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Attitudes and Motivations Graduates in Digital Entrepreneurship

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Abstract: The adoption of technology in entrepreneurship makes technical graduates easier to involve in business. The uses of technology in entrepreneurship involve the using of digital platform such as WhatsApp, Facebook and Instagram in online business. However, the number of student involve in business after graduates is low because their perception towards entrepreneurship field. The students from entrepreneurship also don't involve in entrepreneurship even though they have knowledge and skill to become an entrepreneur. Hence, this study is to identify the perception of attitudes and motivation of students towards digital entrepreneurship, as well how these differs in gender and academics' background. This quantitative study consisted sample of 331 final year students from various faculties in the Technical Malaysian University. Questionnaires were distributed via online. The study's findings revealed that study found that the perception of attitude and motivation towards digital entrepreneurship among students is high. It also found that the perception of attitudes and motivation towards digital entrepreneurship among students is important to help student become unemployed after graduate. The study's finding led to important implementation implication for entrepreneurship activities in digital based on the students' demography.

Keywords: Digital entrepreneurship, technical graduates, entrepreneurial motivation, entrepreneurial attitudes

1. Introduction

The wave of Industrial Revolution 4.0 spread the use of internet and information and communication technology (ICT) to society in various aspects. This revolution shows the role of ICT in development of economic that can increase the Gross Domestic Product (GDP) that create employment opportunities, restructure the organization and reduce poverty. In addition, ICT is also an intermediate media to increase the participation in economic sector such as in entrepreneurship field (Abdul Rashid & Samat, 2019). The digital entrepreneurship involve of technology platforms and other communication equipment in prospective of entrepreneurship (Antonizzi & Smuts, 2020). Digital entrepreneurship is the transformation of the traditional concept of entrepreneurship that establishes the changing of competencies, aspirations and purpose of entrepreneurship. Ghosh, et al. (2021), defined digital entrepreneurship as any venture that used digital technologies to develop the products and service to the customers. This transformation offers various advantages as: (1) the digital technologies have great reach, they provide access to a wider market and better positioning (2) lower cost because the infrastructure is no longer needed to store products; and (3) better involvement with stakeholders means that the relationship with the stakeholders will generate goodwill for the company, which will lead to long-term success (Ladeira et al., 2019). The development of information and communication technologies increases the attractiveness of entrepreneurship by increasing the network, increasing productivity, and making communication easy (Zaremohzzabieh et al., 2015).

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The entrepreneurs use the digital platform to enhance their businesses that are very popular nowadays. Therefore, the digital entrepreneurship gives the opportunity to the graduates to involve in entrepreneurship field. Involvement in digital entrepreneurship while studying can help students gain extra income by becoming a dropship or agent for the existing products in the market. Furthermore, becoming an entrepreneur can also be a career choice for students after graduating. This is because in university the entrepreneurship subject is compulsory for student before there graduate. The knowledge and skills that they learn can help them get involved in the entrepreneurship field (Badawi, 2013). Besides knowledge and skill of entrepreneurship, in digital entrepreneurship the graduates also need to have good attitude and motivation in entrepreneurship (Abdullah, 2015). The good attitude of entrepreneurship are having a passion, being a risk-taker, and looking for opportunity. Students who are exposed to entrepreneurs can better prepare for careers in business entrepreneurship after graduates. Mutalib (2013), state that with exposure in the field of entrepreneurship, it can increase students' competence to face challenges in global competition.

1.1 Research Background

Nagarathanam and Buang (2016), they state the involvement of graduates who involve themselves in the field of entrepreneurship is limited because of the negative perception towards the field of entrepreneurship. The students that have background in business studies also did not choose to become an entrepreneur after graduates (Kurniawan et al., 2019). Even though they have knowledge and skills in entrepreneurship, they do not pursue it as a career due to a negative perception of the field. Besides that, due to the challenges and obstacles in entrepreneurship made them rather be a job hunter (Boon & Bohari, 2010). This perception influences students to engage in entrepreneurship in order to create jobs or to become employees in order to find jobs that interest them Hendrajaya et al. (2019). The students in technical universities are still underrepresented in the field of entrepreneurship (Adul Wahab (2013) even though they have exposure on entrepreneurship education. The aim of the entrepreneurship education is to mold the students to become the potential, competitive, and innovative inventors (Ismail, et. Al, 2019). However, this study only examines awareness of the traditional entrepreneurship, which is face-to-face business.

In the 21st century, the trend of online shopping is becoming more and more popular and growing among the local community. Online shopping using various social media applications, websites, and e-commerce platforms is aimed at attracting users to buy online with electronic payment facilities (Mat Arisah, Zainal Badari, & Hashim, 2016). Therefore, this development opens the opportunities for individuals to get involved in digital entrepreneurship. Therefore, a study is needed to examine the perception of students at UTHM towards the attitude and motivation of digital entrepreneurship.

2. Literature Review

Since the nature of digital entrepreneurship using technology, digital entrepreneurs require both skill in technical and entrepreneurship. According to Antonizzi & Smuts (2020), digital entrepreneurship is the combination of business, knowledge and institutional entrepreneurship. Business refers to the seeking of business opportunities including new product or service creation, and material that be used; knowledge refer to identification of information to enhance the existing and new knowledge in entrepreneurship; while institutional entrepreneurship is the action of the entrepreneur to use the resources in creating new organization or improve the organisation. Therefore, creativity and innovative of the entrepreneur is importance in digital business to keep pace and stay alive in the competitive market (Hisrich & Soltanifa, 2021). The increasing number of online business was affected by the advance of technologies; the new customer demand and the emerging of new market and industries (Kooskora, 2021).

The online business helps the entrepreneur open variety of products to the customer and fulfils the need of customer. Besides that, through the digital platform in online businesses helps the entrepreneurs to get a comment and feedback about their product. This helps them to improve the quality of the product and plan the strategies in marketing their product to be well-known (Antonizzi & Smuts, 2020). The utilisation of digital technology in entrepreneurship improves the business operations, create new business model, enhance business intelligence and the engagement with customers and stakeholders (Elia, Margherita, & Passiante, 2020). The digitalisation brought much faster and less predictable environment whereas with the technology the decision and process information in companies become faster and easier (Kooskora, 2021).

The online business is the new job opportunities to the younger generation to involve in entrepreneurship field. In this 21st century, online shopping become a trend which using various social media platform that aim to attract costumer to buy online (Mat Arisah, Zainal Badari, & Hashim, 2016)This trend will open the opportunities to individual to enter the digital entrepreneurship. Technical and Vocational Education and Training (TVET) produce the skill student need by the industry that is able to cope with the change especially in field of employment (Kusumaningrum, Ganefri, & Hidayat, 2015). However, the students show the negative perception towards entrepreneurship (Nagarathanam & Buang, 2016) and their involvement in entrepreneurship is still low (Adul Wahab, 2013). According to Jafaar, Lai, Lan, and Musit, (2019), there about 13.5% of the graduate in college that further their career as entrepreneurs. Among 407 graduates only 55 of them involve in entrepreneurship. More surprisingly, students

in business study field do not choose to become entrepreneur even though they have knowledge and skill in that area (Kurniawan, et al., 2019). This is because the students are fear to take the risk and fear to face failure to involve in business. Therefore, the graduates' tendency is to be a job hunter rather than job creator.

Entrepreneurial attitude describes a person's belief and perception towards entrepreneurship (Mutalib, 2013). An entrepreneurial attitude becomes a barrier to becoming an entrepreneur when a person gives in easily, has a low internal locus, does not dare to take risks, is not proactive and lacks experience (Al-Haj & Yusof, 2013). The results of a study by Farani, Karimi, and Motaghed (2017) showed that attitude towards the use of information and communications technologies (ICT) have a relationship with intention in digital entrepreneurship. According to Mutalib (2013), student motivation towards entrepreneurship is the main factor in influencing students' tendencies to involve themselves in the field of entrepreneurship. In the study of Wan Nawang et al. (2015), students have a moderate entrepreneurial personality because the motivation to achieve success and the willingness to take risks are not very positive. The motivation for using ICT is the tendency to use technology in the development of the digital era in the field of entrepreneurship (Omar & Ahmad Dimyati, 2018). A person's desire to get involved in the field of entrepreneurship is influenced by motivational factors that help a person frame entrepreneurial activities clearly and successfully in the field of entrepreneurship (Nagarathanam, 2015).

2.1 Shapero Entrepreneurial Event

Shapero suggested that entrepreneurial intention is determined by human social behaviour. According to Patricia & Silangen (2016), Shapero model of the entrepreneurial event (SEE) stated that the entrepreneurial intention was driven by the perception of desirability, feasibility and propensity to act. The perceived desirability is defined as the personal attractiveness to become an entrepreneur includes intrapersonal and interpersonal, meanwhile the perceived feasibility is defined as the degree that person capable of starting a business. SEE assumes that change in life as a shift to the individual in triggering a change in entrepreneurial intention requires entrepreneurial behaviour to become entrepreneurs (Ahmad Bustami, 2017).

In this model, the role model could increase the individual attractiveness of entrepreneurship if there share a knowledge and experience. So, the entrepreneurial intention is related to psychological and cognitive aspects of entrepreneurship (Kaffka & Krueger, 2018). SEE model has significant effects to predict the entrepreneurial intentions by help people gain knowledge, develop abilities and improve the quality of life through education (Patricia & Silangen, 2016). The entrepreneurial attitude is not enough in becoming entrepreneur because many entrepreneurs had little intention of entrepreneurship in few years before. In order to explain the phenomenon the element of intention in SEE is adds as the propensity to act (Omidi Najafabadi, Zamani, & Mirdamadi, 2016). The perceived feasibility and perceived desirability in SEE are positive and significant relationship with entrepreneurial intention.

This shows that factors of perceived feasibility and perceived desirability are the best indicators for developing the entrepreneurial intention (Ali, Shah, & Anwar, 2016). The strong perception of perceived fit to become entrepreneur is achieved when the entrepreneurial intention is strongly predicted by entrepreneurial self-efficacy (Hsu et al., 2019). There are significant and positive relationship between entrepreneurial intentions and entrepreneurial attitudes, subjective norms, self-efficacy, and entrepreneurial behavior. When they belief in their self to become an entrepreneur it show that they have motivation to involve in entrepreneurship field (McMullen & Shepherd, 2006). The change in behaviour is influenced by the attitude and motivation towards entrepreneurship. This is because human behaviour is influenced by events that create shifts and cause changes in an individual's behavior.

3. Methodology

In this study, a quantitative approach was used using a survey research design. This research has been conducted at one of technical University in Malaysia. The final year students have been chosen in each of the faculties and their population is 2453. In total 331 samples, this study consists of 137 male students and 194 female students from various faculties. The distribution of the respondents has been presented in Table 1. These groups of students were selected because they had attended entrepreneurship course previously.

Table 1 - Distribution of respondents' faculties

Faculty	No of respondents		
Civil	59		
Mechanical	57		
Electrical	50		
Education	60		
Management	53		
Computer	52		

The Questionnaire Set consisted of three (3) sections: Section A (demographic), B (entrepreneurial attitudes) refers to the behavior and thinking of students towards the field of entrepreneurship and attitude towards the use of technology in the field of entrepreneurship that consist 15 questions and C (entrepreneurial motivation) refers to students' interest in the field of entrepreneurship and motivation in the use of technology in the field of entrepreneurship that consists 14 questions. Likert scales are commonly used to measure attitude, providing a range of responses to a given question or statement. In this study, the scales for entrepreneurial attitudes and entrepreneurial motivation ranged from (1) strongly disagree to (5) strongly agree. The questionnaire is distributed via online.

The methods of data analysis are descriptive statistics and inferential statistics. The perception towards attitudes and motivation of digital entrepreneurship are analysing use descriptive statistic to identify the mean score and standard deviation. The inferential statistic to identify the relationship of the attitudes toward digital entrepreneurship with motivation towards digital entrepreneurship the Pearson correlation analysis was used. T- test and ANOVA used to identify motivation based the gender and faculties.

4. Finding and Discussion

4.1 Attitudes of Digital Entrepreneurship

There are 15 questions in this section, the item relates to the attitude student in digital entrepreneurship that involvement in online business and the using of ICT in entrepreneurship field. The question is show below in Table 2. The overall mean score is 4.13, indicates that the digital entrepreneurship attitude among respondents is high.

Table 2 - Mean and standard deviation of item attitude towards digital entrepreneurship

Item	Question	Mean score	Standard deviation	Interpretation level
1	I like to find opportunities to become a dropshipper by using social media to generate income.	4.00	1.06	Moderate
2	If I have enough opportunities and resources, I would like to start an online business.	4.21	0.78	High
3	I prefer to do business online because it can save costs.	4.34	0.76	High
4	I had the opportunity to run an online business with e-commerce platforms such as Shopee and so on.	4.14	0.89	High
5	I have the opportunity to do business online with the presence of social media platforms such as Facebook, Instagram, and WhatsApp.	4.40	0.66	High
6	I think it's easy to do business online with social media platforms.	4.36	0.79	High

Table 2 (continued)

Item	Question	Mean score	Standard deviation	Interpretation level
7	I think it's easy to promote a business with social media.	4.35	0.90	High
8	I think it's hard to run an online business.	4.03	0.74	High
9	I am afraid to start an online business.	4.13	0.76	High
10	I will be able to use new technology if I choose an entrepreneurial career.	4.05	0.83	High
11	I like to use the internet to get information about entrepreneurship.	4.27	0.81	High
12	I would like to use information and communication technology (ICT) to obtain information about the field of entrepreneurship.	4.20	0.89	High
13	I enjoy using the website to find information about entrepreneurship.	4.27	0.83	High
14	I enjoy using the website to find out about opportunities in the field of entrepreneurship.	4.19	0.89	High
15	I feel the use of information and communication technology (ICT) is very useful in the field of entrepreneurship.	4.42	0.69	High

This finding supports the opinion of Zaremohzzabieh et al. (2015) and Farani, Karimi, and Motaghed (2017) who have stated that the attitude towards digital entrepreneurship involves the attitude towards the use of ICT in the field of entrepreneurship and that this attitude towards entrepreneurship is an important element in the involvement of students in the field of digital entrepreneurship. This attitude is important element to student to involve in digital entrepreneurship. Nagarathanam and Buang (2016), Arifin, Radin Rahman, and Othman (2020) and Mohammad and Othman (2018) also reinforce the findings of the study with attitude being an important element in student involvement in the field of entrepreneurship because attitude has a significant relationship with entrepreneurship. Mohammad and Othman (2018), also agree that the attitude has significant relationship with entrepreneurship. The student that has desire to become an entrepreneur will take the opportunity and risk-taking person to develop their potential by challenge itself to involve in entrepreneurship.

4.2 Motivation of Digital Entrepreneurship

There result of the motivation of digital entrepreneurship is shown in Table 4. There are 14 questions that relate to the motivation of digital entrepreneurship. The overall mean score on motivation of digital entrepreneurship is 4.24 and indicates high.

Table 4 - Mean and standard deviation of item motivation towards digital entrepreneurship

Item	Question	Mean	Standard	Interpretation
		score	deviation	level
1	I want to improve the quality of life through entrepreneurship.	4.18	0.83	High
2	I want to increase my family's income/economy.	4.49	0.66	High
3	I would like to have flexible working time and hours.	4.41	0.79	High
4	I am influenced by the success of my family or other entrepreneurial friends.	4.06	0.87	High
5	I don't want to be tied to a salaried job.	3.93	1.01	Moderate
6	I want to be a leader or a boss.	3.88	0.98	Moderate
7	I want to earn a decent income.	4.35	0.78	High
8	I have found many people who have been successful with online businesses.	4.33	0.77	High
9	I am always enthusiastic to surf the internet to get the latest information related to the field of entrepreneurship.	4.18	0.92	High

Table 4 (continued)

Item	Question	Mean score	Standard deviation	Interpretation level
10	I am always enthusiastic to use information and communication technology (ICT) to get the latest information related to the field of entrepreneurship.	4.16	0.90	High
11	I found that using information and communication technology (ICT) in the field of entrepreneurship facilitates the implementation of business.	4.33	0.74	High
12	I found that using information and communication technology (ICT) in the field of entrepreneurship can save time.	4.36	0.78	High
13	I found that using information and communication technology (ICT) in the field of entrepreneurship can save costs.	4.23	0.81	High
14	I can interact with customers through Facebook, Instagram, Whatsapp, and email applications.	4.40	0.66	High

The findings of this study are supported by Omar and Ahmad Dimyati (2018), who stated that motivation for digital entrepreneurship is a driver for entrepreneurs to engage in digital entrepreneurship. The finding is also supported by Omar, Rahim, and Ahmad Dimyati (2019), who stated that high motivation for digital entrepreneurship allows entrepreneurs to do business through Facebook, Instagram, and Whatsapp applications and the fun of using ICT to promote business digitally. Zaheer (2020) stated that motivation is a factor that individual involvement in the digital entrepreneurship that support the finding of this research. The research by Subramaniam et al. (2015), also support the finding by stated that students that have higher motivation will choose to pursue their career in entrepreneurship.

4.3 Relationship Between Attitude And Motivation Of Digital Entrepreneurship

Table 6 shown that there are strong positive r = 0.77 with the significance level 0.00 that is smaller than 0.05. Therefore, the attitude toward digital entrepreneurship has a strong relationship with motivation toward digital entrepreneurship.

Table 6 - Relationship between attitude and motivation towards digital entrepreneurship

		Motivation towards Digital Entrepreneurship	Attitude towards Digital Entrepreneurship
	Pearson Correlation	1	.766**
Motivation towards Digital	Sig.		.000
Entrepreneurship	N	331	331
_	Pearson Correlation	.766**	1
Attitude towards Digital	Sig.	.000	
Entrepreneurship	N	331	331

The finding shows that there are strong positive between attitude and motivation towards digital entrepreneurship. This finding is supported by Alsaaty et al. (2014), that the tendency that motivates a person to engage in the field of entrepreneurship has a relationship with a person's attitude towards entrepreneurship. In addition, Ahmad Bustami (2017) also stated that individual behaviour changes are influenced by attitudes and motivation toward entrepreneurship. A study by Ahmad and Kamaruddin (2020) also supports the finding by stating that there is a positive relationship between attitude and motivation towards entrepreneurship, which shows that when motivation towards entrepreneurship is high, attitude towards entrepreneurship is also high.

4.4 Comparison of Attitude and Motivation Based on Demography

Inferential analyses to compare the perception of students toward digital entrepreneurship attitudes and motivation between gender and faculties. Table 7 identified the digital entrepreneurship attitude and motivations of female respondents are higher than male.

Table 7 - Mean score of digital entrepreneurship attitude between the gender

Criteria	Gender	Mean score
Digital entrepreneurship attitude	Male	4.05
	Female	4.19
Digital entrepreneurship motivation	Male	4.14
	Female	4.31

The female students show the higher mean score in digital entrepreneurship attitude and motivation. Omar and Rahim (2015) stated that female have higher interest in entrepreneurship because women are brave in taking risk, more innovate and have good communication skills in run a business. The tendency of female students to involve in digital entrepreneurship is because they are exposed with digital method in starting a business. The online business is easy to run because finding a customers, agents or supplier without face to face (Omar et al., 2019).

The women also show that they like shopping more than men that make them to take opportunity to be independent to have their own money. The experience in online shopping influences the women to engage in digital entrepreneurship. The popularity of online business influences their beliefs to involve in online business (Nadzri et al., 2017). The women also show the abilities and skills in the field that they involved in. Wan Nawang dan Mamat (2019) state that the involvement of women in entrepreneurship is influenced by people around them that have involve in entrepreneurship field. This show that women more involve in entrepreneurship compared to men because their interest in digital entrepreneurship.

Table 8 - Mean score of digital entrepreneurship attitude and motivation between the faculties

Criteria	Faculties	Mean score
Digital entrepreneurship attitude	Civil	4.13
	Electrical	4.21
	Mechanical	4.21
	Management	4.16
	Education	4.27
	Computer	3.79
Digital entrepreneurship motivation	Civil	4.35
	Electrical	4.21
	Mechanical	4.44
	Management	4.24
	Education	4.25
	Computer	3.92

Based on the result above in Table 8, it shows that there are different between faculties in attitudes and motivation toward digital entrepreneurship. For digital entrepreneurship attitude, Faculty of Education show the higher mean score is 4.27, while the Faculty of Computer show the low mean score is 3.79. The faculty that has a higher means score 4.44 in digital entrepreneurship motivation is Faculty of Mechanical and Faculty of Computer show the lowest means score 3.92 in digital entrepreneurship motivation.

The finding shows that the engineering students have a higher attitude and motivation toward digital entrepreneurship. This is because they have positive attitude in entrepreneurship. Adul Wahad (2013) supported the findings by states that the engineering students have gone through their challenging experiences with tasks that have been done in studies, they dare to look for opportunities to test their own potential to be involved in digital entrepreneurship. In addition, this study also supported by Arifin et al. (2020), state that the in order to address the needs of the economy in the future, engineering entrepreneurs keep up with the transformation of the business ecosystem and Industrial Revolution 4.0 through the digital economy.

The finding also shows that the ICT students have lower attitude and motivation towards digital entrepreneurship because they may be exposed to the disadvantages of using ICT in everyday life. Based on Fauzi (2017), he also agrees that the use of social media has advantages, but at the same time, it also has disadvantages such as the spread of false information. In business, some people take advantage by making fake products of existing products in the market.

Furthermore, Mohd Ilham & Mohamad Salleh (2015) also raises issues of privacy and security of business personal information when dealing with using social media for business purposes.

5. Conclusion

The attitudes and motivation towards digital entrepreneurship is important elements that can influence students to become job creator rather than job hunter. The attitudes and motivation of digital entrepreneurship also influence by the knowledge and the skill of the students. The lack of knowledge and skill of entrepreneurship is the challenge to the student to success in entrepreneurship field. When they have an attitudes and motivation in digital entrepreneurship, they will try to explore the field by gain a knowledge and enhance their skills. So, the university should provide opportunities for students to engage with the entrepreneurship activities in campus so that they are exposed to the world of business. The entrepreneurship activities should become a compulsory activity for student to join, so that they can enhance the student skill and give them an experience. The development of digital in entrepreneurship will give the opportunity to student to involve in online business during their study. The digital entrepreneurship will give beneficial to the individual with the spirit and personality that they show to be successful person in future. The entrepreneurship field can help the students to create job that can increase the economy growth. The economic growth is a line with the development of digital era and industrial revolution 4.0.

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