



Utilization of e-commerce in growing entrepreneur skills on the subject of entrepreneurship

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ABSTRACT

The aims of this research, first for develop information systems and e-commerce technology as a entrepreneurial study. Second, test try information system and e-commerce technology as entrepreneurial. And the last, knowing intention student after using information systems and e-commerce technology as entrepreneurial study. This study uses research and development method. The population of the study is lecture entrepreneurship and students. The data analysis technique used in this study is Structural Equation Modeling (SEM). The sampling of this study used was the quota. To meet the assumptions of sample adequacy in SEM analysis, the sample size in this study is 125 respondents. The quantitative data collection techniques used is questionnaire with Likert scale and qualitative guide. The findings of the research, it can be concluded that the variable system quality effect the use learning technology. Tools made successfully make students interest to conduct online business about the work that has been made.

Pemanfaatan e-commerce dalam menumbuhkan entrepreneurskill pada mata kuliah kewirausahaan. Tujuan dari penelitian ini, pertama untuk mengembangkan sistem informasi dan teknologi e-commerce sebagai studi kewirausahaan. Kedua, uji coba sistem informasi dan teknologi e-commerce sebagai wirausaha. Dan yang terakhir, mengetahui niat siswa setelah menggunakan sistem informasi dan teknologi e-commerce sebagai studi kewirausahaan. Penelitian ini menggunakan metode penelitian dan pengembangan. Populasi penelitian ini adalah kuliah kewirausahaan dan mahasiswa. Teknik analisis data yang digunakan dalam penelitian ini adalah Structural Equation Modeling (SEM). Pengambilan sampel penelitian yang digunakan adalah kuota. Untuk memenuhi asumsi kecukupan sampel dalam analisis SEM, ukuran sampel dalam penelitian ini adalah 125 responden. Teknik pengumpulan data kuantitatif yang digunakan adalah kuesioner dengan skala likert dan panduan kualitatif. Temuan penelitian, dapat disimpulkan bahwa variabel kualitas sistem berpengaruh terhadap penggunaan teknologi pembelajaran. Alat yang dibuat dengan sukses membuat siswa tertarik untuk melakukan bisnis online tentang pekerjaan yang telah dibuat.

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1. Introduction

In the modern era, this is a challenge for educational institutions that provide educational services to the community. Education is an important factor in creating superior, characterized and competent human resources. Excellent, character and competent human resources that are pursued by educational institutions through learning activities in the classroom, laboratory and business and industrial world. The learning activities will become a provision for students after completing their education.

Provision of science and knowledge provided in learning activities at each level of education has not been developed yet for graduates in an economic activity, so the classic problem in a country's economy that needs to be addressed by the government is the problem of unemployment. Unemployment is a problem for a country because of its inappropriate between the number of workers and employment. Educated and uneducated unemployment is a serious problem for the Indonesian government. The problem of unemployment in Indonesia arises because the number of workers increasing every year is not matched by available jobs.

The percentage of college graduates with entrepreneurship is very low, even in 2018 there was a decline from 2017 from 0.70% to 0.60% (BPS, 2012). One of the strategies for university graduates to be able to do entrepreneurship easily, cheaply in learning entrepreneurial practices is to use technology and information systems. The ease of use of technology and information systems is that information technology and systems can be accessed anytime and anywhere. Low cost can be used to access the internet at any time (Hart, Ukoha, & Emecheta, 2012).

The entrepreneurial spirit among students becomes interesting because the field of science is not always in line with the career goals of a future student (Puspita, 2019). The research shows that there is a shift in the formation of ideals as an entrepreneur among students. Some questions become the background in writing this research. First, how is the entrepreneurship curriculum in higher education? Second, how is the entrepreneurship curriculum prototype with *e-commerce* technology and information systems that can be applied to the subject of entrepreneurship in higher education?

The research objectives include two matters. First, produce a curriculum of learning is needed in entrepreneurship in higher education. Second, developing *e-commerce* technology and information systems as entrepreneurial developers in university institutions.

2. Literature Review

Learning Media

Learning devices are inseparable from a learning technology. An understanding of learning tools is a *material or software* used in teaching and learning activities. Media tools according to (Daryanto, 2013) are "*material, equipment, hardware and software*". *Media material* is a material can be used to store messages will be delivered to the audience using certain equipment or self-contained objects such as transparency for overhded devices, filmstrip films and slide films, images, graphics and printed materials (Daryanto, 2013). *Media (equipment)* is something used to move or convey something which is stored by the material to the audience, such as slide film projectors, video tape recorders, sticky boards, flannel boards and so forth. *Software* is the message content stored in the material, while the *hardware* is the equipment used to convey the message has been contained into the material to be sent to the audience.

Media is classified as complicated, expensive and simple media. Whereas the grouping of media is based on coverage, namely wide and simultaneous coverage such as TV, radio and *faxsimile*; limited coverage on spaces such as films, videos, slides, audio tape posters; media for individual learning, such as books, modules, computer and telephone learning programs (Daryanto, 2013).

Information Quality

System quality is used to measure the quality of the information technology system itself. *Information quality* in Pitt and Watson's research refers to the output of information systems, concerning the value, usefulness, relevance, and urgency of information (DeLone & McLean, 2003). Meanwhile, DeLone and McLean (2003) in describe the quality of information perceived by users as measured by the four Bailey and Pearson research indicators, namely the accuracy of information (*accuracy*), *timeliness*, completeness of information (*completeness*) and presentation of information (*format*).

E-commerce

E-commerce can be interpreted as an internet or digital media used in conducting sales or purchase transactions of goods or services between companies with consumers directly, companies with retailers, companies with suppliers and suppliers with direct consumers. Regarding *e-commerce*, Laudon and Laudon (2012) argues that the process of buying and selling electronic goods and services including transactions using the internet, networks, and other digital technologies. *E-commerce* according to Ahmadi and Hermawan (2013) is defined as the sale or purchase of goods and services, between companies, households, individuals, governments and communities or other private organizations, which is performed through computers or network media. *E-commerce* also includes activities that support market transactions such as advertising, marketing, customer service, order delivery and payment (Laudon & Laudon, 2012).

Technology Acceptance Model (TAM)

Technology acceptance model (TAM) is an extension of the *theory of reasoned action* (TRA). This theory was first introduced by Davis in 1986 in a conclusion Jogiyanto (2008), the *theory of reasoned action* (TRA) explained that a person's intentions toward behavior are formed by two main factors, namely *attitudes toward the behavior* and *subjective norms*. The *technology acceptance model* (TAM) adds two factors that influence prior to the attitude is formed, namely *Perceived Usefulness* and *Perceived Ease of Use*.

Technology acceptance model (TAM) is very suitable to be used to test the use of information technology in entrepreneurial practices. The results of research conducted by Chau et.al in 1996 that perceived of usefulness (*perceived usefulness*) is the most numerous and significant and important construct that affects *attitudes*, *behaviors intention* and *behaviors* in using technology compared to other constructs (Jogiyanto, 2008).

TRA is usually used to analyze behavioral research because the variables in the concept are predictors in influencing the formation of intentions (Ajzen, 1991). The TRA concept also states that one's intention for a behavior is directly affected by one's actual behavior due to one's tendency to do something in a given time and context (Weerasinghe & Hindagolla, 2018).

TAM is an integration of an appropriate model to find out the best factors that indicate the decision to adopt a technology used (Marakarkandy, Yajnik, & Dasgupta, 2017). So even for practitioners, this theory is important for making decisions in the implementation of a technology by looking at the triggering factors (Lindsay, Jackson, & Cooke, 2011).

Entrepreneurship

The Subject of Entrepreneurship namely developing knowledge and training life skills based on arts and economics-based technology (Kementerian Pendidikan dan Kebudayaan, 2013).

Entrepreneurship learning begins with training the ability of creativity in expressing ideas and ideas so that they become productive and independent individuals. Technological entrepreneurship can enhance skills that lead to the appreciation of renewable technology, agronomic and applicative results in using the surrounding environment by taking into account the impact of ecosystems, management, economics and local cultural wisdom.

Technology for entrepreneurship is currently developing rapidly and the younger generation of entrepreneurs is a group of people who actually passion on it. This is because the younger generation is the generation who are familiar with technology (Hawkin & Mothersbough, 2014). Technology is more popular because it is cheaper and easier (Indrupati & Henari, 2012).

3. Research Method

Samples and Data

The sample in this study were 120 random students majoring in Islamic banking and 2 entrepreneurship lecturers with 40 students. The sample in the trial use of this learning device was 30 students and 2 lecturers on the subject of entrepreneurship.

Research Design

This research is only limited to the results of entrepreneurial learning medias, so that the ten stages of Borg and Gall research and development are modified according to the research needs. This study uses ten stages, so the steps in this study will be as followed.

The first step is *research and information collecting* or identifying needs. The second step is *planning*. The third step is *developing the preliminary form of product*. The fourth step is *preliminary field testing*. The fifth step is *main product revision*. At this stage the researchers made revisions to *e-commerce* products that were tested on students. The sixth step is *main field testing*. The seventh step is *operational product revision*. The eighth step is *operational field testing*. The ninth step is *the analysis of technology acceptance models (TAM), revision and completing*.

Technique of Data Collection

The technique of data collection in this study used two instruments. Data collection instruments in qualitative research in the form of key questions (*question guide*). Data collection instruments in quantitative research in the form of a questionnaire. Researchers used instruments such as inquiries or questionnaires, interview guidelines and documentation. The questionnaire in this study, the questionnaire in the form of direct and closed with a *rating scale* model.

Technique of Data Analysis

The data analysis technique in this study used *structural equation modeling (SEM)*. SEM is a multivariate technique that combines aspects of multiple regression and factor analysis to estimate a series of simultaneous dependency relationships (Hair Jr, Black, Babin, & Anderson, 2010). Testing the effect of each variable is carried out using the AMOS version 21 program to analyze the causality relationships in the structural model created.

4. Result and Discussion

Discussion of the results of statistical tests for measurement of *technology acceptance model*, following Table 1 that describes the test results. Discussion of test results for the effect of each independent variable on the dependent variable.

The variable of system quality is positively related to the convenience variable

The test results can be seen that the variable of system quality has a positive effect on convenience with a *critical ratio* of 6.175 obtained from the path coefficient (*standardized regression weight estimate*) and the *critical ratio* of significance level above 1.96 for a significance

of 5%, this shows that the quality of the system is positively related the variable of convenience is supported by the measurement data of the *technology acceptance model* is accepted.

Table 1. The result of technology acceptance model

Variable			Results of Estimation	s.e.	c.r.	P	Label
Quality	→	Convenience	1.112	0.180	6.175	***	par_20
Quality	→	Usefulness	1.698	0.241	7.033	***	par_21
Usefulness	→	Convenience	1.513	0.215	7.026	***	par_22
Usefulness	→	Behavior	0.972	0.161	6.053	***	par_17
Convenience	→	Behavior	0.664	0.124	5.373	***	par_18
Behavior	→	Intention	1.179	0.200	5.882	***	par_16
Convenience	→	Intention	0.843	0.129	6.528	***	par_14
Convenience	→	Utilizing (usage)	0.818	0.169	4.831	***	par_12
Intention	→	Utilizing (usage)	0.929	0.154	6.017	***	par_11

The variable of system quality variable is positively related to the variable of usefulness

The result of the *critical ratio* value of 7.033 is obtained from the path coefficient (*standardized regression weight estimate*) and the significance level of *critical ratio* above 1.96 for a significance of 5%, this shows that the quality of the system is positively and significantly related to usefulness supported by data and measurement of *technology acceptance model* is accepted.

The variable of usefulness is positively related to the variable of convenience.

The significance level of the *critical ratio* is above 1.96 for a significance of 5%, with a *critical ratio* of 7.026 obtained from the path coefficient (*standardized regression weight estimate*) and, this shows that convenience is positively related to the variable of usefulness supported by the data, means that the measurement of the *technology acceptance model* is accepted.

The variable of usefulness is positively related to the variable of behavior

The results of the path coefficient (*standardized regression weight estimate*) with a *critical ratio* of 6.053 and a significance level of *critical ratio* above 1.96 for a significance of 5%, this shows that usefulness is positively and significantly related to behavior and supported by data, means that the measurement of *technology acceptance models* is accepted.

The variable of convenience is positively related to the variable of behavior

Based on testing it can be seen that the variable of convenience has a positive influence on the variables of behavior with a *critical ratio* of 5.373 obtained from the path coefficient (*standardized regression weight estimate*) and the *critical ratio* significance level above 1.96 for a significance of 5%, means that the measurement model of *technology acceptance models* is accepted.

The variable of behavioral is positively related to the variable of intention

Based on testing it can be seen that the variable of behavior is positively related to the variable of intention with a *critical ratio* of 5.882 obtained from the path coefficient (*standardized regression weight estimate*) and the *critical ratio* significance level above 1.96 for a significance of 5%, means that behavior is positively related to the variable of intention supported by data and measurement model of *technology acceptance model* is accepted.

The variable of convenience is positively related to the variable of intention

Based on testing it can be seen that the variable of usefulness is positively related to the variable of intention with a *critical ratio* of 6.528 obtained from the path coefficient (*standardized*

regression weight estimate) and the *critical ratio* of significance level above 1.96 for a significance of 5%, means that the usefulness is positively related to the variable of intention supported by data and measurement of *technology acceptance model* is accepted.

The variable of convenience is positively related to the variable of usage

Based on testing it can be seen that the variable of usefulness is positively related to the intention variable with a *critical ratio* of 4.831 obtained from the path coefficient (*standardized regression weight estimate*) and the *critical ratio* of significance level above 1.96 for a significance of 5%, means that the behavior is positively related to the variable of intention supported by data and measurement of *technology acceptance model* is accepted.

The variable of intention is positively related to the variable of usage

Based on testing it can be seen that the variable of intention is positively related to the variable of usage with a *critical ratio* of 6.017 obtained from the path coefficient (*standardized regression weight estimate*) and the *critical ratio* of significance level above 1.96 for a significance of 5%, means that the variable of intention is positively related to the variable of usage supported by the data and measurement of the *technology acceptance model* is accepted.

Student learning outcomes using entrepreneurial learning tools using *e-commerce* also improve this can be seen from the department of Islamic banking class A as many as 31 students who were given a pretest and posttest to find out their learning outcomes. The results of the statistical test obtained by observation were -11,092. In the Islamic banking department class B, there were 38 students. Sharia banking majors in class A were given the same opportunity to measure the results of pretest and posttest with sharia banking majors in class B, so that an observation t of -8,976 was obtained. Sharia banking class A students were given the same opportunity to measure the results of the pretest and posttest with the class B of Islamic banking majors, so that t observation was obtained for -12,546 while the *degree of freedom* in the number of 38 respondents and a probability of α of 0.05 was ± 2.024 so that it can be concluded that there are differences in learning outcomes after using *e-commerce* technology and information on entrepreneurship subjects for Islamic banking majors.

5. Conclusions

The conclusion that e-commerce-based learning tools can improve student learning outcomes and can be a solution for entrepreneurship in online entrepreneurship courses by selling student work. The information technology that is displayed in the form of e-commerce is that students and lecturers can operate the website to improve learning in university institutions. The results of the information system acceptance model through statistical tests show the influence on the use of technology and information systems.

The technology acceptance model (TAM) shows that the variable of system quality has a positive influence on the convenience and usefulness. Usefulness has an influence on convenience and behavior. Convenience has a positive influence on behavior, intention, and usage. behaviour positively related to intention. Intention has an influence on usage.

The results of trials on respondents show that e-commerce tools are easy to use and different from other sales websites. Students and lecturers can operate e-commerce well and smoothly even though the website has not been yet made public in public.

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7. References

- Ahmadi, C., & Hermawan, D. (2013). *E-Business & E-Commerce*. Yogyakarta: Andi.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Decision Processes*, 50, 179–211.
- BPS. (2012). Keadaan Ketenagakerjaan Agustus 2012.
- Daryanto. (2013). *Media Pembelajaran: Peranannya sangat Penting dalam Mencapai Tujuan Pembelajaran*. Yogyakarta: Gava Media.
- DeLone, W. ., & McLean, E. . (2003). The DeLone and McLean Model of System Success: A Ten-Year Update. *Journal of Management Information System*, 19(4), 9–30.
- Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis. vectors, 7th Editio*. Pearson Prentice Hall.
- Hart, O. ., Ukoha, O., & Emecheta, B. . (2012). Integrating TAM and TOE Frameworks and Expanding their Characteristic Constructs for E-Commerce Adoption by SMEs. *International Journal of Proceedings of Informing Science and IT Education Conference*, 2, 15–28.
- Hawkin, D. I., & Mothersbough, D. L. (2014). *Consumer Behavior* (12th ed.). New York: Mc Graw Hill.
- Indrupati, J., & Henari, T. (2012). Entrepreneurial success, using online social networking: Evaluation. *Education, Business and Society: Contemporary Middle Eastern Issues*, 5(1), 47–62. <https://doi.org/10.1108/17537981211225853>
- Jogiyanto, H. . (2008). *Model Kesuksesan Sistem Informasi Teknologi*. Yogyakarta: Andi.
- Kementerian Pendidikan dan Kebudayaan. (2013). *Buku Dosen Kewirausahaan*. Jakarta: Pusat Kurikulum dan Perbukuan Balitbang Kemdikbud.
- Laudon, K., & Laudon, J. . (2012). *Informasi Manajemen Mengelola Perusahaan Digital*. Yogyakarta: Andi.
- Lindsay, R., Jackson, T. W., & Cooke, L. (2011). Adapted technology acceptance model for mobile policing. *Journal of Systems and Information Technology*, 13(4), 389–407. <https://doi.org/10.1108/13287261111183988>
- Marakarkandy, B., Yajnik, N., & Dasgupta, C. (2017). Enabling internet banking adoption. *Journal of Enterprise Information Management*, 30(2), 263–294.
- Puspita, R. E. (2019). Factors Influencing on Job Preference among Shariah Banking Student. *Muqtasid: Jurnal Ekonomi Dan Perbankan Syariah*, 10(1), 69. <https://doi.org/10.18326/muqtasid.v10i1.69-79>
- Weerasinghe, S., & Hindagolla, M. C. B. (2018). Technology acceptance model and social network sites (SNS): a selected review of literature. *Global Knowledge, Memory and Communication*, 67(3), 142–153. <https://doi.org/10.1108/GKMC-09-2017-0079>