

Study on Influences of Learning Apps in Children's Development Pertaining to Physical, Psycho-Social and Economic Variants

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ABSTRACT

In the past few decades, public schools and college students in many parts of the world have adopted and used electronic learning or e-learning. But the growth of app based learning and e-learning in the recent pandemic year was beyond expectation. The increased necessity and the rapid growth of usage in technology has made almost everything possible through online means. Use of Learning Apps in teaching has the potential to convert the way teachers educate students. It is a fact that learning Apps cannot replace instructors and teachers, but these technological advancements can upgrade the quality and reach of their educating skills. Children are enthusiastic users of technology much higher than the previous generations. Naturally, after effects of this increased use in technological skill and its impact in development of their brain, their emotional, social, cognitive and physical development are questions under concern. This research work is interested in the investigation of bringing out the pros and cons of technology usage in young generation. This work focus on the study and analysis of the consequences of technology use, and how this impacts children's brains and their socio-emotional, cognitive and physical development. This research work brings out the pros and cons of technology usage in young generation.

Keywords :

Online Learning, Learning Apps, Psycho-social development, Academic growth

Introduction

In different ways, the use of computing technology for learning has been observed. In the past few decades, public schools and college students in many parts of the world have adopted and used electronic learning or e-learning. But the growth of app based learning and e learning in the recent pandemic year was beyond expectation. The increased necessity and the rapid growth of usage in technology has made almost everything possible through online means. Use of Learning Apps in teaching has the potential to convert the way teachers educate students. It is a fact that learning Apps cannot replace instructors and teachers, but these technological advancements can upgrade the quality and reach of their educating skills.

Statement of the problem

To explore the effectiveness of Learning Apps in the education sector in urban India by undertaking a study on influences of learning apps in children's development pertaining to physical, psycho-social and economic variations. It also assesses the role of mobile learning apps in school student's life.

Objectives of the Study

- To examine the role of learning apps in education and their implications especially in the environment outside the classroom.
- To observe the consequences of using Learning Apps on student's behavior
- To investigate the novel teaching approaches that can balance teaching and learning practices through the use of information technology.

To understand the association and the significance level between the learners and the apps.

Scope of the study

With an inclusive Internet infiltration in India and ever growing number of internet consumers the digital learning business in India has experienced a lot of momentum. Digital learning is the category of learning assisted by Internet based technology. Many categories of learning technologies has emerged in the recent past such as Online learning or E-learning, Open Education Resources, independent learning using Learning Apps and Massive Open Online Courses (MOOC). During this pandemic it has become a new normal to adapt to any of these pedagogy to continue with the education in INDIA. The learners, parents and teachers are in a compulsion to be aware of the positive and negative impact of these above said learning methodologies.

Methodology

1. Type of Study

A survey has been conducted to collect data by sharing structured Google form questionnaire to the respondents of the age between 6 and 40. The questionnaire comprises five sections. Section i emphasis on the users' summary such as gender, age, and education background and the kind of user (parent, learner or teacher). Section ii concentrates on the Emotional/psycho-social aspects, Section iii explores the Economic impact of Learning Apps in learner's life, Section D and E focusses on questions related to Physical well-being and impact on Academic perspective. A range of 5 points were used to scale the opinions like, 1- Strongly agree, 2 – Agree, 3 – No opinion, 4 – Disagree and 5 – Strongly

disagree. An assessment scale of YES, NO, MAYBE is also used for discrete questions.

2. Sources of data and validation

- The questionnaires was shared to students and parents where respondents are all mobile learning APP users who have experienced mobile learning APP.
- Survey was undertaken from the teachers using the Learning App to teach at educational institution.
- External validation is performed, in which the results are generalized to the respondent population from sample. The time span of this survey was two months.

3. Sample size and sampling methodology

The study focuses on a sample of 150 respondents. The gender ratio of the sample is taken as equal percentage of 50. Percentage of respondents below 15 years of age will be 50% indicating students, above an age of 30 will be 30 percentage for parents and teachers, between 15 and 30 will be 20% for young adults. The empirical study was conducted using the online questionnaire and the variables are measured with multiple indicators. The questionnaire was shared to respondents belonging to the category of school students, parents and teachers. Their response is analyzed and a result has been drawn.

Results, Analysis & Discussion

Data collection was done through Google form due to the pandemic situation, on a set of 50 Questions that falls in to the various category of responders. The study focused on a sample of 150 respondents. The male/ female ratio of the sample is taken in equal percentage of 50. Percentage of respondents below 15 years of age is 50% indicating students, above an age of 30 is 30 percentage for parents and teachers, between 15 and 30 is 20% indicating young adults. The questions asked were framed pertaining to the areas like Emotional/psycho-social, Economic impact, Physical well -being and Academic growth. The analysis of the response under each area is discussed in this section.

i. Emotional/psycho-social Impact

In this unpredictable era of digital world, the learners are already introduced to the new mode of education through Learning Apps. This has an impact on the psychological behaviors and emotional quotient.

Question 1: Do you think the emotional need of you/your ward is satisfied (interaction with classmates and friends)? Fig :1 shows the analysis of response given.

Question 2: Students are more interested in acquiring skills using apps, mostly for immediate needs. Kindly share your opinion on this statement. Fig :2 shows the analysis of response given.

Question 3: Do you think the teacher -student bond is prevailing in online teaching? Fig :3 shows the analysis of response given

Question 4: 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? Fig :4 shows the analysis of response given

Question 5: In your opinion, will the student gain moral values/disciplines or app helps purely academic growth only? Fig :5 shows the analysis of response given

Question 6: What do you think, the learning apps have made your ward isolated and emotionally challenged? Fig :6 shows the analysis of response given

Question 7: Has learning app teaching pedagogy increases the stress level of your ward? Rate it. Fig :7 shows the analysis of response given

Question 8: Do you think, the learning from educational app has made your ward more punctual?

Fig :8 shows the analysis of response given

Question 9: Is peer teaching happening in learning from app? Fig :9 shows the analysis of response given

Question 10: Do think your ward is dependent on his/her Teacher for academic activity? Fig :10 shows the analysis of response given

The graphs shown indicates the responses for these mentioned questions. The queries posted across the respondents are shared here. The queries has been given the choices of YES, NO, MAYBE to quantify the responses were shown as pie graph. For the results shown Bar chart the X axis represents the opinions. The notations are 1- Strongly agree, 2 – Agree, 3 – No opinion, 4 – Disagree and 5 – Strongly disagree.

The respondents have shared their views that they miss the warmth and care of the teacher from the traditional learning environment, since the teachers only play a role of facilitator. The parents and the teachers have felt the psychological change in the growing adults when the App has been removed and faces challenges in bringing them back to normalcy. The analysis shows that the stress level of the learners have slowly increased from pleasure to pressure. The peer-peer teaching methodology of learning has been increased through this way of learning. Keeping up the schedule for the online classes has invested the habit of punctuality among the learners. The adults have the opinion that education through learning Apps needs continuous supervision and regular assessment.

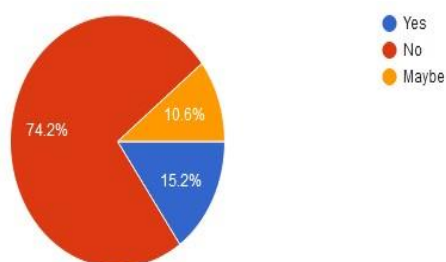


Fig 1: Analysis of the response on emotional satisfaction

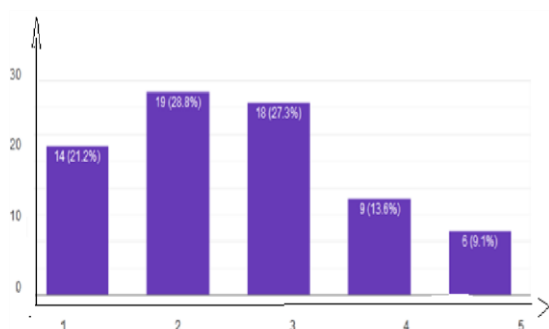


Fig 2: Acquiring skills using apps, mostly for immediate needs

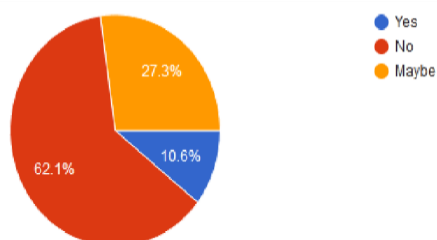


Fig 3: Teacher -student bond Analysis

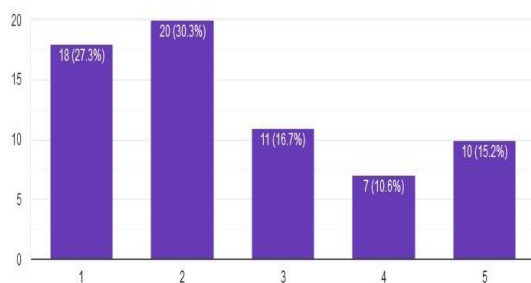


Fig 4: Analysis of the response on App uninstalled or removed

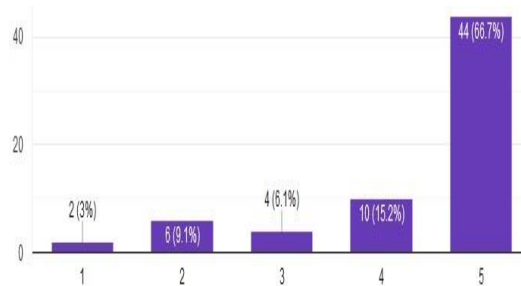


Fig 5: Analysis of the response on moral values/disciplines

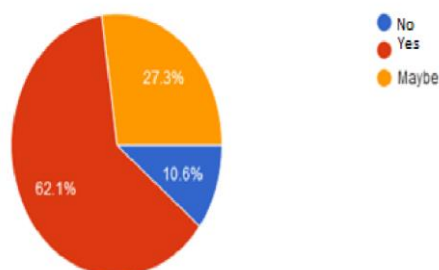


Fig 6: Analysis of the response on ward isolated/emotionally challenge

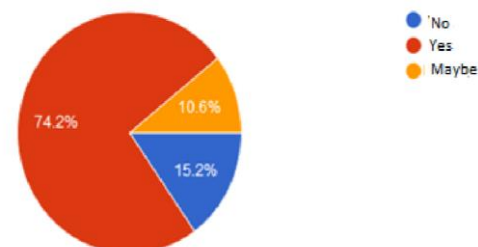


Fig 7: Analysis of the response on stress level

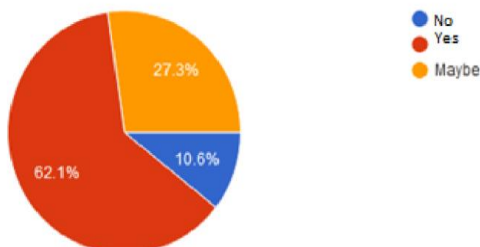


Fig 8: Analysis of the response on punctuality

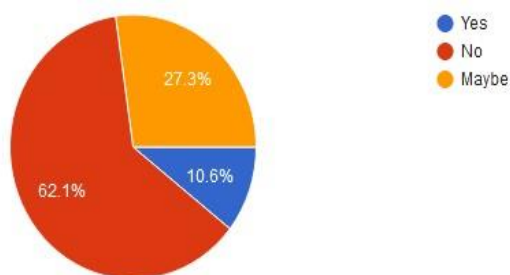


Fig 9: Analysis of the response on peer teaching

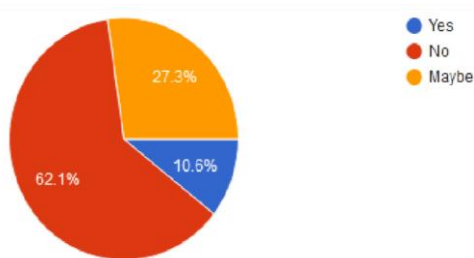


Fig 10: Analysis of the response on Teacher dependent

ii. Economic Impact

The amount of money that has been invested in the learning Apps plays a vital role since it directly affects the economically less privileged sector of learners. Purchasing the device and App can be given for subsidiary for these learners. The response analysis clearly indicates that parents and teachers in common are willing to update and keep the resources ready to help their ward in studying. The questionnaire and the responses analyzed are discussed in this section.

Question 1: As a parent, how much percentage of your income do you have to spend for online mode of learning materials/activity for your child? Fig 11 shows the analysis.

Fig 11: Analysis income spent for learning Apps

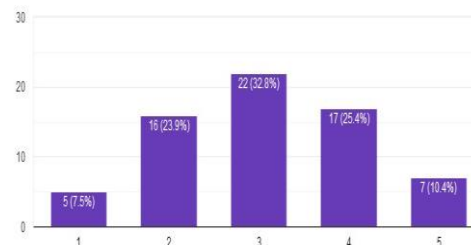


Fig 12: upgrade internet connection and App version

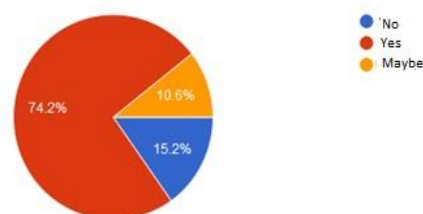


Fig 13: Analysis of the money spent enhance ward's knowledge

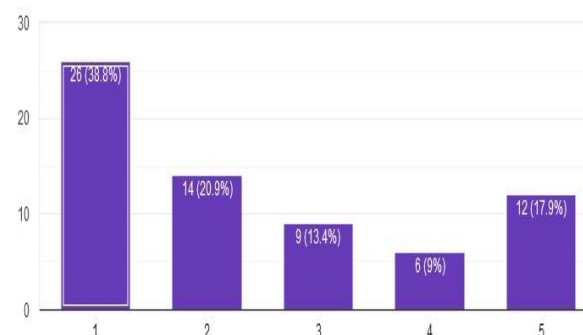


Fig 14: Analysis of the response on additional expense

Question 2: The learning apps requires steady internet connections and frequent version updates. Are you always willing to do so? Fig 12 shows the analysis.

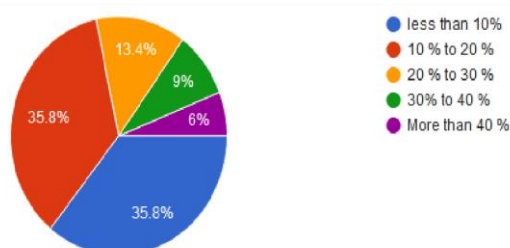
Question 3: Do you feel that the money you spent in online mode of learning is effective in enhancing the knowledge level of the child? Fig 13 shows the analysis.

Question 4: Do you think that it is an extra expense to spend money for purchasing the laptop/tablet /mobile / any related device and the App in addition to the tuition fee paid in school/college? Fig 14 shows the analysis

The overall responses has given a mixed reaction towards the usage of Learning Apps in their wards. The parent's voice out that the amount of money spent on the Apps should enhance the knowledge level of their wards. The opinion shows that it has taken an extra leverage in paying for the Apps and devices other than the institutional education fees. But on the other hand, the cost cutting can be implemented in transportation charges, tutor's salary, and procurement of course materials.

iii. Physical well-being impact:

The traditional educational system concentrates on overall well-being of a school going child. It emphasis on participatory learning and induces competitive spirit among the learners. Education through Learning Apps, provides a non-competitive environment where the learners cherish



their own success in a non-competitive environment with less pressure without a feeling of performance comparison with other learners. The questionnaire has the following queries.

Question 1: Do you think that your ward has inculcated laziness because of learning App? Fig 15: shows the analysis.

Question 2 : What is your opinion about learning apps with respect to your ward's vision? Is it affecting?

Question 3 : Your opinion on physical activities which is not possible through learning apps. Does it have impact on your ward's health?

Question 4 : Do you think that continuous learning from the apps has changed the sleeping pattern in your ward?

Question 5: Do you think that engaging themselves with learning apps for a long period of time will have negative effect on the health parameters of the child? Fig 16 shows the analysis.

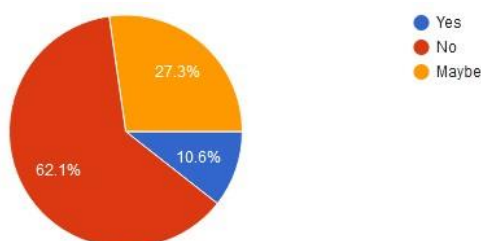


Fig 15: Percentage of laziness among the learners

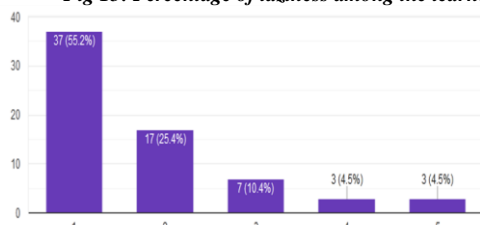


Fig 16:

Negative impact on health parameters

For the question 2 about the eye vision of their ward, 62% of the respondent have agreed with that, 36 % NO and 2% are not sure about that. Continuous usage of Learning App has a direct impact on the learners, said 32% , 51% denied it and 17% were not aware of it. With respect to the sleeping pattern of their ward who uses Apps for learning, 58% has acknowledged it, 24% has responded negatively and the rest not sure of it.

iv. Academic Impact

Every learner has their own way of learning. The learning phase will differ depending on their grasping power, understanding capacity and learning ability. Learning Apps provides an efficient platform cater the needs of different levels of learners. This section discuss the analysis on academic impact by using the educational Apps. Learning

Apps inculcates independent learning skills among the learners. The observations made in accordance to academic impact is shared below.

Questions 1 : Is online learning enabling the ward to self learn? Fig :17 shows the analysis of response given

Question 2: Learning is the ability to acquire new or transform knowledge. How do you agree the ability of learning app in satisfying the teaching learning process and serving the purpose of learning? Fig :18 shows the analysis of response given

Question 3 : Do you agree on the statement that students are engaged more into learning while using a mobile learning app? Fig :19 shows the analysis of response given

Question 4: Do you think that App based learning is better than traditional classroom based learning ?(rate your opinion) Fig :20 shows the analysis of response given

Question 5 :Do you think that children are able to recollect or remember the contents they have learned through app much easier than in traditional learning practice ? Fig :21 shows the analysis of response given

Question 6: Are WE, the elders, opening a way before children that could lead them as gadget addicts? Fig :22 shows the analysis of response given

Question 7: In your opinion, will the student gain moral values/disciplines or app helps purely academic growth only. Fig :23 shows the analysis of response given

Question 8. Do you feel that app based learning narrows the thinking ability of the student ? Fig :24 shows the analysis of response given

Question 9 : Do you feel that contents posted in apps needs more review before posting? Fig :25 shows the nalysis of response given

Question 10 : Do you feel that the advertisements that come in between the apps is distracting the students from their learning process ? Fig :26 shows the analysis of response given

Question 11 : Do you think that the App based assessment will be genuine in evaluating a child and can replace the traditional hand written examination system? Fig :27 shows the analysis of response given

Question 12: Do you want your ward go back to traditional school setup? Fig :28 shows the analysis of response given

Question 13: Do you think that the academic performance of your ward has improved through learning apps?

The analysis of response for question 13 was quite interesting. The parents and teachers have responded that 63% of them have acknowledged and 11 % denied the fact and 26% have responded that learning App may also be a

cause. New learning pedagogy are adopted during the critical and emergency periods this pandemic. Learners love to use the stimulating and fun filled educational Apps for learning. It opens various arena for learning different topics of a particular subject which is an escapee from classroom lectures.



Fig 17: Percentage of laziness among the learners

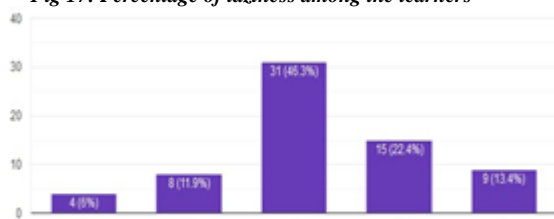


Fig 18: Ability of App in satisfying teaching process

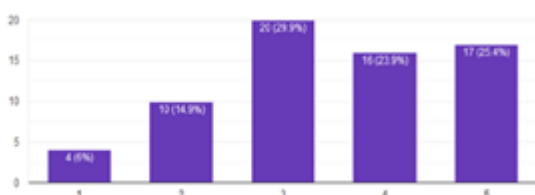


Fig 19: Learners engagement using Learning

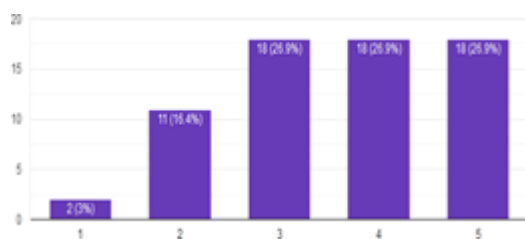


Fig 20: Effectiveness of Learning App Vs traditional

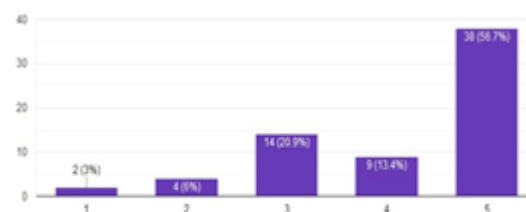


Fig 21: Remembering and recollecting among App learners

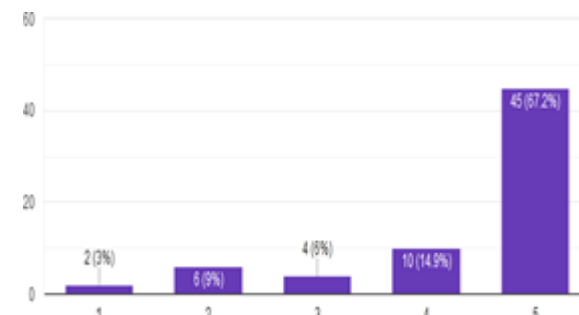


Fig 22: Response for Gadget addiction

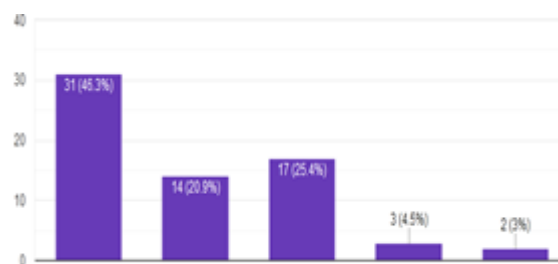


Fig 23: Response related to learning moral values

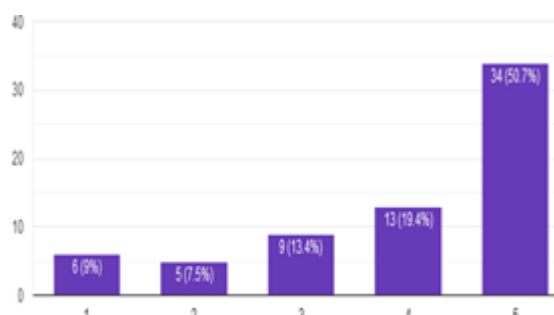


Fig 24: Thinking ability among App learners

This section analyzed the impact of learning apps with respect to the academic growth of millennial learners. Though unsaid limitations are there, but still provides a challenging environment for the self-learners to explore more in academics. Learning Apps demands more motivation, self-discipline, punctuality than the classroom environment. It needs more involvement to set up the goals, meet the target and deadlines, to track the learning progress. Moreover, learning through Apps leads the learner towards isolation but it can be overcome by actively participating in forums, communicating through digital modes. Apps

provides visual experience with animations and interactive learning that enriches the learning experience.

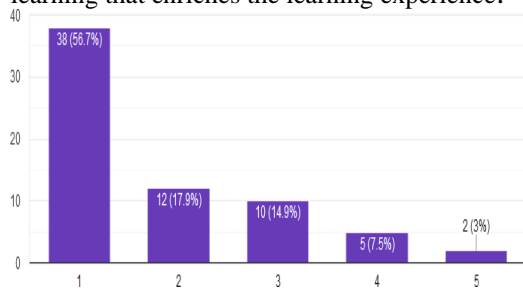


Fig 25: Need for review of content

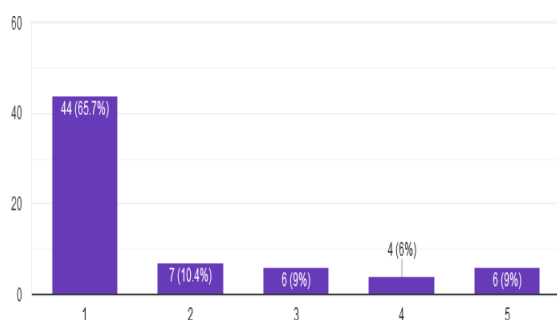


Fig 26: Percentage of distraction because of advertisements

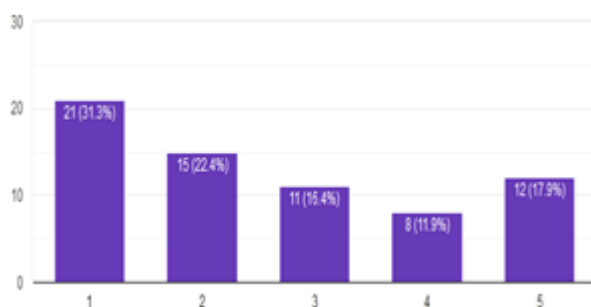


Fig 27: App based Evaluation and assessment

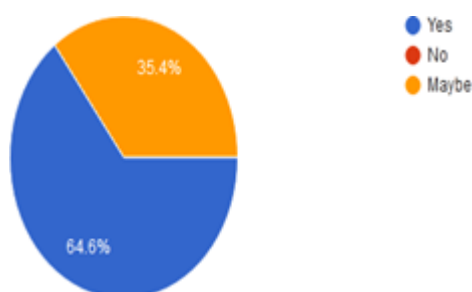


Fig 28: willingness to go back to traditional school Learning

Observations

- In a multi linguistics population like INDIA, learning Apps needs to be created in local languages which can

tap both the rural and urban market potentials. This leads to deeper penetration of education across pan India.

- Stable and swift internet access and mobile data enabled devices to use the Apps plays the significant role in current education sector.
- Efficient usage of multimedia tools and training for the same is the need of the hour for the teachers uploading the E-content for the Apps.

Conclusion

In this current digital world, Internet technology and Apps has become an addiction which does not have any standards. This research work has been carried out to study the impact of online classes and usage of educational Apps among the learners and to analyze the outcomes. This empirical study illustrates the survey taken among the learners and young adult, parents and teachers of different economic levels and households. The result provides a conclusion that extreme use of Apps has a negative impact on physical, emotional, psychological and social behaviors of the learners. During this pandemic, innovation has been the key to the survival even in the field of education. Learning Apps provides enhanced learning experience that supplements the classroom environment. But it has given more responsibilities to the parents as mentors and presenters that may be a hard role to play for all the parents. Online proctoring, self-learning through Apps has replaced the traditional teaching and learning. Though independent learning provides strength it can also be problematic in creating islands of knowledge. Learners can connect to the global network exposing them to new perspectives. Their vision and ideas can reach out anywhere not limited the number of counterparts in the classroom. The role of teacher cannot be replaced only as facilitator. It is still a debatable question: will the Learning App surpass or replace a teacher?

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