1 Lecturer 1 Android Apps: Boosting Lecturer's Technology Management for Teaching and Learning during and Post-Pandemic Covid-19 Situation

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Abstract

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The aim of this writing is to boost the lecturer's technology management in delivering the lecture, disseminating research and serving community service. There are two main reasons, first the use of gadget is increasing massively and second the need of teaching and learning during and post-pandemic covid-19 is in touchable world. These emerge the lecturer to have own android apps to be accessed by the students anytime anywhere they need. It can contain the lecturer's official video of lecture, research and community service. This writing describes the features of lecturer's apps from the profile, the subjects taught; including the lesson plan, the video, the frequently asked questions, discussion forum, and exercises until the open access references. Besides telling the research interest of the, it also describes the community service for the society. There are at least three benefits having one lecturer one android apps, namely 1. It helps the students to access the lecture anytime and anywhere; 2. The customized videos can be adapted to student's own learning style; 3. All provided sources won't be bothered by holidays or any other activities. In conclusion, having one lecturer one android apps helps the students to study during and post-pandemic covid-19 situation.

Introduction

Twenty years ago we were never expected the appearance of technology will creeping into every sector in our daily life, such as a payment method, electronic communication, machines industrial that applied a computer, internet opened the gate of social networks, and also alteration of our social culture, including our learning process. In this era, education can not against loftiness of technology to change the monotonous learning of the learning process. Until this day several teacher still applying the monotonous method of the

learning process, the lecturer of teacher always giving knowledge to their student and without feeling freakish the student will always be receiver of the knowledge cycle process. This passive method of learning process cannot stay any longer in our educational. The student must involve into active learning process, the student must be a receiver also a sender to deliver knowledge. The teacher should find a new method of learning and teaching process so that the student can find and develop their creativity. On this case, no only the student must being creative but also the teacher. Digital era has come and sit with us, with this situation the teacher should make a new method with using the product of the technology. Teacher should prepare students to face global competition in development of science and technologies (Merdekawati & Lestari, 2011) .

Mobile Device is one of the product of Technology that has grown dramatically in a several country in this world. This device is the most common product of technology that popular in every generation, especially a student. Most of the students in Indonesia are using Mobile device for several needs, such as communication, getting newest information, also learning process. This device has a standard size so we can take it anywhere without worrying about being heavy or inconvenient when using it. This product is a device which can staying connected to with others. Mobile device have expanded in functionality from merely a device to dial number to personal digital assistants (Lee & Salman, 2012). Many tools that this product made such as pictures, sounds, videos and others until now. These tools can be used to learn, to build an interesting, creative and fun learning process if we can operated it well.

Mobile device has created a new path in education. They're designing a creative look of learning process to make student wouldn't get boring to studying their course content. This new method popularly called mobile learning. Mobile learning makes student have ability to access the course content flexibility, cause of the readily available of the internet makes mobile learning completely flexible to delivering and accessing information of knowledge. Mobile learning are also called a "knowledge in one touch". Mobile learning has advantages of providing pervasive facilitating the interaction between teachers and students. (Zhao, Wu & Chen, 2017). If we put mobile learning as a complement tools for learning process, it can be applied cheaply and easily.

In this 21st century, a new environment of teaching and learning was introduced by mobile technologies. Mobile technologies has helped us to keep walking on the pandemic issue COVID-19, as we know that these pandemic has blocked us in every sector in this world, especially in education. Education are not the quite same education anymore after these pandemic occurred, the lecturer are separating from the student is like the source are separating from the seeker. Lecturer faced difficulties to delivering knowledge to their students, also in the same way, the student running out of way to received knowledge. But then, all those problem are not the quite problem anymore, with mobile technologies the new bridge between the lecturer and the student are build. System operation can be illustrated as abridge between the device and the user (Zatulifal, Riswandi, Fitriawan & Akla, 2018).

With mobile learning based android environment, student and lecturer can taste interactively, accessibility and pleasantly of learning process. Applications that develop through *android* technology are more efficient and effective than other technologies such as window or Symbian (Pahriah & Khery, 2018). The differences

between android and windows is their design. Android came with handy design than windows, windows has discovered in a long way to have a good look like nowadays. Android has google as shelter meanwhile windows has windows store. Cause of android sheltered by google, android has a play store which had a dozen app to install, in the other hand, windows has window store that can applied only in windows operating system. Android giving lot advantages for developer to creating, innovating and designing our own app as we wish, and that is a thing that can't windows do. Android was stealed a start line to come to smartphone user and most of the user whom used android for their operating system has experienced the flexibility of android.

Teachers need to leave their teacher preparation programs with a solid understanding of how to use technology to support learning (King, 2017). The effective of using technology is not skill that simply can pick up once they get into the classroom, but teacher need to know and learn how to use technology to realize each state's learning standard from day one. A 2006 survey of saint Leo University teacher preparation program alumni showed satisfaction with their preparation with one notable exception-technology in the classroom (King, 2017). Saint Leo faculty redesigned their program on the basis of the technological pedagogical and content knowledge model were redesigned by Saint Leo faculty, this model was established a long-term goal and making it as a keystone of it's program. Educational technology lab was built by school, so teacher can practice using device, apps and other digital learning resources. Students regularly reflect on their experience using technology to increase effectiveness and efficiency as well as it's value in the learning process (King, 2017).

Technology-enabled learning allows learners to tap resources and expertise anywhere in the world, starting with their own communities (King, 2017). A Students can take the online course with using internet access that enabled all of faculty member, the lecturer, and also the student to feel flexibility of learning process. Students studying in remote geographic area phenomena which can collaborate with doing similar work anywhere with using mobile data and Online platform. Regardless of where they go to school, students can publish their work to abroad global audience by using multimedia communication source. To remain globally competitive and develop engaged citizens, our schools should weave 21st century competencies and expertise throughout the learning experience (King, 2017).

Applying virtual classroom approach is seen as an alternative method to enhance teaching and learning process in abnormal situations (Kummitha, Kolloju, Chittoor & Madepalli, 2021). The COVID-19 pandemic has been significantly affected in teaching and learning activities. By this challenging situation, traditional face-to-face classroom as moved into online teaching and learning from the education sector across the globe. In this case, the important thing is to increasing better facilitating to access information and communication technology (ICT). The only method that can adopt in this digital technology era is online and learning method. This method is often referred as "E-learning" but as a type it can describe as "Distance learning". People has started to appreciate the advantage of online learning and then it is become to popular method to implement.

We need to guide the development of competencies to use technology in ways that are meaningful, productive, respectful, and safe (King, 2017). By helping student to learn to using proper online etiquette or

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influence everyone how important to secure their personal information that might be used online. To understanding of the Technology tools and increasing the ability of using online learning in daily life, we have to mastering those skills. Educators can turn to resources such as Common-Sense Education's digital citizenship curriculum or the student technology standards from the International Society for Technology in Education (ISTE). Educators can create Innovation Schols which can increase flexibility such as schedule, curriculum, or any other professional development. In 2015, there are 26 schools that can approved Innovation Schools and Academies across Massachusetts. Some of those schools are implemented a Science, Technology, Engineering, Mathematics (STEM) and any other combination of Educational models. Through the redesign of the school day and year, students engage in hands-on experiential learning with in-class lessons; online and blended coursework; and off-campus academic opportunities, internships, and apprenticeships (King, 2017).

This study are discussed about how the lecturer managing their teaching and learning during the Covid-19 pandemic by force of technology. Also showing how to design the learning app using Android platform. With using Android app, lecturer can easily managing their teaching and learning and helped student to understanding the material along with flexibility. By using the app student can also studying anywhere and anytime because it is the Android platform, which is they can operate their own learning abilities and self-directed with the authority to choose their own place, time, content, and direction of learning (Rosli, et al., 2016).

1. Synchronous and Asynchronous Learning

Communication is a process of transmitting or sending a message (P. Romero, 1984) Online classes fall into two categories; synchronous and asynchronous. Each of which aligns with different students' interests, personalities, and learning styles.

a. Synchronous learning

Synchronous learning is a learning event in a group of students or a class are engaging at learning at the same time. Synchronous learning is also more interactive and also works in two way online or distance education that happens in real time with the teacher. The component that can be use of appropriate language can be fulfilled through instant messaging app or synchronous audio-video based media because these media abilities is to send message or do video meet that enables the teacher to explain in detail what is meant in a problem discussed with students. This of course also explain in more detail the problem. The familiar form of synchronous communication in institution of education is face-to-face. The communication was occurred in the traditional classroom where there is the teacher or lecturer and the student that giving interaction each other directly. The process of integrating synchronous communication in teaching and learning may also be termed as a synchronous education (Lim, 2017). There are some advantages and disadvantages using synchronous communication. The example advantages are the student can immediately receive a feedback from the lecturer. They can interact and giving some feedback spontaneously. Meanwhile, the disadvantages are is the technical failure and poor internet connectivity may affect the quality of communication.

b. Asynchronous learning

Asynchronous learning is a method that occurs virtually online and through

prepared resources which allows you to learn on your own schedule, within a certain timeframe. Asynchronous learning is strongly supporting long-distance collaboration among learners is used in the present project. Although, asynchronous online courses have important features in common. It means that effective in its own way and the stages of teaching and learning remain the same and do not change.

With using asynchronous communication , the student can access these tools 24/7. It will provides them more time to studying on the topic of discussion. The advantages are located in flexibility of access the course content. This type of communication are useful even if there are too many student in the online classroom. The sad part is the student may not get the immediate feedback from the lecturer (Lim, 2017). The need for a combination of synchronous and asynchronous to create an ideal learning environment (Perveen, 2016). A synchronous learning environment is classroom learning that brings teachers together with their students online in a specific platform to provide and receive learning materials. While asynchronous learning environment is learning outside the classroom, in other words it does not occur directly and interactively. Students, when in class are motivated to reflect on and consolidate learning. And outside the classroom, students learn about teacher-provided videos (Bergmann & Sams, 2012). Therefore it can be concluded that this learning environment has advantages and disadvantages as Perveen (2016): "Lessons can be recorded and added to an e-library. Using the archived e-library, students can access and replay teacher's lectures as necessary to master the material." Quote above are advantages that we can take advantage of. Not all students are able to understand the material delivered by their teachers with just one delivery. There are some students who have low absorption so it takes time to repeat until the student is able to understand the material.

2. Zoom Google Meet Other Platforms

Zoom and google meet are platforms that are widely used in the current pandemic era, as they have provided a variety of tools such as voice, videos, share screen and others that can help us in learning in the current pandemic era that requires a remote learning system.

At the beginning of 2020, there has been the emergence of a new virus form Wuhan, China. Due to this virus, human activities around the world are disrupted and cannot run normally as before. The used of online-based platforms can be a solution to the learning process at this time continues to run smoothly. So, there has been a steady increase in video conferencing, as globally distributed companies shifted from in-person meeting and teleconferences to video meetings. But as we have seen, a crisis like the one we're currently facing can accelerate the adoption of new technology and drive permanent change in behavior. That certainly seems to be the case with video conferencing.

Zoom, the video conferencing software, which is one of the most popular services for video conferencing and online meetings. It means that among any other video conferencing app, Zoom has the hugest number of users. Zoom allows users to talk to up to 99 other people simultaneously has emerged as of the most popular downloads. Zoom was downloaded 485 million times in 2020. It provides a stable video conference, tons of feature, easy to use, and also free. Although, there's a limitation in the duration of the meet. It capped to 40 minutes time of meet and after that the Zoom is automatically ended the meeting and we need to make a new meet all over again. This can be avoided by purchasing the premium which is has no limit on

duration. Another video conferencing app that's very popular these days are Google Meet. Google Meet is a free application that provides as much as Zoom do, but Google Meet doesn't have a limitation of duration, which is attract people who doesn't want to purchase the premium version to get an unlimited duration of the meeting. The only cons that a lot of people occurring are the unstable video meet even though we have a stable internet connection.

Many teachers meet with small groups for guided reading on platforms such as Zoom. It means that many teachers meet with their students using the closest platform and probably already accessed by almost everyone including Zoom or Google Meet, which is a platform in the form of video calls. Because this is a digital platform, of course the party who will use it is given the freedom. In line with her, someone else believes that Covid-19 pandemic has resulted in all activities being carried out online from home, including teaching and learning activities. So, the use of online-based platforms can be a solution to the learning process at this time continues to run smoothly. (Aswir, Hadi, and Dewi 2021). It also means that the Zoom or Google Meet platform benefits teachers or students and is one of the solutions for learning during this pandemic, the reason is that it is easily accessible to both young and old. Different from someone else, somebody claims that the use of Zoom Meeting is not quite effective because it is constrained by bad network that causes intermittent voice, and the lack of students' level of understanding on the material. (Laili and Nashir 2020). It can be said that although easy to access, Zoom or Google Meet can be less effective due to network problems and cause a lack of understanding of the material. So it clear that Zoom or Google Meet platform has advantages and disadvantages. The advantages of using online platforms include supporting the delivery of material in an attractive manner, smooth interaction, while the disadvantages are less interactive, less fluent lecture communication and tends to be one-way, wasteful of quotas, inadequate internet access, less than optimal understanding of material, and level of participation. low student.

The use of online-based platforms can be a solution to the learning process at this time continues to run smoothly (Aswir, Hadi & Dewi, 2021). Zoom and google meet platform is the best solution that can be used in this pandemic era so that learning can continue to run. Although easy to access, zoom and google meet can become less effective due to the network issues. In addition, lecture communication is not smooth, wasteful quota and low material absorption makes students easily forget.

Zoom is one of the most popular services for video conferencing and online meetings (Joseph, 2020). It means that among any video conferencing app, zoom app has the most huge amount of users. Someone else believes that zoom has been one of the winners during the Covid-19 lockdowns taking place around the world. The daily number of participants in virtual meetings via video conferencing app soared from 10 million in December 2019 to 300 million four months later (Aiken, 2020). So many people enjoy video conferencing than voice calling to talk to others during the lockdown. Beside for personal use, zoom app also very compatible for education use and business use. That's why zoom app user is increased specially in lockdown.

3. In the past: science is limited, nowadaysscience is shareable

Technology nowadays has been recognized and fell give a lot of benefit for our life. It means that with evolving technology we

can access science so easy like finding this pdf with technology as media shareable it will easy learn something new. A lot of people didn`t realize how important social media and the internet are in the world of education. It also means that nowadays it's so important to know about technology in the word of education so we keep updated about science. People learned how to cook, by watching an egg cooking show. It can be said that (we can learn so many things even like how to cook the egg. So, it is clear that now sciences are shareable easy to access for everyone not like in the past is hard to find science.

In the past, science was limited because the source was only books. While the book is limited, it is still very difficult to find, especially related to the material or discussion needed at that time. Now science is sharable because technology at his time has gown rapidly and has many benefits especially in the field of science. Technology nowadays has been recognized and fell give a lot of benefit for our life (Dwiningrum, 2012). With the development of technology we shared it will be easy to learn something new. Currently there are many platforms and internet access that can make it easier for us to find whatever we want as Halpin and Tuffield have stated (2010): "A lot of people didn't realize how important social media and the internet are in the world of education."

Many of those people do not realize how easy it is today to search for anything just by using the internet. Like looking for source books, articles, jobs, news and more. Nowadays is so important to know about technology in the world of education so we keep update about science. People learned how to cook, by watching an egg cooking show (Grant & Meadows, 2010). We can learn so many things even like how to cook the egg just watch and listen some video about cooking then practice it. If we want

to share it to the other of our friend, we just share it. It so easy and sharable.

4. From Computer (Website) to Mobile Device (Apps)

Considering the importance of the Internet in people's daily lives, it is easy to see the Internet going mobile. The Internet will not be bound to personal computers (PCs); rather users can access it anywhere, anytime through mobile devices. It means most people prefer mobile applications because they are easy to use and perform tasks instantly. In line with him, someone else believes that today's mobile phones are more powerful than the computers that took Apollo 11 to the moon, with the ability to send data to and from nearly anywhere. It also means the users become more dependable on the mobile applications when solving any life tasks like booking movie tickets, buying, and selling, or many other similar routine activities. These tasks can be solved with a single click. Different from someone else, somebody claims that those studies found that students most often used the laptops to do homework, take notes, and finish assignments. General-purpose software such as word processors, web browsers, and presentation software were relatively common. It can be said that students are more comfortable using laptops or PCs to do their things. So, it is clear that both computer/laptop and mobile apps have their respective uses.

Sales of mobile computers surpassed sales of desktop computers. Rapid development of mobile technologies is present not only in technical side but also in educational side. Besides the notion of e-learning it is also introducing the notion of m-learning, which emphasizes usage of mobile technological means also in the educational process (Fojtik, 2015). This emphasizes that smartphone usage with it's many apps have

been exceeding in popularity particularly in education process.

Furthermore supported within the "EBooks and mobile devices in education" journal that there was a research in 2004, 2013 and 2014. The research about the usage of mobile information among students of bachelor's degree study program applied computer science. The research result was Android (78%). Other systems are iOS (12%), MS Windows Phone (8%), Blackberry (1%), other systems (1%). It is clear that the usage of mobile phone is almost become necessity amongst student especially in this pandemic era.

The usage of smartphones can create a safe environment for students to participate in class discussions, and to emphasize a reflective process into student's need through personalization (Sabron, Hasyim, Abdullah & Shamsudin, 2020). Web-based learning or e-learning engaging with the student through the screen of mobile phone anywhere and anytime. The teacher or the lecturer can also monitoring their students educational activity easily, in which helping student education effectiveness. This mobility and functionality are what people needs in the era where knowledge and information are easier to find, shareable and everyone can access it anywhere anytime.

Considering the importance of the internet in people's daily lives, it is easy to see the internet going mobile. The internet will not be bound to personal computers (PCs); rather users can access it anywhere, anytime through mobile devices (Ahson, 2019). It means most people prefer mobile applications because they are easy to use, perform tasks instantly and it has a standard size so we can take it anywhere without worrying about being heavy or inconvenient when using it.

Theoretical Framework

1. History of Android Apps

Android is an open-source operating system, released under *Apache's* open source license owned by *Google* (Zatulifal, Riswandi, Fitriawan & Akla, 2018). Android are also open-source software, which efficiency connected to another mobile devices. Android designed for mobile devices, such as smartphone and tablet. But nowadays, android are not only in "Handy-device", television which is wearable device, also using android based, both smartphone and television are developer by *Google*. As remember, all android phone are smartphone, but all smartphones are not android, they are using their own operating system, it is called Apple, which is not going to be discuss in this paper. Android provides a rich app that allows us to designing and building a creative and innovative app for mobile devices. Android also can be used in smartphone which is not only to communicate but also a new learning platform.

Android apps are the most dependable media in these days, especially in this pandemic era. The Google Playstore has millions of apps. Some are good, and some are bad, even dangerous. Various of android apps is becoming our daily life and making life easier such as instant messaging app that help us communicate and sharing photos easier and stylish. Not stopping there, android apps came in many different form and utility for example; video conferencing, video sharing, games, shopping, etc. Language textbooks with learning aids on mobile devices can greatly help students with their studies. This paper introduces an Android apps that help students to memorize vocabulary. The vocabulary is based on a published textbook. Student who are using the textbook in their courses can review the vocabulary anytime anywhere. The search engine app also comes in handy because we

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can search anything we want to know in case of learning. Android apps are really becoming a big part in our life.

Android are born in 2003 when a company named Android Inc. was founded by Andy Rubin. At that time, long before these flexible era Google was already backing

Android Inc. but in that moment they didn't own it yet. Finally, Google was acquired Android Inc. in 2005; then in 2007, the open Handset Alliance came to life and the Android OS was officially open search (Ted Hagos, 2018).

Android app are developed using one or more basic component (Burnette, 2009) :

1. Activity
2. Service
3. Content Provider
4. Broadcast Receiver (The component which can send and receive message to all app)
5. Intent (Messages)

The development of the App could used not only for one activities, but more than one activities. The service routine is also one of the important treatment for developing Android app, for example they are blocking the main thread of execution and interaction from the other application while the App is running. Content data are used for sharing one or more data such as files or databases to another application. This component also provides to communicate the of processes transferring data between applications. Android application are developed mainly usig Eclipse IDE with Android Development Tools (ADIT) plug-in, meanwhile Android SDK are necessary for application development (Shanmugapriya M & Tamilarasi A, 2011).

Others believethat in just a decade, android has grown to be the leading operating system used in a variety of mobile devices ranging from smartphones to home appliances such as TV sets. In this period, the development of apps for the platform has increased steadily: as of April 2017, the official app market, google play, was distributing over 2.8 million apps (Li Li, 2018). It didn't take long for android, within a decade android became the most advanced operating system and was widely used in various mobile devices such as smartphone and TV.

Android mobile learning has shifted a monotone learning into variety of learning process. By using this media, user will easy to learning the course content, this because the ability of the android platform and based on e-learning allows students to operate their own learning n accordance with their self-directed abilities with the authority to choose their own place, time, content and direction of learning (Rosli, 2016). It is (Arif Taufiq M Pratama, 2021) also stated that, with using mobile app leads us to higher level of accessibility than using any other platform. This advantages is helping us to feel flexibility of mobile learning in this pandemic, because flexibility are needed for the students nor the lecturer. In other way, it is (Pressman & Maxin, 2014) stated that, software is a product of technology which it can producing, managing, deriving, modifying, displaying or transmitting information, these advantages are able to executed in really short time. Software are called information, as we know that information is the most important product of our time. We can conclude that software is an information transformers in this 21st century. As (Grover, 2021) believed it is quickly adapting and taking technology for granted. Unconsciously, technology was naturally touched every corner of our lives. If we are evaluating for past few years, when smartphone are spreading out and being popular things to own, we didn't learned telecommunication engineering to

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be able to using it, we just naturally learning it with our curiosity, always bring in it besides us and then putting it to become our personal digital assistant and family we get used to it, adapt to it. The evolution of technology is much duster than it was a decade ago. Mobile apps are among the most challenging software systems being built today (Pressman & Maxin, 2014). Not only a large developer teams, mobile apps also allowed all individual who has a little formal training to creating, designing and developing their apps. This makes several developer hunch that mobile apps are more challenging than any other platform. Even though we know that all mobile platform are complex to build, it takes advantages of the unique interaction mechanisms of user interface that vows by mobile platform.

2. The Benefit of Apps for life

The application referred to here can facilitate all activities that occur in this life such as the covid-19 period which hampers life activities that are usually carried out. The period that requires us to stay at home makes face-to-face learning activities no longer allowed. The utilization of online learning applications is a solution for schools that are starting to implement the school from home system (Rita, 2021). So that all students in the world continue to carry out their duties as students, carry out learning without having to leave the house, this application helps students make distance learning easy.

The extent to which a person believes that the use of a particular technology will improve the person's achievement (A. Misbahrudin, 2014). Making applications that are then used very well will also produce maximum results. Only people who can use the application properly can improve their thinking, learning, skills and achievement. There are still other benefits of various applications. So it clear that there

are many applications that are very useful for life, more developed the age of eating will be more applications that will provide many benefits.

3. The Benefit of Apps for Learning

Nowadays, the world is being horrified by the covid-19 pandemic. All sectors of life are being affected by the pandemic including the educational sector, starting from the elementary level up to college. The ministry of education policy in implementing distance learning forces teachers and students to use the latest technology to support the teaching and learning process, one of them is the use of zoom meeting (Ghazizadeh & Fatemipor, 2017). Because every application used is not always perfect, in other words it has some shortcomings which of course can hinder this learning, an application is made that should be able to improve the shortcomings of other applications, make it easier and more interesting so that students can be more enthusiastic in learning.

It can be said that digital learning media or technology makes it easier for students to access information and become a source of independent learning (can be accessed anywhere). The benefits of apps for learning are many. Especially for students, making it easier to access information anywhere and anytime.

Many students' lives today are filled with technology that gives them mobile access to information and resources at anytime, enables them to create multimedia content and share it with the world, and allows them to participate in online social networks where people from all over the world share ideas, collaborate, and learn new things. It means that Technology has developed rapidly to make it easier for

students to seek knowledge that was not previously known in all fields.

Based on the available data, the normalized again score, which represents the improvement of the students' cognitive understanding about the relevant topic, the learning-media can effectively serve as an independent learning source. It can be said that digital learning media makes it easier for students to access information and become a source of independent learning (can be accessed anywhere).So it clear that the benefits of apps for learning today are many, especially for students, namely making it easier to access information anywhere and anytime.

Several studies and critical colleagues mentioned that there is some factors to contribute quality of supported learning tools. the factors can be categorize into six classification : (1) The institution, (2) The technology, (3) The lecturer, (4) The student, (5) The instructional design, and (6) The pedagogical factors. All of these categories is adding the quality of supported learning tools. If all of those list are satiable or in other words the quality of learning tool is quenching, it can influencing lecturer to uptake the e-learning system (Fresen, (2011). In literature studies, the critical success factors of e-learning can be simplified into four list: instructor characteristics, student characteristics, technology and of course the support of university (Selim, 2007). There is a basic factor to have a comprehensive e-learning. The underlying assumptions are listed in number one factor before the quality of supported learning tool must be considered. The underlying assumptions is contained such as the ICT infrastructure in institution, basic ability of students and lecturer to use technology such as smartphone or computer, the positive attitude from lecturers, the motivation and commitment from student, the practice of

learning and teaching, and last is commitment to developing the improvement e -learning system (Fresen, (2011). The user interface, the accessibility the material, the flexibility of scheduling or rescheduling the class, the availability to communicate with lecturer or the student itself is one of the important elements to standardised the information design of all application that influence supported learning tools.

Methodology Descriptive

1. Showing some useful apps for learning
There are so many applications that have been created, whether it's an application for learning, playing and others. Learning applications can help and facilitate us in learning. And here are some applications that are commonly used in learning especially online learning (distance). Many authors of mobile apps out there are developing a great apps that making our life easier. These apps come in different utility; whether it's for learning, playing, entertainment, communicating, etc. There are many apps that can fulfill our learning needs, especially in this pandemic:

2. Video conferences apps (Zoom, Google Meet, Microsoft Teams)
Video conferencing is an online technology that allows users in different locations to hold face-to-face meetings without having to move to a single location together. It's very handy at online classes that needs an interaction between students and teacher. It provides a video meets with up to 100 people in one meet which is good for seminar. And also, there's a feature called "Share screen" which allows us to share our devices screen to other people in the meet in case we need to explain something in picture or teachers showing their materials to the students. Zoom meeting is a learning application (video conferencing service to

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chat together online in one time) created by an American communications technology company headquartered in San Jose, California. Google meet is a learning application (video communication service) developed by Goggle as the largest internet company, which able to accommodate teleconference participants up to 250 people in one grid on one screen.

3. Duolingo (Language-learning app)
Duolingo is an app that help us learn a various language in the world, especially English language. Duolingo can help you develop a base level of knowledge for a variety of languages, but it's limited in what it teaches and how much it challenges you. Depending on your goal and prior experience, you'll likely want to strengthen your reading, writing, listening, and speaking skills.

4. Google Classroom
Google Classroom is a free blended learning platform developed by Google for schools that aims to simplify creating, distributing, and grading assignments. The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students. As of 2021, approximately 150 million users use Google Classroom.

5. Designing personal apps for lecturer
Prototyping is generative(Warfel, 2009). It is means that if we are using prototype through our work, we are not only produce one ideas but more than that. If we want to generate ten ideas, it will developing into hundred ideas. Some of those ideas are contained good ideas and the rest of it are not really good ideas, but it doesn't means those less good ideas will throwing into trash can, it can be another solution of any ideas. Protoyping helps us to representative our idea into something more realistic, it means that prototype can makes us feel the

experience, the work through, the implementation, and the final testing. This means also, if we are more realistic we are saving more time and effort, and if we are saving time and effort, it will saving our cost. Cause of it generative work of process, prototyping leads us into innovation. Protype makes us to producing a lot of new ideas with just one origin idea, and not only just on to implement in produce Any ideas of prototyping will always be usefull to every solution that might be face.

A prototype is a representative model or simulation of the final system (Warfel, 2009). Protoype are not only explaining us 'how to' in theoretically way, but also guiding us to do it in practically. So that we can flex our experience and knowledge to contribute to the design effectively. The simulation of the prototyping id helpfull cause it pass thought creating and testing, which is strongest solutions to survive. *Protoype is Adaptive,* this means that if we are facing the changing natur of software development, prototypes can assimilating and compensating it.

Mark Sanders, the inventor of the Strida folding bicycles describes the process of prototype, a few things stood out: Sketching, Evaluating, Modeling and Testing (Warfel, 2009). Prototyping is iterative and evolutionary process (Warfel, 2009). Sketiching, presentation, and critique are some of pretty stress step to through. This pressure of cycle are makes the process keep moving and it makes us more productive. We test, and then we it all again.

Sketching is a key part of the prototyping process. The goal is to get the ideas into more a solid or visible format. This section is make a quick work without worrying in the details. Also, the purpose of this step is to generate and explore a number of every concept that have been imagined, and draw out as quick as possible. Sketching is where

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quantity is more important that quality, because the concept or the product will always be evaluate and producing a better ideas, and then the quality will come later. The Advantages is makes the code easier with an increasing number of available tools. The goal of evaluate step is to find the best ideas that have been sketched. The testing section is a hybrid model of presentation and critique with sketching. By sketching the revisions, the risk of misinterpretation is reduced and with testing the client can contribute to the solution, so it can be a collaborative (Warfel, 2009).

D. Discussion
The personal application that we designed for the lecturers is expected to be able to improve other learning applications. This application is designed to be as attractive and complete as possible.

a. Design of interface and content

The first appearance from the app is the Welcome Page. In this page user are introduced by the symbol icon of the course and welcoming text. The color of the welcoming page is represent the whole of concept and theme that used in this app. This page also giving user some brief preparation for accessing the information from the app.
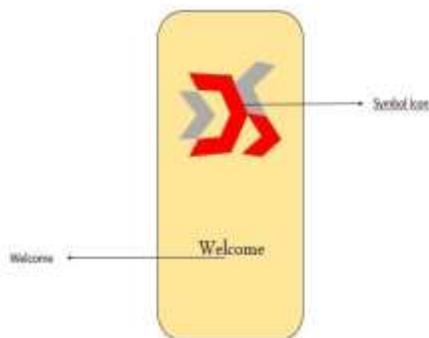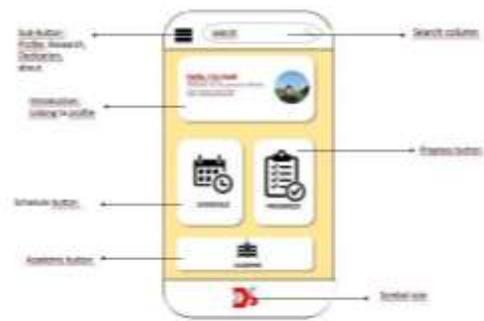

Figurer 1. Welcome Page
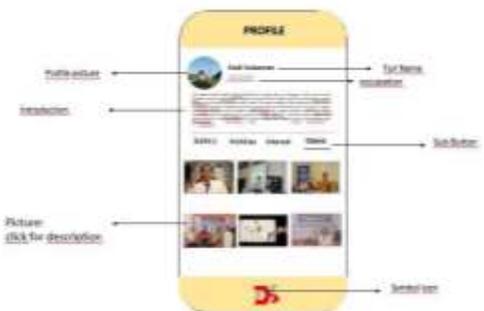

Figure 2. Home Page

b. Personal information

Figure3. Profile

c. Teaching & Expertise
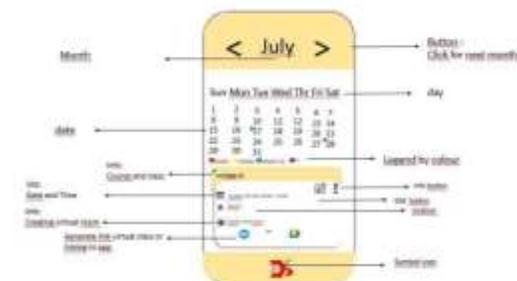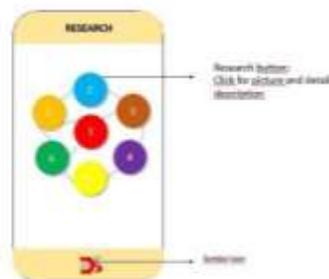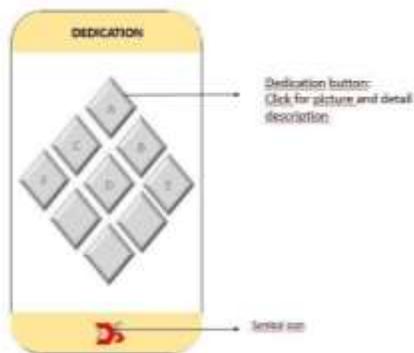

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Figure 4. Academic

Figure 5. Schedule

d. Research & Publication

Figure 6. Reasearch

e. Civil Service

Figure 7. Dedication

Conclusion

Lecturer's technology management apps can help lecturer's teaching and helped the students to study during and post-pandemic covid-19 situation. Learning applications can help and facilitate us in learning. For the example of learning application there are zoom and google meet. There are at least three benefits having one lecturer one android apps, namely 1. It helps the students to access the lecture anytime and anywhere; 2. The customized videos can be adapted to student's own learning style; 3. All provided sources won't be bothered by holidays or any other activities. The personal application that we make is designed as best a possible, simple, complete and attractive which is expected to make it easier for the lecturers and the

students to carry out lecturers comfortably and effectively. It's very recommended that each lecturer has their own management apps in order to help their teaching and the students to study during this COVID-19 pandemic.

There's lot of benefits that comes from the one lecturer one app for example; apps in phone devices are able to access in anywhere anytime, there's a customized video that can be adapted depends on the student learning style, and all of the sources and material provided by the lecture won't be bothered by holidays or any other activities. The apps itself needs to be as compact and attractive as possible so it can be easier for the lecturer and the students to enjoy the lecture in comfort.

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