

Digital Business Opportunities in Education Services: the Use of Information Technology in the Covid-19 Endemic

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Abstract. The impact of Covid-19 in various segments of life makes everyone talk about it; not only in the community among workers and businessmen but also within any community whose activities are conducted from home, either merely some social activities or simple economic transactions; those activities are done in one of another way that they are all required to know how to use information technology. Data have it that nearly all Indonesia people are unique mobile users, social media users and Internet users. Thus, the increase in the use of information technology seems to be very substantial. What arises from this phenomenon is that business opportunities in various sectors have turned into digital, as the educational services that have also turned into online forms and often involve parents who have to provide digital facilities for their children as the students. This research is conducted using descriptive approach with quantitative analysis, and it aims to bring forward some finding that opportunities do avail in the current pandemic-influenced educational services. Observation and studies on research data reveal the use of information technology and its trends, and serve as a reference that digital business opportunities in the educational field will keep accelerating during the Covid-19 endemic era. And this in turn is expected to serve as important information for any interested parties.

Keywords: Digital Business Opportunity, Information Technology, Covid-19 Endemic

1. Introduction

A digital business is a business that gets positive values for its products to be marketed using digital technology. The products can be goods or services, for instance, education services, which is now more assisted by contents generated through the collaboration of web platforms in the form of written literacy or YouTube videos. In the early days of the COVID-19 pandemic, parents automatically had to meet their children's school needs which had moved towards the Internet and were no longer face-to-face to a certain great extent. The impact of this phenomenon is very broad, both for the development of digital business and the use of information technology, which force parents to possess and master these technological devices. The types of technology used are very diverse. Quoting Neng Susi Susilawati Sugiana in "Information Systems for Educational Data Processing at SDN 10 Lembang", information technology is a tool for transferring information so that it can be more valuable and useful for the users, and currently each institution relies on information systems [1]. The choice depends on what will be developed through the existing digital facilities. YouTube is one of the most popular video platforms in the world. Hundreds of millions users play hundreds of millions videos every day.

This platform also offers income for content creators who have lots of subscribers. It makes a very interesting and effective online learning medium for students, such as for writing various types of subject matters in online newspapers, blogs, or paid writing platforms. By utilizing one's field of profession in writing contents, one can get a considerably substantial profit.

At the time of Covid-19 pandemic businesses must strive to survive while still producing, marketing, and selling products online. The outbreak of Covid-19 provides new opportunities and strategies in terms of production, marketing, transaction, and delivery to consumers. According to the Head of the MSME Division at the Department of Industry, Trade, Cooperatives and Small and Medium Enterprises, the number of MSME in Tangerang City is 13,368 [2]. In this study, microlecture and m-learning (abbreviated mlearning) is analyzed, combined and implemented in computing in a polytechnic in Bandung, Indonesia, to enable its students to learn new knowledge and revise the previously learnt teaching material [3]. Business design as quoted from Hisrich and Peters is explained as follows: "The business plan is a written document prepared by the entrepreneur that describes all the relevant external and internal elements involved in starting a new venture." (Hisrich, Peter, 1995:113) [2]. E-business offers a great assistance in business processes, in collaborating and innovating. Through the right implementation of e-business, a company can create products or services different from those of its competitors, can serve its customers better, and can reduce the time needed to release new products, and therefore e-business involves applications suitable for the Covid-19 pandemic or endemic condition. According to Suryana, (2013) success in entrepreneurship is determined by three factors, which include: ability and will, strong determination and hard work, chance and opportunity [3]. Social media is a place to socialize online, but marketing through social media can be achieved with creative contents and advertising efforts on social media, such as Facebook Ads, Instagram Ads, LinkedIn Ads, and so on. Social media audience will see your contents, and when you advertise in this way your audience accessibility to your advertisement will increase. However, viewers on social media see ads because they are targeted based on their interests and not based on what they are looking for. Marketing conducted via e-mail is called commercial e-mail. The use of e-mail in business can help send information (promotion) about products or services to the recipients of the message (receiver). The CAN-SPAM Act is a law that sets the rules for commercial e-mail [4]. In digital marketing activities there is a term known as AIDA, especially in the process of introducing products or services to the market (consumers) [5]. AIDA stands for Awareness, Interest, Desire, Action. An education process is the acquiring of knowledge, skills and habits that are passed down from one generation to the next through teaching, training, or research. Education often takes place under the guidance of others, but it can also be in the form of a self-taught process [6]. The education during pandemic has changed from being face-to-face to online. Online learning aims to maximize the PPKM (*Pemberlakuan Pembatasan Kegiatan Masyarakat* or Community Activities Restrictions Enforcement) program and to minimize the interaction between students so as to prevent the emergence of new Covid-19 clusters due to corona virus transmission. Being online involves a connection to a computer network and the Internet. The media that are often used in online learning are WhatsApp, Telegram messaging applications, and e-mail platforms. Learning media can also be social media such as Instagram. For video conferences, you can use Zoom or Google Meet. By using these media, teachers can find out whether students follow the lesson or not. To administer examinations, teacher can use Google Forms which make his correcting tasks automatic and easier [7]. Information technology is a general term for any technology that assists humans in creating, transforming, storing, communicating and/or disseminating information. IT brings together high-speed computing and communication of data, voice, and video. Examples of Information Technology are not limited to personal computers only, but also telephones, television, electronic household appliances, and modern handheld devices (e.g. cell phones) [8]. IT provides businesses with four core sets of services to help execute business strategy: business process automation, providing information, connecting with customers, and productivity tools.

Without information technology the developments that have taken place would not have gone as such. Information technology is a study of the design, implementation, development, support or management of computer-based information systems, especially in hardware and software applications. Learning methods in education field is growing along with the development of existing technology. One form of progress in the education field aided by technology is that learning activities have currently adopted the e-learning method, which can be done through all electronic media such as audio, video, interactive TV, compact disc (CD), computers, and the Internet.[9] The role of technology in education is very important because it can help educational staff and students get learning materials in the form of electronic journals, books, magazines, and modules through electronic libraries using computer and internet media. The emergence of the internet can turn learning methods in schools into distance-learning under any conditions and situations [8]. In the development and use of technology in education, there are three basic principles that must be achieved, namely an easier and more efficient system approach, student-oriented results, and the use of technology in relation to learning resources. With technology, the teaching and learning processes have undergone drastic changes, such as from training merely given to students to simulations performed by students, from a fixed venue called a school to the consideration of where and when educators and students should conduct the learning activities, from using paper and books to using computers and laptops [10]. Endemic is the spread of a disease in an area or in a group of people. Endemic is a condition or occurrence of a disease that is constant or the disease is common in a population or a certain geographic area. Examples of endemic diseases in Indonesia are malaria and dengue hemorrhagic fever (DHF). The endemic transition is a process in which the period from pandemic to endemic with a number of indicators, including the transmission rate which must be less than 1, the positivity rate must be less than 5%, then the hospitalization rate must be less than 5%, the fatality rate must be less than 3%, and the PPKM must be at level 1. These conditions must occur within a certain period of time, for example 6 months [11]. Following this transition, there have been changes in the procedures in the use of information technology in the field of educational services and also in the assistance for implementing the teaching and learning process activities. What is more interesting is the demand for parental assistance who must participate in understanding the application used.

Reported by Y. Rosmansyah, D. S. Hamdani and A. Bakhrun, "Development of a Web-based Microlecture Mobile Learning System," 2019 International Conference on ICT for Smart Society (ICISS), 2019, p. 1-6, doi:10.1109/ICISS48059.2019.8969792. Microlecture is useful in implementing distance learning. Selective learning where students use a choice of material choices they want. The micro material provided focuses on the discussion. Microlecture has linkages such as lesson plans, discussion forums. Micro learning is expected to increase students' understanding and knowledge during learning and effectively improve communication with lecturers. To achieve this, we need a system that is in accordance with the needs of students, where students can carry out the learning process outside of their lecture time. M-learning is a digital learning and mobile computing technology. M-learning is useful for sending text, audio or video (multimedia) files. Microlecture can be done via the internet, based on the m-learning function that can be accessed anywhere and anytime[12]. we can take information that the forerunner of distance learning can already be facilitated with a video showing material for students who want distance learning or lectures as well as in individual learning. The connection has an impact on an opportunity that will be owned by entrepreneurs in building new businesses during the Covid-19 Pandemic, the efforts of business actors to survive by continuing to market, market, and transact products online. The outbreak of this virus provides new opportunities and strategies in terms of production, marketing, transactions, and product delivery to consumers. This is according to the Head of the MSME Division at the Industry, Trade, Cooperatives and Small and Medium Enterprises Service. The number of MSME actors in Tangerang City is 13,368.[13] Even though it contributes in the form of challenges to the economy, the COVID-19 pandemic still has a positive impact on driving the digital economy, in the form of catalytic data between consumers and entrepreneurs to immediately migrate to digital platforms.

Scope that can be developed and used in the distance education system. in the form of Selecting and Developing Learning Materials, which can convey information and messages in learning resources to students. Teaching materials can be in the form of textbooks, handbooks, modules, audio video programs, computer-based teaching materials, multimedia programs. This expands business opportunities in the world of education which not only provides applications that facilitate but can also provide several features that can be utilized by students themselves. The method applied to convince entrepreneurs that digital business opportunities in the field of education exist is to look for the relationship between the variable X = applications that are easy to use or applications that are user-friendly, Y = online implementation, Z = increasing demand for applications, easy-to-use applications result in smooth implementation of online learning, and smooth implementation of online learning results in increased demand for applications, with quantitative research methods it is expected to be proven significantly that with the implementation of smooth online learning will increase demand or with in other words the occurrence of a good business opportunity.

2. Method

This study aims to analyze how digital business is used in the field of education services and the use of information technology during the Covid-19 pandemic. The research method used is descriptive and verification, probability sampling (random sample), and simple random sampling technique, which is a random sampling technique done with a population of three batches of parents whose children are students of Business Administration Study Program. As a reference, Sugiyono (2013, p. 120) [121] explains that “sampling from the population is carried out randomly regardless of the strata in the population”. The sample in this study amounted to 40 out of 160 parents of third-grade students in the LPKIA Business Administration Study Program. The sampling technique was proportional random sampling using questionnaires.

Time : 1 Desember 2021- 31 Januari 2022
 Location : Institut Digital Ekonomi LPKIA Bandung
 Respondents : 40 Third-Level Students Program Study Adbis LPKIA
 Institution : Prodi Administrasi bisnis Institut Digital Ekonomi LPKIA Bandung

Table 1. Research Time Frame

Kegiatan	Schedule				
	November	December	Januari	February	March
Identifying Problem					
Preparation of Hypotheses					
Questionnaire Deployment					
Questionnaire Evaluation					
Drafting the Report					

3. Results and Discussion

The data that have been collected is processed with the help of SPSS software, to make sure that the data that have clear connection and can be proven significantly, so that it can be used as material for good analysis.

Table 2 shows that the value of Sig. (2-tailed) between the easy-to-use application (X) and online implementation (Y) is $0.000 < 0.05$, which means there is a significant correlation between the variables X and Z, for the online implementation variable (Y) on the increase in application requests has a value of Sig. (2-tailed) of $0.000 < 0.5$, which means there is a significant correlation between the variables Y and Z. For R count for variable X is 0.577 against Variable Z > from R table 0.576, and R count for Variable Y which is 0.937 where both are greater than R table. So it can be concluded that the easier it is to use the application for smooth online learning, the higher the demand for online applications.

Table 2. Correlations

		easy-to-use application	online implementation	increasing application demand
easy-to-use application	Pearson Correlation	1	,541**	,577**
	Sig. (2-tailed)		,000	,000
	N	40	40	40
online implementation	Pearson Correlation	,541**	1	,937**
	Sig. (2-tailed)	,000		,000
	N	40	40	40
increasing application demand	Pearson Correlation	,577**	,937**	1
	Sig. (2-tailed)	,000	,000	
	N	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

In Table 3 the analysis of variance (Anova) is presented. Here the value of $F = 275,500$ is obtained and can be used to test the hypothesis or F-test to predict the contribution of the independent variables to the dependent variable.

Table 3. ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6,591	1	6,591	275,500	,000 ^b
	Residual	,909	38	,024		
	Total	7,500	39			

a. Dependent Variable: increasing application demand

b. Predictors: (Constant), online implementation

In the table 4 Analysis of Variance (Anova) is presented. From the table below, the value of $F = 15,743$ is obtained and can be used to test the hypothesis or F-test in predicting the contribution of the independent variables to the dependent variable.

Table 4. ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2,336	1	2,336	15,743	,000 ^b
	Residual	5,639	38	,148		

	Total	7,975	39		
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- a. Dependent Variable: online implementation
b. Predictors: (Constant), easy-to-use application

Hypothesis:

H₀: There is no digital business opportunities for education services in the form of the use of information technology during the Covid-19 endemic.

H₁: There is digital business opportunities for educational services in the form of the use of information technology during the Covid-19 endemic.

Because $F\text{-count} > F\text{-table} (0.05) = 4.74$, then H₀ is rejected and H₁ is accepted. The conclusion is that the independent variables significantly contribute to the dependent variable.

From the calculation of the survey results, it is proven that there are digital business opportunities in the field of education services, i.e. in the learning and teaching process at the college level, especially if the technology used is easier and more comfortable for the users, whether they are students' parents who participate actively and remotely in supervising the learning process or they are students as the main users who can feel the ease and even the convenience; these will subsequently affect the use of the application selected from several other alternatives, for example the use of YouTube, Zoom devices or Google Meet. Then, this will result in the increase of demand both in terms of hardware such as smartphones or laptops and in terms of increasing interest in software from online networks that are used during the teaching and learning process. This refers to an increase in smartphone demand and the use of applications such as Zoommeeting or an increase in YouTube accounts. For this reason, there are a great number of digital business opportunities that could provide facilities and infrastructure that provide information technology for the education services.

4. Conclusions

The results of this study indicate that during the Covid-19 pandemic, digital business opportunities in the field of education services are increasing, generated by the utilization of information technology packaged somehow in an application that is attractive and convenient to use. This is so because basically there are really a number of parties involved in the online teaching and learning processes. For this reason, this research can serve as a reference for entrepreneurs who will develop some sort of business in the fields of digital technology, i.e. in the field of information technology (IT) that supports distance learning processes carried out at university level; the entrepreneurs in question are software developers or hardware suppliers who provide facilities and infrastructure needed by the educational services.

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