



Research Paper

“Study of cost benefit analysis of Extramarks- the learning app with other educational online products in Nagpur region.”

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ABSTRACT:

The expansive nature of the Internet and the accessibility of technology have generated a surge in the demand for App based teaching and learning. Online education is quickly infiltrating into school districts and colleges across the nation. This paper explores whether high school could benefit from online courses and examines the potential challenges students and drawbacks of online coursework. This paper raises questions about how this study will examine cost benefit of Extramarks -The learning app with other educational online product due to covid-19. Educational Institute shifting their operation to online learning and Consumers attitude also changed toward digital learning due to covid-19. In report we compare Improving learning by animation and high-tech equipment by app Or not when Aap provide quality education with Test-series.

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I. INTRODUCTION:

The COVID-19 lockdown has led to the closure of schools and colleges throughout the world an estimated 1.2 Billion students across the world are affected due to the same, Nearly 186 countries around the world have stopped working due to this global pandemic, While some say that it is difficult to suddenly shift to a complete online learning methodology, The rest argue that information technology in education will help students and will eventually be a part of the regular curriculum.

However the academic calendar was disrupted and there was a need to stay on the learning track not only for students but also teachers, Now the best way to do so was to make use of online learning platforms and App based learning platforms during this pandemic. Online classes started taking place on zoom, Microsoft teams, Google meet and students also choosed to go with App based learning like Extramarks. Also the employees were asked to work from home so that the virus does not spread much.

INDUSTRY BACKGROUND

- The online education market in India was valued at INR 39 billion in 2018 and is expected to reach INR 360.3 billion by 2024, expanding at a CAGR of ~43.85% during the 2019-2024 period.
- Ease of learning, flexibility, and a wide range of study materials have influenced the overall growth of the industry.
- The Indian online education market is highly fragmented with around 3,500 edtech start-ups operating in the country. Many foreign players are entering the Indian online education industry.
- BYJU's, Udemy, Coursera and Duolingo are a few prominent players in the industry, catering to the requirements of different target audiences.
- The Indian Government also played an important role to promote e learning by offering free courses through portals like Swayam, Diksha, Nasscom. The AICTE launched an online portal “ENHANCEMENT IN LEARNING WITH IMPROVEMENT IN SKILLS”
- Portal which gives access to free online courses from 18 ed tech giants. A large number of ed tech giants also gave away online courses free of cost, based on a study on top 35 online learning platforms the ed-tech segment saw a 26% increase in online traffic between April 2019 to March 2020.
- BYJUs Learning app announced free classes till the end of April 2020, Like Uncademy founder Gaurav Munjal said that they have increased taking free online class.

- Some important factors for online learning are Students learn more than offline normal classroom courses, Important concepts can be discussed, Regular assessment can be made online.
- Some professors would argue that online presentations help create an efficient and effective communication model which could benefit students in the long run. Research suggests that online learning helps retain 25%-60% more information as compared to 8%-10% classroom teaching.
- Also E-learning requires a 40%-60% less time to learn than traditional classroom teaching as the course can be tailored with our pace. So one can make the most out of the time, also since these courses are self paced students can skip unnecessary stuff.
- E-learning also saves a lot of time commuting from one place to another. E-learning saves a lot of money as well by reducing time of commuting from one place to another. IBM is said to have saved \$200 million by switching to e-learning.
- For students COVID-19 was one of the best opportunities to enhance their skillset with a lot of websites offering free certification courses.
- Though these courses were offered before COVID-19, There was an increase in number of course takers in the pandemic period. It has been stated by DHE under MHRD recommended that even the teachers, faculty member may use this time in online learning, self development, writing research papers and other fruitful activities.

RESEARCH PROBLEM

- Due to COVID-19 school and colleges taking online classes but schools not providing proper technology to explain topics in online classes.
- Students only get study guidance for college hours but on Extramarks App it for 24/7.
- Schools not taking tests on every topics to see topics are clear and study material are not proper in covid- 19 pandemic.
- Private tuitions cost very high for covering hole syllabus which cause financial crisis for parents in covid- 19.

OBJECTIVE:

- To determine economic benefit for K-12 classes provided by Extramarks-The learning app at its cost price is more than other online educational learning in Nagpur.
- To determine economic benefit for JEE /NEET classes provided by Extramarks-The learning app at its cost price is more than other online educational learning in Nagpur.
- To determine economic benefit for National level tests and mock test provided by Extramarks-The learning app at its cost price is more than other Online learning apps in Nagpur.

HYPOTHESES

1. **Null Hypothesis H_0** : There is no significant relationship between Economic benefit provided by Extramarks at its cost price and convenience of Extramarks over other apps.
2. **H1**: There is a significant relationship between Economic benefit provided by Extramarks at its cost price and convenience of Extramarks over other apps.
3. **H2**: There is a significant relationship between Quality of education provided by Extramarks and convenience of Extramarks over other apps.

II. REVIEW OF LITERATURE

- Technology can be a powerful tool for transforming learning. It can help affirm and advance relationships between educators and students, reinvent our approaches to learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the needs of all learners.
- Our schools, community colleges, adult learning centers and universities should be incubators of exploration and invention. Educators should be collaborators in learning, seeking new knowledge and constantly acquiring new skills alongside their students. Education leaders should set a vision for creating learning experiences that provide the right tools and supports for all learners to thrive.
- The online platform providers play a pivotal role in the online education ecosystem. Initially, the platform served as enablers by connecting prospective students and content providers. In recent times, the platform providers have increasingly played the role of content providers and curators.
- Online education in India has a mix of dedicated online only and offline players with an online presence. C2C business models have also emerged where the platform connects prospective teachers and students.

B2B offerings are prevalent in higher education, where institutions offer degree/diploma courses to students through their own platforms or third party aggregators.

- Corporate tie-ups assist in co-creation of industry certified content, which enhances overall acceptance of online education amongst the target user base. Improved internet connectivity and adoption of digital payment options have significantly aided in the growth of online education in India.. In recent times, the platform providers have increasingly played the role of content providers and curators. Online education in India has a mix of dedicated online only and offline players with an online presence. C2C business models have also emerged where the platform connects prospective teachers and students. B2B offerings are prevalent in higher education, where institutions offer degree/diploma courses to students through their own platforms or third party aggregators. Corporate tie-ups assist in co-creation of industry certified content, which enhances overall acceptance of online education amongst the target user base. Improved internet connectivity and adoption of digital payment options have significantly aided in the growth of online education in India.
- The COVID-19 has resulted in schools shut all across the world. Globally, over 1.2 billion children are out of the classroom.
- As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms.
- Research suggests that online learning has been shown to increase retention of information, and take less time, meaning the changes coronavirus have caused might be here to stay.
- While countries are at different points in their COVID-19 infection rates, worldwide there are currently more than 1.2 billion children in 186 countries affected by school closures due to the pandemic. In Denmark, children up to the age of 11 are returning to nurseries and schools after initially closing on 12 March, but in South Korea students are responding to roll calls from their teachers online.
- Technology has changed the possibilities within teaching and learning. Classes, which prior to the digital era were restricted to lectures, talks, and physical objects, no longer have to be designed in that manner. Teachers and students now have a digital toolbox – ranging from engaging devices to teach the students to online courses and digital textbooks. Digital education is the term used to refer to all online educational practices. Projections show the e-learning market worldwide is forecast to surpass 243 billion U.S. dollars by 2022. In 2016, the self-paced e-learning product market amounted to 46.67 billion U.S. dollars and is projected to decrease to 33.5 billion U.S. dollars in 2021. A considerable share of faculty worldwide have shown willingness to support less traditional and digital education models. About 65 percent of faculty supports the use of open educational resources (OERs) in teaching, and 63 percent showed support for the competency-based education system.

III. RESEARCH METHODOLOGY

a. RESEARCH TYPE:

This is a ‘**Descriptive**’ (**conclusive**) type of research. This type of research describes what exists and may help to uncover new facts and meaning.

Conclusive research is a structured data collection technique that provides detailed, factual information that's useful in decision-making. Descriptive marketing research is a form of conclusive research used to describe both the composition of a group in such terms as income, gender, age and education and the characteristics of group members in regards to both current and future behavior.

Examples of a group include a collection of customers, sales people, organizations or market segments. Surveys, case studies, job analyses, document analyses, and correlational studies are each a form of descriptive marketing research.

b. SAMPLE SIZE :

The sample size was at 150 respondents. Convenience sampling technique (non-probability technique) was used to get the questionnaire filled by the retailers.

3.3 SAMPLING METHOD:

Convenience sampling technique (non-probability technique) was used to get the questionnaire filled by the respondents.

Non-probability sampling technique:-

Non-probability sample is not a product of a randomized selection processes. Subjects in a non-probability sample are usually selected on the basis of their accessibility or by the purposive personal judgment of the researcher.

Convenience sampling technique:

The subjects are selected just because they are easiest to recruit for the study and the researcher did not consider selecting subjects that are representative of the entire population.

In all forms of research, it would be ideal to test the entire population, but in most cases, the population is just too large that it is impossible to include every individual. This is the reason why most researchers rely on sampling techniques like convenience sampling, the most common of all sampling techniques. Many researchers prefer this sampling technique because it is fast, inexpensive, easy and the subjects are readily available

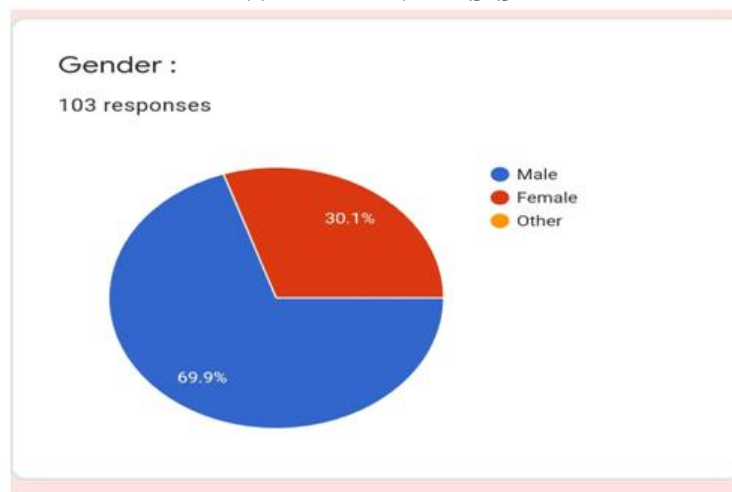
3.4 DATA COLLECTION METHOD:-

For Primary data well-structured questionnaire was prepared and convenience sampling method was used to get it filled by the respondents and secondary data collected through Journals, Articles and Websites.

3.5 STATISTICAL TOOL:-

Collected data were analyzed statistically by using Regression and Anova technique.

IV. DATA ANALYSIS



Respondents: Demographics

RELIABILITY TEST

1.RELIABILITY TEST:-

1.1.ECONOMIC BENEFIT-

Reliability Statistics

Cronbach's Alpha	N of Items
.799	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EB1	9.34	3.178	.577	.769
EB2	9.49	3.242	.608	.751
EB3	9.42	3.256	.663	.725
EB4	9.39	3.330	.606	.752

Inference:

- a. Cronbach’s alpha is 0.799 which is greater than 0.6, Hence there is strong individual indicator reliability and higher degree of internal consistency in data.
- b. Also, all values in correlation table are greater than 0.5. Hence, there is a convergent relationship between them.

1.2 QUALITY OF EDUCATION-
Reliability Statistics

Cronbach's Alpha	N of Items
.603	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
QE1	9.94	7.739	.468	.463
QE2	10.15	7.909	.494	.444
QE3	10.64	10.689	.167	.672
QE4	10.07	8.282	.421	.503

Inference:

- 1) Cronbach’s alpha is 0.603 which is greater than 0.6, Hence there is strong individual indicator reliability and higher degree of internal consistency in data.
- 2) Also, all values in correlation table are greater than 0.5. Hence, there is a convergent relationship between them.

2.FACTOR ANALYSIS:

2.1 ECONOMIC BENEFIT:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.725
Bartlett's Test of Sphericity	Approx. Chi-Square
	129.445
	df
	6
	Sig.
	.000

Inference:

- KMO value is 0.725 which is greater than 0.5, indicates that this sample size (N=102) is adequate and factor analysis can be done with data.

- Significant value is less than 0.05; hence the indicators or the items have good correlation with construct.

2.2 QUALITY OF EDUCATION:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.644	
Bartlett's Test of Sphericity	Approx. Chi-Square	52.387
	Df	6
	Sig.	.000

Inference:

- KMO value is 0.644 which is greater than 0.5, indicates that this sample size (N=102) is adequate and factor analysis can be done with data.
- Significant value is less than 0.05; hence the indicators or the items have good correlation with construct.

3.CHI-SQUARE

3.1 ECONOMIC BENEFIT

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.165 ^a	32	.364
Likelihood Ratio	43.412	32	.086
Linear-by-Linear Association	.224	1	.636
N of Valid Cases	102		

- 63 cells (95.5%) have expected count less than 5. The minimum expected count is .37.

Interpretation:

As it can be seen from the Chi-Square table, Significance value (0.364) is greater than 0.05, there is no statistical relation between the responses and hence we accept the Null hypothesis and reject the alternative hypothesis.

3.2 QUALITY OF EDUCATION:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47.562 ^a	40	.192
Likelihood Ratio	60.001	40	.022
Linear-by-Linear Association	1.657	1	.198
N of Valid Cases	102		

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47.562 ^a	40	.192
Likelihood Ratio	60.001	40	.022
Linear-by-Linear Association	1.657	1	.198
N of Valid Cases	102		

a. 78 cells (95.1%) have expected count less than 5. The minimum expected count is .37.

Interpretation-

As it can be seen from the Chi-Square table, Significance value (0.192) is greater than 0.05, there is no statistical relation between the responses and hence we accept the Null hypothesis and reject the alternative hypothesis.

4.ANNOVA TEST:

4.1 ECONOMIC BENEFIT:

ANOVA

Do Extramarks is more convenient than other online learning ?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.986	32	.250	1.086	.378
Within Groups	15.857	69	.230		
Total	23.843	101			

Interpretation-

As it can be seen from the ANOVA table, Significance value (0.378) is greater than 0.05, there is no statistical relation between the responses and hence we accept the Null hypothesis and reject the alternative hypothesis.

4.2 QUALITY OF EDUCATION:

ANOVA

Do Extramarks is more convenient than other online learning ?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.118	40	.278	1.332	.154
Within Groups	12.725	61	.209		
Total	23.843	101			

Interpretation-

As it can be seen from the ANOVA table, Significance value (0.154) is greater than 0.05, there is no statistical relation between the responses and hence we accept the Null hypothesis and reject the alternative hypothesis.

5. REGRESSION

5.1 ECONOMIC BENEFIT-

Coefficient^s

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.373	.048		28.420	.000		
EB	-.023	.049	-.047	-.471	.638	1.000	1.000

a. Dependent Variable: Do Extramarks is more convenient than other online learning ?

Interpretation-

As it can be seen from the coefficient table, Significance value (0.638) is greater than 0.05, there is no statistical relation between the responses and hence we accept the Null hypothesis and reject the alternative hypothesis.

5.2 QUALITY OF EDUCATION

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.373	.048		28.625	.000		
QE	-.062	.048	-.128	-1.292	.199	1.000	1.000

a. Dependent Variable: Do Extramarks is more convenient than other online learning ?

Interpretation-

As it can be seen from the coefficient table, Significance value (0.199) is greater than 0.05, there is no statistical relation between the responses and hence we accept the Null hypothesis and reject the alternative hypothesis.

V. FINDINGS

The study conducted indicates that majority of the sample respondents are aware of Extramarks and its cost benefits. In our research most preferred mode of education is Extramarks and learning from learning App is more convenient than school/college online classes in 63% people choose learning App. Only few people think that school/college online learning is effective. In research people giving most preference on Content, problem solving, Price and compatibility with device for effective learning on Extramarks app. More than 50% people believed that Extramarks is added value in educational learning. In which we can see that marketing is playing important role in giving awareness about aap and for better reach to customers. The those who thinks that the Extramarks app is not an effective way of learning they give reason like, students need to feel contacted to their school, lack of interaction between classmates.

VI. CONCLUSION

- Through the research questions it can be proved that the students prefer both the traditional online learning method as well as the method opted by educational applications . And its seen that students do find much difference in the teaching methods of both .
- The students using educational applications do not get confused in writing answers due to the concepts explained differently in school and the applications.
- Through the research question it can be concluded that schools and colleges should definitely adopt the app learning methods for teaching . That many of them do not have or had an account on educational applications and due to the lack of awareness about these applications and also because of the fee demanded by them. The teachers also encourage the students to use these educational applications and be a part of e-learning system.

VII.RECOMMENDATIONS

1. The research gives implication to marketers of App based learning platforms to promote their courses during such unforeseen pandemics or during vacations, holidays and latest technological advancements. This way they can introduce their courses and promote them well to ensure maximum enrollments as these online courses.
2. Special discounts can be given by the App based learning platforms so that they get maximum enrollments as App based learning will continue to grow not only for students but also for teachers, working professionals
3. The App based learning platforms can tie up with internet broadband companies to provide students with affordable App based learning platform packages, And the over dependence on classroom courses will reduce

LIMITATIONS & FUTURE SCOPE

- The research has some limitations that may lead to future research scope.
- This research had self-reported data from the respondents and had to depend on Google forms for collecting information due to COVID-19 pandemic .
- This study was conducted in Nagpur, so the future researcher may conduct a study at India level.
- The sample chosen for this research was by generated through Non probability sampling method level.
- The research is done on the basis of data provided by respondents also questionnaire is designed based on our research objectives.
- Educational app is good platform for the people who are not able to complete their studies
- In addition to this future research could include Price of the courses, Occupation, Schools as a elements to enhance the research and test their impact during the COVID-19 Lockdown.

RESEARCH QUESTIONNARE

1. NAME :

2. Gender : *

Mark only one oval.

- Male
 Female
 Other

3. Occupation : *

- Mark only one oval.*
 Student
Self-
 employed
 Employed
 Housewife
 Retired
 Businessman Other:
-

4. Educational Qualification : * *Mark only one oval.*

- Less than high school
 High school
Post Graduate
 graduate Professional degree Other:
-

5. Do Extramarks-The learning aap is more convenient to use than other online learning between K-12 standard ? *

- Mark only one oval.*
Yes
No

6. Do you think, Extramarks-The learning aap has less cost and more benefit? *

- Mark only one oval.*
1 2 3 4 5
Agree NotAgree
-

7. How long have you been using Extramarks ? * *Mark only one oval.*

- Less than 6 months
 6-12 months
 1-3 years
 4-6 years
 More than 6 years
8. On an average, how many hours per day do you spend on Extramarks during lockdown ? * *Mark only one oval.*
- ? *
 Less than 1 hour
 1-3 hours
 3-4 hours
 4-5 hours
 More than 5 hours
9. Do you find Extramarks essential in completing school syllabus ? * *Mark only one oval.*
- Yes
 No
10. What parameters are important for you while buying Extramarks ? *

Checkallthatapply.

- BrandName
 Prince
 Qualityofeducation

Other: _____

11. Family annual income * *Mark only one oval.*

- Less than 3 lakh
 3- 5 lakhs
 5-9 lakhs
 9 lakhs and above

12. Indicate your extent of agreement towards the following statements regarding Extramarks : *

Markonlyoneovalperrow.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
IwouldfindExtramarksuseful formystudies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UsingExtramarkswillincrease myproductivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Duringlockdown,Ihavestarted usingmoreoften	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CostbenefitofExtramarksis morethananotheronlinelearning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Highqualityofeducation providedbyExtramarks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. What else do you think is required for improving quality of Extramarks ?

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