



Designing Cluster Development-based Entrepreneurial School Model in Tourism Sector for Vocational High School

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Abstract: This study aimed at obtaining the design of an entrepreneurial school model for vocational high school based on an effective cluster development in tourism sector to strengthen the competitiveness of vocational high school graduates. This study applied research and development procedures and design based research (DBR) models which were integrated with constructivistic design principles. The procedures involve evaluation and determination of regional supremacy as a leading commodity / industry; development of design and product model for entrepreneurial school cluster-based model; and a reflection and experimental process to get the final product model. The collection of data on developing process was taken through in-depth interviews and focus group discussions (FGD) in schools, governments, industrial world groups, and other stakeholders. In addition, the questionnaire was also used to get the feasibility of the design by involving experts in the areas of tourism, economy, education, and development. The overall data were then analyzed qualitatively. The components of the entrepreneurial school model produced involve audience, content, procedures, and evaluations. The design produced learning outcomes, an integrated entrepreneurial curriculum, standardized documents and standard operational procedures, entrepreneurship school management modules. The expert analytical test shows that the overall design and product model are very good.

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Introduction

Vocational High Schools (VHS) in Indonesia are presented to prepare the graduates to enter the working world, which is not only to work for certain companies, but also to become creators for a new job with creativity and innovation. However, these expectations have not been completely taken place. The data from Central Bureau of Statistics (BPS) in 2019 recorded that the unemployment rate for VHS graduates reached 10.36%. It is the highest rate compared to graduates of other education levels. Therefore, VHS level students are equipped with entrepreneurship skills, both theoretically and practically. It is very essential to strengthen the entrepreneurship aspect, because based on the results of the study by Sukardi et al. (2019) found that there was a discrepancy in expertise developed by the Vocational High School (VHS) with the regional issues which became the featured basis. It confirms to be the main reason of the gap between the needs of graduates with the availability of employment (Sala-i-Martín et al, 2015; Wildan & Sukardi, 2011; Sukardi & Wardana, 2016). Considering these conditions, it is very relevant for Lee and Peterson's (2000) offer about the importance of entrepreneurship as an instrument to overcome these problems because entrepreneurship is an activator of economic change (Wong et al., 2005).



To grow entrepreneurship, it requires an entrepreneurial environment like an entrepreneurial school (Wong et al., 2007). Entrepreneurial school is an environment that generates quality and competitive graduates, as reflected where the graduates become entrepreneurs as well as intrapreneurs (Murwani, 2006). The development of entrepreneurial schools at the VHS level has not been widely carried out, except for the University level. Several large universities have developed this model, such as: Babson College, University of Houston, Stanford University, National University of Singapore (Wong et al., 2007). Charney and Libecap (2000) report that the institution produces 64% of competitive graduates who are involved in new businesses, own their own business, or engage in self-employment.

Compared to the University level, the recent development of entrepreneurial schools in this study is directed at the problems and regional issues or regional supremacy (cluster development) in the tourism sector as well as social reconstruction theory (Jha, 2012; White, 2012). Theoretically, entrepreneurial school as proposed by Wernerfelt (1984) becomes an instrument to make differential capability to achieve sustained competitive advantage (Etzkowitz, 2004). The development of entrepreneurial schools is urgent, particularly for the vocational schools in Indonesia and Lombok Island. It is due to the results of the study by Wildan and Sukardi (2011) show that vocational schools have not moved on from their internal problems, such as: the ability to increase the relevance of education and the competitiveness of graduates, even when the potential of the regions with the local supremacy is very sufficient to generate competitive graduates. The development of the entrepreneurial school model design becomes an important instrument to achieve the intended relevance and competitiveness. On this premise, this research was conducted with the aim of obtaining an entrepreneurial school model design based on cluster development in Lombok tourism sector at the VHS level.

Research Method

Based on the above objectives, the research and development of the Design-Based Research (DBR) model from Reeves (2006) is chosen. The advantages of this model are interventionist, iterative, involvement of practitioners, process-oriented, utility-oriented, and theory-oriented (Plomp, 2010). In the implementation, this model is combined with constructivist-oriented design principles, such as collaboration and open-end and flexible models (Willis, 2000). The stages of this research included: analysis of practical problems, development of designs and models using inverted designs Gagne et al. (1992), interactive cycle of model testing and refinement, reflection of testing and refinement to produce design principles. In this article, the study focuses on the second stage which is developing the design and instruments of the entrepreneurial school model.

The study was carried out in Central Lombok Regency, West Nusa Tenggara Province by involving two schools that specialize in the tourism sector. The subjects involved were the School Principal, Teachers, School Committees, Students, Local Government, Business World Bussiness/ World Work Group (WB/WW) of the tourism sector, Education Board, and other stakeholders selected by purposive sampling.

Design tests and products are carried out through expert and practitioner analytical tests. For analytical testing involving economists, tourism, education, and involving practitioners (such as WB/WW tourism sector). The instrument for analytical testing uses a questionnaire adapted from indicators developed by the Direktorat Pembinaan SMA (2007a; 2007b). Analytical test instruments by practitioners were screened using the Focus Group Discussion (FGD) guide.



The feasibility of the development results is measured through the accuracy of the design with the formation of entrepreneurial and intrapreneurial behavior. The feasibility of the product prototype is measured through the accuracy of the resulting design. The results of the analytical test were analyzed by descriptive quantitative method. The rating of the scores is at intervals 1-5, so the assessment criteria are: Average score > 4 (Very good); 3 <to 4 (Good); 2 <s.d 3 (Sufficient); 1 <s.d 2 (Less); and = 1 (Very less).

Results and Discussion

The design development in this study used an inverted design by Gagne et al (1992). Thus, the profile of graduates as the main output of the development of this model is the tourism sector entrepreneur. Based on the profile, the result of the learning outcomes formulation is that students can become entrepreneurs and intrapreneurial in promoting tourism products and services, including production, management, and marketing aspects. Based on these outcomes, the main components of the entrepreneurial school model are goals/objectives, organizing implementers/participants, content, procedures, and evaluation (Table 1).

Table 1. Description of the Entrepreneurial School Development Model Design

No	Component	Description
1	Objectives	The formulation of objectives includes competencies in entrepreneurs and intrapreneurial in developing tourism products and services, including the dimensions of production, management, and marketing strategies. The focus of the objectives leads to the two behaviors; consequently, the formulation of the objectives is developed by using a procedural approach. The formulation of objectives consists of the main competencies and indicators of achievement of competencies. All the objective formulations use functional verbs that refer to the entrepreneurial skills and skills of vocational students.
2	Implementor Arrangement	The input model consists of implementor board with a clear task division. The board consists of the director, implementor, student, and partners or supervisors. (a) The director is carried out by the Principal; (b) Implementers consist of representatives from the Vice Principal, Teachers, and Education Personnel; (c) students as the target groups; and (d) Partners and supervisors: Tourism Department Office, Education Department Office, and WB/WW
3	Content	The scope of development includes Education to create and/or promote tourism products and services; business management or governance (structure, finance, human resources, etc.); and marketing strategies through marketing mix (products, places, prices, and promotions).
4	Procedure	Aspects; (a) implementation priorities in every aspect of development; (b) the stages of implementation including the activities that will be carried out, who will do it, when and where it will be carried out, how to do it, what resources will be needed, and what targets will be achieved; (c) institutions which have the role of elements of the school, elements of government, community members, religious and community leaders,

No	Component	Description
		entrepreneurs or providers of tourism products and services; (d) milestone; and (e) financing.
5	Evaluation	The evaluation aspects are: (a) inputs: profile accuracy, learning outcomes, and product models; (b) process: accuracy of implementation management and implementation procedures; (c) output: achievement of competencies and entrepreneurial intentions; (d) outcome: achievement of entrepreneurial and intrapreneur behavior.

Based on the design, then a prototype product model is compiled, in the form and graduate profiles, learning outcomes, structure/curriculum arrangement, quality implementation standard, standard operating procedures (POB) documents, entrepreneurial school management modules, and monitoring and evaluation guidelines. Thereafter, an analytical test was conducted involving economists/entrepreneurship, tourism, education, and WB/WW practitioners. The results of the economist test are summarized in Table 2.

Table 2. Analytical Test Results from Economic Aspects

No	Aspect	Average Rating	Rating Category
1	Tourism products/services	4.1	Very good
2	Diversification of tourism products/services	4.2	Very good
3	Business management	4.0	Very good
4	Competitive strategy	3.6	Good
5	Marketing strategy	4.0	Very good
6	Partnership	4.2	Very good
7	Monitoring and evaluation	4.3	Very good
Overall		4.06	Very Good

The results of the analytical test of the accuracy of the substance in terms of the principles of sustainable tourism development are summarized in Table 3 below.

Table 3. Analytical Test Results from the Aspects of Tourism Exploration

No	Aspect	Average Rating	Rating Category
1	Tourism conservation	4.2	Very good
2	Local community institutions and partnerships	3.9	Good
3	Communitybased economy	4.0	Very good
4	Education	4.3	Very good
5	Management framework	3.8	Good
Overall		4.04	Very good

Furthermore, the results of the feasibility test and presentation by education experts are presented in the following Table 4.

Table 4. Feasibility Validation Test Results and Model Product Presentation

No	Aspect	Average Rating	Rating Category
1	Profile of graduates	4.33	Very good
2	Learning outcomes	4.08	Very good
3	Structure/arrangement curriculum	3.58	Good
4	Quality and implementation standard	4.15	Very good
5	Entrepreneur school management	3.59	Good

module			
6	Monev guide	4,24	Very good
Overall		4.24	Very good

In terms of product substance, the results of the FGD participant assessment of the WB/WW element of the tourism sector indicate that the substance is correct (Table 5).

Table 5. Accuracy Validation Test Results for Product Substance Contents

No	Aspect	Average Rating	Rating Category
1	Compatibility with learning outcomes	5	Very good
2	The accuracy of the main and supporting competencies	4	Good
3	Material coverage	5	Very good
4	Material depth	5	Very good
5	The accuracy of the order	4	Good
6	Use of the material	4	Good
Overall		4.5	Very good

Observing the results of the analytical tests as shown in Tables 2, 3, 4, and 5 above, the overall design produced has met the criteria in terms of economy, tourism, education, and DU/DK practitioners in the tourism sector. From the economic side, for example, the development of ecotourism has touched economic exploration as well as strengthening the economy of local communities. From the environmental side, it shows that economic exploration is based on sustainable economic principles.

Discussion

The important point as the advantage of the result of initial model design is related to the model substance and model components. First, in terms of substance, the result of design model confirms the previous findings (Sukardi, 2016; Sukardi et al., 2014) that the development of entrepreneurship education which relies on social reconstruction has a strategic position in solving social problems, such as the competitiveness of VHS graduates which is still low. It focuses on social issue of regional supremacy and development (cluster development), specifically in the tourism sector. It states in Etkowitz's (2004) study that the part of the capitalization of knowledge is the basis for economic growth and community development (Etkowitz, 2004). Moreover, Lazzeroni and Piccaluga (2003) emphasize that one form of knowledge capitalization attached to the role of schools as entrepreneurial schools is regional development through collaboration with the local economy, local industry, and the community. This model then received empirical support based on the study of Philpott et al. (2011). Thus, the model that has based on the theory of social reconstruction places the entrepreneurial school as an inseparable part of social solutions in society (Stanley, 1981).

The second advantage is that this model focused on the dimensions that are in direct contact with entrepreneurial learning, namely: goals/objectives, organizing implementers/participants, content, procedures, and evaluations. As an example, in the aspects of objectives and content, it is entirely based on the potential of the region/leading commodity, such as tourism. Previously, Keller (1983) mentioned that interest and motivation to learn can be achieved when the material presented is relevant to the needs and resources around students. The source of the sector-based content is the achievement of competencies, intentions, and entrepreneurial characteristics of the students including entrepreneurial behavior and intrapreneur. Some of the results of many studies focus on these



entrepreneurial parameters, such as: entrepreneurial intentions (Jones et al., 2008; Sukardi et al., 2018), entrepreneurial behavior (Baron, 2008), intrapreneur behavior (Baron, 2008; Fayolle & Gailly, 2008). Therefore, a high competitiveness of graduates can be achieved when graduates can develop new business ventures by utilizing superior sectors. This has been proven in several large universities such as Stanford University through Silicon Valley (Etzkowitz, 2013). As a result, 64% of graduates are involved in new business and have their own business (Charney & Libecap, 2000).

Conclusion

The conclusion from this study is the result of entrepreneurial school design including these components: goals/objectives, organizing implementors/participants, content, procedures, and evaluation. From the design, several product models are generated, such as graduate profiles, learning outcomes, structure and arrangement of curriculum, quality and implementation standards, SOP documents, entrepreneurial school management modules, and monitoring and evaluation guidelines. The results of the expert analytical tests show that the design of entrepreneurial school development based on cluster development in the tourism sector has fulfilled the elements of economic/entrepreneurship, tourism, education, and the accuracy of the substance. Therefore, the items of development starting from the compilation of graduate profiles to the monitoring and evaluation are the product from the design which has been developed in this study.

Recommendation

From these findings, further examinations are necessary to ensure that the resulting model design is suitable with the needs of students and the direction of tourism development in Central Lombok Regency. Practically, schools and related agencies are able to take advantage of their designs and products within the framework of strengthening the capacity of VHS towards competitive graduates. The form advantages are the workshop/seminar/training materials, guidance materials for strengthening the capacity of principals and teachers, dissemination materials for school management in an entrepreneurial school environment, and other forms.

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References

- Badan Pusat Statistik/BPS. (2019). *Tingkat pengangguran terbuka berdasarkan tingkat pendidikan 2019*. (online) (<https://www.bps.go.id/indicator/6/1179/1/tingkat-pengangguran-terbuka-berdasarkan-tingkat-pendidikan.html>).
- Baron, R.A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, 33 (2): 328-340.
- Charney, A. & Libecap, G.D. (2000). *Impact of entrepreneurship education. Insights: A Kauffman Research Series (Kauffman Center for Entrepreneurial Leadership)*. (online) (http://cfed.org/assets/documents/Youth_Eship_Materials/Impact_of_Entrepreneurship_Education.pdf), accessed in 12 Februari 2017.
- Direktorat Pembinaan SMA. (2007a). *Panduan umum pengembangan mulok*. Jakarta: Direktorat Pembinaan SMA Depdiknas.



- Direktorat Pembinaan SMA. (2007b). *Panduan umum pengembangan bahan ajar*. Jakarta: Direktorat Pembinaan SMA Depdiknas.
- Etzkowitz, H. (2004). The evolution of the entrepreneurial university. *International journal of Technology and Globalisation*, 1 (1): 64-77.
- Etzkowitz, H. (2013). Silicon Valley at risk? Sustainability of a global innovation icon: An introduction to the special issue. *Social Science Information*, 52 (4): 515-538.
- Fayolle, A. & Gailly, B. (2008). From craft to science: Teaching models and learning processes in entrepreneurship education. *Journal of European Industrial Training*, 32 (7), 569-593.
- Fayolle, A. & Gailly, B. (2008). From craft to science: Teaching models and learning processes in entrepreneurship education. *Journal of European Industrial Training*, 32 (7), 569-593.
- Gagne, R.M., Briggs, L.J. & Walter, W.W. (1992). *Principles of instructional design* (4th ed.). Fort Worth, TX: HBJ College Publishers. It is accessed on 12 February 2017.
- Jha, A. K. (2012). Epistemological and pedagogical concerns of constructionism: relating to the educational practices. *Creative Education*, 3 (2): 171-178.
- Jones, P., Jones, A., Packham, G. & Miller, C. (2008). Student attitudes towards enterprise education in poland: A positive impact. *Education+Training*, 50 (7): 597-614.
- Keller, J.M. Motivational Design of Instruction. Dalam Charles M. Reigeluth (Ed). (1983). *Instructional-Design Theories and Models: An Overview of their Current Status*. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Lazzeroni, M. & Piccaluga, A. (2003). Towards the entrepreneurial university. *Local Economy*, 18 (1): 38-38.
- Lee, S.M., & Peterson, S.J. (2000). Culture, entrepreneurial orientation, and global competitiveness. *Journal of World Business*, 35 (4): 401-416.
- Murwani, F. D. (2016). Model pendidikan entrepreneurship di perguruan tinggi: upaya menumbuhkan *entrepreneur* dan *intrapreneur* dalam wadah *Entrepreneurial University*. *Pidato Pengukuhan Guru Besar Bidang Pendidikan Ekonomi pada Fakultas Ekonomi Universitas Negeri Malang, 14 April*.
- Philpott, K., Dooley, L., O'Reilly, C., & Lupton, G. (2011). The entrepreneurial university: Examining the underlying academic tensions. *Technovation*, 31 (4): 161-170.
- Plopp, T. (2010). Educational design research. an introduction. In T. Plomp & N. Nieveen (Eds). *An introduction to educational design research* (hlm.9-35). Netherlands: Netzdruk, Enschede.
- Reeves, T.C. (2006). Design research from a technology perspective, In J.V.D. Akker, K.Gravemeijer, S. McKenney, & N. Nieveen (Eds). *Educational design research* (hlm.52-66). London: Routledge.
- Sala-i-Martin, X., Crotti, R., Di Battista, A., Hanouz, M.D. Galvan, C., Geiger, T., & Marti. (2015). *Reaching beyond the new normal: Findings from the Global Competitiveness Index 2015-2016*. (online) (http://www3.weforum.org/docs/gcr/2015-2016/GCR_Chapter1.1_2015-16.pdf), diakses 13 Februari 2018.
- Stanley, W.B. (1981). Toward a reconstruction of social education. *Theory and Research in Social Education*, 9 (1): 67-89.
- Sukardi & Wardana, L.A. (2016). *The study of service quality and competitiveness of secondary education in West Sumbawa*, (Online) (<http://www.atlantispres.com/php/pub.php?publication=icse-15>), diakses 3 Mei.



- Sukardi, Hamidsyukrie, & Wardana, L. A. (2018). *Aplikasi model experiential learning berbasis moodle dan prestasi akademik terhadap intensi kewirausahaan (Laporan Penelitian)*. Mataram: LPPM Universitas Mataram.
- Sukardi, Ismail, M., & Suryanti, N.M.N. (2014). Model pendidikan kewirausahaan berbasis keterampilan lokal bagi anak putus sekolah pada masyarakat marginal. *Cakrawala Pendidikan*, 33 (3): 402-412.
- Sukardi, Wildan, & Fahrurrozi, M. (2019). Vocational education: A missing link for the competitive graduates?. *International Educations Studies*, 12 (11).
- Sukardi. (2016). Design Model prakarya dan kewirausahaan berbasis ekonomi kreatif berdimensi industri keunggulan lokal. *Cakrawala Pendidikan*, 35 (1): 11-124.
- Wenerfelt, B. (1984). A resource based view of the firm. *Strategic Management Journal*, 5 (2): 171-180.
- White, S.R. (2012). Reconstructionism and interdisciplinary global education: Curricula construction in a teilhardian context. *International Education Journal*, 31(1):5-23.
- Wildan & Sukardi. (2011). *Naskah kajian strategi perencanaan pendidikan menengah di NTB*. Jakarta: Dirjen Dikmen Kemendiknas.
- Willis, J. & Wright, K.E. (2000). A general set of procedures for constructivist instructional design: The new R2D2 Model. *Educational Technology*, 40 (2):5-20.
- Wong, P.K. Ho, Y.P., & Autio, E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics*, 24 (3): 335-350.
- Wong, P.K. Ho, Y.P., & Singh, A. (2007). Toward an “entrepreneurial university” model to support knowledge-based economic development: The case of the National University of Singapore. *World Development*, 35 (6): 941-958.