

A Comparative Study on Effective Learning through Electronic Devices

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Abstract:

The main aim of this research is to compare the positive and negative effects of various electronic devices such as mobile, laptop, television, radio, and e-readers during this pandemic period. This research work helps to understand the effectiveness of the electronic mode of learning. Currently, many institutions are conducting online courses through various e-learning tools. Furthermore, schools and universities are conducting online classes to complete uncompleted syllabus and portions. The opinions of the learners on various mobile and e-devices were analyzed to find out the positive and negative effects of online teaching, learning, and evaluation. The positive effects such as effective communication, flexibility, and convenience were taken into considerations. At the same time, the issues related to security, digital divides, facilities, data availability, and effective evaluations were also analyzed in this study. The qualitative method of analysis was used to find out the effects of learning and teaching among students. Various electronic tools like TV, Radio, Mobile phone, Laptops, and e-readers were taken to compare the effectiveness. This research clearly shows that the positive side of the e-learning mode is considered effective in the current situation. Furthermore, the study finds a lack of safety, security, internet connectivity and storage capability varies among learners. Also, this research shows that mobile phones are very effective than the other e-devices during this pandemic period.

Keywords—E-devices, Pandemic period, effective learning, qualitative analysis, Security and Safety, E-Learning, Mobile learning mode

I. Introduction:

Due to the lockdown method, there are no choices for the face to face teaching and learning in the fixed classroom set-ups. Now many educational institutions in India are following the e-learning mode of learning through various computer applications and e-devices. There are many useful learning tools and applications are available for the android and Microsoft platforms. The e-devices such as Mobile phones, Television, Radio, e-readers, laptops are currently in use for the betterment of virtual mode of training and education. These tools have many open-source software applications and as well as a commercial model of software tools. Even though these tools offer plenty of flexibility, it does not provide safety and security related to the personal data of the user groups.

This research discusses the issues and advantages of the virtual learning applications by the way of opinion survey method.

2. Review of Related Literature:

The research conducted by the researcher Zarei found out the development of creativity and knowledge among the university students. They proved the effectiveness of ICT tools and e-learning tools in higher education by using survey method (Zare, M., Sarikhani, R., Salari, M., Mansouri, V. 2016), They focused the impact of e-learning tools on creativity and skill development. The researchers M.L.H. Khan and A. Setiawan conducted research to find out the impact of e-learning on higher education. This feedback study showed a favorable opinion among the students on the e-learning strategy. Also, the educators gave a favorable opinion on the concept of e-learning methods. (M.L.H. Khan, A. Setiawan, 2019). Negash, et al., found out the various differences in the e-learning mode. They classified the e-learning modes into synchronous learning, asynchronous learning, self-learning, face to face learning. Hybrid synchronous learning,

Blended asynchronous learning, etc. The researchers focused on the concept of asynchronous learning with the guidance of educators. The research proved the positive effect of learning in a supervised environment (Negash, Solomon, 2008).

The research conducted by Zarei and others showed the improved aspects related to motivational level, attitude changes, and academic achievements in the electronic mode of learning (Zarei-Zavaraki and Rezael, 2011). Bendani and Ahmed's research showed a positive attitude among university learners and educators in Saudi Arabia (Bendani, Ahmed, 2011). Liaw and Shu-Sheng conducted research on the growing nature of online learning and education. (Liaw, Shu-Sheng, 2008). Their research outcome showed enrollment improvement in online learning. Wei and Lo conducted research on mobile phones and their impact in 2006. Wei and Lo's research concluded that mobile phones helped to fulfill the social gratification needs of young users. It showed the improvement in the social connectivity among the user groups. Also, it helped to improve the relationships with friends and valued others (Wei and Lo, 2006). The constant accessibility of technology tools, internet, and mobile devices gave a sense of independence among young people. Kasesniemi and Rautianinen conducted research and proved the relationships between independence and mobile phone usage. It showed the improvement in independent activities without the dependency from others and family members in the mobile access environment (Kasesniemi and Rautianinen, 2000). The research conducted by the Greenfield and Yan showed issues related to privacy, internet security, safety, cybercrime, and pornography among the virtual community (Subrahmanyam, Kraut, Greenfield, and Gross, 2006).

3. Method and Procedures:

The opinion of private school students was taken into this study. Simple random sampling techniques were used to collect the qualitative data. The opinion of 120 students was gathered using email forms with a suitable questionnaire. The questionnaire contained thirty two questions relevant to the effectiveness of e-devices. The opinion of the students was analyzed with the four well-structured categories. The variables such as flexibility, User friendliness, connectivity, availability, experience were taken into considerations. The questionnaire was designed with the guidance of subject experts to frame the research work. The questionnaire contained the following parts to evaluate the opinions

Flexibility

User friendliness

Connectivity

Availability

Learner's experience

Five-part Likert scale was used to analyze the opinion of and students of private schools in Tamil Nadu. The students were given option to write their opinion based on the usage of e-devices.

5. Findings and Suggestions

Demographic data

- The majority of the student respondents are +2 students with the age groups between the ages of 17 to 19.
- 52 percentage of respondents had average marks in their tenth public exams
- 85 % of students had mobile phones for the learning
- 60 % of the students had internet data facilities

- The majority of the students had Television in their home for learning
- 70 % of them had previous e-learning experience
- More than 50 % of teacher respondents were from city-based locations.
- 30 % of students were from village-based locations.

Device usage:

- 98 % of the student used Mobile phone for the learning process.
- 90 % percent of the students had experience in laptop usage for the learning
- 40 % of respondents had experience in Radio usage in learning
- 20% of respondents had experience in e-reader's usage
- 96 % of students had experience in Television media for the learning

Effective learning and teaching

- 95 % of the student gave favorable opinion regarding the use of mobile phones in the e-learning mode.
- 67 % of the student respondents gave favorable opinion regarding the TV media in the learning process.
- 90 % of the student respondents gave unfavorable opinion regarding the use of e-readers.
- 20 % of the student respondents gave favorable opinion related to satisfaction of learning through the radio medium.
- 96 % of the student respondents gave a good response to feedback and clarification through the mobile phone in the learning environment.

The finding of this study shows that there is a significant relationship found between the variable such as the e-learning mode of learning and student's satisfaction. There is a strong relationship found between the variables such as e-devices and flexibility. There is a positive relationship found between the technical tools' availability and feasibility. Also, there is a negative response found between the e-devices in privacy and effective learning.

6. Conclusion

As a result of this research, the rise of the e-system of education is found. It also shows that most students accept this type of e-education. The use of web sites and social media tools such as WhatsApp and Zoom etc., for education and entertainment, has become a very important need. E-media provide a great opportunity to pursue education. Studying through e-devices and e-platforms can now be seen as a bond between students. This research confirms that e-education is now a link between education and students. Most students have accepted that such a change is useful. Many have opined that such an e-model of education has had a huge negative impact on routine life and day to day activities. Most students have positive opinions about the benefits of face to face learning in schools. Students opined that there is great scope for learning on e-mode of learning. Due to this pandemic, there is no better way to educate than the e-education mode. Many positive research findings have already been published on the benefits of learning through e- mode.

Technology tools, facilities, data, and internet communications are inadequate in the current scenario. These have created a gap in students' learning opportunities. In spite of the different opinions, this study confirms that such e-devices provide a great learning opportunity during this pandemic period. Also, this research shows that there is huge scope present in the use of mobile phones in the educational process.

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