Investigation of the Impact of Learning Apps on the Academic and Overall Well-being of Young Learners

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Abstract

21st century individuals have taken to innovation in an unprecedented fashion and the numbers are a lot higher than the past ages. This increase in use has prompted attention towards the evaluation of the outcomes of technology usage, and how this affects the young learner's brain and their socio-enthusiastic, psychological and physical developments. Our research is toward drawing out the pros and cons of app usage in the younger generation. The online App based learning makes technology move towards smart training, however it correspondingly directs various positive and negative effects to the student's utilization of innovation. These may adversely influence the children's physical, mental, enthusiastic, and social well-being. The result of innovation can lead to uncontrolled practices like addition to mobile devices. This article attempts an investigation of App based learning and the various ramifications involved. The paper demonstrates the study from the base of satisfaction factors, classroom environment, and low-income households for different analysis factors with an in-depth explanation.

Keywords: Learning Apps, education, innovative learning, m-learning.

1. Introduction

The academic community is finding new ways to continue with an effective teaching learning process through the pandemic. Students keep themselves engaged with new means of learning and working, and they educate and help others through all possible methods having adopted virtual ways to complete various tasks. In the field of learning and teaching, the online mode of learning is now a mandatory requirement [1]. The various positive contributions of technology and the usage of internet in an effective manner have increased the academic achievement [2] and an increased feeling of social connectedness that enhances well-being among friends and family. The online approach of freedom in learning has increased satisfaction rates in enthusiastic and creative young minds. Educational media at a young age can have positive effects if it is genuinely educational and requires direct participation. [3, 4]. Consideration must be given to usage of innovation in children and in youths. It is essential to balance the use of technology with different exercises that advance relationships, creativity and improvement.

Unnecessary use can adversely affect the physical, mental, emotional and social advancement of students [5, 6]. Several researchers have noted that overuse of technology can result in mental overload and disconnect people from nature, play, and people. A child who spends too much time in the virtual world is less likely to have significant social skills to interact in the real world if only from lack of practice.[7,8] App Technology negatively impacts social skills, and those engaging in excessive app use have a decreased sense of time and concentration due to multi-tasking, also, they are not progressive toward the future and are more impulsive. It was also found that the academic performance was affected more than any other factor.

The paper has been organized as follows: Section I describes a brief overview of the state of the art work in the area of Mobile Application based learning, Section II discusses the introduction of mobile application-based learning, Section III delivers an analysis on mobile application-based learning and Section IV draws suitable conclusions.

2. A brief overview of state of the art articles

Liqiong Liu et al in their paper on "Influence Factors of Satisfaction with Mobile Learning APP: An Empirical Analysis of China "have put light on the many factors affecting students overall development. Although this study empirically researched the factors influencing user satisfaction with the use of mobile learning APP, and pointed out the matters needing attention, it didn't comprehensively analyse the factors, for example, price and privacy protection in the analysis framework. Mohd Shoaib Ansari and Aditya Tripathi, in their work,"An Investigation of the Effectiveness of Mobile Learning Apps in Higher Education in India" have basically researched and expressed the levels of the Indian students' mindfulness and convenience of mobile-learning applications and its effect over the learning cycle [10]. The researchers made assessments of various categories of students' from various colleges and from various places of India. However, they haven't considered the assessment of other partners and stakeholders like guardians, educators, APP engineers etc.

In the article "Should Tablets Replace Textbooks in K-12 Schools?" [6] authors have published a blog regarding the pros and cons of textbook and tablet. As tablets have gotten more predominant, another discussion is being framed about whether schools should change from print course readings to advanced reading material on tablets and e-readers. Advocates of tablets state that they are accepted by most instructors and students, as they are a lot lighter than print course readings, and can help improve the prevalent assessment system.

3. Discussion on the present scenario and analysis of the satisfaction level of users

With a general Internet penetration in India and consistently expanding number of web users the computerized learning business in India has picked up heaps of energy. Computerized learning includes the assortment of learning encouraged by apps and instructional learning provided by apps. This includes different systems like versatile learning, mixed learning, study hall advances, e-reading material, portable learning, web based learning (or e-learning), open instructive assets (OERs) etc. The organizations giving computerized instruction have different stages in their administrations,

from 'EDUCOMP Smart Class/School' to 'MOOC'. Consequently, educators, guardians and

understudies are obliged to shoulder as a primary concern the advantages and disadvantages of learning through advanced methods to have a more powerful comprehension of the scholar community and the positive or adverse influences therein.

The survey has taken into consideration various aspects of this new environment from the perspective of the educationalist and the students. There have been plenty of positive and negative [10] impacts leading to poor academic results. A questionnaire with 45-50 questions was framed pertaining to the areas like academic growth, time/economic relevance, socio behavioural aspects etc. The questionnaire was answered by respondents in the category of school students, parents and teachers. The findings revealed that a few conditions were problematic to the successful usage of an online program. Executives and employees who are uncomfortable with change and innovation, feel that online projects cannot offer quality instruction and such people try to hinder the growth of online learning [11]. Some of the shortcomings in an online program are that some organizations cannot see beyond the bottom line and look at online programs only as ways to build incomes and are not focused on the methods used for giving quality education to learners [12]. Interestingly to the question *"Are the socializing needs of the ward satisfied through online interaction with classmates and friends" with various* options as no, yes, and maybe from parents and teachers, the analysis of response given by respondents show that 50 percent of the people responded with a less satisfying factor to their online mode of teaching environment. 40 percentage remarked that they are satisfied with online mode of teaching and learning. The remaining 10 percentage has given a response in the mid level and that they does not find much deviation with the traditional way of teaching and online way. Another aspect of the topic that is worth discussing is the amount of money spent by parents and institutions towards the fulfillment of online App based education mode when compared to traditional way of teaching and learning [13,14]. The cost structures of online learning frameworks are not quite the same as those of conventional separation instruction systems. It is fundamental to comprehend the costs engaged with an online course framework before considering its expense effectiveness. Mainly the cost of App based learning is on the device cost, expenses for purchasing the App if it is not free and the extra wear and tear cost. A group of parents and teachers were asked about their opinion on expenses for online mode of teaching. As figure 1 indicates, majority of the parents are spending less than 20 % of their income and gave the feedback that they are satisfied and feel that it is worth to spend this amount on online mode of learning activity for their ward.
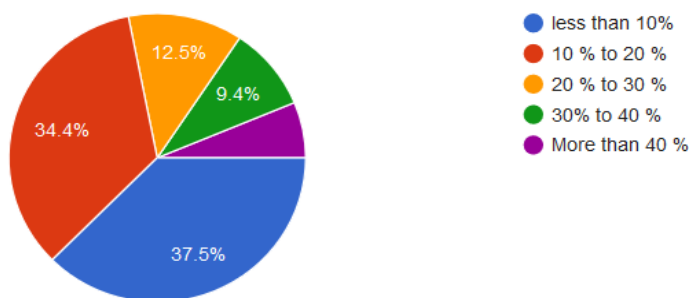

Figure 1: Consolidated result of the percentage of income spent by families for online App based education
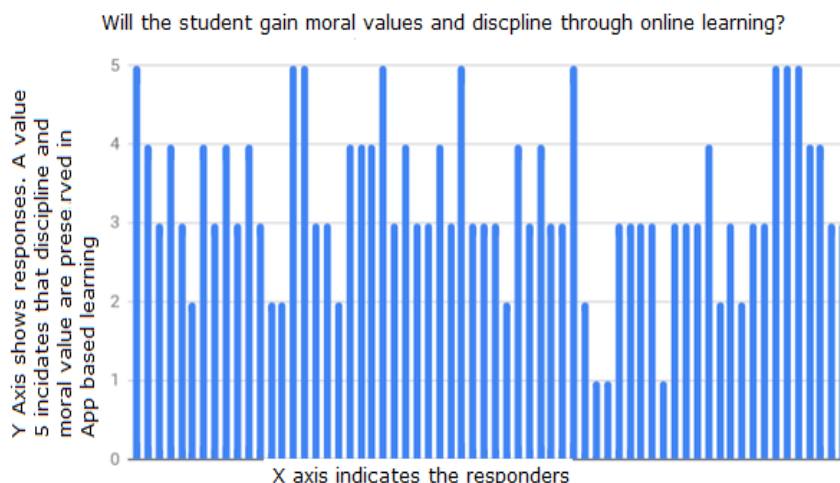
Figure 2: Consolidated result of the evaluation on discipline and moral values gained by student on App based learning. Y axis shows response in numerical scale and X axis shows the respondents.
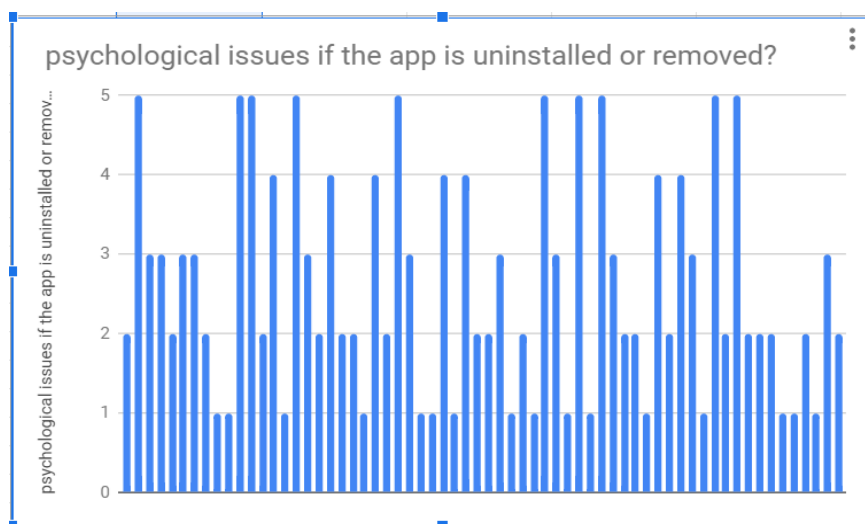

Figure 3: Consolidated result of the evaluation on psychological impact of online or App based learning. Y axis shows response in numerical scale (value 5 indicates high psychological issues and 1 indicates less issues) and X axis shows the respondents.

It is a teachers' goal to create a positive online class room experience that upholds learner's development and improvement. This is not very simple when the teacher is confronted with a blend of characters and learning capacities. Realizing how to deal with and address student issues in a faultless way is critical to recapturing control of the class and for offering a positive learning experience [13]. The mentor or the teacher now has an additional responsibility to take care of the online discipline of the students also. Student aggressive behaviour has been estimated based on the question "Do you feel that the students who spend more time with app-based learning will have psychological issues if the app is uninstalled or removed?" and the question "Will the student gain moral values or purely academic knowledge only?" The figure 2 shows the response. It depicts that, 70% of the parents have responded by sharing the fact that Apps give only academic development and that their wards started showing psychological issues if the mobile is not available. Parents also agree on the fact that Apps reduce the thinking ability of their ward.

Discussion on the present scenario and analysis of the satisfaction level of users

A questionnaire with 45-50 questions was framed pertaining to the areas like academic growth, time/economic relevance, socio behavioral aspects etc. The questionnaire was given to respondents falling in the category school students, parents and teachers. Their response was analyzed and the result are presented herewith.

Limitations of the survey

Almost 75% of the Indian population does not speak or write English. Creation of a Hindi (other supported local languages) digital education gateways to tap the sub urban or rural market potential can prove to be a key element to penetrate deeper. A facility to have affordable internet access, data enabled devices and appropriate internet plans can play a significant role in tapping the market and to increase the usage of learning App.

4. Conclusion

Internet and technology addiction is multi-faceted and truly has no standard definition because of the diverse technologies available. The article provides a preliminary analysis of online classes and the consequences of the methods used after factoring in the various aspects of classroom environment and low-income households to provide different analysis factors with possible explanations. The conclusions point to the fact that excessive use can negatively impact the physical, mental, emotional, and social development of youth. More health education interventions are needed in most countries to create and increase the awareness of this potential issue. Innovation has been viewed as the key to change methods of school instruction and has had an exponential growth during this pandemic. Innovative ideas and solutions are the need of the hour to battle the instruction/tutoring related issues while also taking into consideration reaching all remote and economically backward learners.

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