Design a website to measure ASEAN entrepreneurship profiling

Design a website to measure ASEAN entrepreneurship profiling

Sasmoko[1*], H Saroso[2], H Hartono[3], F Purnomo[4], Y Indrianti[5], M K bin Ramly[6] and N Artha[7]

[1]Primary Teacher Education Department, Faculty of Humanities, Bina Nusantara University, Jakarta, Indonesia 11480
[2]Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia 11480
[3]Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta, Indonesia 11480
[4]Entrepreneurship Department, Podomoro University, Jakarta, Indonesia 11470
[6]Business Administration Department, Universiti Teknologi Malaysia, Malaysia
[1,5,7]Research Interest Group in Educational Technology, Bina Nusantara University, Jakarta, Indonesia 11480

Email: [1]sasmoko@binus.edu, [2]hardijanto.saroso@binus.edu, [3]hhartono@binus.edu, [4]fpurnomo@binus.edu, [5]yasintaindrianti@gmail.com, [6]mohdkhairuddin@utm.my, [7]bliartha_n@yahoo.co.id

Abstract. ASEAN Entrepreneurship Profiling is one of the initial efforts to bring together profiles among ASEAN countries and to find the most powerful determining factor for entrepreneurs in ASEAN, developed using the Neuroresearch and Waterfall Model research methods. This research aims to identify the design of ASEAN Entrepreneurship Profiling website design to collect data online by using Neuroresearch and Waterfall Model research methods. The result shows that this profiling is expected to be able to contribute to novice entrepreneurs to explore gaps, take advantage of opportunities, prepare for their capacity, and build their potential. It is also easier for business actors when visiting the website as it displays self-profiling and recommendations for themselves.

Keywords: Website Design, Asean Entrepreneurship Profiling, Neuroresearch, Waterfall Model

1. Introduction

The rapid growth of entrepreneurs will have a positive impact on economic progress and development in Indonesia [1]. Indonesia has young people who illustrate the power of productive age, allowing opportunities and challenges in entrepreneurship to emerge. Entrepreneurship is very important for employment, innovation and economic growth to increase productivity and the capability of productive individuals [2]. This illustrates the extraordinary potential possessed by Indonesian human resources. This power can produce a level of global competitiveness based on micro and macroeconomic foundation levels in building national competitiveness [3], [4], [5].

In fact, not all entrepreneurs are able to reach the point of success. There are various factors that can influence that success. Externally, the policy for entrepreneurship influences efforts to create an

environment conducive to supporting and developing entrepreneurship [6], [7]. Whereas internally, the entrepreneurial spirit and understanding of global competitiveness need to be internalized by entrepreneurs. The entrepreneurial spirit is measured through an entrepreneurial attitude consisting of social values, personal attributes, and goal orientation [8]. This has become one of the interesting considerations to further examine various indicators that are able to realize successful and sustainable entrepreneurship.

Indonesia's experience in measuring entrepreneurship profiles in Indonesia so far has been using the Global Entrepreneurship Monitor (GEM) and the Global Entrepreneurship and Development Institute (The GEDI Institute). Entrepreneurship based on the GEM model is seen as an entrepreneurial process, which includes the context, the business environment (entrepreneurial ecosystem), entrepreneurial attitudes and activities, and output (job creation or economic development) [9]. The GEDI instrument aims to measure the relationship between entrepreneurship, economic development and a country's prosperity. The institute was founded by entrepreneurial scholars from George Mason University, Pécs University and Imperial College London. The GEDI instrument is more focused on discovering the quality and dynamics of the entrepreneurial ecosystem at the national, regional and local levels [10].

Based on the description of GEM and GEDI, it can be concluded that the two instruments that have been commonly implemented in Indonesia, basically developed based on the perspectives of the American, Canadian and European countries that represent developed countries. Of course, if this is applied to countries in Asean, it will be relatively inappropriate because the patterns, structure, development sector, and entrepreneurship development in ASEAN are very different. For example, in Indonesia. Indonesia has entrepreneurship in the people of agriculture, micro, labor intensive, and even has a non-formal business sector, a small business sector, a medium to a macro entrepreneurial sector. Such heterogeneity and disparity in Indonesian entrepreneurship require special instruments that are contextual with Indonesia.

Asean Entrepreneur Profiling is one of the efforts to obtain an overview of the key factors of entrepreneur profile in ASEAN. It is hoped that this profiling will be able to contribute to the beginner entrepreneurs to explore the gap of the profile that is owned by the ideal profile so that it can help them to focus more on developing components with priority scale in order to minimize failure and get closer to the probability of success. This study aims to identify the design of Asean Entrepreneurship Profiling website design to collect data online.

2. Methodology

This research is planned to use 2 (two) research methods, namely: (a) Neuroresearch Research Method, and (b) Waterfall Model Research Method.

The Neuroresarch Method is a mixed methods model that consists of a series of interrelated links between a range of Exploratory, Exploratory and Confirmatory research methods. Neuroresrach Research Methods has 3 (three) types of research stages, namely: (a) Exploratory Research, (b) Exploratory Research, and (c) Confirmatory Research. Exploratory research is a Neuroresearch research method with a qualitative approach whose task is to construct theoretical constructs through content analysis methods which include systematic literature review with the target of finding constructs [11].

Costruct is the conclusion of the researcher about the Entrepreneurship Profiling variable according to the ASEAN context, dimensions, and indicators of the variable. Exploratory Research is a Neuriresearch research method with a quantitative approach whose task is to calibrate the results of the construct of the Entrepreneurship Profiling variable according to the ASEAN context, then deepen it through surveys to samples. In the survey found: (a) the tendency of the condition of the Entrepreneurship Profiling variable in the ASEAN population through the approach that the population variance in ASEAN is unknown to the researcher, (b) finding the most dominant dimension or indicator determining the formation of an Entrepreneurship profile of ASEAN business actors, and business actors in every country.

Confirmatory Research is a Neuroresearch research method with a quantitative approach whose task is to explore the results of Exploratory research through the development of Variable Moderators. With the development of the Moderator Variable, this method will find differences in the ASEAN Entrepreneurship Profiling variables analyzed based on differences in all categories of backgrounds of ASEAN business actors represented by cluster sampling of Indonesian and Malaysian business actors.

The Waterfall method is used since it is a sequential website development model [12]. Based on what is provided in Figure 1. Waterfall method has several important stages, namely from requirements definition, system and software design, implementation and unit testing, integration and system testing, and operation and maintenance [12]. This method will help ensure that every stage of the application development process can be carried out correctly [12], [13], [14], [15].

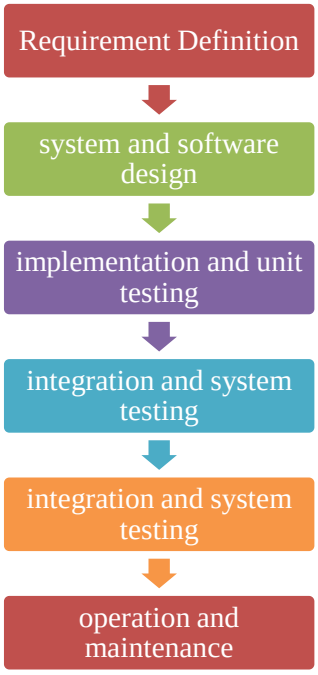

Figure 1. Waterfall Model [11]

3. Results and discussions

3.1 Website features

The features that will be developed in the Asean Entrepreneurship Profiling website are as follows:

- Determine the level of Asean Entrepreneurship Profiling.
- Displays the level of ASEAN Entrepreneurship Profiling compared to data in ASEAN, national, regional, and other entrepreneurs with similar backgrounds.
- Displays a dimension profile chart and entrepreneur indicator compared to the average graph of all data entered.
- Displays an explanation of each of the dimensions and indicators of Asean Entrepreneurship Profiling.
- Data is stored on the Internet in the MongoDB Atlas database.
- Appearance of website applications that are responsive and consider website usability and aesthetics.

3.2 *Overview of website appearance*

As seen in Figure 2, some of the designs on the Asean Entrepreneurship Profiling website will contain the following:

- After accessing the "Login" button on the start page, the questionnaire page displays. Contains Business Data and Contains statements that must be filled.
- The results of filling the instrument will be obtained immediately when all data and statements have been filled in completely. How to see results is by accessing the "View Results" button at the bottom of the page.
- The information displayed on the results page is the level of Asean Entrepreneurship Profiling of users and graphs of Asean Entrepreneurship Profiling of users compared to the Asean Entrepreneurship Profiling data of each region and with the Asean Entrepreneurship Profiling data of businesses with the same background as users.
- Dimension profile charts and user indicators are compared with mean dimensions and indicators from sample data.

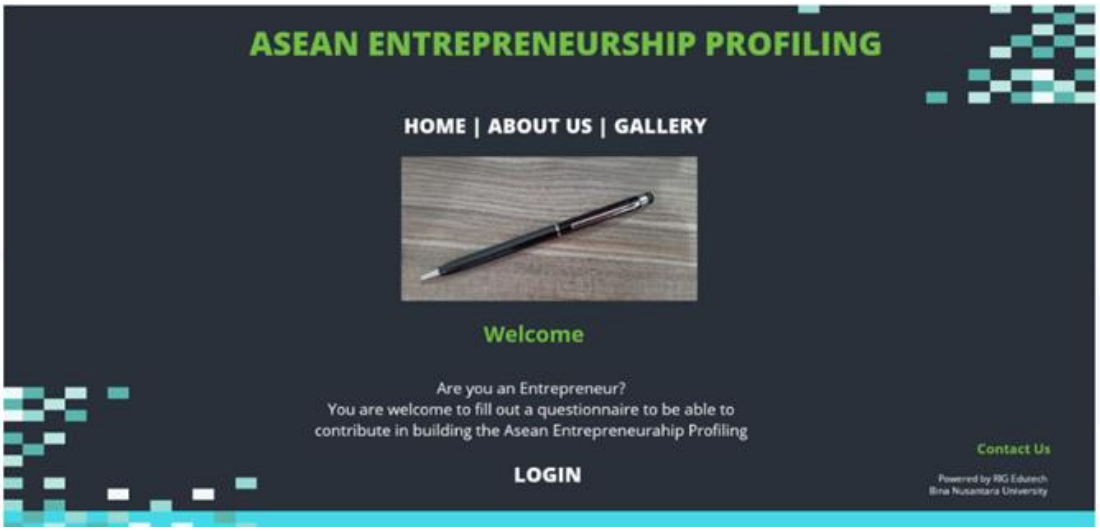

Figure 2. Prototype Website

3.3 Statistics analysis results

The Wesbite Asean Entrepreneurship Profiling will also display statistics from all sample data that continues to grow along with the data from respondents, namely the results of statistical analysis and CART (Classification and Regression Tree) analysis of sample data that has been collected on the website (Figure 3). The data displayed is:

- Number of samples that have been collected.
- The average value of the Asean Entrepreneurship Profiling sample and its lower bound and upper bound.
- The meaning of the lower bound average value of the Asean Entrepreneurship Profiling sample.
- CART trees are updated every time new sample data is entered.

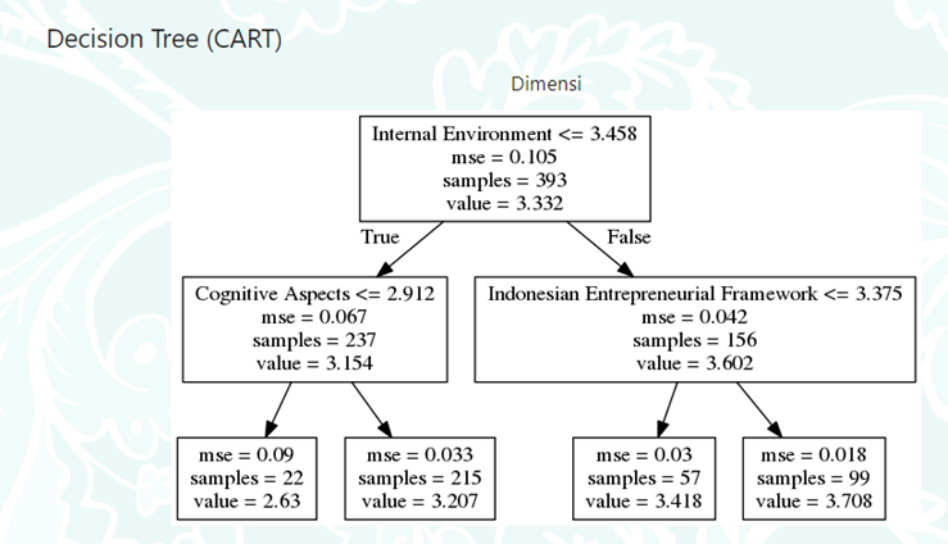

Figure 3. Example Chart

4. Conclusion

Researchers conducted a literature study from a variety of literature sources that have examined the factors that can increase the growth and success of entrepreneurship. Asean Entrepreneurship Profiling is based on the key factors for entrepreneurial success that are superficially thought to be very influenced by two major factors namely external factors and internal factors of the entrepreneur itself. External factors highlight how systematic government policy support is accompanied by infrastructure that is built to make a support system capable of facilitating the growth of productive entrepreneurs. Market behavior is also an important part of external factors where entrepreneurial competence and capacity as part of internal factors will be tested. Other internal factors are related to the potential and competency of the entrepreneurship they have so they have the opportunity to be developed optimally [16].

Entrepreneurship is able to encourage economic growth. Many efforts have been made to support entrepreneurial growth, especially in Indonesia. The study of various things that affect entrepreneurship is an important thing to do. Entrepreneurship is a multifaceted concept because it can be understood from a variety of perspectives [17]. Entrepreneurship plays an important role because it is used as a driving force for current economic development [18], [19].

The success of an entrepreneur in developing a business is determined by many things. These complex factors naturally produce a comprehensive entrepreneur profile. On the other hand, the mushrooming of business start-ups and various entrepreneurship models does not necessarily make all types of businesses achieve success. Not to mention the occurrence of competition that is not just a local business actor of a country, but competition also occurs between countries. Therefore, ASEAN Entrepreneurship Profiling is one of the initial efforts to bring together profiles among ASEAN countries and also to find the most powerful determinant for entrepreneurs in ASEAN.

This profiling is expected to be able to contribute to novice entrepreneurs to explore gaps, take advantage of opportunities, prepare for their capacity, and build their potential. Thus, ASEAN business actors become more focused on developing their business with priority scale, so as to minimize failure and get closer to the probability of success. To make it easier for business actors to know their proper profile, a website that can display self-profiling and recommendations for themselves is developed as an advanced entrepreneur.

Acknowledgment
This work is supported by Research and Technology Transfer Office, Bina Nusantara University as a part of Bina Nusantara University's International Research Grant entitled Asean Entrepreneurship Profiling with contract number: No.026/VR.RTT/IV/2020 and contract date: 6 April 2020.

References
[1] Bhasin B B and Venkataramany S 2010 Globalization of entrepreneurship: Policy considerations for SME development in Indonesia *International Business & Economic Research Journal* **9(4)**
[2] Vial V 2011 Micro-entrepreneurship in a hostile environment: Evidence from Indonesia. *Bull Indones Econ Stud*. **47(2)** p 233–62
[3] Drucker P F 1985 Innovation and Entrepreneurship. *Harper Row* **54** p 277
[4] Cooney, T M 2012 Entrepreneurship Skills for Growth-Orientated Businesses. *Denish. Bus. Auth*. **November**, p 23. Available from: http://www.oecd.org/cfe/leed/Cooney_entrepreneurship_skills_HGF.pdf
[5] Gorman G, Hanlon D and King W 1997 Some research perspectives on entrepreneurship education , enterprise education and education for small business management : a ten-year literature review. *Int. Small. Bus J*. **56**
[6] Mirzanti I R, Simatupang T M and Larso D 2015 Mapping on entrepreneurship policy in Indonesia. *Procedia-Social Behav. Sci*. **169** p 346–53
[7] Gupta V, MacMillan I C and Surie G 2004 Entrepreneurial leadership: Developing and measuring a cross-cultural construct. *J. Bus. Ventur*. **19(2)** p 241–60
[8] Pawitan G, Nawangpalupi C B and Widyarini M 2017 Understanding the relationship between entrepreneurial spirit and global competitiveness: Implications for Indonesia. *Int. J. Bus. Soc*. **18.**
[9] Pawitan G 2018 Profil Kewirausahaan Indonesia 2013-2017 Available from: https://unpar.ac.id/profil-kewirausahaan-indonesia-2013-2017/
[10] Zoltán J A and László S A L 2018 *Global Entrepreneurship Index* (Springer International Publishing)
[11] Sasmoko, Yasinta I, Ravik K, Dewi W and Poppy R 2018 Neuroresearch: another form of mixed-method. *Int. J. Eng. Technol* **7** p 134–138
[12] Balaji S 2012 Waterfall vs. V-Model vs. Agile: A comparative study on SDLC. *Int. J. Inf. Technol. Bus. Manag*. **2(1)** p 26–30
[13] Pressman R S 2009 *Software Engineering: A Practioner's Approach* (New York: McGraw Hill Education) p 928
[14] Sommerville I 2010 Software Engineering (Boston: Addison-Wesley) p 56–81
[15] Hong J C, Hwang M Y, Liu M C, Ho H Y and Chen YL 2014 Using a "prediction-observation-explanation" inquiry model to enhance student interest and intention to continue science learning predicted by their Internet cognitive failure. *Comput. Educ.* **72** p 1–11
[16] Acs Z J, Szerb L and Autio E 2016 *Global Entrepreneurship and Development Index 2015* (Springer) Available from: http://link.springer.com/10.1007/978-3-319-26730-2
[17] Audretsch D B, Kuratko D F and Link A N 2015 Making sense of the elusive paradigm of entrepreneurship. *Small. Bus. Econ*. **45(4)** p 703–12
[18] Edward L, Kerr S P, Kerr W R, Link C, Glaeser E L and Kerr S P 2015 Entrepreneurship and urban growth: An empirical assessment with historical mines *The Review of Economics and Statistics* **97(2)** p 498-520
[19] Yari A, Toulabi Z and Pourashraf Y 2013 Designing propensity to entrepreneurship paradigm in Ilam universities (structural equation model approach) *Journal of Novel Applied Science* p 872–880