Digital entrepreneurship education in emerging countries: Opportunities and challenges

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Submission date: 18-Apr-2023 01:50AM (UTC+0700)
Submission ID: 2067501926
File name: Chapter8-DigitalEntrepreneurshipEducationinEmergingCountries.pdf (339.09K)
Word count: 6238
Character count: 37420

Chapter 8
Digital Entrepreneurship Education in Emerging Countries:
Opportunities and Challenges

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ABSTRACT

Entrepreneurship is one of the economic engines in a country especially in emerging countries. Indonesia is an emerging country that encourages the creation of entrepreneurship processes in various fields. Entrepreneurship education is one of the knowledge transfer processes in creating entrepreneurs. The digital transformation in entrepreneurship education is a new approach and an important challenge in education to prepare students in the face of technological change. Digitalization should be used in all sectors of education and training, as technological skills are essential to global relations. Currently, building a technology-based entrepreneurship education curriculum is critical, whereby the digitalization process can expand student partnerships and networks with their peers across countries, entrepreneurial educators, and the business communities. In particular, students will use digital tools to learn entrepreneurial skills such as business feasibility and market research as well as designing their own business plans. This chapter provides useful information on entrepreneurship education by focusing on technological developments in Indonesia. This chapter will also explore more deeply about the current state of entrepreneurship education, opportunities and challenges. This chapter concludes with suggestions for the further development of digital entrepreneurship education in the future.

Keywords: Digital Entrepreneurship Education, Emerging Countries, Knowledge Transfer, Technology-Based

INTRODUCTION

The growth of digital economy has an important role in strengthening the economy of a country. The advancement of information technology brings significant changes to the development of business ecosystems in the world. “The digital economy has encouraged businesses to develop their activities

DOI: 10.4018/978-1-5225-7473-6.ch008

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beyond their internal markets" (Kempster and Cope, 2010; Ziyae et al, 2014). Indonesia is one of the developing countries that consistently build digital ecosystems to support the development of digital entrepreneurship.

The development of the digital entrepreneurship is inseparable from the development of Internet technology. Internet users in Indonesia continue to increase. Based on a published data by Indonesia Internet Service Provider Association (APJII) in 2017, there are 143.26 million people in Indonesia who use the internet from a total population of 262 million people. The majority of internet users in Indonesia are between 19-34 years old with the number reached a total of 70.94 million people. Meanwhile, internet penetration in 2017 has reached 54.68%, where the number has increased compared to 2016, which is only 47.5%. The data shows that the business opportunity in the digital field is still very open, so it can be utilized by entrepreneurs to open and develop their business.

In the era of global economic competition, digital information technology based industry has changed the model, strategy, and value creation of new business. Higher education plays an important role in encouraging the growth and innovation of digital economy entrepreneurs in the development of human resources. However, higher education also faces challenges in realizing digital-based entrepreneurship education. Curriculum with more closer to the content of information technology and innovation is needed to equip students in implementing entrepreneurial education based on digital. Students need to be taught comprehensive logic (computational thinking), including how to model, analyze data, and extract information. In addition, related to complex systems and sharpen the sense of business with the direct practice of entrepreneurship.

The Government of Indonesia believes that the potential of digital business is very high; the built ecosystem can encourage Micro Small Medium Enterprises (MSMEs) to transform into digital MSMEs. The digital entrepreneurship has facilitated traditional business interactions and has also offered new ways of doing (Schwens and Kabst, 2009; Ziyae et al, 2014). According to Minister of Cooperatives and Small and Medium Enterprises (SMEs), Anak Agung Gede Ngurah Puspayoga, the number of Indonesian entrepreneurs only reached 3.1 percent of the total population. This ratio is still lower than other countries such as Malaysia 5 percent, China 10 percent, Singapore 7 percent, Japan 11 percent and US 12 percent (Kumparan, 2017).

Therefore, universities in Indonesia are aware of the importance of creating graduates or student entrepreneurs who are able to compete with other countries. One of the roles that are being executed is to respond to future challenges by creating new entrepreneurs based on digital or digital entrepreneurs. The creation of digital entrepreneurs is expected to increase the number of entrepreneurs in Indonesia, so it is expected to contribute economically and potentially in improving the quality of life of the community through job creation. This chapter tries to discuss the various opportunities and challenges faced by emerging countries, such as Indonesia in developing digital-based entrepreneurship education. Future research directions are also provided in this chapter.

DIGITAL ENTREPRENEURSHIP

The progress of the digital era is becoming a new trend for entrepreneurship. This is confirmed by Nambisan (2017) that "digital technologies herald a new era in entrepreneurship, one in which the traditional ways and forms of pursuing entrepreneurial opportunities are increasingly questioned and refashioned." Entrepreneurs are people who have the courage and the ability to take risks to open a business in various opportunities. Peter F. Drucker (2012) mentions that entrepreneurship is the ability to create something new and different. This is in line with Schumpeter's opinion that links entrepreneurship with innovation and resource availability. The entrepreneur is an innovator who implements changes within the market through new combinations of products, production methods, markets, source of supply,

or new organization to an industry. While digital entrepreneurship contains understanding as an effort to utilize information technology undertaken entrepreneurs to manage the business. One characteristic of digital entrepreneurship is that it involves digital interaction (Hull et al., 2007) and represents most of the unrealized entrepreneurial renovations (Carroll and Shabana, 2010; Ziyae et al., 2014). Currently, digital business is the main attraction for the community because people can easily utilize digital technology to open new business opportunities. "The rapid process of digitalisation of products and services throughout the industry provides an entrepreneurial opportunity to enter into the market with digital technology (Nambisan, 2017). The difference between a virtual business and a traditional business is a new venture to fail or miss a lucrative opportunity (Hull et al., 2007).

Digital entrepreneurship can be divided into three types namely (Hull et al, 2007):

1. *Mild digital entrepreneurship*: involves venturing into the digital economy as a supplement to more traditional venues.
2. *Moderate digital entrepreneurship*: requires a significant focus on digital products, digital delivery, or other digital components of the business. Moderate digital entrepreneurship could not exist without the digital infrastructure.
3. *Extreme digital entrepreneurship*, means the entire venture is digital, including production, the goods or services themselves, advertising, distribution, and the customers.

Table 1. Category of Digital Entrepreneurship (Hull et al, 2007)

Activity	Category of digital entrepreneurship		
	Mild	**Moderate**	**Extreme**
Marketing	Website as supplement	Digital marketing is primary mode	Digital marketing is only mode
Sales	Product may be available for sale digitally	Product can be purchases digitally, possible exclusively	Product is only available for sale digitally
Product (good or service)	Product is non-digital	Product may or may not be digital	Product is digital
Distribution	Product is delivered by physical means	Product may be delivered physically or digitally	Product is delivered digitally
Stakeholder management	Traditional interactions, may include e-mail	Significant levels of digital interactions; traditional interactions also common	Digital interactions are primary; traditional interactions seldom or never occur
Operations	Primarily physical location(s), traditional interactions, may include some virtual team interaction	Primarily physical location(s), traditional interactions, probably includes some virtual team interaction	Strong virtual presence, physical location and traditional interactions possible but not required

Digital entrepreneurship involves the ability to recognize and identify opportunities, and to transform opportunities into marketable products and services. Digital entrepreneurship is also inseparable from the ability to take risks and realize profits. Hull et al (2007) also describes a typology of digital entrepreneurship:

1. Ease to entry: becoming a digital entrepreneur is easy. Little time is needed to create a commercial website. For example: companies like eBay and Amazon give individuals the opportunity to create small business ventures in hours, though many entries are of low quality.

2. Ease of manufacturing and storing: online sellers of traditional goods may not benefit in terms of manufacturing or storage, but digital products offer savings in these two traditionally cost-intensive areas.
3. Ease of distribution in the digital marketplace: digital business allows products to be sent around the world quickly and cheaply. On the other hand, digital entrepreneurs face global competition from the moment they put up their websites.
4. Digital workplace: the reach of the internet also allows digital entrepreneurs to take advantage of potential employees and partnerships all over the globe without forcing anyone to relocate (Okkonen, 2004). Global virtual teams make it easier to locate and hire talent, harness cultural diversity, and increase flexibility and responsiveness (Walker, 2006).
5. Digital goods: selling digital goods provides advantages beyond those mentioned above. The product can be modified easily, to the point where even radical innovations can be introduced without seriously disrupting the process by which the product is produced, and sold.
6. Digital services: offering online services is a growing business (Kirkpatrick, 2007). These digital services may amount to running an inexpensive automated routine, but to the customer, the service may be valuable (Komiak et al., 2004).
7. Digital commitment: commitment may be harder to develop in new virtual companies than in new physical ones.

THE ROLE OF HIGHER EDUCATION IN BUILDING DIGITAL ENTREPRENEURSHIP

Higher Education Institutions or Universities have a significant role in encouraging the development of entrepreneurship in the community. Based on data from the Central Bureau of Statistics, the open unemployment rate in Indonesia in 2018 reached 5.13% or 6,871,122 people and the number of unemployed university graduates was 5.15% or 353,862 people (BPS, 2018). Every year, unemployment becomes the main problem that must be solved by the Indonesian government. The limited absorption of university graduates in the government and private sector, as well as the competition of every graduate to get a job makes the opportunity to work for college graduates getting smaller. Through entrepreneurship education it is expected that high education graduates not only focus on getting jobs, however, they can create new jobs that can absorb labor. "Entrepreneurship education supports the school-to-work transition. It shows learners that there are different paths to the future and different choices based on actions and values (Vaidya, 2014). Entrepreneurship education is solely about encouraging "students" to set-up and run their own businesses (Kirby, 2004). "Entrepreneurship is both an art and a science, so that our contribution should be to build critical theoretical knowledge about entrepreneurship and to endow students with the management skills necessary for an entrepreneurial career (Jack and Anderson, 1999).

The community will be helped by new jobs created by young entrepreneurs graduated from universities. The business development and entrepreneurship education process is not just an individual business development process, but a development process that includes: first, identification and stimulus for students who have the potential to own and actually run business; second, students who may work and pursue in this business (Rosa, 1992; Jack and Anderson, 1999).

Entrepreneurship education at universities focuses on entrepreneurial knowledge and skills. "Entrepreneurship education can be considered as a structured formal delivery of entrepreneurial knowledge (Young, 2000; Jack and Anderson, 1999)." Entrepreneurial knowledge is the most important factor in promoting student entrepreneurship (Scuotto and Morellato, 2013). Here are the steps in the learning process of digital-based entrepreneurship that can be applied in universities:

a. Identify Potential Talent

To attract and stimulate the intention of entrepreneurship students, the main thing that should be done by educational institutions is to encourage students to be able to recognize the potential that exists within them, realizing the strengths and weaknesses possessed, which will become a source of success in entrepreneurship. Entrepreneurship in the educational context not only focuses on encouraging students to start a business but also makes students more creative, opportunity-oriented, proactive and innovative (Aldianto, Anggadwita and Umbara, 2018). The potential of self-employment can be assessed from six aspects, namely: Personality, Self-discipline, Creativity, Encouragement/desire, Courage to face risks, and Confidence.

b. Entrepreneurship Curriculum: Innovation and Technology Management

Universities in Indonesia are starting to improve their teaching and learning systems by incorporating digital-based entrepreneurship education courses in Indonesia. The purpose of entrepreneurship education is to equip college graduates to be entrepreneurial by taking advantage of opportunities and resources owned. So in the end students who have/will graduate are expected to have entrepreneurial spirit and run their business with a tough and innovative.

c. Digital Ecosystem

Campus environment has a role in the process of making a student's decision to become an entrepreneur. In other words, a conducive campus environment can motivate students to learn to become entrepreneurs. In the process of developing entrepreneurship intention, students need to get stimulation to have the willingness to think, act and behave like an entrepreneur. Thus, the creation of a campus environment that supports the digital entrepreneurship climate will motivate students and support the entrepreneurship learning process, which has an impact in increasing student intention in digital entrepreneurship. "The updated entrepreneurial programs should positively facilitate not only the improvement of digital competence but also enhance the ability to build collaborative networks in the new generation of student entrepreneurs" (Scuotto and Morellato, 2013).

d. Facilities and Infrastructure: Creativity

Many things can affect student intention in digital entrepreneurship. First is the habits of millennial generation students who are very close to the technology such as the use of smart phones, social media and other applications. Therefore, the Higher Education Institution needs to facilitate the needs of students with supporting infrastructure such as high internet access network, laboratory computing, training center and business incubator.

e. Government Support: Funding

The Indonesian government needs to support the progress of digital entrepreneurship. The assistance provided usually involves granting funds to digital students to develop their business ideas. According to a World Bank study, the involvement of MSMEs digitally could be one of the drivers of achieving the target of 7% economic growth in 2025. Thus, the government's assistance to start-up digital business will help the government to create more digital entrepreneurs. If the program manifests, it is certain that the number of digital-based digital entrepreneurs will increase and will have a positive impact on Gross Domestic Product by 2020.

f. Network Collaboration

Collaboration between institutions and stakeholders plays an important role for the sustainability of the digital entrepreneurship process. Digital entrepreneurship knows no geographic boundaries and has a huge market. Therefore, establishing cooperation between digital entrepreneurs also becomes the focus of attention in the process of entrepreneurship digital education. "The presence of informal collaborative networks and the ability to efficiently use the latest technology are also relevant in developing entrepreneurship attitude (Scuotto and Morellato, 2013).
The digital economy is a very complex field that requires cross-field and science collaboration. Students not only need the provision of technological savviness skills, but also business acumen. They should also be able to identify opportunities (entrepreneurial spirit), understand agile structure, technology interface, and consumer behavior. Moreover, they need to work with different stakeholders.

OPPORTUNITIES FOR DIGITAL ENTREPRENEURSHIP

Digital economic growth allows people to start many new businesses and enter a wider market, even increasing competition. The potential of a creative digital economy is huge and could reach US $ 130, while the value of US $ 130 billion, when calculated in IDR13.300 per dollar then could reach IDR1.729 trillion by 2020 (Minister of Communication and Informatics, Rudiantara - Creative Economy Agency Developer Day).

The advantages of digital entrepreneurship are market and wide area coverage, its existence knows no boundaries and demographics. Not only in Indonesia, has the phenomenon of digital entrepreneurship become a trendsetter in some Asian regions. This is because the vital role of digital entrepreneurship that supports the growth of a country's digital economy. Examples are digital companies like Facebook and Amazon.com has a huge business impact on the world. In Asia, giant companies such as eBay and Alibaba are able to reach the international market. While in Indonesia alone, various digital-based businesses ranging from online shop or start-up of digital business began to develop in the last ten years, for example Tokopedia, Bukalapak, Gojek and many more.

Indonesia has a large population, indicating that Indonesia has a good market potential so that many Asian e-commerce companies are interested in entering Indonesia. But even though the potential of digital entrepreneurship is very high, currently digital products traded in Indonesia are predominantly foreign or imported. Thus, digital business actors need to continue to innovate to expand its business. Therefore, introducing the potential of digital business for students is very important to motivate students, that digital business opportunities are still very much. Here is the potential of digital business that can be utilized by college graduate students in Indonesia:

1. *E-commerce*

The uniqueness of digital business is that it does not need a physical place because there is a new trend like e-commerce. Thus the utilization of ecommerce platform will be able to stabilize the price well, to shorten the distance between producers and consumers without having to go through a long distribution chain.

Increased of internet penetration in Indonesia has become one of the driving factors for e-commerce growth in Indonesia. E-commerce can offer excellent opportunities for economic growth in emerging countries like Indonesia (Indonesia-investment, 2017). E-commerce is a business process by utilizing internet technology so as to improve organizational performance such as increasing profitability, gain market share, improve customer service, and deliver products faster (Francisco et al., 1995; Zhao et al., 2013; Zou et al., 2012; Chen and Zhang, 2012). E-commerce involves all aspects of organizational

interaction electronically with its stakeholders. In brief, electronic commerce involves the use of information technology to improve communication and transactions with all the organization's stakeholders include customers, suppliers, government regulators, financial institutions, managers, employees, and the public.

There are at least seven basic types of e-commerce or e-commerce business forms with different characteristics (Rebeca, 2016):

Business-to-Business (B2B)

B2B e-commerce includes all electronic transactions of goods or services performed between companies. Generally e-commerce with this type is done by using EDI (Electronic Data Interchange) and email in the process of purchasing goods and services, information and consultation, or the delivery and request of business proposals. EDI (Electronic Data Interchange) is a structured data transfer process, in an approved standard format, from one computer system to another, in electronic form. Some examples of B2B e-commerce websites are Bizzy which provides solutions for companies that have problems in terms of procurement and business service needs; and Ralali is one of B2B e-commerce company Indonesia which sells MRO (Maintenance, Repair, and Operational) products.

Business-to-Consumer (B2C)

B2C is a type of e-commerce between companies and consumers. Some websites in Indonesia that apply e-commerce of this type is Bhinneka, Berrybenka and Tiket.com.

Consumer-to-Consumer (C2C)

C2C is a type of e-commerce that covers all electronic transactions of goods or services between consumers. Generally these transactions are made through a third party that provides an online platform to conduct such transactions. Some examples of C2C application in website in Indonesia are Tokopedia, Bukalapak and Lamido. There sellers are allowed to directly sell goods through an existing website. But there are also websites that apply the C2C type and require the seller to complete the verification process first, such as Blanja and Elevenia.

Consumer-to-Business (C2B)

C2B is a type of e-commerce with a complete reversal of traditional exchanges or buying and selling transactions. An example of a C2B application is a market that sells royalty-free photos, images, media and design elements such as www.istockphoto.com. Another example of implementing C2B e-commerce is www.mybloggerthemes.com, a website that sells a variety of blog templates from various template developers.

Business-to-Administration (B2A)

B2A is a type of e-commerce that includes all online transactions between companies and public administration. This type of e-commerce involves many services, especially in areas such as fiscal, social security, employment, legal documents and registers, and others. Some examples of public administration websites that implement B2A are www.pajak.go.id, www.allianz.com and www.bpjs-online.com. Companies can process transactions on services they get directly to the public administration.

Consumer-to-Administration (C2A)

Type C2A covers all electronic transactions conducted between individuals and public administration. The example of a C2A application is the same as B2A; it's just that the dissimilarity is on the individual-public administration and corporate-public administration. The B2A and C2A models are both related to the idea of efficiency and ease of use of services provided to communities by the government, as well as with the support of information and communication technologies.

Online-to-Offline (O2O)

O2O is a type of e-commerce that attracts customers from online channels to physical stores. O2O identifies customers in the online field such as email and internet advertising, and then uses various tools and approaches to attract customers to leave the online scope. For example, a fitness center will not be established in your living room, but by using an O2O service provided by a company like Groupon Inc, the fitness center can channel its offline business into online. Some big companies with fast growth like Uber and Airbnb also run their business with O2O type. Some websites in Indonesia that apply the type of O2O is Kudo and MatahariMall.

2. *Marketplace*

The presence of the internet in our lives makes things easier, faster, and instantaneous. Another advantage of the internet presence is the opening of jobs and the possibility of becoming a wider entrepreneur. Everyone can become an entrepreneur by starting his own business without having to open a store in physical form. There are several ways to start a business online, one of which is to take advantage of an existing marketplace. Some of the popular marketplace in Indonesia includes Tokopedia, BukaLapak, Qoo10 Indonesia, Elevenia, Lamindo Indonesia, and Rakuten Online Shopping.

3. *Transportation*

The advancement of digital business has the potential to create similar businesses that result in high levels of business competition. One example in Indonesia is Go-Jek, which first opened for funds in 2010 and launched in 2015. Their business has successfully changed the lifestyle of people in making transportation reservations quickly and easily through smartphone applications. So the motorcycle taxis, which are the traditional mode of transportation, feel disturbed and cause chaos in some big cities because they reject Go-Jek's operations. The Go-Jek app has been downloaded more than 3 million times and now operates in major cities with a total of 15 cities across Indonesia. Forbes even incorporated Go-Jek as "50 Corporate Changing Worlds", ranked 17th out of 50 listed companies. This further proves how Go-Jek affects the nation and the world especially on innovation because the Forbes measurements include the social impact, business value, and level of innovation that the company generates. Go-Jek shows how technology and innovation can improve normal daily business. Using an open innovation system, Go-Jek has become a disruptive company primarily for traditional transportation and opening new market entrances to similar businesses such as Grab and Uber. Go-Jek uses an open innovation system by not only managing all processes and features internally, Go-Jek can get immediate feedback from both customer service and the experience of each driver's rating. This is done directly from the beginning of use by the consumer until the end of the trip. These steps can reduce the time estimates for each other compared to traditional travel, and at the end of the trip, users can rank for multiple uses such as reviews from the company for driver feasibility, app's overall performance and feedback for other features that can later enhanced by the development team. In addition, there are many other developers and services that also join the Go-Jek system, further enhancing usability like Go-Massage, Go-Tix, Go-Med, and more. Each one further integrates with the system and provides many new options for the user, ensuring long application usage and attracting new markets. In this way, the company is not limited by single use

only innovate in the use of transportation, but also expand the market layer and reach several types of target market at once. Go-Jek also works with several payment providers such as Banks to make payments easier for users, and with companies like Qraved to further improve the customer experience while using Go-Jek.

4. *Accomodation Services*

With new technology, accommodations Services Company in the tourism business have no boundaries anymore. They can provide good services in accommodation around the world. Therefore, accommodation services very promising digital business in the future. A lot of travel agents transform their business to accommodation Services Company by providing accommodation platform that connects tourist with tourism business. For example *Traveloka*, one of the biggest technology companies in Indonesia that provides accommodation services for tourist around the world such as online ticketing and hotel booking services. The other example is *tiket.com*, the platform that helps tourist to manage their travel easier.

5. *Digital Agency*

In a digital era, the company needs to changes their marketing strategy to fit in with a new market. Digital Marketing agency is an advertising company that helps the company or small business to advertise their product digitalize. The digital agency provides graphic design and copywriting with new digital technology such as video, text, social media, SEO, etc. The digital agency is a good potential business because to win market competition many companies choose to used modern marketing techniques to commercialize their product and service. The example of the successful marketing digital companies in Indonesia are *dgtraffic indonesia* (google partner), *webarq promote*, *valuklik*, etc.

6. *Digital Media*

Nowadays, digital media is very important to visualize the product and services. The company tries to get closer to describe their product and services to meet customer expectation. Digital media agency is the consultant and producer of creative digital media with focusing on content, for example website, messenger, social media application, video, etc. Digital media agency is a good business opportunity for the digital entrepreneur because not all of the traditional company can create their own digital media.

7. *Financial*

In Indonesia, various financial applications are also created by local businessmen, one of which is iuran.id as an online platform that becomes a forum for innovators to share ideas and realize ideas to build Bandung for the better. This application is devoted as an offering for the development of the city of Bandung. Another application is UangKu made by ODT Indonesia developers who provide personal financial record keeping function in a simple and simple. TemanBisnis is also a mobile application intended to assist the process of financial arrangements, especially for SME players. In addition, Finansialku application offers a much wider functionality, as a financial planner.

THE CHALLENGE OF DIGITAL ENTREPRENEURSHIP

The digital business era forces businesses to continue to grow their businesses for survival, as well as implement and develop business strategies to adapt through changes in the consumer market. There are many challenges that digital businesses need to face to sustain their business. To maintain the digital

business, there are several factors to be noticed that include an economic atmosphere, competitive advantage, job skills, and the potential to grow. Meanwhile, according to Drucker (2012) the key to becoming a successful business is to be different from other competitors out there.

a. Innovation

Innovation is one of the keys to business revival and also has the potential to be their downfall. No business can develop by simply being stagnant and ignoring the innovations made by its competitors. Therefore, innovation has a major role for the digital entrepreneur to move forward.

b. Customer Feedback

To maintain the digital business, business actors need feedback to improve product quality and efficiency. This innovation can also include customer feedback to build the company and fix issues with customer suggestions to improve the item or feature. There is also a platform where people can post their ideas and comments that can be addressed and feedback by many users with adjacent skills so as to gain mutual benefits for ideas they provide.

c. Technology Adoption for SME's

Digital business entrepreneurs, in the future must be able to continue to transform through digital-based trading, which indirectly can expand its business and increase productivity and welfare. But not all traditional business entrepreneurs (MSMEs) can change their business model. The factors that can strengthen the digital entrepreneurship model are not immediately responded by the owners of MSMEs in Indonesia. The number of micro, small and medium enterprises (MSMEs) that use the internet to sell products is still very limited. Based on Deloitte's research in 2016, only 9% of 57.9 million of MSMEs are serious about selling products through an integrated social network or via an e-commerce platform. In addition, there are 37% of MSMEs who have no internet access, either through computers or smartphones. 36% of other MSMEs have internet access but are not used for product sales. Meanwhile, the remaining 18% only use social media networks for product sales.

d. Infrastructure, Policy and Regulation

Education is one sector that is expected to anticipate the dynamics of technological changes. The Indonesian government needs to explore the internet to be accessed by all levels of society even to remote areas. One of the obstacles to the realization of the application of ICT in education is the absence of a national strategic policy in planning ICT implementation for education. The education sector in Indonesia began to adapt curriculum and infrastructure facilities by utilizing internet technology and digitalization. There are two policies relating to the implementation of entrepreneurship education programmes in Indonesia: 1) entrepreneurship as a subject at both secondary and tertiary education levels and 2) entrepreneurship as a skill assessed against a competence standard (Ministry of National Education, 2010; Aldianto, Anggadwita and umbara, 20018).

However, strengthening the role of information technology should be immediately utilized by stakeholders including policy makers in building models of entrepreneurial ecosystems, such as the government, the private sector or the company, and covers the entire range of people involved in the Education unit. One is the equity of 'digital infrastructure' in order to build an ecosystem driving the growth of new digital entrepreneurs. Equity is intended for various applications based on existing digital technology will be closer to the entrepreneurs in various fields.

CONCLUSION AND RECOMMENDATION

Digital entrepreneurship education in Indonesia has various opportunities and potential to be developed further. Indonesia has great potential to increase the number of digital entrepreneurs as Indonesia has quality human resource assets, and a large potential local market in e-commerce development. In addition, Indonesia has creative people who have the ability of digital literacy and always follow the development of technology. However, the development of entrepreneurship education in Indonesia also has various challenges that must be faced. Especially the role and commitment of various stakeholders such as academic community, government, business, digital community and media are still considered very lacking to build a conducive digital ecosystem.

Another thing that really matters is the digital entrepreneurship education process itself. Entrepreneurship education programs need to foster and support entrepreneurial skills and activities. "The universities or higher education institutions should re-think the design of entrepreneurship education programs with regard to the necessity for structure, curricula and teaching methods" (Permatasari and Agustina, 2018). Entrepreneurship cannot be learnt by the 'chalk and talk' method with the teacher behaving as a 'sage on stage'. Evolving pedagogical approaches beyond the confines of textbooks is required to inculcate leadership and team building skills, which are necessary for entrepreneurial abilities to grow and nurture (Vaidya, 2014). Therefore, implementing ICT in digital entrepreneurship education will have many benefits. First are teachers or lecturer can digging deeper information about the material to be delivered. Secondly, with information technology and teaching communication can provide stimulus to students to learn and create a conducive and controlled class. Using various existing media can have a monotonous effect so that students do not stick to the teacher's explanation, but also provide space for students to use their feelings, and try to do activities that will shape learning experiences.

The entrepreneurship education process of universities in Indonesia still has weaknesses in terms of inter-institutional collaboration. With cross-field and scientific collaboration is expected to be established mutual cooperation between institutions, educators (lecturers or mentors) and students to produce output (digital entrepreneur) ready to compete. College graduates can choose entrepreneurial activities based on digital as their career choice, so it is expected that university institutions can help the government to increase the number of entrepreneurs in Indonesia through digital entrepreneurship education.

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