

# Development of Model Centre of Excellence (CoE) Technical and Vocational Education and Training for Teachers (TVET-T) in the Field of Arts and Design through Strengthening Vocational Education Competent

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## ABSTRACT

This research is a form of response to the findings of problems that occur in the scope of vocational education in the field of art and design in West Java. Based on the results of preliminary studies, it was obtained that almost vocational education both managed by the private sector and the government is partly less concerned especially from the improvement of the competence of educators, especially in the form of learning methods and models. Teaching materials development workshops are conducted using an andragogy education approach subject is teachers in associate with MGMP Art and Design as target audiences. Workshop activities were conducted in three different places, namely SMK Sinar Parahiangan (Cianjur), SMKN 1 Panyingkiran (Majalengka), and SMKN 2 Garut. The exterior of this research is in the form of teaching materials in the form of Sketch and Drawing subject modules. It is hoped that the presence of such externalities can be a reference in the development of teaching materials for vocational education, especially in West Java and generally in Indonesia.

**Keywords:** *Vocational education, Workshop, Teaching materials introduction.*

## 1. INTRODUCTION

The development of science and technology certainly can not be separated from the factors that affect it such as culture, politics, and economics. These factors certainly help change the view of humans and their orientation in the educational process. Education is no longer seen narrowly as pedagogical but is a symptom of social, political, economic, cultural even education can only be considered as an industry that produces humans who are prepared to accompany machines and technology.

Education is a conscious effort carried out systematically with the aim of creating a more civilized life and in accordance with the principles of humanity. Simply put, education is a process in humans to understand and understand life so that there is a change in attitude, personality and knowledge, with the hope of creating quality generation, critical in thinking and able

to understand the environment. Education according to Ki Hajar Dewantara education is a life demand that is a natural for every individual as a human being and society to achieve true happiness. In its development education not only includes formal education organized by the government but there are non-formal and informal education all three have the same goal of realizing a better human standard of living. To reach at that level, of course, you must pay attention to the quality of education that cannot be separated from the process, namely the transfer and sharing of knowledge. In this section, transfer information is an important part, so the right strategy and media are needed so that the substance of the educational objectives is achieved. Recognizing the importance of education has encouraged many establishments of higher education schools and institutions, this is an advancement because it shows public attention and awareness of education.

The trend of globalization is one of the triggers for the degradation of educational patterns and systems in Indonesia, so that the spirit of education as a conscious effort in humanizing humans only focuses on intelligence and skills so that the values of education become neglected, even though education is a process of humanization. Learners are not robots but humans who must be helped in the maturation process in order to be independent and crisis thinking. In addition, education is a human right, therefore the equalization of education must be carried out consequently. The equalization of education is related to poverty, and therefore poverty is a priorities that needs to be addressed in line with the implementation of equality itself. That is education, which is essentially a process of empowerment that is freeing individuals from the confines of a centralized power structure, which tramples on human rights, which builds a power structure that benefits only a small group of people who hurt the people. Pedagogical liberation is pedagogical that empowers learners in order to build a new Indonesian society.

Universitas Pendidikan Indonesia is an institution that encourages various scientific development that aims to make UPI as a Development of Centre Excellence of Technical and Vocational Education and Training for teachers (CoE on TVET-T). In connection with this, this goal is closely related to vocational education as an effort by the government to prepare the generation ready for work in the industrial world. Specifically, regarding vocational education regulated in the Law on National Education Number 20 of 2003 article 15, The type of education includes general education, vocational, academic, professional, vocational, religious, and special. Then explained in article 20 paragraph 3 that universities can organize professional academic programs, and / or vocational.

Based on the above presentation, this research is an effort by the Faculty of Art and Design Education to support the realization of UPI into a center for vocational education development in Indonesia. The results of this research will contribute to the development of UPI as a CoE on TVET-T in the field of vocational education which aims to prepare vocational teachers who have good competence. This research is adapted to UPI's plan set out in one of its missions: conducting research to create and develop educational theories and practices and other science that is innovative and rooted in local wisdom. Then this research is also related to the National Research Master Plan (RIRN) research in the field of social humanities, namely: in the context of character education and supporting tourism, 1) Design of national character education based on national religious and cultural values that are globally competitive, 2) Design strengthening national cultural arts as the backbone of tourism. Related to National Research Priorities (PRN) this research is related to the research focus 2020-2024

Permen 2019 point 8 on Social Humanities, Cultural Arts and Education, lastly associated with the mission and vision of FPSD.

## **2. LITERATURE REVIEW**

### ***2.1. Education***

The history of formal education in Indonesia cannot be separated from the Dutch colonial that replaced the Portuguese in Indonesia. Brugmans stated that education is determined by Dutch economic and political considerations in Indonesia [1]. Education is made tiered, does not apply to all circles, and based on class level. Education takes precedence for Dutch children, while for Indonesian children it is made with lower quality. Education for the natives served to provide labor that was paid cheaply because of the needs of the rulers at that time. The Dutch colonials gradually seemed to be responsible for the education of Indonesian children through ethical politics. Ethical politics is carried out based on economic factors inside and outside Indonesia, such as the rise of Asia, the emergence of Japan as a modern state capable of conquering Russia, and the First World War [1]. Ethical politics is primarily an economically motivated tool for wages to be as low as possible to achieve maximum profit. Irrigation, transmigration, and education are proclaimed as a cover for profit-making strategies. Irrigation is made so that the rice harvest is not threatened to fail and get more satisfactory results. Transmigration serves for the spread of labor, one of which is for plantation workers. Until colonial power moved into Japanese hands by bringing the idea of an Asian revival that was no less cunning than the Dutch. Education is increasingly concerning and made to provide free energy (Romusha) and the needs of soldiers for the benefit of Japanese war [2]. The classification system was abolished by the Japanese. The people became a tool of Japanese power for the sake of war. Education during Japanese rule has a foundation of *icui* rights that invites the Indonesian nation to work together to achieve prosperity with Greater Asia. Students should take strict physical training, military training, and indoctrination.

### ***2.2. Vocational Education in Indonesia***

Education from the concept of technology to its practice continues to develop in accordance with the times and civilization. So that there are various kinds of thoughts in the world of education, the result is the emergence of various theories, understandings and opinions. For example, understand the flow of empiricism that prioritizes external stimulation in human development, and states that the development of children depends on the environment, while the bearing is not important. The experience that learners gain in

everyday life is obtained from their environment. This stimulation comes from the outdoors or is created by adults in the form of educational programs.

The flow of empiricism is considered biased, because it only attaches importance to the role of experience gained from the environment. While the basic abilities carried by children from birth are considered non-decisive. In fact, in everyday life there are children who succeed because of talent, even though the surrounding environment is not supportive.

This success is caused by the ability that comes from within in the form of intelligence or willpower, children try to get an environment that can develop the talents or abilities that exist in him. Nevertheless, adherents of this school still appear in the opinion that views humans as passive beings and can be manipulated, for example through modification of behaviour. This is reflected in the scientific psychology view of BF. Skinner or other behavioralism views. Behavioralism makes human behaviour that appears to come out as the target of his study, while still emphasizing that the behaviour is the result of learning solely. However, this view of behavioralism also still varies in determining what factors are the most important in the learning process. From some of the views above can be drawn a view that education is all human effort to achieve the goal of realizing human degrees at the plenary stage, precision and *masagi*.

**2.3. History of Vocational in Indonesia**

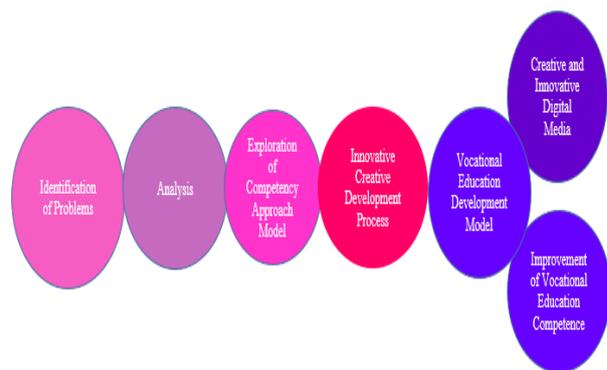
Vocational education in Indonesia has a long history may also be said to be the first formal education established by the Netherlands to date efforts in improving the quality of vocational education continue to be improved as published in Media Indonesia July 20, 2020, making breakthroughs in strengthening and strengthening vocational education Major breakthroughs like this include developing the Center of Excellence (CoE), Vocational House, and the involvement of the industry in compiling the curriculum is the right step. With great experience and ideas we have hope for the future of vocational education in Indonesia. If investigated further, the most advantaged by vocational education graduates is Iduka. The company spends costs and time that is not short to find and provide training to prospective workers. This effort certainly cannot be separated from what Germany did in developing its vocational education. Technische Universitat Braunschweig Germany is Germany successfully optimizing the function of vocational schools / vocational functions (berufsschule). By implementing the dual system model, they have the least number of unemployed in Europe. By applying the dual system education model as an ideal form of collaboration between government and industry. Vocational students in Germany have hours of study in school one to two

days and in the company three to four days per week, during the school term. Students get salary and leave during the learning process. The result of this education they will be human resources who are ready to work [3].

**3. RESEARCH METHODS**

To be able to answer the problems found, the effort that must be done is to conduct seminars and workshops for vocational teachers in the field of Art and design, namely with an adult education approach. This adult education approach or andragogy is done with two main keys, namely a participatory approach based on the knowledge and experience of teachers, so that it will easily find patterns in creating learning models that suit their needs so that problems can be easily solved. It is also an initial identification to accommodate the necessary needs. Workshop results are not used as a dead blueprint, but as an open framework to be developed based on shared knowledge and experience. While the second is the approach of equality facilitator (or instructor). It is expected that the role of facilitators will be able to stimulate and facilitate the training process, together conducting research in finding problem solving including in extracting information, exchanging thoughts, analysis in finding models and learning patterns that suit their needs. Develop a brief learning model that suits the characteristics of students and their fields. Facilitators provide innovation and creative thinking, original, and artistic direction, by exploring every problem that exists in vocational education, especially in West Java.

The application of this method begins with the identification of problems including basic abilities, creative thinking debriefing and problem solving. In general, this research can be described as follows figures 1 and 2:



**Figure 1** Research method.

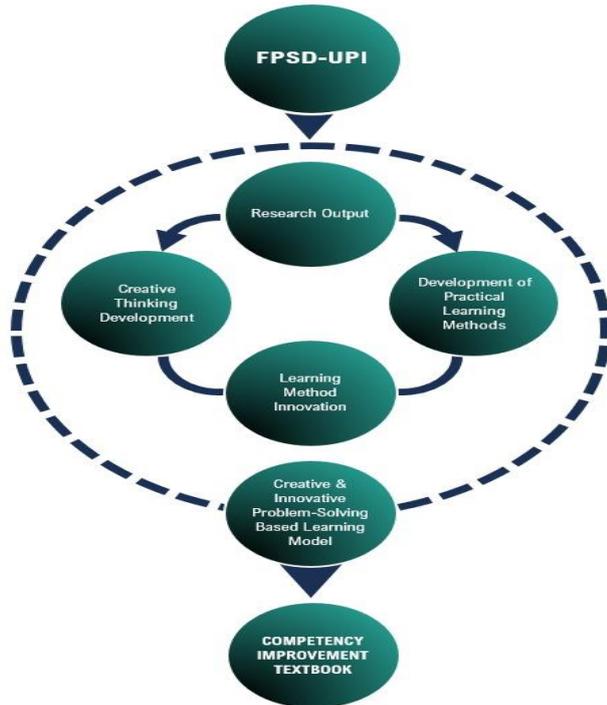


Figure 2 Vocational education competency development process flow.

Table I. Framework

Program	Activities	Target
Identification	Development of Model Centre of Excellence (CoE) Technical and Vocational Education and Training for Teachers (TVET-T) in the Field of Arts and Design Through Strengthening Vocational Education Competency	To build and provide understanding and Strengthening vocational education for vocational teachers in the field of art and design
Development Teaching materials	Teaching materials development workshop	Strategies in creating and developing materials to teach the ideal field of art and design
Soft skills development for vocational teachers	Design thinking workshop	In order to be able to develop teaching materials (learning media) that adjust the dean of the characteristics of learners

4.3. Method and Processes

The development of teaching materials for vocational education through workshops / training (learning media) is expected to have an impact on improving competence, capacity and productivity (teachers and vocational students).

This adult education approach or andragogy is carried out with two main keys, namely the Participatory Approach based on the knowledge and experience of teaching materials development trainees,

4. RESULTS AND DISCUSSIONS

4.1. Preparation

- Preparation of materials that are in accordance with the needs of participants.
- Equipment and equipment.
- Online/offline media.

4.2. Framework

namely vocational teachers in the field of art and design in West Java. While the second is the Equality Facilitator (or instructor) approach of training with trainees. The role of facilitator stimulates and facilitates the training process together. Develop teaching materials from KKNi and SKKNI by developing according to characteristics.

In general, the activities of developing teaching materials for vocational education for teachers in West Java can be described as follows:

**4.3.1. Location**

Activities are carried out online and offline at vocational schools in West Java Province.

**4.3.2. Goal**

Vocational School Teacher in Art and Design.

**4.3.3. Activities and Achievements**

- Development of teaching materials SMK Sinar Parahiangan – Cianjur (Figure 3).



**Figure 3** Development of teaching materials SMK Sinar Parahiangan – Cianjur.

- Development of Teaching Materials SMKN 1 Panyingkiran – Majalengka (Figure 4).



**Figure 4** Development of teaching materials SMKN 1 Panyingkiran - Majalengka.

- Development of Teaching Materials SMKN 2 GARUT (Figure 5)



**Figure 5** Development of teaching materials SMKN 2 GARUT.

**5. PRODUCT DEVELOPMENT RESULTS**

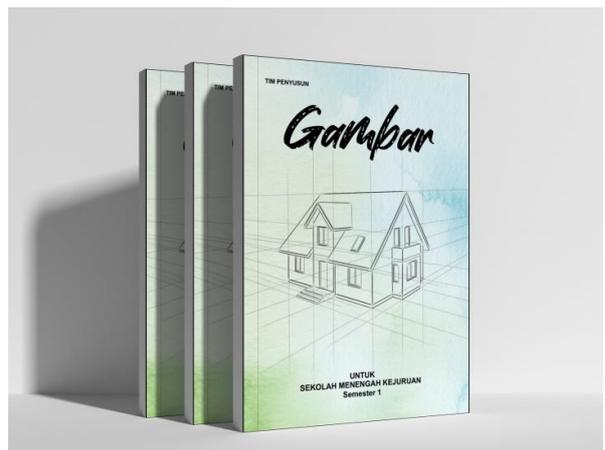
In the form of Books / Teaching Materials Drawing and Sketch

- Sketch Module (Figure 6).



**Figure 6** Sketch module.

- Drawing Module (Figure 7).



**Figure 7** Drawing module.

## 6. CONCLUSION

Workshop activities for the development of teaching materials were carried out as an effort to improve the understanding and competence of each workshop participant in this case vocational educators in West Java. The implementation of workshops, each conducted in three different schools, aims to expand the range of workshop results. Participatory approach based on the knowledge and experience of participants and equality approach facilitator or training instructor is an approach taken in this workshop activity. It is expected that with the presence of workshop outsiders in the form of sketch module teaching materials and drawing modules can be used as a supporting medium for the learning process in vocational education.

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