders but also make it convenient to access, share, store and correct the documents. The use of smartphones and other similar gadgets by college going students has increased from 23% in 2009 to 73% in 2013, according to Ransford (2013). Giurgiu, L. & Barsan, G (2008) concluded that the use of latest electronic gadgets has made accessing internet more and more convenient and handy compared to the older PCs.

IV. RESEARCH METHODOLOGY

The present study is mainly descriptive research which focuses on shifting perception of undergraduate students for e-learning in top-tier educational institutions of India. The sampling frame is students who study in undergraduate programs of different institutes. The sampling unit taken is students of undergraduate programs of different age groups, gender and locations. The sample size taken for study is 91 students and sampling technique used is purposive sampling. Primary data was collected using structured questionnaire method.

Data Analysis

The demographic characteristics of the respondents show that the majority of the respondents were males (80%) and only 20% were females.
Majority of the students surveyed were aged between 18 to 20 years (75.8%) followed by 16 to 18 years (17.6%) and only 6.6% of the respondents were aged between 20 to 22 years.

It was observed that 46.1% of the students spent an average of 4 to 7 hours on electronic gadgets, 31.8% spent 1 to 4 hours, 19.7% spent 7+ hours and 2.1% spent less than one hour on such devices.

Most of the students (63.7%) spent 1 to 4 hours on smartphones and other such devices for academic purposes, 17.5% spent less than one hour, 16.48% spent 4 to 7 hours and 2.1% spent 7+ hours on e-learning.

Type of Electronic Gadgets used by students

- PC: 24 (26.7%)
- Laptop: 20 (22.2%)
- Smartphones: 15 (16.48%)
- Tablets: 15 (16.48%)
- Kindles (other similar types of devices): 10 (11.1%)
- Fitness Bands: 1 (1.1%)
- VR/AR: 1 (1.1%)
- Gaming consoles: 1 (1.1%)
When data was collected on the type of electronic gadgets used by students it was seen that Majority of students use Smartphones followed by Laptops followed by PC & Tablet. This was basically due to the convenience in carrying these devices.

![Use of electronic devices have enhanced learning process of students](chart)

When the respondents were asked whether use of electronic devices have enhanced their learning process 81% said yes where as only 6% answered in negative.

**Hypothesis**

H₀₁: There is no significant relationship between approximate time spent on electronic gadgets per day and average time spent on these devices for academic purposes per day

H₁₁: There is significant relationship between approximate time spent on electronic gadgets per day and average time spent on these devices for academic purposes per day

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>26.995a</td>
<td>9</td>
<td>.001</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>26.446</td>
<td>9</td>
<td>.002</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>18.500</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 10 cells (62.5%) have expected count less than 5. The minimum expected count is .04.

The calculated value of Chi square is 26.995 which is greater than the table value of chi square 16.919 at 9 degrees of freedom. Hence we reject the null hypothesis. Thus there is significant relationship between approximate time spent on electronic gadgets per day and average time spent on these devices for academic purposes per day.

H₀₂: There is no significant relationship between Gender and approximate time spent on electronic gadgets per day

H₁₂: There is significant relationship between Gender and approximate time spent on electronic gadgets per day

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
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<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.351²</td>
<td>3</td>
<td>.717</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.111</td>
<td>3</td>
<td>.774</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.000</td>
<td>1</td>
<td>.991</td>
</tr>
</tbody>
</table>

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The test results indicate that the calculated value of Chi square is 1.351 which is less than the table value of chi square 7.815 at 3 degrees of freedom. Thus the null hypothesis is accepted as there is no significant relationship between gender and approximate time spent on electronic gadgets per day in higher education.

H03: There is no significant relationship between average time spent on electronic gadgets per day for academic purpose and the opinion about the usage of these devices in enhancing their learning process.

H13: There is significant relationship between average time spent on electronic gadgets per day for academic purpose and the opinion about the usage of these devices in enhancing their learning process

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>21.108</td>
<td>6</td>
<td>.002</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>14.854</td>
<td>6</td>
<td>.021</td>
</tr>
</tbody>
</table>

The test results show that the calculated value of Chi square 21.108 is more than the table value of chi square 12.592 which shows that null hypothesis is rejected. There is no significant relationship between average time spent on electronic gadgets per day for academic purpose and the opinion about the usage of these devices in enhancing their learning process.

**Student perceptions towards e-learning**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find it easier to assess e-books compared to hard copies</td>
<td>18</td>
<td>38</td>
<td>22</td>
<td>10</td>
<td>3</td>
<td>2.36</td>
</tr>
<tr>
<td>Electronic gadgets provide convenient methods of assessing information</td>
<td>26</td>
<td>52</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>1.90</td>
</tr>
<tr>
<td>Communication between Faculty/Administration and students can be enhanced with the use of electronic devices</td>
<td>29</td>
<td>38</td>
<td>16</td>
<td>7</td>
<td>1</td>
<td>2.04</td>
</tr>
<tr>
<td>It is easier to plot graphs/make reports on electronic gadgets as compared to those on paper</td>
<td>37</td>
<td>33</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>1.91</td>
</tr>
<tr>
<td>Storing and Sharing of information has become more convenient with the use of electronic gadgets</td>
<td>52</td>
<td>34</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1.51</td>
</tr>
<tr>
<td>You use applications like Google Assistant and Siri to schedule your daily tasks</td>
<td>8</td>
<td>13</td>
<td>30</td>
<td>33</td>
<td>7</td>
<td>3.20</td>
</tr>
<tr>
<td>The information on these electronic devices is reliable</td>
<td>8</td>
<td>52</td>
<td>25</td>
<td>5</td>
<td>1</td>
<td>2.33</td>
</tr>
</tbody>
</table>
The survey reflects that majority of the students (62%) found it easier to read books on electronic devices compared to hard copies. 86% of the students held the belief that accessing information became much easier with electronic devices. Communication between the faculty/administration and the student body was enhanced with the use of smartphones according to 74% of the students. 77% of the students agreed upon the fact that plotting graphs was easier and much more convenient on electronic devices as compared to physically drawing them on paper. Only 1% of the students disagreed to the fact that sharing and storing of information has become more convenient on electronic gadgets. Most people (44%) did not use electronic devices for scheduling their routines with the help of applications like Google Assistant and Siri. 66% of the students believed the information available on such devices to be reliable while 56% considered it sufficient to score well in their examinations. 45% of the students were of the opinion that their information remains safe and secure on these electronic devices while a fair share of 40% students decided not to comment upon the same. 78% of the students thought that the electronic gadgets are not a distraction for them.

This statement was also analysed through the mean score. Most students agreed to all statements as is seen by the mean score of less than three but they disagreed to one question where the mean was less than 3 which shows that they don’t use applications like Google assistant and Siri to schedule their daily tasks.

V. CONCLUSION

The study shows that students’ opinion regarding e-learning does not vary with gender. Moreover, students’ opinions on the effectiveness of learning through is dependent upon the time they spend on these devices.

We can observe that since most of the students found it convenient to study on electronic gadgets, there is a shift from traditional methods in academics, with students tilting towards e-learning. Students no longer view these devices as mere objects to pass time but are utilizing their time gaining knowledge.

Most students held the view that communication between them and their institute authorities has radically eased out with the increased use of these devices.

The advent of electronic gadgets has also reduced the ‘Paper work’ with more and more students preferring to complete tasks and making reports electronically. These devices are now being gradually brought into use by students to schedule their study time and other tasks for the day.

Students in higher education also find the content on these devices reliable and sufficient to perform well in their examinations. They believe their electronically saved data to be safe from outer threats to their privacy.

BIBLIOGRAPHY