



Agricultural Engineering Informative learning through an Android bridge app with the help of Centurion University website named courseware.

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Abstract - The popularity of smart devices is growing rapidly. These digital devices represent a new generation of technological tools that provide amazing access to content and opportunities for artistic use as well as for students (Ally, Grimus et al. 2014). Most of the top-selling paid apps in the education sector are aimed at students. However, the educational value of such applications is difficult to determine. Parents and teachers who turn to these devices for the educational benefits they expect from their students have a limited number of tools to test these apps (Papadakis, Kalogiannakis et al. 2018). With book reviews in mind, we present the latest findings regarding the true educational value of these "self-respecting" educational apps (Brown, Bull et al. 2013). Our analysis concludes that although there are thousands of apps available today, choosing the most suitable educational courses especially for agricultural engineering students is difficult and problematic for both teachers and educators (Barkley and Major 2015).

Keywords - Smart mobile devices; Tablets; Educational Apps; Agricultural Engineering students.

I. INTRODUCTION

Educational technology, sometimes abbreviated to EduTech or EdTech, is a broad field. Therefore, many explanations can be found, some of which are contradictory (Kennedy 2018). Educational technology as a field of education can be considered a science of design or a set of diverse research interests that address important issues of learning, teaching, and social organization (Amiel and Reeves 2008). Educational technology as a practice means any form of teaching and learning that uses technology.

Technology refers to the systematic use of scientific or other forms of information in the work process. Educational technologies are therefore based on theoretical knowledge from various fields (communication,

psychology, social sciences, philosophy, practical wisdom, informatics, etc.) and knowledge from work experience (**Granić and Marangunić 2019**).

Educational technology refers to the use of tools, technologies, processes, processes, resources and strategies to develop learning skills in various areas such as formal learning, non-formal learning, informal learning, lifelong learning, on-demand learning, workplace learning and instant learning. Educational technology has evolved from the early use of teaching tools and has rapidly expanded in recent years to include such devices and methods as mobile technology, virtual reality or advanced, simulation and targeted environments, collaborative learning, social networks, cloud computing, interactive classrooms, and more. "

With the increasing popularity of smartphones, the use of various applications has increased. Nowadays, learning through various app-based platforms has also increased as the new generation students are more into smart things (**Wai, Ng et al. 2018**). Educational apps like BYJU, Unacademy, Khan Academy, Coursera etc. will capture the minds of students towards them. Allow students to use their app every day (**Raj 2022**). However, these apps provide educational information only for standard school subjects and tests named like JEE MAINS, ADVANCE, UPSC etc. Hence, students are aware of this specific broadcast and strive for the same. But currently many courses / streams are being introduced which can give bright future like Agricultural Engineering (**Pradhan 2011**). Agricultural engineering is a very broad international study that is unknown to many (**Wang and Huang 2022**). Therefore, to highlight this noble course in the world, this program has been introduced to provide details of this study that can lead to the development of the world (**Ghalayini and Noble 1996**).

II. About the Title & Logo



Fig-2.1: App Icon “AgriTECH”

This application logo was created in Logo-Maker. The name of the app is “AgriTECH” which deliberately describes the identity of agricultural engineering students. "Agri" means agriculture and "TECH" means technology. Agricultural technology is what all agricultural engineering students wanted to learn. Below is also a tagline – “A Bright Approach to Agri Technology Approach” which broadly describes the focus and use of this app. A leafy background is used to focus on agriculture with just an added touch of green.

III. History behind the birth of the App

The title of this post briefly describes our project. It is well known that the application is mainly based on agricultural engineering students (**Little 1982**). The idea to design this app came when four of us faced the same problem. When introducing a new course, the word "domain" appears, you don't know about the scope of bachelor's degrees (**Winograd and Flores 1986**). The ideas were mixed with various other ideas and came to a conclusion by the end of year 2 of our study (**Reese, Balzano et al. 2022**). The idea of building a solution for our future generations to deal with the similarities. In this way, AgriTECH was born in the project work of our two-year continuous study called "Intelligent Engineering Project". Searching and more research is going on for about 2 months to find a better forum like BYJU, Unacademy etc. only for agricultural engineering students (**Khan 2023**). The birth of this application created many obstacles, but in the end, it is independent and has only 4 foundations behind it (**Laakso and Kiviniemi 2012**).

IV. About the App

This application is made using Glide software, which converts spreadsheets into software (**Liu, Prapong et al. 2002**). Choose a table and Glide will instantly generate a real working app or website to get you started (**Huang, Sherman et al. 2009**). This software helps every enthusiastic app developer who wants to develop an app with basic spreadsheet knowledge without coding (**Cox 1986**). This app mainly contains 4 tables as 4 backbones namely users, domains, apps: comments, shopping. The application consists of 5 interfaces such as front interface, course interface, chat interface, shopping interface and location interface (**Aghajan, Augusto et al. 2009**). This application is based on a bridge that literally works like a Google search engine that mainly redirects users to a user-specified/listed platform to get their preferred information.

V. Mobile Application

At the peak of the smart mobile device boom is the launch of applications (apps) for tablets and smartphones (**Papadakis and Kalogiannakis 2017**). At the peak of the smart mobile device boom is the launch of applications (apps) for tablets and smartphones (**Wang, Yahyavi et al. 2015**). A mobile application is a computer program designed to work on mobile devices such as smartphones and tablets (**Page 2014**). A mobile application may also be known as an app, an iPhone application, or a smartphone application (**Rakestraw, Eunni et al. 2013**). There are actually five different types of apps (see **Fig-5.1**).

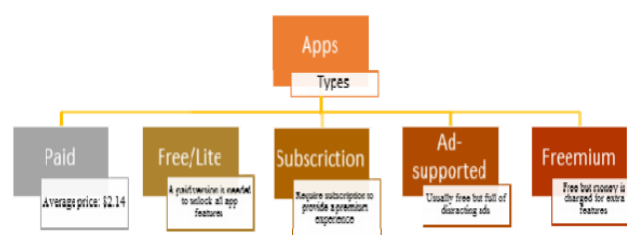


Fig: The 5 different types of apps

Goodwin divides applications into three distinct categories:

- A creative or "productive" application featuring an open design that allows users to create their own digital content or artifact using the application. Creative apps are designed for artistic expression (**Compton and Mateas 2015**).
- Instructional apps have "practice" design features where the app provides a predetermined "task" that elicits the same response from the user (**Papadakis and Kalogiannakis 2017**). These applications require minimal psychological investment on behalf of the student. Many game apps are classified as educational apps (**McQuiggan, McQuiggan et al. 2015**).
- Usable applications enable targeted detection and testing in a pre-determined context or framework (**Goodwin and Highfield 2012**). These apps require more reasonable engagement than educational apps, but less than constructive apps.

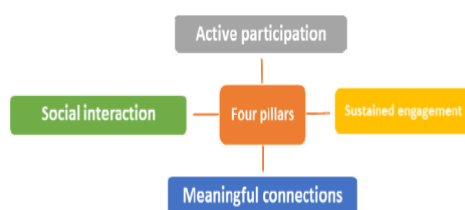


Fig: Four pillars of an App

VI. The App Marketplace

Mobile applications have become a rapidly growing tool in the software industry. Since the iPhone entered the business in 2007 (the first smart touch-screen mobile device), the mobile app business has grown to become a part of the economy itself. This rapidly growing mobile app industry is worth billions of dollars. Apple's digital application store, called the App Store, first opened on July 10, 2008, offering free or paid applications for the iPhone and later for the iPod touch and iPad (**Morrissey and Campbell 2011**). In 2011, over \$2.5 billion was "paid out" in the software industry, while in 2014, apps earned over \$10 billion to developers (**Kelly 2016**). According to Apple's CEO, by the end of 2014, users had downloaded 75 billion apps and visited the App Store 300 million times a week. These three models, paid, in-app purchases and advertising, power the mobile app business (**Berkowski 2014**). Total program revenue is expected to grow from \$45.37 billion in 2015 to \$76.52 billion in 2017 (**Alavi and Buttlar 2019**). In 2012, in-app purchases accounted for 11.4% of global mobile app revenue, and it is expected that in 2017 will increase to 48.2%. the purchase price of the application will reach 28.9 billion dollars by 2017 (**Strataki 2022**).

According to a 2008 report by the Federal Trade Commission (FTC), a US government agency, titled "Curriculum: Disclosure of Current Privacy Information It's Disappointing", smart device users can choose up to 600 apps. In 2012, there were more than 500,000 apps in the Apple App Store and another 380,000 in Google Play (a digital distribution platform for Android mobile apps). As of June 2015, there were 1.5 million mobile apps available in the Apple App Store (**Papadakis and Kalogiannakis 2017**). The number of apps available on

the Google Play Store, formerly known as the Android Market, surpassed one million apps in July 2013 and last posted 2 million apps in February 2016 (Rakestraw, Eunni et al. 2013).

VII. Salient Features of the App

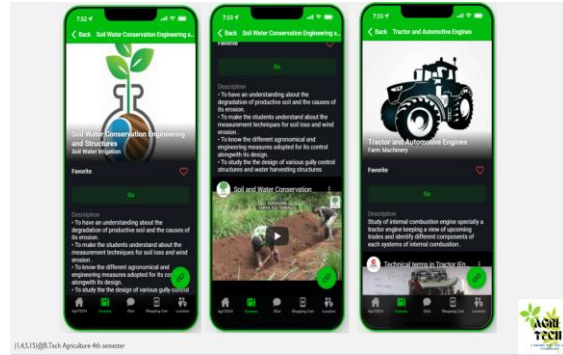
The android agricultural application **AGRITECH – A bright way for Agricultural Technology**, provides mainly 4 features -

- I. Lessons
- II. Chat
- III. Shopping cart
- IV. Location.

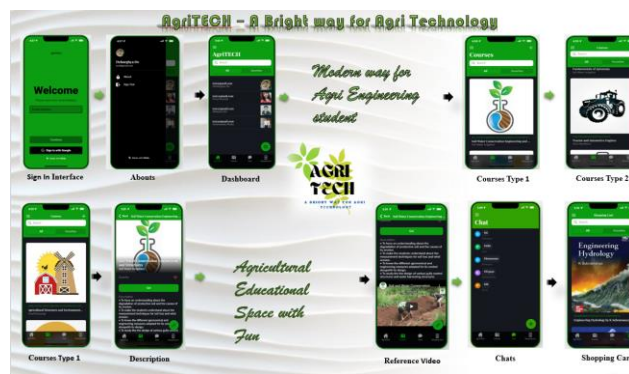
- + Sign in Public Sign in using your email ID or Google Account.
- + Create an account
- + Go to the courses, then select and view available courses.
- + Search for a favourite topic and add it to a favourite list.
- + To see the details of the lesson, click on the title icon (short description, short video, go option, link icon available. Go - courseware website, link logo - magazine.)
- + Use the chat option for any doubts / question.
- + For more reference books click on the shopping cart option. With this option the user can purchase or view book details.
- + Location option to find or track user location.

Note - As the application is based on agriculture, so all courses are topics based on agricultural background (Vink 2013).





VIII. Flow Chart of the App



- I. Opening the App we look into Sign-In Interface, where we need to sign in through our **E-Mail ID** or directly through **Google**.
- II. Entering into the **AgriTECH** we firstly look into option where we can see the abouts of the app and in the same way we get an interface where it is said to create an account by applying all the said credentials.
- III. After creating account, we can access easily to all the dashboard features such as – Courses, Shopping, Location and Chat option.
 - **Courses:** In this option one can find the different varieties of Agricultural engineering Domain courses with its syllabus, brief description of the course, short videos, ppts or pdfs and lastly with a latest and renowned journal.
 - **Shopping:** In this option, the user can find different types of useful and informative book with its shopping link (Amazon/ Flipkart).
 - **Location:** This option is provided to make this app much more spectacular to the user. Through this option the user can see his/ her location and in the same way the user’s location can be noted and traced by the backend owners of the app.
 - **Chat:** This option is provided to ask queries and in the same way anybody can answer to the asked queries.

IX. Application

At the peak of the development of smart mobile devices is the introduction of applications (apps) for tablets and smartphones (**Page 2014**). Various researchers point out that in addition to the technical features of smart devices, these are in favour of very young children due to the presence of mobile applications designed for these devices (**Falloon 2013**). Research has shown that young children engage more with apps and enjoy playing with them at different times depending on their needs and interests and the content and structure of the app (**Nesset and Large 2004**). A mobile application is a computer program designed to run on mobile devices such as smartphones and tablets. A mobile app may also be known as an app, an iPhone app, or a smartphone app (**Godwin-Jones 2011**). Educational apps help students analyse what they have learned and what their source is, making them curious to know more, but in a systematic way where they know how, when and what to research (**Ciampa 2014**). To increase productivity, educational programs work together to help attract students to courses (**Tri, Hoang et al. 2021**). Mobile apps give us access to endless information and data (**Lumsden, Byrne-Davis et al. 2015**). This digital technology has changed the education system. New Ways to Learn (**Alaboudi and Alharbi 2021**).

- ✚ Improved Parent Communication.
- ✚ eBooks And Online Lessons.
- ✚ Mixed Functions. ...
- ✚ The Gap of Student and Institutional Communication has narrowed.

X. Conclusion

The 21st century is a time of movement and freedom. Students are increasingly exposed to media, technology and screen time (MeTS) at home and in the classroom (**Mohnsen 2008**). More than 80,000 apps are listed as educational in the Apple App Store and Google Play Store, but most of them are not actually educational (**Papadakis, Kalogiannakis et al. 2018**). Education and the successful delivery of education is an art and educational products must be created by an education professional (**Kaden 2020**). Until now, most untrained app developers filled the market with so-called educational apps (**Parker, Van Alstyne et al. 2016**). To a meeting of faculty involved in the application development process, where the situation changes drastically (**Korthagen, Loughran et al. 2006**). Apps developed or designed by teachers have the potential to translate decades of experience into a global mobile learning platform (**Mehdipour and Zerehkafi 2013**). The goal should be to install state-of-the-art mobile applications wherever they are needed, to provide information and learning for anyone who seeks it, and especially to meet the needs of those who can afford a good education (**Hasan and Laaser 2010**).

This project provided an important review of existing textbooks on the use of critical sports in education. He recommends that agricultural engineering students learn about mobile learning technologies and engage in critical sports (**Spaaij and Jeanes 2013**). The findings of this masterpiece show that students were learning to find solutions for themselves rather than being "spoon-fed" by their professors (**Hird 2003**). These findings are also

consistent with open learning and other construction methods **(Moore, Dickson-Deane et al. 2011)**. At the same time, the project encouraged them and gave them emotional benefits when they shared with other people **(Robins, Dautenhahn et al. 2005)**. Therefore, this contribution and its historical findings agree with the relevant theoretical foundations **(George 2019)**. It has been shown that the use of portable learning technologies can improve the delivery of quality student-centred education **(Crompton 2014)**. In conclusion, researchers suggest that the integration of traditional and digital learning resources can improve learning outcomes in primary education **(Nortvig, Petersen et al. 2018)**.

XI. Future Scope

In the current situation where the technology in the mobile application is becoming more and more complex and its impact has a huge impact on the entire sector **(Hofmann and Rüsç 2017)**. The most common mobile variables that include smartphone industry and mobile application growth are also used on the basis of applications such as chat, WhatsApp, entertainment, social media, games, and others. strengthen the market **(Chou and Liu 2016)**. The most common and used platform is the Android platform. This platform works as a functional application for various types of smartphones, I-phones, tablets, etc., because the main part of the operation is completely based on the type of software available on the smartphone. The app also helps to track various learning activities and schedule from start to finish **(De 2016)**. More and more universities seem to be finding faster solutions while developing their own comprehensive technology strategy **(Bryk, Gomez et al. 2015)**. One of the reasons is to create mobile templates for their current website at affordable prices **(O'reilly 2007)**. Tertiary institutions are investing in technology to improve student knowledge and increase efficiency **(Papanastasiou, Drigas et al. 2019)**. Two recent technological trends are influencing higher education **(Pucciarelli and Kaplan 2016)**. First, the availability of a universal teaching and learning environment translates into the provision of wireless access to virtual learning environments (VLEs) **(Browne, Jenkins et al. 2006)**. VLE mobile applications are designed for a wide range of smartphones and tablet computers **(Niño 2015)**.

This work was done at Centurion University Technology and Management. Therefore, the findings of this study should be based on further research in some cases. Some updates may consider that different universities in India may yield different results **(Feder, Just et al. 1985)**. Future Project can analyse projects with critical results **(Frohberg, Göth et al. 2009)**. Further research may reveal that there may be different motives in the use of digital education among different people **(Ali 2020)**.

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