

Education App – Learn More

Using React Native and Firebase

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Abstract

LearnMore will provide the user & learning friendly environment for the user to study uninterruptedly and with proper focus. user can select his/her course or field and the application will help them to study in an organized and systematic manner by providing them with the module wise weightage and amount of time required. User can set his/her To-do list for a day/week/month and can set the reminder for each task. Users can also use this application for maintaining their previous year mark sheet, certificates, or any other important documents, in one place. There will be a community page/channel/group and users can join a community of his/her field or course. This application will be available for Android as well as iOS devices.

Key Words: Better Learning, Time flexibility, Modern UI/UX, Day by day track activities.

Introduction

In Mobile learning technologies It involves a qualitative study among children to better understand their opinions and perceptions toward the use of educational applications (apps) that are available on their mobile devices, including smartphones and tablets. The researchers organized semi-structured, face-to face interview sessions with primary school students who were using mobile technologies at their institution. The students reported that their engagement with the educational apps has improved their competencies. They acquired relational and communicative skills as they collaborated together in teams. On the other hand, there were a few students who were not perceiving the usefulness and the ease of use of the educational apps on their mobile device. This study indicates that the research participants had different skill-sets as they exhibited different learning abilities. In conclusion, this contribution opens-up avenues for future research in this promising field of study.

Aim

To develop an application that will help students to keep track of their daily progress, increase their learning consistency, remove procrastination, get the habit of learning daily, making them aware of the remaining syllabus, providing notes and quizzes to make their learning easy and interesting.

Benefits of e-learning

There are many advantages of adopting e-learning as shown in figure 1. Some of them are listed below:

1. It is fee-effective and saves time:

By the way of lowering the time consumed far from the workplace, disposing of tour prices and putting off printed materials, on-line studying lets you save money and acts as a booming place for business productivity. E-learning support group are available 24/7, so we can study anywhere, anytime.

2. Easily managed:

E-learning courses can also be managed in our busy running schedule. The maximum of e-learning guides has a certain duration time, and it also permits learners to print out the certificate of fulfilment as an extra incentive.

3. Online classroom environment:

It is discreet that not all of us feel relaxed studying in a huge organization, but e-studying allows anybody to address the subject according to the people's personal tempo, with interactive tasks ensuring an intensive knowledge during every module.

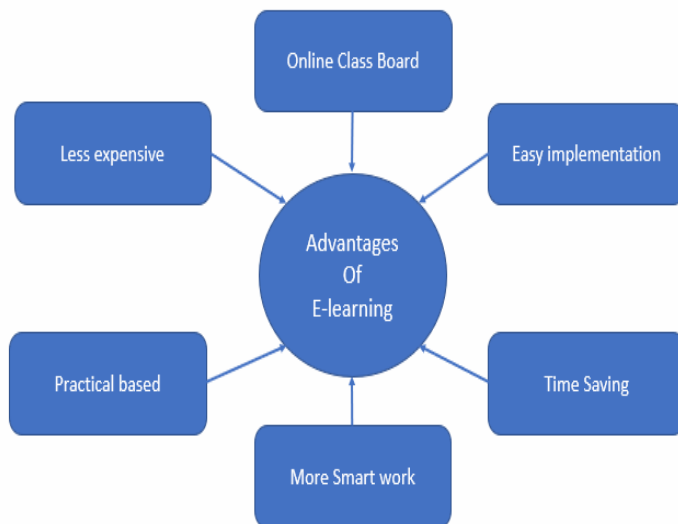


Fig 1 Advantage of E-learning

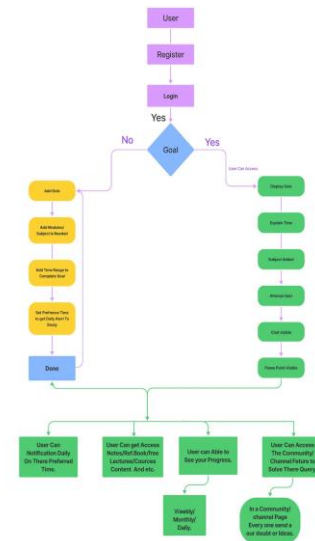


Fig 3 System Flow Diagram

System Architecture

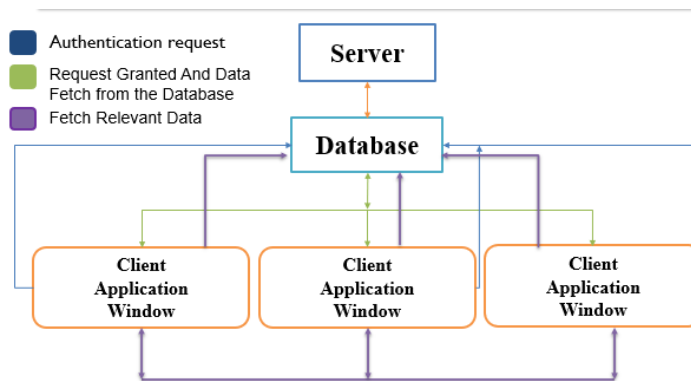


Fig 2 System Architecture

This is a System Architecture of our application where the server is connected to the database and the database connects to the main app. In our App we are using firebase of data storage. So, the firebase is a real time database and is created by google. In our system the blue line indicates the Authentication request, green line indicates the request granted and relevant data fetch from the database and purple line indicates the data from App to database is fetching the useful or relevant data from the database to App.

System Flow Diagram

This is the system flow diagram of our app. After registration the user selects the goal and he/his type yes then it displays the selected course and set time and see the full syllabus in a dashboard.

Is the system flow diagram of our app. After registration, the user selects the goal. If the goal is already selected (yes) then it displays the selected course and set time and sees the full syllabus in a dashboard.

If the user does not set the goal (No), the user will be directed to set the goal manually where the user can add the goal manually where they can add their subject module or topic and also, they can add the range and time to complete or goal and set the preferred timing to get a daily alert on the study and then they can attempt the quiz, chat visibility, and many more features.

After logging in to the application and completing the profile then the user can access another feature. like notification daily on their preferred time to study and user can get access to the notes reference book free lectures and user can able to see their progress daily monthly or weekly and they also have the access to the community channel where students solve the quiz and queries and, in a community, everyone shares their idea in community and there will be one more option that is, one to one chatting.

LITERATURE REVIEW:

Among the various papers gone through, most of them are keenly concentrated on effectiveness and the impact that the e-learning sources are creating in the minds of the present generation. While some papers even discussed on additional factors like what exactly is crushing the interest of people to study something digitally. According to Mudassir Khan [[HYPERLINK \l "KHA16" 1](#)],

E-learning technologies seek to enhance the educational results target by using e-learning technology instruments in a thorough manner and to empower innovative learning. eLearning is an effective part of student's technical, design and developing skills in the current era in computer science. In the view of Froilan and Gesswein [[HYPERLINK \l "Mob19" 2](#)],

the e-learning system is designed to help students gain an understanding of their respected academic subjects and to enhance and engage their learning experience. Through the research they did regarding the scope of e-learning, they suggest that it would be better if the learning system as such, blooms wide across the world which can be happen only when every individual knows the procedure of accessing the sources provided.

As per Roohinder Kaur [3],

today, with various technological developments, learning is not limited to lecture classrooms as the only way to transfer knowledge, but rather an electronic way of learning has continued to develop. Electronic education, enabling training through communication networks, has rendered learning via the Internet, large networks or local area networks available from anywhere at any time. According to Sonia and Kavita [HYPERLINK \l "Placeholder5" 4],

India is stepping towards the e-learning sites to embrace the knowledge on new technologies leaving the traditional mindsets behind. By this, they concluded about the scope of e-learning that India would be surely becomes vibrant in using the e-resources as much as possible as the number of internet users are growing rapidly day by day, coloring a positive signal to the upcoming era. According to Arum and Vaishali [5],

In under developing and developing countries, e-learning is going to play a key role be it economically or socially. It increases the wave of people in rural areas to learn easily and adopt the methods of technology somewhere to improve their life cycle. He made it clear that India's education sector is going to bloom as learning modes are varying and being brought into the lives of people in the most welcoming way. In the view of Sunil et.al., e-learning [HYPERLINK \l "Placeholder7" 6]

provides much knowledge and information than the traditional learning as the learning sites takes much of care to include every minute point. According to them, it increases the pace of learning and helps in knowledge sharing through the circle formation within the site or through any other medium. Be it using in training or tutoring, India meet all the bounds of learning things electronically. Through this paper, they expressed that it would be faster to educate the massive number of people at a time, mainly in remote areas. Coming to the business organizations, this method would be much fruitful as there is no need to spend millions to educate and train the employees traditionally. Components of e-Learning [HYPERLINK \l "CNB191" 7]:

The basic requirements of e-Learning courses are mainly categorized into 10 major components. These components including various resources such as Voice over (10.00%), Images (10.00%), Graphics (6.67%), Quizzes (13.33%), Power points (10.00%), Index (13.33%), URL's (10.00%), Tests (6.67%), Practical learning (3.33%) and Presentation (6.67%). The graphical representation of these resources is expounded in the form of pie chart as shown in figure 4.

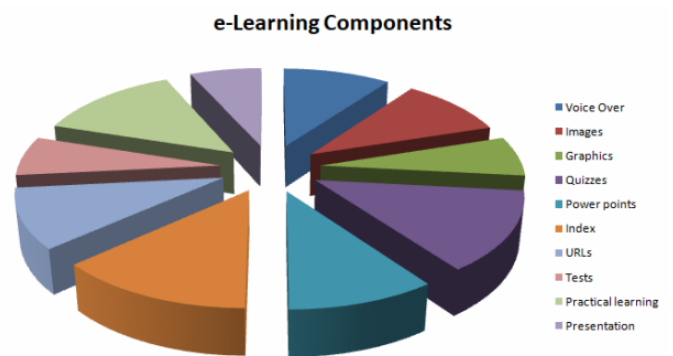


Fig 4. Components of e-learning

Leading sources of e-Learning: -

The following table explains about the most commonly used educational sites for various online courses based on its courses, users, cost, exams. Table 1 describes the eleven eLearning courses. Each course is further elaborated with source of the course or the provider of the course-its initiation year, the number of different courses offered by the provider, courses available, its corresponding Uniform Resource Locator (URL), the organizer of the source, the number of users registered, certification fees, course fee, and whether they offering the exam for the registered course.

Graph on 5 most demanding skills in 2019:

Various organizations had conducted survey at several areas in India [HYPERLINK \l "CNB193" 8] regarding to e-learning courses. Interestingly 5 courses are indicated as major e-learning courses named as Cloud computing (15%), Artificial intelligence (25%), Analytical reasoning (20%), People management (20%), UX (User Experience) design (20%). The visual representation of these highly populated courses is elaborated in the following as shown in figure 5.

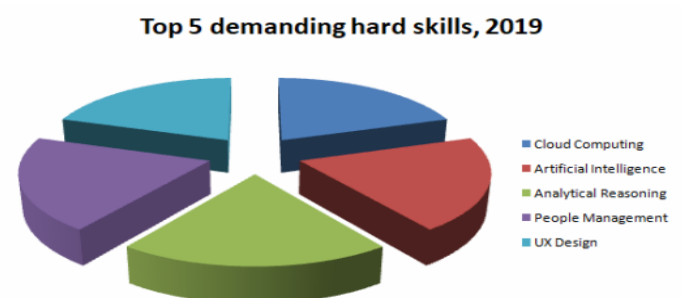


Fig 5. Demanding e-learning courses

SCOPE& RESULTS

Online learning is a wide platform to help students get more educated. With the E-Learning, the concept of learning has differed from the old times. This e-learning platform is widely increased as each individual contains a smart phone with high-speed internet through which, each can access the courses on the websites in minutes. Some report engines like KPMG released their research that, by the year 2021, the count of people who were using the e-learning platform can reach up to 9.6 million. This figure is huge in number. In order

to help learners to get more knowledgeable, The Ministry Human Resource Development (MHRD) is creating more interest to users with their new courses, certificates, practical's etc. This eLearning platform is creating its type of awareness which is available to the villages and all the cities.

NPTEL

[HYPERLINK \l "Placeholder8" 9]: The MHRD which is human resource development initiated this NPTEL. The MHRD is merged with the IIT and IISC to develop the National Program Technology on Enhanced Learning (NPTEL). This platform NPTEL get their quality training courses from the colleges like, IIT Bombay, Delhi, Kanpur, Madras and from Bengaluru Indian Institute of Science. The NPTEL contains catchy deals which attracts users with their free video lectures and certificates. When after the full course was done by the user, the user has to get tested with the questions by the NPTEL and users who scores the target mark and more gets the certificate of the course they've done. Courses offered through the NPTEL; many courses are offered to the users that ranges from Aerospace to Bio Technology.

The courses are for the studies like:

1. Aerospace engineering,
2. Atmospheric science,
3. Automobile engineering,
4. Bio technology,
5. Chemical engineering
6. Computer science,
7. Electrical engineering,
8. Electronics and communication engineering,
9. Engineering design,
10. Environmental science,
11. Humanities and social science,
12. Mining engineering,
13. Nano technology,
14. Ocean engineering,
15. Textile engineering and lot more

3.6] Existing Systems & E-Learning Sources with details

S. No	Source	# Courses	Courses	URL	Organized	Users	Certification fee	Course fee	Exam
1	Edx (May 2012)	2,200	Web programming, Mobile apps, AI, Python etc.	https://www.edx.org/	Massachusetts institute of technology & Harvard university	18 million students	Both free and paid	Both free and paid	Yes
2	Nptel (2003)	934	web & video courses created at ug and pg. level and many more	https://nptel.ac.in/	Seven IIT's (Bombay, Delhi, Kanpur, Madras, Kharagpur, Guwahati, Roorkee)	Enrollment s: 6335382 Exam registration s: 627866	Yes	No	Yes
3	Udemy (2010)	1,30,000	Programming languages, courses on business skills etc.	https://www.udemy.com/	ErenBali, Gagan Biyani, Oktay Caglar	30million+ students and 50,000 instructors	Both free and paid	Both free and paid	No
4	Coursera (2012)	3,600	Engineering, medicine, humanities, Data science, business etc.	https://www.coursera.org/	Jeff Maggioncalda (CEO), Andrew Ng and Daphne Koller	33 million+	Yes	Both free and paid	No
5	W3 schools (1998)	200+	HTML, CSS, Java, Sql, Python, Php, color picker, JavaScript, Bootstrap	https://www.w3schools.com/	Refsnes data - a Norway software development and consulting company.	50 million	Yes	No	Yes
6	Code academy (2011)	250+	Programming languages like Python, Java, Sql, C++, HTML, CSS, SASS, etc.	https://www.codecademy.com/	Ryzac, Inc (owner) Zach sims, Ryan Bubinski	26 million	No	Both free and paid	No

Table 1. e-learning sources with the details of each source

CONCLUSIONS

Learn More Application is a user-friendly application which will help students to keep a track of their studies, to make daily studying a habit for a student, to be aware of the remaining syllabus, to maintain the consistency of their study. To Overcome Procrastination.

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