Editor

Meen

Proceedings of the 2019 IEEE Eurasia Conference on IOT, Communication and Engineering (IEEE ECICE 2019) Yunlin, Taiwan, October 3–6, 2019

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Teen-Hang Meen

National Formosa University, Taiwan

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Editorial:

This volume represents the proceedings of the 2019 IEEE Eurasia Conference on IOT, Communication and Engineering(IEEE ECICE 2019). This conference was organized by the Institute of Electrical and Electronics Engineers (IEEE), National Formosa University, International Institute of Knowledge Innovation and Invention(IIKII), and held October 3–6, 2019 in Yunlin, Taiwan. The conference provided a unified communication platform for researchers in a range of topics, such as Internet & IOT technology, Communication Science & Engineering, Computer Science & Information Technology, Computational Science & Engineering, Electrical & Electronic Engineering, Mechanical & Automation Engineering, Advanced Machining and Forming Processes, Micro- and Nano-Fabrication, Surface manufacturing processes, Gears Manufacturing, Bio-medical Manufacturing, Precision Engineering Measurement, Robotics and Automation, Additive Manufacturing Technology, Smart Manufacturing Technology for Industry 4.0, and other related fields. This proceedings volume enables interdisciplinary collaboration of science and engineering technologists in the academic and industrial fields, as well as networking internationally

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National Formosa University, Taiwan

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Conference Agenda

Venue: National Formosa University, Yunlin, Taiwan **Language:** English

Pre- Conference

Thursday, October 3rd, 2019

10:00	17:00	Sponsor Showcase (Ballroom)

Main Conference

Friday, October 4th, 2019

08:30	09:00	Welcoming Reception & Registration
09:00	09:30	Opening Ceremony
09:40	10:50	Keynote Speech 1
10:50	11:00	Tea Break
11:00	12:10	Keynote Speech 2
12:10	13:00	Lunch Break
13:00	17:00	Oral Session A, Oral Session B, Oral Session C
13:00	17:00	Poster Session
18:00	20:00	Conference Banquet

Conference Agenda

Venue: National Formosa University, Yunlin, Taiwan

Language: English

Main Conference

Saturday, October 5th, 2019

09:00	09:30	Welcoming Reception & Registration
09:30	10:40	Keynote Speech 3
10:40	10:50	Tea Break
10:50	12:00	Keynote Speech 4
12:00	13:00	Lunch Break
13:00	16:00	Poster Session
13:00	16:00	Oral Session A, Oral Session B, Oral Session C

Main Conference

Sunday, October 6th, 2019

09:00	17:00	Sponsor Showcase (Ballroom) & Closing Ceremony

Model Creativepreneur at Vocational High School Art and Creative Industries Sector for Creative Industry Development

B.S. Pracihara[a], Luthfiyah Nurlaela[b], Muchlas Samani[c], I.G.P Asto Buditjahyanto[d]

Postgraduate Program
Lidah Wetan Street
Surabaya, State University of Surabaya and Indonesia
T: (+6231)7532160 and F:(+6231)7532112
E-mail: [a]pracihara@gmail.com, [b]luthfiyahnurlaela@unesa.ac.id, [c]msamani@unesa.ac.id, [d]asto@unesa.ac.id

Abstract

Research model development to increase the professionalism of the model creativepreneur vocational students is studied. This study aims to reveal the professional development of vocational school students find creativepreneur development model, and determine the effectiveness of internal models in vocational creativepreneur Arts and Creative Industries Sector. This study uses research and development that consist of three steps, preliminary studies, model development and internal testing. The research was conducted at SMK Negeri 12 Surabaya. Data collection for the research used in-depth interviews and observation. The results showed that, the development of vocational students studied professionalism comes mostly from government and schools. Development program in school depends on the policies and strategies of each principal. Creativepreneur the model developed is composed of components of the competence, creativity, and effectiveness. It can be concluded that the effectiveness of the model's internal test results agree that the category of model components is complete, the structure of the model components is clear, the relationship between the components of the model is clear, readability models of good, decent models, and models effective if it is implemented. The results showed that, the development of vocational students studied professionalism comes mostly from government and schools.

Keywords: Development, Creativepreneur, Creative Industry

I. INTRODUCTION

In the regulation of Education and Culture Minister No. 70 in 2013, education based on the nation's cultural life of the nation is able to establish the pattern of the present and future. This view into the direction of curriculum development in 2013 was based on very diverse national culture, to build a life now, and underpinned a better life of the nation in the future. To prepare learners, Curriculum 2013 was developed towards a learning experience that can provide ample opportunities for learners in mastering the competencies needed in his life, and together with it also remains developed kempetensi learners as heir to the culture of Indonesia. With the advantage of the culture it is studied to generate a sense of pride, implemented and expressed in private life, for society, and nation.

Efforts to qualify the graduates in Indonesia, have issued Regulation of Presidential No. 08 of 2012 on the Indonesian National Qualifications Framework (INQF) with implications for the curriculum and management towards the achievement of the competence that leads to the achievement of results pembelajara capabilities. As the INQF expected to change the person's insight competence, not only is solely the framework of the qualification diploma but is legalized nationwide as the basis for the recognition of educational outcomes. So, a compilation of competence meant a person's ability to perform a job description measured through structured assessment, which includes aspects of self-reliance and individual responsibility in his field of work.

President Joko Widodo is often advised that the government focus on preparing the Human Resources (HR) qualified Indonesian so that Indonesia could take a leap of progress and catch up with other countries. According to the predictions, in 2045 Indonesia will have 195 million people of childbearing age; and 60 percent of young people who should be well managed in order to become a demographic bonus for the realization of Indonesia Gold in 100 years of independence. The ability to reverse the pyramid's qualification which is currently still the majority of elementary and secondary school education becomes an educated workforce and skilled, through education and vocational training.

Competitive labor and skilled one was born from education and vocational training quality and relevant to the demands of business and industry constantly is evolving. President Jokowi instructed overhaul of vocational education and training system, and the government must reorient education and vocational training towards demand driven. Through the Presidential Instruction No. 9 of 2016, the President stressed the need to revitalize vocational school to improve the quality of human resources. The instruction commissioned to create a road map of vocational development; enhance and vocational curriculum align with the required competence of graduates (link and match).

A total of 219 vocations selected for revitalization will be encouraged to make changes and alignment of curriculum referring to the world of business and industry. The Government will meet the needs of teachers and kependidikannya professionalism. This pilot vocational escort is ready to produce skilled manpower according to the needs of the 21st century. Increased standardization of major infrastructure and industrial cooperation program update, and managing and structuring institutions and increased access to the vocational competence certification need expertise in accordance with the priorities national development, namely maritime, tourism, agriculture (food security), and the creative industries. Selection of the four areas of study into the vocational development focus is based on the direction of economic development of Indonesia.

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Related to education based on the nation's cultural life of the nation to build a present and the future to come, in their implementation of vocational school based arts and creative industries require careful thought, especially in producing graduates who are ready to work. The process of learning has taken various efforts, particularly in adapting to the preservation and development of technological development. The fact that the Indonesian culture is very rich can be used as the primary capital to be able to compete with other nations in this world, especially ASEAN member countries. But in memprsiapkan HR vocational school graduates of Arts and Creative Industries need standardization, so that will be able to compete, biting, even blocking foreign labor.

The issues and considerations kept in mind, it is necessary to study the development of models to increase the professionalism of vocational students given the model name creativepreneur. Creativepreneur model development is the adoption of a positive attitude owned by entrepreneur into the profession of vocational students. The development of this model will consist of the design of the conceptual model in training for vocational students with a greater emphasis on the element of creativity and effectiveness in the field of arts and creative industries.

II. Theoretical Studies

Entrepreneur is the application of creativity and innovation to solve the problem and attempt to take advantage of opportunities. Vocational education provisions *softskills* very important, because to face the job market, one of the soft skills that are e*ntrepreneurial* as a framework to innovate so that the results of such innovation can be accepted and appreciated by others. In this frame of mind honed sharpness three main abilities are creativity, innovation, and productivity. The nature of entrepreneurial education in the curriculum is the development and habituation patterns of thinking and skills of students to develop her potential in a creative, innovative, and productive to produce something meaningful idea or product (Pranata, 2014: 61).

A change is expected to occur in students who initially made the designs mediocre transformed into a creative design that could provide solutions through increased kreativitivitas and entrepreneurial spirit. *Entrepreneurship* is *an* entrepreneurial spirit, in this case, being close to the field of economics and business. Entrepreneurs are pioneers who dare to take risks for a change, some successful character of an entrepreneur; passion, patience, perseverance, hard work, flexible, and creative (Delle, 12: 43).

In turn, students' understanding of professional conduct in the workplace can be improved to be diterjuninya later in life. Competency-based curriculum is a model curriculum that focuses on the acquisition of capabilities and competence particular with regard to the task or role in the work. Vocational education is a kind of education that prepares graduates to enter the workforce, here focused on studying or training practical abilities, skills that are directly related to the completion of work tasks.

Being creativepreneurer is one who can do all those, the most important thing is to be creative berolapikir, which aims to turn ideas into something tangible and can be enjoyed by the public. Of these activities will take place the process of finding opportunities, creating a product or service and eventually making money. In the course of a business process it usually begins on a small scale, and will grow big, which is the need for entrepreneurial spirit. To increase sales, branding is required in an effort to promote to the public. With rapid advances in technology, a blog, promotion on social media or e-commerce website building can be created.

There is no word impossible for creative people to create something new, including in building the business. From the start of activities seeking the original idea to build a creative business, it is not be afraid to take risks and continue to create something new. Being creativepreneurer is the most suitable profession for young, energetic and likes a challenge. Creative economy is a government appointed new sector to be managed up to the level of the Agency, namely Bekraf (Creative Economy Agency). In 2012, handled by Kemenparekraf, because it has strategic value for Indonesia, the value is a significant contribution, creation of business climate is positive, raising the image and identity of the nation, using renewable resources, encouraging innovation, and providing a positive social impact.

In the sector of the creative economy and the creative industry, there have developed 16 sub-sectors. The existence of the ministry at the time focused on the development of the creative industries to be able to survive because of the crisis in 2008, and through the industries creative, this is the industrial sector that is resilient to crises, being expected to boost the economy, and realizing the vision of Indonesia bercitra creative. To grow the creative industries in Indonesia is not difficult, because of the abundant capital of the local culture. This cultural wealth is a gift, because it is not owned by any other nations. Indonesia's creative industry will have a bright future if supported by the presence of government, business groups, academics, and the potential creativity of young people.

Creative personality is an individual who has a remarkable ability to adapt to a very wide range of situations and perform various activities to achieve the desired goal, and creativepreneur is always to create something new, different, unique, and has a high added value. Creative man born out of the creative culture has the opportunity to think creatively who want to think out of the box. Culture encourages the process of change or modernization, educational process killing creativity is a process of education that hinders critical thinking. Creative human groups according to Trias de Bes and territorial commands A = activator, an initiator of the birth of the idea, B = browser, collect information from all sources to create ideas, C = creator, humans who give birth to ideas from information analysis, D = developers, creative people who find or inventors of ideas formulated by creators, E = executors, implementers of infenter who develop ideas, F = facilitators, creative people are the means for further development, (Tilaar , 2012. 219).

The creative industry is very necessary and continues to be developed as it contributes a very significant economy and creates a positive business climate and builds the nation's image and identity. On the other side of the creative industries based on renewable resources, innovation and creativity are competitive advantages of a nation as well as provide positive social impact. The creative industry is a collaboration and integration to work together in synergy of the main actors in the creative industries are among other Academician educators, humanists, artists, researchers, writers, pioneers of

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culture and art galleries, and scholars. Business men transform creativity into products of economic value, as well as the Government roels as a catalyst, advocate, and regulators.

The Indonesian Creative Economy Development in 2025, targets the creation of conditions for creative people with an adequate quantity and quality and reinforcement of human resources in the community with the mindset and creative atmosphere supported by talented and creative workers. This can be achieved; 1) increase the number of qualified human resources continuously creative and spread evenly; 2) penigkatan number and improved quality of education and training institutions as needed creative talent; 3) improvement of the human penghagaan creative community as a profession that brings added value both economically and socially; 4) an increase in the number of creative entrepreneurs significantly boosting creative employment growth; 5) International recognition of the quality of Indonesia's creative people whose work can be felt by the Indonesian people.

III. RESEARCH METHODOLOGY

Outcome of the paper is the discovery of a development model in vocational educator named creativepreneu models. This study uses the Research and Development (Research and Development / R & D). Procedures R & D refers to the Borg & Gall in 1989 in Sugiyono (2017: 35). Of the 10 stages of development proposed by Borg & Gall, researchers only focused in three stages: preliminary studies, model development, and testing of internal models. Before the development of vocational creativepreneu models, conducted needs assessments aimed to determine the need or early descriptions of the development educators have done in SMK. Research conducted using qualitative approaches with R&D.

This study was conducted in August 2018 to December 2018. August 2018 were used to analyze the needs, September-October 2018 to develop a model, while the November-December 2018 is used for the testing / validation and testing the effectiveness of internal models. The research location chosen was SMK Negeri 12 Surabaya area of expertise of arts and creative industries. The respondents consisted of the assistant principal of curriculum areas, chairman of competency skills, teachers earning amounted to 3 people in each competency skills, Data collection techniques used in this study are: (1) direct observation in the study site with the help of image and sound recording devices; (2) in-depth interviews to all the respondents have been determined; (3) view the documents at schools including: Budgets, the work program vice principal areas of curriculum, program chairman competency skills, As well as other data required.

The validation instruments and models are limited to three people who have expert knowledge about the development of the capacity of educators. Data were obtained from interviews, observation, and documentation are analyzed and interpreted to meet the demands of the purpose of research and other information. In order for the presentation of data more meaningful and easier to understand the steps of data analysis used in this study using the analysis interactive model of Miles and Huberman (1994: 23) that divides the analysis activities into several parts, namely: data collection, data reduction, data presentation, and conclusion.

IV. RESEARCH RESULTS AND DISCUSSION

Based on interview, observation and documentation done in SMK Negeri 12 Surabaya can be described as development of educational progress. School program relies on policy of each school in organizing educational development, and may include trainings aimed at improving the quality of students. Education development programs originating from other institutions are conducted by the industry and artists as a form of cooperation on education. Development activity is training to students whose expectations generated vocational graduates who are ready to work within the required standards in creative industries.

The result of research, found the problems and weaknesses that often occurs in connection with the development of education, so that the results of the implementation of the development of education less than the maximum, these problems are: (1) the obstacles often faced by students in participating in training activities is learning time creative product development is less ; (2) there is no evaluation of the ability / competence of students after the implementation of activities related to creative product development, so that the picture of the desired outcome is not yet known; (3) The budget factor is one factor to consider in the hold of creative product development activities conducted school; (4) differences in competency skills and vocational neighborhood arts and creative industries; (5) the effectiveness of the guidance to the professional abilities of vocational students in the arts and creative industries who applied for this is still weak, the weakness of the aspects of planning, implementation, and monitoring. It can be seen from the quality and competence of the final result of the implementation of the development program less than the maximum. Also, based on productivity and quality of the resulting student has not fully maximized the competence of his expertise, it can be seen from the works produced; (6) guidance in the form of training is less to give optimal results, particularly in developing real-time capabilities and expertise in the industry / business, institutions and artists. It can be seen from the quality and competence of the final result of the implementation of the development program less than the maximum. Also, based on productivity and quality of the resulting student has not fully maximize the competence of his expertise, it can be seen from the works produced; (6) guidance in the form of training is less to give optimal results, particularly in developing real-time capabilities and expertise in the industry / business, institutions and artists. It can be seen from the quality and competence of the final result of the implementation of the development program less than the maximum. Also, based on productivity and quality of the resulting student has not fully maximize the competence of his expertise, it can be seen from the works produced; (6) guidance in the form of training is less to give optimal results, particularly in developing real-time capabilities and expertise in the industry / business, institutions and artists.

Seeing the condition that occurs required the participation of all parties involved in the development of education. There are several advantages that need to be maintained and enhanced, namely: (1) there are many creative productive education program so that a more professional students; (2) the majority of competency skills in SMK Negeri 12 Surabaya, the

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arts and creative industries already have facilities and adequate learning facilities; (3) lots of information and communication technology (ICT) in this day and age that can be used to help facilitate the implementation of learning activities, so that students become easier to understand; (4) the qualification of existing teachers have largely meets the required which has been equipped with the competency; (5) school-based management has been implemented in each CMS needs to be maintained; (6) involvement and closeness partner institutions facilitate the development of education in student development program.

Creativepreneur Model consists of components of competence, creativity and effectiveness. All the components cannot be separated from each other. Creativepreneur models belong to the improvement of student profesonalitas. To face the challenges of the 21st century and compete with other countries, innovation and integration among the components namely the aspect of creativity and effectiveness of a wide variety of students in the use of resources in the learning activities are needed. A student is required to have a good competence in performing the duties of creative product development. Components of students' creativity are the ability to accomplish good learning shown to increase learning outcomes. Components effectiveness is conformity between tasks creative product development with the intended target. All the components cannot be separated from each other, and an integral component in realizing creativepreneur. The following image creativepreneur model development.

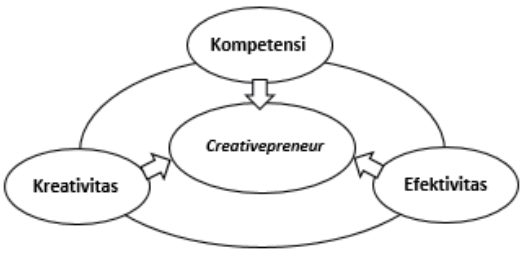

Fig. 1. Late Model Creativepreneur

Creativepreneur models consist of components: (1) to discover new things, be open to new things, flexible in action, freedom of self-expression; (2) can appreciate, believe in the idea itself, independent thinking, able to work hard and tenacious; (3) may be more reflective of self-development capabilities, to develop good social relations, cooperation with others, and have the will to always improve keprofesionalitasnya.

V. CONCLUSION

The development of school programs rely policy of each school in organizing pendidikna development, may include trainings aimed at improving the quality of students. Education development programs originating from other institutions are conducted by the industry, and artists as a form of cooperation on education. Development activity is doing is training to students whose expectations generated vocational graduates who are ready to work within the required standards in creative industries.

The weakness is often the case related to the development of education, so that the results of the implementation of the educational development of their full potential, these problems are: (1) the learning time is less creative product development; (2) there is no evaluation of the ability / competence of students related to the development of creative products, it is not known picture of the desired result; (3) The budget factors need to be considered in the hold of creative product development activities; (4) differences in competency skills and vocational neighborhood arts and creative industries; (5) the effectiveness of the guidance to the professional abilities of students for this is still weak, it can be seen from the works produced; (6) guidance in the form of training is less provide optimum results, especially in industry / business, institutions and artists.

The strengths in the development educators, namely: (1) there are many creative productive educational development programs; (2) most of the expertise competence has facilities and adequate learning facilities; (3) The information and communication technology (ICT) can be used to help facilitate the implementation of learning activities; (4) qualified teachers is competent in their field; (5) the implementation of school-based management; (6) involvement and closeness partner institutions facilitate the development of education in student development program.

The result of creativepreneur model development on vocational field of arts and creative industries consists of competence, creativity, and effectiveness. Internal test results can be concluded that the experts agree: (1) complete model components; (2) the structure of a clear model components; (3) the relationship between components models clearly; (4) The model has good readability; (5) the model feasible; and (6) the model effectively implemented.

REFERENCES

[1] Delle. 2012. *Magic of Creativepreneur*. ABNG
[2] Milles, MB & AM Huberman. (1994). *Qualitative analysis of data*. California: SAGE Publications Inc.
[3] Institutions, Y.Moeljadi, 2014. *Crativepreneurial Competency Development in the Perspective of Cultural Art Education*, Proceedings of the National Seminar on the theme Reorientation of Education Arts and Culture in Perspective Crativepreneur Competency, Cultural Arts Education PPs Unesa Surabaya
[4] Sugiyono, 2017. *Methods of Research and Development (Research and Development)*. Bandung: Alfabeta.
[5] Tilaar, HAR, 2012. *Development of Creativity and Entrepreneurship*. Jakarta: Kompas

ISBN: 978-1-7281-2501-5