



**Innovation of Vocational Technology Education**  
**Volume XII, Number 1, February 2016**  
**ISSN 1411-5514 (Print)**  
**ISSN 2461-1336 (Online)**

**invotec** is an internationally peer-reviewed journal devoted to the study and innovations in vocational technology education. Areas of interests include policies, philosophy, management, learning process, learning media and materials, teaching models and methods, and teaching evaluation.

**invotec** publishes two issues, in February and August, annually. It is published in cooperation with APTEKINDO (The Indonesian Association of Technical and Vocational Education).

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FPTK Building 5<sup>th</sup> Floor Universitas Pendidikan Indonesia  
Jl. Dr. Setabudhi No.207 Bandung 40154, Telp. +62-22 2013163, ext. 34002, Fax. +62-22 2011576  
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ISSN 1411-5514 (Print)  
ISSN 2461-1336 (Online)

## TABLE OF CONTENTS

<b>Soft Skill and Entrepreneurial Career Guidance Model for Enhancing Technical Vocational Education and Training's Graduates Competitiveness</b> Ahmad Dardiri	1 - 7
<b>The Competitiveness of SMK and Diploma 3 Graduates of Hospitality at the Entry Level and Employability Skills in Developing Career Pathways</b> Femmy Indriany Dalimunthe, Eddy Sutadji, Rita Margaretha Setianingsih	8-15
<b>The Constructivist Approach: Radical and Social Constructivism in the Relationship by Using the Implementation Career Level on the Vocational Education</b> Haryadi, Iskandar, Dicky Nofriansyah	16-21
<b>Implementing Project-Based Learning (PBL) in Final Collection to Improve the Quality of Fashion Design Student</b> Indarti	22-30
<b>Production Based Training on Agro Industry Expertise Course to Improve Student's Competencies in Food Diversification based on Local Resources</b> Sri Handayani, Mustika Nuramalia Handayani, Dewi Cakrawati	31-35
<b>Educational Program Evaluation using CIPP Model</b> Warju	36-42
<b>The Development of Non-Formal Technological and Vocational Education in Village Communities</b> Lilis Widaningsih, Ade Gafar Abdullah	43-47

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The first page of the paper should contain the article title, the names and affiliations of all authors, authors' notes or acknowledgments, and the names and complete mailing addresses of all authors. Please note the author to whom all correspondence, including proofs, should be sent. The second page should contain an abstract of no more than 200 words and five to seven keywords (in alphabetical order) to facilitate electronic access. The title of the paper will be repeated on page 2.

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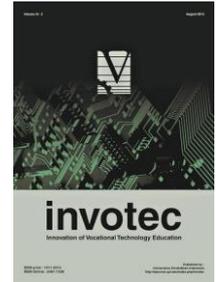
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# **Soft Skill and Entrepreneurial Career Guidance Model for Enhancing Technical Vocational Education and Training's Graduates Competitiveness**

Ahmad Dardiri

Department Civil Engineering, Engineering Faculty, Universitas Negeri Malang, Indonesia

## ARTICLE INFO

### *Article history:*

Received 02 December 2015

Received in revised form 12

January 2016

Accepted 28 January 2016

Available online 01 February 2016

### *Keywords:*

Career guidance

Competitiveness

Vocational education.

### *Corresponding author:*

ahmad.dardiri.ft@um.ac.id

## ABSTRACT

The globalization and free trade era have implications for the high competition for vocational institutions. Problems faced by vocational education are (1) lack of relevance of the graduates competence with the industrial need, (2) low absorption of the graduates by industry, (3) discrepancy of skill competencies program that developed with the needs of industry, (4) there is lack understanding of the vision mission and objectives of vocational education among practitioners in the industry, (5) learning infrastructure gaps with industrial need, (6) absence of career standardization structure development on industry, and (7) unfavorable the academic climate in vocational education. Facing these challenges is necessary required soft skills and entrepreneurial career guidance model as solutions to enhance the graduate competitiveness.

## 1. Introduction

The globalization era and advances of information technology led to an employment competition between countries. Free trade agreements between countries such as AFTA, CAFTA, and ASEAN Economic Community (AEC) ultimately lead to labor competition in all sectors of work. Technological Vocational Education and Training (TVET) has an important role in preparing high quality of labor to improve national productivity. Vocational High School (SMK) in charge of preparing and competitive intelligent beings (intelligent spiritual, emotional, intellectual, and aesthetic kinesthetic) which has competitiveness. However, the competitiveness of SMKs graduates are still low. Many find facts relevance of TVETs graduates did not meet with industry requirements.

The implications of the information age coloring people's lives by virtual communication very quickly. Everyone expected have ability to adapt to changes in the complex, lateral, and conformed quickly to the character of advances in information technology. Globalization also foster the changing demands of labor

competencies from rigid to flexible competence. The workforce who have ability to adapt to changes easily, independent, collaborative in a team work, able to solve problems, be able to communicate, and have high initiative (Deseco, 2005; Wagner 2008).

Central Statistics Agency in Table 1 shows that the open unemployment of the vocational school graduates nationwide as February 2011 was 13.87%, February 2012 9.50%, February 2013 amounted to 7.67%, and 2014 at 7.21%. It illustrates that the industry has not been able to absorb the graduates of vocational and even more absorbing a high school graduate. In other words, the competitiveness of vocational graduates is still low.

**Table 1.** Unemployment Rate Population Age 15 and Over by Educational Attainment 2011-2014 (percent)

Education Attainment	2011		2012		2013		2014
	February	August	February	August	February	August	February
Elementary	3.37	3.81	3.59	3.55	3.51	3.44	3.69
Junior High School	7.55	7.45	7.76	7.75	8.13	7.59	7.44
Senior High School	11.90	11.90	10.41	9.63	9.39	9.72	9.1
Vocational High School	13.81	11.87	9.50	9.92	7.67	11.61	7.21
Diploma I, II, III	15.71	12.78	7.45	6.19	5.67	5.95	5.87
Univesitas	14.24	11.92	6.90	5.88	4.96	5.39	4.31
Σ	7.41	7.14	6.24	6.07	5.82	6.16	5.70

Source: BPS, 2014 (No. 38/05/Th. XVII, 5 Mei 2014)

Thus SMK was require to prepare graduates who have readiness to face these changes. In anticipation of the necessary character, intelligence, and health. Growing health consciousness that comes from education. Career guidance has an important role in enhancing the academic ability, personal, and career choice of graduates of vocational education (Rashid and Bakar, 2011). The Indonesian labor competitiveness compared with 84 countries in the world is still low. World Economic Forum (2010) in the Table 2 illustrates the competitiveness of labor in terms of basic needs Indonesia occupy 60 rankings, in terms of increasing the efficiency of Indonesia was ranked 51, while in terms of innovation and sophistication of human resources 37. Job readiness of Indonesia workforce in the industry at a low level in terms of aspects of talent and training eye productive learning process. Young age, minimal stock of knowledge and inadequate skills often become the main obstacle vocational school graduates to get a decent job and can support her career.

The implementation of career guidance in the vocational schools has not handling seriously. Awareness of the importance of handling has not been done in a professional career. Career guidance in vocational schools is still limited on labor market information. Many schools focus on improving the technical competence and lack of attention to soft skills in the sphere of formal or as the foundation of development. Winstead et.al. (2009) stated most business school curricula, however, focus only on technical skills, and do not address on the soft skills in a formal setting or on a consistent basis. As graduates compete for fewer jobs, business schools must develop creative and innovative ways to give Reviews their graduates a competitive edge. Most adults do not understand that in the contemporary world of work it is important to develop the skills to be able to manage one's own career and life pathways.

Career guidance is a services provided to students and community at all ages and all aspects of life through education, training, employment, and managing his/her career (OECD, 2004:19). Career guidance services is recommended to include five elements: (1) professional guidance to personnel guidance, (2) anticipatory risk of limited resources, (3) impartiality / avoid bias institutions, (4) labor market information that is relevant, and (5) evaluation the impact of the service.

**Table 2.** Competitiveness Ranking of Indonesian's Workers

Indicator	Competitiveness of Indonesian Workers				
	Ind	Mly	Bru	Sin	Tha
Efficiency	51	24	67	1	39
Basic need	60	33	20	2	48
Inovasi and sophistications	37	25	72	10	49

Source: WEF, 2010

Career guidance refers to services intended to assist people, of any age and at any point throughout their lives to make educational, training and occupational choices and to manage their careers. Career guidance helps people to reflect on their ambitions, interests, qualifications and abilities. It helps them to understand the labor market and education systems, and to relate this to what they know about themselves. Comprehensive career guidance tries to teach people to plan and make decisions about work and learning. Career guidance makes information about the labor market and about educational opportunities more accessible by organizing, systemizing, and making available when and where people need it.

Career development includes a range of practices designed to help people think about, planning and managing reviews their careers. Career development is related to vocational education, but is applicable to all students in vocational or academic whether programs. Career development provides a mechanism for linking the curriculum with the learning that students do in extracurricular activities and their wider life. A strong culture of career development needs to be built in TVET, one which has a focus on all age groups and which encourage older adults to consider career and learning options. In the AEC era, the industry needs graduates who have the soft skills competencies include (1) the ability of critical thinking and problem solving; (2) ability to work and learn in teams with different individuals across the nation; (3) the ability to make plans based on accurate information; (4) ability to adapt to rapid changes; (5) international communication skills both oral and written; and (6) have an insight into the future and want to expand (Dardiri & Hajji, 2011). Ana, Gaffar, and Hakim (2012) state, students not only learn technical skill, but also develop their communication skill and project management. Based on this background formulated the problem as follows: (1) how the concept of soft skill and entrepreneur career guidance?, (2) how the implementation of soft skill and entrepreneurial career guidance?, and (3) is soft skill and entrepreneurial career guidance can improve competitiveness of vocational graduates.

## 2. Discussion

### 2.1 Industrial Development and Labor Competence

The development of science, information technology, and modern economic growth resulted in a cultural change society. It also resulted in changes in labor competencies essential. Work force of the 21st century is not enough just to have basic knowledge related to the three "R's" (reading, writing, and arithmetic) as the capital's ability to work, but also need to be mastered skills applicable. Furthermore, it is stated that soft skills are very important for the competence of the workforce to be ready to work ([Http://www.dol.gov/odep](http://www.dol.gov/odep)). Besides soft skills competencies is seen as crucial to the ease of someone adapting the work situation. (<http://www.sdf.gov.sg/>). Thus it can be stated that the face of the competitive era, soft skills is the key to success for labor.

According to the forum Continuous Progress Development, soft skill is a personal advantage related to non-technical matters, including the ability to communicate, socialize, and the ability to control himself. Soft skills is an ability that is affective one has, besides its ability on technical mastery of formal intellectual one field, which allows a person to be accepted in the work environment (Tripathy, 2006); (Mirza, 2005); (Dev 2006), (Kaipa and Milus 2005); (Alsop, 2006).

Wagner (2008) states that entered the "New World" of Work in the 21st century survival skill needed seven, namely: (1) critical thinking and problem solving; (2) collaboration across networks and leading by influence; (3) agility and adaptability; (4) initiative and entrepreneurialism; (5) The effective oral and written communication; (6) Accessing and analyzing information; and (7) curiosity and imagination. In the new world era, the economy evolved from traditional pattern to the industry, and now to the knowledge based economy (KBE). KBE is characterized by a pattern of trade that promotes the use of modern technology and science as a driver of growth, development and job creation to prosper (Zuhal, 2008). In KBE the workforce must have the ability to solving problems, to work planning, and ability as teamwork.

The concept of teamwork is very different today compared to 20 years ago. Technology has been providing virtual model teams. Virtual teams to work with people around the world by solving problems using software. They do not work in the same space, do not go to the same office, each week doing conference calls, working with web-net meeting. The challenge of virtual and global collaboration is a cooperation network. Skillfulness of individually working with networks of people across boundaries and from different culture is an essential requirement/underlying a number of multinational companies. Her core competencies are strategic thinking.

Understanding and appreciating on the different cultures are core competencies of the vocational graduates. Wagner (2008: 25) states that concern for global change refers to the needs of the student's ability to (1) use the ability of critical thinking and problem solving to understand global issues; (2) learn from and work collaboratively with individuals of different cultures, religions, and lifestyles in the spirit of mutual needs and open dialogue in the context of work and communicate; (3) understand the culture of the countries, including the use of English. To survive, the necessary capabilities are flexible and can adapt as a lifelong learner. The key competence is the ability to handlers ambiguously, ability studying the parts of the core and fundamental, strategic intelligence. Based on the above analysis it can be said that the graduates of vocational excellence requires soft skills in order to have the high competitiveness. Thus career guidance conducted at TVET should be based on the development of soft skills.

## 2.2 Entrepreneurial Career Guidance

The Intense of the competition and the lack of jobs is a reality challenges faced by the vocational educational. The number of educated significantly (BPS, 2014). Unemployment in Indonesia is increased Darmaningtyas (2008) stated that there is a tendency the persons who have the higher level of education they have the lower desire for entrepreneurship. The college graduates prefer desire to get a job securely. They did not dare take the risk occupations such as entrepreneurship. The main choice of the college graduates are as employer or laborers. Being self- employment is often viewed as a career option which is not favored because faced with everyday situations that are uncertain, full of obstacles, and frustration associated with the establishment of new businesses.

Various studies show that education and training affects one's perception of entrepreneurial career. On the other hand the entrepreneurial spirit is significant effect on the job readiness vocational students (Indriani, 2014). Therefore, entrepreneurship education should be designed in such a way in order to give effect in boosting interest in the graduates for entrepreneurship.

The entrepreneurial learning pattern contains five elements minimally. There are: thinking, feeling, skill, mental readiness, and direct experience. The empirical studies also indicate that the need for achievement (n Ach) is a key factor in the success of entrepreneurship. For the school to be able to create an atmosphere that encourages the development needs within the student achievement through career guidance. Vocational career guidance demanded to prepare graduates for entrepreneurship. The TVET graduate's readiness as entrepreneurship is the fulfillment of the minimum standard of competence that have been established which includes managerial skills, planning of production and marketing, and financial management indicators: (1) the ability of entrepreneurship; (2) the prediction business fields; and (3) potential graduates sought.

Career guidance is basically an orientation with services, information services, and job placement. Career Guidance is services to prepare the students to choose a future career. Proper and sufficient information about an individual is an asset that is essential for the individual to develop his career. Individual understanding of the weaknesses and strengths. Student since grade one guided his career that he has the readiness to enter the workforce. Based on above analysis concluded that to improve graduates competitiveness can be done through the spirit of entrepreneurship. Career guidance was developed based on the effort to improve the ability of students to entrepreneurship.

The challenges of the global era led to the demand that graduates have the ability to develop his/her mental attitude of entrepreneurship. In the global competition era required the guidance career development pattern that different with traditional career development (Herr, 1997). Development of new career is career development based on soft skill and entrepreneurial focus development. This is in line with the dynamics of career guidance system framework that emphasizes more complex aspects include motivation, competence, experience, and interaction with the environment. Career guidance is conducted continuously so that students can make choice independently.

### 2.3 The Principals Role

The school principal is one of the keys to success in achieving the vocational educational institutions goals. The principals has role to set the vision, to build values, norms and culture of schools, to develop commitment and encourage motivation of organization, so that he can give their best performance until the school reached a quality results (dam & Gamage, 2008).

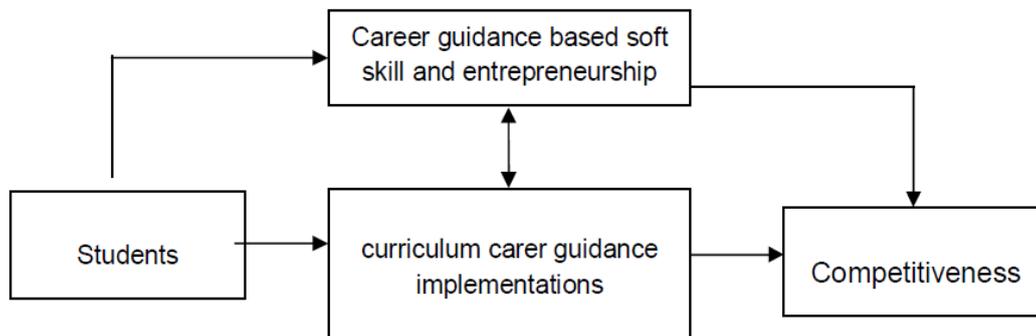
Dardiri (2011) confirmed that to achieve success school takes principal who have entrepreneurial souls. The principal also serves to empowering SMK's stakeholders for able and willing to give support in capacity building, institutional, systems, resources, culture and the direction so that the trust of stakeholders towards vocational education has increased. Usman (2010) state of seven role of the principal there are (1) educator, (2) manager, (3) administrator, (4) supervisor, (5) leader, (6) climate creator, and (7) entrepreneurial. In the context changes era, school principal plays the vital role in building orientation of the learning-based competence to constructivist learning, change of the curriculum that emphasizes hard skills into the curriculum oriented hard skills and soft skills. It is required principals reliable to give strong directions, provide motivation and facilitate all stakeholders to achieve the goal of competitiveness of graduates.

### 2.4 The Relevant Research Roadmap

Research and studies on the implementation of career guidance, soft skills, and efforts improving the graduate's competitiveness carried out as follows. Principals have an important role to play, in association with other stakeholders, in exercising strategic leadership so that career guidance services can be better planned and better coordinated. In many schools this role has not been exercised well, although some recent examples exist of more effective planning and co-ordination mechanisms that can encompass at least the key schools portfolio. Principals should also strengthen the voice of consumers in the ways that services are delivered. Instruments include need and satisfaction surveys and community consultations.

OECD (2004) stated that career guidance policy has strong impact on Career developmental level: individual, organizational, and societal; OECD (2011) Learning for Job Review of Vocational Education and Training; Rashid (2011) reveal that career development interventions are important regardless of students with good academic performance or students at-risk. If schools counsellors are continued to hold the thinking that career development intervention only for good academic performance students to plan for getting into college only, this will not benefit the at-risk students.; Dardiri, (2011) Soft Skill and Entrepreneurship can improve graduate's competitiveness; Dardiri (2012) showed that the vocational schools that has high soft skills and entrepreneurial gain the trust of the industry. SMK requires principals whose have able to develop a vision, direction, become role in preparing graduates character. Principals who has able to foster entrepreneurial spirit and attitude for graduates.

Recognized the rapid growth of jobs and careers expand employment opportunities, but it is becoming more difficult choice, career guidance is needed to avoid mistakes career for the young generation. Providing career guidance resources reliable and impartial guidance so that young people do not have to rely on informal sources of guidance, like family and friends who have the power, but may only offer choices. Thus, TVET institution must being encourage to implementing soft skill and entrepreneurial career guidance model. Its linked to wider competency-oriented school reforms. Personal and career planning is defined as one of five “broad areas of learning” throughout schooling. The aim is to provide support for students’ identity development in secondary school and guidance in career planning throughout school. This linked to ensuring that students understand the usefulness of their studies (in languages, mathematics, sciences and so on) and why they are studying them illustrated on Figure 1.



**Figure 1.** Soft Skill and entrepreneurial career guidance model

### 3. Conclusion

Conclusion can be drawn from the above discussion are: (1) Soft skills and entrepreneurial career guidance model is the system of career guidance in vocational education oriented on entrepreneurial spirit and soft skill development. (2) implementation of soft skill and entrepreneurial career guidance model encompass: (a) strengthening input (students) against potential self-awareness, (b) preparation of guidance materials that focus on strengthening entrepreneurship and soft skills student, (c) provision of information and type of working competency required of industry/world of work; (d) teaching learning implementation based on teaching factory; and (d) teaching learning evaluations based on authentic assessment; (3) soft skills and entrepreneurial career guidance model can improve the TVETs graduates competitiveness.

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## The Competitiveness of SMK and Diploma 3 Graduates of Hospitality at the Entry Level and Employability Skills in Developing Career Pathways

Femmy Indriany Dalimunthe<sup>1</sup>, Eddy Sutadji<sup>1</sup>, Rita Margaretha Setianingsih<sup>2</sup>

<sup>1</sup>Malang State University, <sup>2</sup>Medan Tourism Academy, Indonesia

### ARTICLE INFO

*Article history:*

Received 07 December 2015

Received in revised form 02

January 2016

Accepted 26 January 2016

Available online 01 February 2016

*Keywords:*

Competitiveness

Entry Level

Employability Skills

Career Pathways

*Corresponding author:*

femmy\_dalimunthe@yahoo.co.id

### ABSTRACT

Along with the development of the ASEAN Economic Community in 2015, Indonesia is required to generate professional human resources in order to compete with other countries, particularly subject to competition in the services sector. Hotel is a product in the hospitality industry that have an important role in the tourism business. Intense competition in the hospitality industry demand the hotels to provide the best service to the customers. Vocational education has a function to prepare a professional and competitive workforce in the industry. The hospitality graduates will be able to fill the existing organizational structure in accordance with the educational background. The Presidential Decree No.8, 2012, Article 5 states that equalizing learning outcomes generated through education with the level of qualification at KKNi. KKNi is intended as a description of outcomes that must be mastered by graduates of vocational education, higher education, vocational training institutions as well as independent study. Graduates of Vocational and D3 of hospitality began their career in the hospitality industry by filling the positions in the organizational structure. In a few of star hotels in Medan, North Sumatra, hospitality graduates of vocational and D3 have competitive power in a very thin difference. Their entry level almost similar to the same position as well as employability skills and technical competence are almost equal that will provide a gap between the educational background of the career pathways that exist in the world of hospitality. It is very wise if there will be collaboration between the hotel industry, the educators, community leaders, and high-level policy makers in generating strategies to enhance the competitiveness of human resources professionals in the hospitality and placed in accordance with the level of education based KKNi.

## 1. Introduction

Asean Economic Community (AEC) has already begun in early 2015. This will be a highly competitive among Southeast Asian countries, namely Singapore, Malaysia, Philippines, Thailand, Brunei Darussalam, Cambodia, Laos, Myanmar and Vietnam in the field of economy. Commodity entry and exit of goods, services and capital between countries is valid so that competition in the industrial sector increasingly stringent. Based on the above, Indonesia is required to compete in all sectors, one of the sectors is that engaged in the tourism. MEA provides the opportunity and the chance to develop the tourism sector, in line with the improvement of international tourism, especially with ASEAN. This will encourage and increase the level of foreign tourist arrivals from Asean and outside the ASEAN member countries, including Indonesia. These opportunities also pose some challenges that might occur in the era of the MEA, namely how to improve the Human Resources (HR) of competitive excellence, and competitive in all sectors of industry and services at a competitive level ASEAN region, for the development and improvement of human resources equivalent to the regional level, such as ASEAN and internationally in the field of tourism continues to be done. Hotel is one of the contributing factors in tourism that has an important role in developing tourism infrastructure. Hotel as one type of accommodation that is directly involved in the provision of services of lodging, food and beverages and other facilities, is expected to give satisfaction to everyone who uses these services. Hotel requires workers who are professional and loyal to provide the best service and able to survive in this competitive era.

In line with *Kualifikasi Baku Jenis Pekerjaan Indonesia* (2002: x-xi), the professional skill level is measured by the number of years of formal education, training and relevant experience that are usually required to fulfil the set of goals satisfactorily. Details of formal education are as follows: complete primary school, junior, senior, D1, D2, D3, S1, graduated D4, S2, and S3. In defining the scope of work on the base class type, KBJI uses education as a basic skill requirements. At the base class 0 and 1 does not require skill requirements. Group 2 requires minimal skill requirements equal S1. Most types of work in the base class 3 requires minimal skill requirements D3. Most types of work in the principal categories 4,5,6,7, and 8 require minimal skill requirements equivalent graduating junior and senior. A period of training and experience in the workplace sometimes is also required to complete the formal requirements. This period can be seen as a complement to formal training in some cases replace most expertise. Most of the base class 9 requires no skill requirements.

Based on the above, graduates of SMK and D3 in Hospitality for hotel operations such as the field of front office, housekeeping, and food & beverage should not have the same competence. This is because the D3 is the academy level that it is no longer a middle level vocational education, but it is a higher education. D3 Graduates in hospitality is expected to fill the supervisor level. But in fact, the graduates of vocational and D3 is considered to have the same competence for field operations and has the same entry level in their career started. Although it's early career started at the same level positions, a graduate Diploma 3 should only last a minute in the level of rank n file, then move up or promotion to a supervisory level or the next level in accordance with the profession career pathways. The purpose of this paper is to contribute ideas in the form of exposure conceptually based on critical analysis of the researchers in the development of SMK and D3 graduates' career pathways, so that there is clarity of self-development in the future.

Based on observations in the hospitality industry, the employer does not see the educational background as something that is important to support one's career. The problems are caused by the employers in hiring someone will do a first employee assessment based on employability skills. They will do the selection test and interview the prospective employees not based on the applicant's educational background have. In fact, the majority of employers found that employability skills of SMK graduates are better than D3 graduates. If this is not addressed, then in the future, graduates of SMK career pathways will be equal to D3 graduates, especially in the entry level of their careers. Thus we need a strategy to improve the competitiveness of professional human resources in the hospitality and placed according to their level of education based KKNI.

## 2. Theoretical Review

Human resources to fill the existing organizational structure of the hotel, especially for hotel operations, recruited from vocational education school and higher educational institutions in the hospitality field. Vocational education has a function to prepare a professional workforce and competitiveness in the industry. Vocational education is the education that is designed to develop the skills, abilities, understanding, attitudes, work habits, and appreciation needed by workers in entering the employment and make progress in a meaningful and productive jobs (Adhikary, 2005). According to Pavlova (2009: 2) tradition of vocational education is to prepare students for working. Vocational education and on the job training is the education that prepares the formation of skills, understanding, behavior, attitudes, work habits and an appreciation of the jobs needed by the community business / industry, overseen by the public and the government or in the contract with the agency and based productive. The above statement explains that vocational education aims to prepare graduates who are ready to use the knowledge and skills and attitudes required by the industry.

According to Law No. 20 of 2003 on National Education System: Article 8 paragraph (3) which states that secondary education that form High School (SMA), Madrasah Aliyah (MA), vocational schools (SMK), and Madrasah Aliyah Vocational (MAK) , or other equivalent forms, while according to article 19 paragraph (1) states higher education is an education after secondary education includes diplomas, bachelor's, master's, specialist, and doctoral organized by the college. From the above statement, it can be explained that vocational education is secondary education that prepares students primarily to work in a particular field. Unit forms of education is vocational high School (SMK), which has a wide range of specific competency skills. Higher Vocational education that prepares students to have a job with a certain applied skills, up the ladder diploma 4 that is equivalent to the degree program.

Criteria that must be owned by the vocational education are (1) the orientation is on the performance of individuals in the industry, (2) justification specifically on the real needs at the work field, (3) focus the curriculum on aspects of the psychomotor, affective and cognitive, (4) a measure of success is not just confined to school, (5) sensitivity to the development of the industry, (6) require adequate infrastructure and (7) the support of the community. Based on the above criteria, it can be seen that one of the vocational education criteria is to produce students who have the ability and competence appropriate to the needs of the industry, so they are ready to enter the industry. Institutions of higher vocational education that orient in the field of hospitality and tourism have some courses, such as (1) Rooms Division management, (2) Food and Beverage Management, (3) Food Production Management, (4) Patisserie Management, (5) Hotel Administration, (6) Tours and Travel Management, and (7) Tourism Planning and Marketing Management. Overall these courses have the same vision, namely to produce qualified human resources in the field and is ready to be placed in the industrialized world in accordance with the specific applied skills learned.

The institute is also believed to provide a set of knowledge, skills and professional attitude in preparing students to enter the industry through the teaching and learning process in the form of material competency course and work experience in developing core competency. The education process in the vocational education has a different character with general education, when viewed from the educational criteria, the substance of the lesson, and output. Implementation of vocational education can be done through the following models: (1) vocational schools, (2) internship (apprenticeship), and (3) education and vocational training employment (on the job training). In accordance with the argument of Prosser (1950) that vocational education will be effective and efficient if the learning environment is a replica of a working environment that will be occupied by graduates later.

In addition to the higher education institutions, vocational schools also produce graduates who are ready to work professionally in the hospitality industry. SMK is a vocational secondary school that has the same level with Senior High School. Meanwhile, higher education institutions provide vocational education and training work practices for three years longer than SMK. Therefore, institution of higher education is expected to produce graduates who are professional and ready-made than the fresh hospitality graduates of vocational education school (SMK), in particular on entry level (early career). According Burack and Mathys (1983) career pathways is the path of the first level of a career to get to the last level (the highest), through the stages of work, personal development, experiential learning and promotion. From the above definition can be explained that the career pathways and career advancement of a person is affected from

the beginning of his career (entry level) until he reaches the top or highest level last. According to Hinckley and Hull (2008: 37) that there are seven components that support the career pathways of adults: (1) Personal needs; (2) Academic Skills; (3) Career Focus; (4) Employability skills; (5) Career and Technical Skills; (6) Job entry skills; (7) Advanced skills. From the above statement can be explained that the employability skills is one of the components that support one's career pathways.

## 2.1 Defining Employability Skills

Employability skills also known by many other terms such as generic skills, soft skills, key skills, common skills, essential skills, basic skills, necessary skills, competencies skills, and transferable skills. Vocational education is an education that prepares students to work professionally in a particular field. The graduates are expected will be ready and able to work both independently (self-employed) and fill vacancies in the industry. For that, learners are not only required to have hard skills but also employability skills. Employability skills fulfill a crucial role in shaping an individual's personality and complement their technical skills (Schulz, 2008). A graduates who only have technical skills can not be accepted to work in the industry because it does not have the job skills (employability skills). Conversely, a graduate whose only job skills may find it difficult to get a job because he did not know how to do the job properly. Thus, potential employees need both types of skills to compete, get and keep a job (Omar, et al., 2012).

Hinckley and Hull (2008: 41) states that the employability skills or soft skills are components of career and technical education have been identified, defined and implanted into the curriculum since it was introduced by SCANS in 1992. Employability skills including interpersonal relations, cooperation in team, able to think critically, and be able to solve the problem.

Employability skills often referred to job skills or competencies skills. Employability skills are general and across all types of industry, business size, and the level of work ranging from entry level workers to the highest position (Robinson, 2000). Ability to work (employability skills) depends on the knowledge, skills and attitudes, how workers use these assets and how workers demonstrated its ability for companies (STEMNET, 2010)

Billing (2003: 335) states that employability skills are the most desired by the industry that can be taken to various situations, specifically that expertise in problem solving, communication, teamwork and critical thinking. Job skills involves the ability to contribute to the efficiency of work in an organization that is combined with excellent communication skills both orally and in writing and critical thinking, which formed the basis of academic and success in the workplace (Munro: 2007). Employability skills not only include the desired attributes of prospective employees but also the basic needs of an individual to be considered in the work. These skills are necessary to perform their duties efficiently and contribute to the growth of an organization (Bennett: 2006). In line with the above Overtoom (2000: 2) states that the employability skills essential for career success for all levels of workers and to all levels of education.

There are several opinions about the employability skills by sharing dimension. But basically this division has the same indicator or competence. Based on the dimensions, employability skills are part of the soft skills. Soft skills have 23 attributes divided into two parts, namely intrapersonal skills and interpersonal skills (Sailah 2008), while *employability skills* divided into multiple dimensions namely; the 3-dimensional by the Secretary's Commission on Achieving Necessary Skills (SCANS) and The Conference Board of Canada and 8 competence by the Organization for Economic Co-Operation and Development (OECD) (Surono, 2012), Australian Chamber of Commerce and Industry (accii), and the Business Council of Australia (BCA). Each dimension/competency described by SCANS, the Conference Board of Canada, OECD, AACI, and BCA have an indicator that is almost the same although there are differences in the distribution of the dimensions/ competencies. Comparison of employability skills and the division of the skills can be seen in the table below:

**Tabel 1.** Comparison of employability skills and the division of the skills

OECD, AACI and BCA	SCANS	The Conference Board of Canada
<ol style="list-style-type: none"> <li>1. Communication</li> <li>2. teamwork</li> <li>3. problem solving</li> <li>4. Initiative and enterprise</li> <li>5. Planning and organizing</li> <li>6. self management</li> <li>7. Learning</li> <li>8. Technology</li> </ol>	<ol style="list-style-type: none"> <li>1. Basic skills (basic skills) include skills:                             <ul style="list-style-type: none"> <li>• Reading</li> <li>• Writing</li> <li>• Numeracy and mathematics</li> <li>• Talking and listening</li> </ul> </li> <li>2. Thinking skills (thinking skills) skills include:                             <ul style="list-style-type: none"> <li>• creative thinking</li> <li>• Make decision</li> <li>• Solve the problem</li> <li>• visualize something</li> <li>• Learning and reasoning</li> </ul> </li> <li>3. Personal qualities (quality individual skills) include:                             <ul style="list-style-type: none"> <li>• Individual Responsibility</li> <li>• Confidence</li> <li>• socializing</li> <li>• self-management</li> <li>• Integrity</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Fundamental skills, including skills:                             <ul style="list-style-type: none"> <li>• Communication</li> <li>• managing information</li> <li>• Using numbers (mathematical)</li> <li>• Think and solve problems</li> </ul> </li> <li>2. Personal management skills include skills:                             <ul style="list-style-type: none"> <li>• Act and behave positively</li> <li>• To be responsible</li> <li>• Adapting</li> <li>• continuous learning</li> <li>• Work safely.</li> </ul> </li> <li>3. Teamwork skills include skills:                             <ul style="list-style-type: none"> <li>• Working with others in a team</li> <li>• Participating in a project or task.</li> </ul> </li> </ol>

### 3. Research Methods

The method of this research is using literary study/conceptual study. In this research, the researchers want to analyze critically the existing theoretical and empirical studies so that can contribute ideas in a conceptual form to clarify the position of alumni SMK and D3 graduates in career pathways according to KKNi.

### 4. Discussion

The studies on the importance of employability skills in the workplace and support the career of an employee have been carried out by the experts. Research conducted by Richens & Mc Clain (2000) by surveying 400 employers on their perception of workplace basic skills and competencies that are required for the employees who are at work and the potential employees. The employers stated that they want entry level workers to possess employability skills rather than technology competencies, and most importantly for these employers (with a rating above 92.6%) are the basic skills, thinking skills, personal qualities skills and interpersonal competencies. A study conducted by Evers, Rush and Berdrow (1998) indicated that the competencies students need to be developed to enhance their employability skills are self-management; communication; managing people and tasks; and mobilizing innovation and change. In the hospitality industry, especially in the city of Medan, the employer has not found yet the SMK and D3 graduates in hospitality that possess the whole competence of employability skills such as listed above, especially when interviewing graduates who will enter the workforce.

According to Wilhelm et.al. (2002), the employer asserted that too many high school and college graduates who do not possess the skills necessary to contribute productively in their jobs without extensive employer training. Soft skill are important in virtually every profession, especially when a person has reached the level of sales manager or owner of the agency that required him to work with others. According

to Ramlee (2002) some of the graduates of technical and vocational education (TVE) usually master their technical skills but employers normally feel dissatisfied of their employees when it comes to employability skills because they lacked the skills of motivation, communication skills, interpersonal skills, critical thinking, and problem-solving and entrepreneurial skills. Based on the results of a survey by the National Association of Colleges and Employers, USA, 2002 (survey of 457 leaders), the grade point average (GPA) is not considered important in the industry, far more important are soft skills that include communication skills, honesty and cooperation, motivation, adaptability, other interpersonal competence, with a value orientation that respects the effective performance (fk.umsida.ac.id). This is similar to the research conducted by the Association of MBAs worldwide for the graduates of MBA program which was concluded that the soft skills play a bigger role in career advancement. This study was conducted in 2008 and is a continuation of research that began in 2006 (www.on the job trainingjournal.com). From the results of the survey that was conducted the Curriculum Centre of National Education Department revealed that the key to success is 80% mindset and 20% technical skills.

The results of the study above shows that employability skills has an important role in starting one's career, especially at the entry level and is one component that support career advancement in one's career pathways. Kwok (2004) found out that the competitiveness of individuals in the labor market depends not only on their vocational competence but also on whether these individuals have employability competencies that they can continue to expand. Employability competencies must be developed to the extent that individual can find a suitable job and can acclimatize to social, technological and organizational changes (Burgaz, 2008). The employer of hospitality industry in Medan, when selecting candidates, most prefer the soft skills rather than technical skills or educational backgrounds of prospective employees. Based on the above, the SMK and D3 graduates in the hospitality should be prepared physically and mentally in school and are equipped with technical competence and employability skills in order to compete and pursue a career in the hospitality industry.

Schools with a higher education level should focus on the experience, both in the classroom and in the field, which makes the students are able to develop these essential competencies. Hee (2008: 21) in his research stated that multitechnical skills, good communication skills, leadership skills and financial skills are the skills needed to work effectively in the hospitality industry. So it is important for the hospitality students and educational providers to identify skills needed by the hospitality industry. If educators know what the industry wants from the new employee, educational providers can focus on changing their curriculum to support the expectations and needs of the industry and increase satisfaction of the hospitality students.

Audu, et al (2013) stated that students should acquire employability skills while they are at TVE institutions or in schools. Employability skills can be learned through classroom instruction, in the field or outside the classroom. These skills are abstract in nature and need a long time to train students in order to fully acquire the employability skills. Employability skills or generic skills, including achievement, a sense of understanding, and the personal qualities that make an individual is willing to work, develop career and success in their chosen occupation (Omar, et al., 2012). Based on the foregoing, it can be explained that the role of education is very important in order to develop employability skills so that a student is ready to enter the industry and compete in the workplace and achieve career success in accordance with the career pathways he wanted.

Harper et al. (2005: 231) in their research found that the role of formal education in the career emphasized that higher education levels appear to make sure the graduates at the beginning of entering the industry will be at the level of assistant manager, while graduates with the lower education level start his career as a supervisor. This explains the importance of an education. Based on the observation conducted by the researcher to several stakeholders in the hospitality industry in Medan, found that the entry level of the early career for the graduates of SMK and D3 in hospitality tend to be the same though the D3 graduates have 3 years longer education. Both at the level of rank n file or worker level basis. Judging from its competence, D3 hospitality graduates also have the competence and performance test results similar to SMK hospitality graduates especially for operational areas, such as receptionist, bell boy, room boy and waiter. In some cases, the hospitality industry in the city of Medan, tend to see the SMK graduates have better employability skills than a D3 graduates.

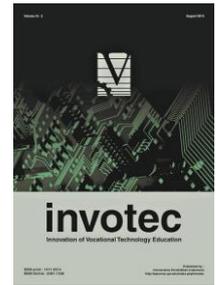
## 5. Conclusion

The success of a school can be seen from the quality of its graduates. Along with the implementation of MEAs, graduates of vocational schools and higher level has to be competitive in the industry and accepted to work in the industry in accordance with the level of education based KKNi so as not to be the spectators in our own country. The competitiveness of individuals in the industry depends not only on their technical competencies but also on whether these individuals have employability competencies that are needed by the industry. The students should acquire employability skills while they are at TVE institutions or in schools. Employability skills can be learned through classroom instruction, in the field (on the job training) or outside the classroom. Based on the above, it is important for the school and the industry to work together to generate a curriculum that will produce graduates with employability skills and competitiveness in the industry as well as synchronized with the appropriate educational pathways from other countries associated with MEA. Vocational schools and colleges that is supported by the industry must develop a curriculum that is based on Indonesian National Qualifications Framework (KKNi) in order to produce graduates who are competent as required by the industry globally (nationally and internationally) and can be placed to work in accordance with their education level. The collaborations between the educator , industry, community leaders and the authorities (high level policy makers) also necessary in order to implement a career pathways in accordance with the background of education.

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# The Constructivist Approach: Radical and Social Constructivism in the Relationship by Using the Implementation Career Level on the Vocational Education

Haryadi, Iskandar, Dicky Nofriansyah

Faculty of Engineering, Universitas Negeri Padang, Indonesia

## ARTICLE INFO

### *Article history:*

Received 02 December 2015

Received in revised form 12

January 2016

Accepted 28 January 2016

Available online 01 February 2016

### *Keywords:*

Radical Constructivism

Social Constructivism

Vocational Education.

### *Corresponding*

*author:* haryadi.fe@gmail.com

## ABSTRACT

Vocational education is oriented to the secondary educational in which focusing on the development of the student in order to be ready to work professionally and ready to improve their self-potential, in particular, field work. The aim of this paper is to analyze the constructivist approach to vocational education, the relationship between radical and social constructivist and the implementation of the career level on the voced. The result of this discussion to explain the relationship between radical constructivism and social constructivism is viewed the strong abilities. Radical constructivism related the construction mental structure and meaning by individual. After studying, the social constructivism is more focused the social interaction than the individual knowledge construction, the stressing of construction is shown about the meaning in the social interaction activities. Implementation would be successful about the career in the vocational education and needed the educators to make an active facilitator, particularly to guide the students by question with their assumptions and trained the students by reconstructing the new meaning of knowledge, so that students can be a good career.

## 1. Introduction

As part of the national education system, vocational education is an education in secondary education that promotes the development of the ability of learners to be able to work in a particular field, the ability to adapt in the workplace, see employment opportunities and career development in the future. Development of vocational education curriculum should be comprehensive and responsive to the social dynamic, relevant not overload, and able to accommodate the diversity of needs and advances in technology. There is a tendency in the world of education today is to go back on the idea that children will learn better if the environment is created naturally. Learning would be more meaningful if the child has his own what

he learned, not knowing. Oriented learning targets proved successful mastery of subject matter within the competence given the short term, but fail to provide children solve problems in the long-term life. Contextual approach (contextually learning and teaching) is an approach to teaching that characteristic fulfill that hope. Contextual learning is a concept of learning where the teacher presents real-world situations into the classroom and encourage students to make connections between the knowledge possessed by the application in their lives as members and the community. With this concept, the learning outcomes expected to be more meaningful for students. Seven major components underlying the application of contextual learning in the classroom. Seventh major component that is constructivism, questioning, inquiries, community learning, modeling, reflection and authentic assessment. The argument in this paper is based on social constructivism and radical constructivism in related implementation career level on the vocational education. At first, the author introduced the notion of constructivism, radical constructivism, and social constructivism in brief in conjunction with the implementation of vocational education career.

## 2. Literature Review

### 2.1 Constructivism

Constructivism meaning varies according to one's perspective and position. In the context of education, there is the philosophical meaning of constructivism, as well as personal constructivism. It seems imperative to introduce the notion of constructivism in epistemology, philosophy, and theory of learning. Constructivism is a system of beliefs (worldview) in which the construction of knowledge or process of knowing is compared metaphorically with the construction of a building or furniture or an artifact (Ernest, 2010). The act of construction depends on what tools an individual already has. The tools are prior conceptions of the world through experiences. An individual may construct knowledge of something based on what he or she already knows about it and how he or she reconceptualizes the new experiences based on earlier experiences. The process of knowing is related to one's cognitive, affective, psychomotor, mental, and metacognitive responses to the change within those conceptions, Glasersfeld. 1995<sup>3)</sup>. Hence, one's construction of knowledge stands on what he or she already has in the form of prior knowledge and conception, and how the new experiences adapt to the new conceptions, schemes, or actions (Steffe & Thompson, 2000).

Constructivism has many faces- trivial, constructionist, cultural and social, radical, critical, feminist, and postmodern constructivism. One can be a trivial constructivist or a constructionist. Others can be critical or feminist or postmodern constructivist in terms of how they practice teaching and learning and how they conceive and implement the respective epistemologies. The intent this paper focuses on radical and social constructivism in the Relationship by using the Implementation Career Level on the Vocational Education. Doolittle and Camp (1999). Constructivism look not as a single entity (entity), but looked at as a series of theoretical. Doolittle and Camp Classify understanding constructivism into : cognitive constructivism, radical constructivism, social constructivism. Based on some opinions on the definition of constructivism being addressed by experts in the above it can be concluded that constructivism is a philosophy of knowledge that had the notion that knowledge is the result of construction (formation) the man himself. Humans construct their knowledge individually and through their interaction with objects, phenomena, experiences and their environment. A knowledge is considered correct if it can be useful knowledge to deal with and solve problems that appropriate (Suparno, 2008:28).

### 2.2 Radical Constructivism

Radical Constructivism (Fischer, 1995) is part of a larger 'constructivist' movement in the philosophy and sociology of science (Schwandt)<sup>8)</sup>. Radical Constructivism puts forward two main claims (Glasersfeld, 1989: 162) knowledge is not passively received but actively built up by the cognizing subject; b) the function of cognition is adaptive and serves the organization of the experiential world, not the discovery of ontological reality.

The paradigm of radical constructivism assumes that the mind is like an organism undergoing through an evolutionary process. Wuketits, 1984<sup>10)</sup>. The metaphor of the evolved mind, to this author, is the cognitive re-construction of the experiential world that continues an adaptation to better and clearer conceptual or mental percepts or schemes through reorganization of this world (Ernest, 1995; von Glasersfeld, 1995). It is worth noting that Radical Constructivism differs from Darwinian models of evolutionary epistemology in that it does not propose that different constructed knowledges gradually converged and eventually will merge into one knowledge system representing 'the real world' in full.

### 2.3 Social Constructivism

Social constructivism emphasizes the importance of culture and context in understanding what occurs in society and constructing knowledge based on this understanding (Derry, 1999). This perspective is closely associated with many contemporary theories, most notably the developmental theories of Vygotsky and Bruner, and Bandura's social cognitive theory. Social constructivism, strongly influenced, Vygotsky's work (1978) work suggests that knowledge is first constructed in a social context and is then appropriated by individuals. According to social constructivists, the process of sharing individual perspectives-called *collaborative elaboration*. This results in learners constructing understanding together that wouldn't be possible alone. Social constructivism views each learner as a unique individual with unique needs and backgrounds. The learner is also seen as complex and multidimensional. Social constructivism not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilizes and rewards it as an integral part of the learning process. Wertsch. 1997<sup>13)</sup>.

### 2.4 Career Defenition

In his foreword for the 2007 Handbook of Career Studies, by Gunz & Peiperl, Schein states that "The career field has grown enormously, but it is far from integrated. Rather, a few paradigms built on individual developmental theories such as those of Super and Holland have dominated the field. Such lack of integration is not in itself a problem, but the disregard of researchers in one paradigm for the relevant work of researchers in another paradigm is a problem when each set of researchers presents their work as the final and correct analysis of a particular area. Until this day, the meaning of career is understood differentially. For a long-range, historic view of career theory, we refer to the contribution from Moore, Gunz and Hall, 2007, in Gunz & Peiperl.

With Parsons (1909) as a pioneer, traditional definitions restrict career to professional work life which included advancement. Exemplary in this respect is the Oxford English Dictionary. 1989<sup>15)</sup> definition of career as "a course of professional life or employment, which affords opportunity for progress or advancement in the world". The most cited definition here is that of career as "the evolving sequence of a person's work experiences over time", Arthur, Hall & Lawrence, 1989, p.8<sup>16)</sup>. Gunz & Peiperl (2007, p.4) attribute the relative success of this definition to its "virtue of being succinct and of leaving the matter open as to whether we are interested in experiences as the person experiences them (the so-called subjective career), Hughes, 1937<sup>17)</sup> or as others see them (the objective career) and whether we are interested in the person as an individual or in the institutions through which he or she passes in the course of life (and in so doing, transforms and is transformed by them to a greater or lesser extent). Even broader, including the life career, Super. 1976<sup>18)</sup> defines career as "the sequence of major positions occupied by a person throughout his preoccupational, occupational and postoccupational life; includes work related roles such as those of student, employee, and pensioner, together with complementary vocational, familial and civil roles" (p. 20).

Indeed, the career spectrum broader meaning and deeper than similar terms. Career implies a sequence of occupation, job and positions occupied throughout a person's work experience. (Tolbert, 1974). In line with this opinion, Healy 1982: 5<sup>19)</sup> argues that a career can be defined, "as the sequence of major position occupied by a person throughout his, or her preoccupational, occupational and post-occupational life". Both this sense indicates that a person's career occurred since the time of study, work, and retirement. The problem that arises is whether the position of learning, work and retirement can be regarded as a career? That by Super (1976) referred that are more careers oriented person. The position can be seen as a career, depending on one's view and perspective regarding career where he was using.

The most important thing is how the quality of the individuals behaved in any such position. With this assumption, it can be said that the quality of behavior in these positions can be felt and meaningful to the lives of the individuals themselves.

Career success can be achieved through education, hobbies, profession, social, personal, and religion. Career covers all aspects of an individual's life, which includes (1) life-roles, such as workers, family members and citizens; (2) life-settings, such as in family, community agencies, school or work; and (3) life-events, such as in entering a job, marriage, duty, loss of a job, or resign from a job. Based on the various opinions on the above, it can be concluded that a career is a meaningful self-realization through a series of activities and covers all aspects of life are realized because of the strength of the inner person. Self-realization will be worthwhile when there is satisfaction / happiness of ourselves and the environment.

### **3. Methods**

This paper is done by exploring the sources related to the topic. This study was descriptive qualitative research to explore the information constructivist approach (radical and social) in relation to the implementation of a career in vocational education. Source of data to be used is secondary data obtained by collecting data that is required in papers or collect references and literature related to the discussion in this paper such as research reports, theses and journals as well as reference books and data another support in varied websites that have relevance to this study. Data collection technique used is a literature review that is by collecting data by examining a number of literature such as research reports (theses, journal), books and other supporting data in the varied websites related to this topic.

### **4. Results and Discussion**

#### **4.1 Radical and Social Constructivism in connection with use of Implementation in Vocational Education Career Level**

In theory, radical and social constructivist approach in vocational education is an approach that is very strong implications in which knowledge is formed from the formation process of construction based on experience. Radical and social constructivism are both seen as more powerful forms of constructivism. Radical constructivism attention to the construction way of thinking structure and meaning individually to interpret and construct the experience of interacting with the environment. In this case the radical construction is deemed to have a higher degree of cognitive constructivism than construction of mental structures (Doolittle and Camp, 1999). Social constructivism more attention to the social interaction of the individual knowledge construction; the emphasis on the construction of meaning in social interaction activities.

Career Implementation in vocational education in theory illustrates that the concept of constructivism relevant and influential in the career development of students in vocational education The combination of radical and social constructivism is a powerful form of constructivism shows that the development of construction mental structure and meaning individually to interpret and construct the experience of interacting with the environment and with regard to social interaction with emphasis on the construction of meaning in social interaction activities will greatly affect the level career in vocational education. From a career guidance standpoint, the important thing to remember about vocational education is that it has been seen for too long as useful to only highly restricted sample of the total student population rather than to all or most students. The mutual contributions of vocational education to Career Education are examined as recommendations are developed for greater meshing of these two elements of the educational process.

Through career counseling approaches in vocational education from an early age by implementing radical and social constructivism approach will give students to the variety and diverse types of careers in the field of vocational training. Reality it requires the ability to make a certain career choices appropriate level of student comprehension and understanding of the potential opportunities and career opportunities. The phenomenon that indicates that the service career information needs of vocational education students

have not been met, so that vocational students are confused in the face of the world of work. Although they are ready to enter the workforce as an area of expertise or skills practiced.

## 5. Conclusion

In the final stage of the come from this research the conclusion and suggestions from the research carried out the radical and social Constructivism in relation to implementation career level on the vocational education. Philosophy of constructivism assumed that knowledge is the result of human construction. Humans construct their knowledge through their interaction with objects, phenomena, experiences and their environment. Social constructivism and radical constructivism are a powerful form of constructivism. Radical constructivism attention to the construction of mental structures and means the individual to interpret and build the experience of interacting with the environment. Social constructivism more attention to the social interaction of the individual knowledge construction; the emphasis on the construction of meaning in social interaction activities. Implementation of radical and social constructivist approach early on will give an idea of the direction of career and vocational education for students to develop a career and a good competence.

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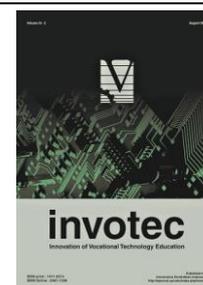
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# Implementing Project-Based Learning (PBL) in Final Collection to Improve the Quality of Fashion Design Student

Indarti

Department of Family Welfare Education, Faculty of Engineering, Universitas Negeri Surabaya, Indonesia

## ARTICLE INFO

### *Article history:*

Received 02 December 2015

Received in revised form 12

January 2016

Accepted 28 January 2016

Available online 01 February 2016

### *Keywords:*

Project-Based Learning

Final Collection

Fashion Design

### *Corresponding author:*

anfaku@gmail.com

## ABSTRACT

Fashion design education is one of education that prepares students to work in fashion design field. Students research future fashion trends, sketch designs, select colors, fabrics and patterns, and give instructions on how to make the products they designed. Fashion design education not only nurture and develop student's creative skills, it also teaches essential practical skills such as production techniques and material properties, to create a final product. According to this, new educational methods and strategies are needed in order engage students in the learning process and guarantee higher quality. Project-based learning (PBL) is example of educational approach that takes in account student-center learning. Project based learning (PBL) provides opportunities for students to build these qualities, as well as more deeply learn traditional academic content and understand how it applies to the real world. The methods of Literature review will apply in this research. Literature searches process through journal, proceeding and book. Literature searches are also undertaken most using computer and electronic databases. PBL methodology enhances students learning and improves students' confident, technical skill, soft skill and prepare graduate for professional practice. The benefit of implementing PBL are increase team work skill and student motivations, articulation between theory and practice, inquiry and problem solving.

## 1. Introduction

The center of global economic gravity is shifting toward Asia. The Association of Southeast Asian Nations (ASEAN) is in the process of creating a single market and production base, called the ASEAN Economic Community (AEC), which will allow the free flow of goods, services, investments, and skilled labor, and the freer movement of capital across the region. AEC is prepared starting in late 2015 by all

members of ASEAN which aims to improve the economic stability in the ASEAN region and form the economic area among ASEAN countries is strong. With the enactment of MEA at the end of 2015, ASEAN member countries will experience a free flow of goods, services, investment, and an educated workforce of each country. Indonesia is part of the ASEAN community trying to prepare oneself and take advantage of opportunities AEC, and should increase the capability to be able to compete with other ASEAN member countries. In the implementation of the ASEAN single market, the readiness of human resources is an important concern. Qualified, skilled and high competitiveness human resources is a necessity in the face of this global competition. Education is the key to producing quality human resources.

Fashion design education is one of education that prepares students to work in fashion design field such as fashion journalist, fashion illustrator, fashion stylist, pattern maker and fashion educator. Fashion designers are the people who create the clothing and accessories. They research future fashion trends, sketch designs, select colors, fabrics and patterns, and give instructions on how to make the products they designed. Fashion designers use their creative and technical skills to create varieties of clothing and accessories. Along with sketching and constructing original products, designers constantly study the industry to stay informed of current trends and to be able to forecast future styles. Fashion designers often have a bachelor's degree in fashion design and gain hands-on experience through internships and assistant positions. Some fashion designers are self-employed. They generally work for individual clients on a contract. Other designers are employed by manufacturing establishments, wholesalers, or design firms, creating designs for the mass market.

Fashion design education not only nurture and develop student's creative skills, they also teach essential practical skills such as production techniques and material properties, to create a final product. Final collection is one of kinds of course in fashion design education. This course prepares students to learn to become a fashion designer, how to develop collections and how to show collections. This course needs theory and practice how to realize 2D sketching become 3D in real garment and fit on the human body. To show the collection, students need collaboration with another organization such as model, choreographer, lighting, photographer, beautician, hair do and others. Students need social skill and good communication to build good network cooperation. The project of the final collection is intentionally very similar to that of designing a commercial collection. The difference of them is final collection in university requirement of curriculum while a commercial collection can only be validated by the market. The final collection could help students to confirm this – think of it as a dress rehearsal. This practice also enables to complete the skill set necessary to succeed in fashion design field (Atkinson, 2012:10).

Teachers must prepare a teaching method in accordance with the purpose of learning. The need for more student-center in fashion design education, which provide design experience to students, foster the development of soft skills and the link between theory and practice are some of the recommendation. According to this, new educational methods and strategies are needed in order engage students in the learning process and guarantee higher quality. Project-based learning (PBL) is example of educational approach that takes in account student-center learning. Project based learning (PBL) provides opportunities for students to build these qualities, as well as more deeply learn traditional academic content and understand how it applies to the real world (Larmer, 2015:2). Project-based learning not only positive learning outcome but also helped the students to improve their cognition, work ethics, and interpersonal skills (Kettanun, 2015).

## **2. Project-Based Learning**

“Project-based learning (PBL) is a model that organizes learning around projects” (Thomas, 2000: 1). Even though assigning projects to students in traditional classroom is not a new phenomenon, project-based learning is quite different from the usual application. Thomas listed five major criteria for a method of learning to be called project based-learning: (1) PBL projects are central, not peripheral to the curriculum, (2) PBL projects are focused on questions or problems that "drive" students to encounter (and struggle with) the central concepts and principles of a discipline, (3) Projects involve students in a constructive investigation, (4) Projects are student-driven to some significant degree, (5) Projects are realistic, not school-like (2012: 3-4). In PBL, the project is the central teaching strategy; students encounter and learn the central concepts of the discipline via the project. PBL projects may be built around thematic units or the

intersection of topics from two or more disciplines, but that is not sufficient to define a project. An investigation is a goal directed process that involves inquiry, knowledge building, and resolution. Investigations may be design, decision-making, problem-finding, problem-solving, discovery, or model-building processes. PBL projects incorporate a good deal more student autonomy, choice, unsupervised work time, and responsibility than traditional instruction and traditional projects. PBL incorporates real-life challenges where the focus is on authentic (not simulated) problems or questions and where solutions have the potential to be implemented.

“Project based learning (PBL) provides opportunities for students to build these qualities, as well as more deeply learn traditional academic content and understand how it applies to the real world” (Larmer, 2015: 2). PBL as “a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks” (\_\_\_\_, 2009:12). “Project-based learning involves students in an extended process of inquiry in response to a real-world problem”(Jackson, 2012). Inquiry is keys for PBL, students seek for information and knowledge, starts by posing questions, problems or scenarios. Students will identify and research issue and questions to develop their knowledge or solutions. PBL provides a way to learn deeply and responds real world. Students can think, solve problem, and interact with friends or others. This method can apply to find new way for real learning systematically with teacher as facilitator.

Klein mentions characteristics of PBL such as (1) Leads students to investigate important ideas and questions, (2) Is framed around an inquiry process, (3) Is differentiated according to student needs and interests, (4) Is driven by student independent production and presentation rather than teacher delivery of information, (5) Requires the use of creative thinking, critical thinking, and information skills to investigate, draw, (6) conclusions about, and create content, and (7) Connects to real world and authentic problems and issues (p.8). With those characteristics in mind, teachers can plan learning experiences that result in in-depth understanding of important ideas in the content. Because students are driving the learning, they can draw upon their strengths and create projects that incorporate their own interests, native language, cultural background, abilities and preference for using different types of media. Larmer (2015) says that project based learning is a powerful teaching method that does the following: (1) Motivates students, (2) Prepares students for college, careers, and citizenship, (3) Helps students meet standards and do well on tests that ask students to demonstrate in-depth knowledge and thinking skills, (4) Allows teachers to teach in a more satisfying way, and (5) Provides schools and districts with new ways to communicate and to connect with parents, communities, and the wider world (p.2).

### **3. Steps in PBL**

In National Academy Foundation (2009: 16-17), there are 5 steps for PBL: (1) begin with the end in mind, (2) craft the driving question, (3) plan the assessment, (4) map the project, and (5) manage the process. Jackson (2012) says, it has five key characteristics: (1) outcomes are tied to curriculum and learning goals, (2) essential questions and problems lead students to the central concepts of the subject, (3) investigations and research involve inquiry and knowledge building, (4) students are responsible for designing and managing much of their own learning, and (5) projects are based on authentic, real-world problems and questions that students care about. Klein (2009: 11) suggest that there are five planning process (steps) in PBL; (1) establish content and skill goals, (2) develop formats for final product, (3) plan of the scope of the project, (4) design instructional activities, and (5) assess the project. Projects should be directed toward essential ideas or themes in the curriculum that are rigorous enough to support in-depth study and student construction of meaning.

Step (1); establish content and skill goals include big idea/theme, big ideas or theme provide an overall goal for a project-based unit and offer possibilities for interdisciplinary collaboration. Once the big ideas or themes have been determined, the teacher provides a framework for students to pursue those essential ideas or themes by crafting essential questions. The integration of content and learning skills is an essential component of project-based learning and should be identified in the project outcomes. Students need to learn, practice, apply, and extend these skills as part of the project design. Step (2); develop format for final product includes authentic products and presentation/performance formats and portfolio. Authentic

products have a real-life context and involve thinking and learning as the product is created, they cannot be simply copied from somewhere else. To document their learning process, student should create a print or electronic portfolio in which all draft of work is maintained. Complete portfolio for all projects can become part of students overall academic portfolios. Step (3); plan of the scope of the project include developing a timeline and scope for the project. A well-constructed project plan includes more than a sequence of activities; it is a design for supporting and directing students as they create products to complete the project. Step (4); design instructional activities include instructional strategies, possible mini lessons; decide how to launch the project, planned assessment, rubrics for project-based learning. Step (5); assess the project design, once all the instructional activities have been designed, teachers may pause to reflect on the design, looking for alignment with curriculum priorities, clarity and feasibility of organization, availability of resources, and the differentiation that is planned for meeting the needs of all learners.

The project of the final collection is intentionally very similar to that of designing a commercial collection. The difference of them is final collection in university requirement of curriculum while a commercial collection can only be validated by the market. The final collection could help students to confirm this – think of it as a dress rehearsal. This practice also enables to complete the skill set necessary to succeed in fashion design field (Atkinson, 2012:10).

#### **4. Final Collection**

Final collection is project of fashion design student. The project is part of learning for aspiring designers. Students prepare everything to make the final works/collection and show it off. Activities start from research inspiration, developing design to realize the complete garment then exhibit in fashion show event. The process and format of presenting a collection is an important time for any design student and is charged with a heightened sense of expectation. Essentially, fashion shows are promotional events aimed at encouraging buyer or private clients to place orders and for the press or other media to provide favorable coverage. For fashion design students the prospect of being offered employment is enticing, but it is important to remember that an exciting fashion show does not necessarily equate to a job offer or commercial success. Moreover, fashion shows are expensive events to host, with the ever-present risk of going over budget.

Fashion shows are essentially promotional events. In the fashion industry they are mainly used to present and sell merchandise to an invited audience and to promote the image and standing of a company. This is also true for many fashion students who view inclusion in a fashion show as a validation of their work. All fashion shows required detailed planning, including budgetary considerations and level of pre-publicity. This includes confirming a venue and agreeing a date, casting and booking models, arranging fittings and preparing a seating plan as well as considering music and lighting requirements (Hopkins, 2012: 164). Faerm (2011:24-25) says the key stages of fashion design development is (1) inspiration and research, (2) using color for effect, (3) selecting appropriate fabrics, (4) using the croquis process, (5) editing down to a six-figure narrative, (6) using prototypes and final samples, (7) finalizing collection. Hopkins says how to developing the design includes: (1) research process, (2) working with sketchbook, (3) line planning and range building, (4) costing and pricing, (5) presenting a collection. Whereas Atkinson (2012) in his book, there are five ways to developing the final collection: (1) finding inspiration, (2) your sketchbook, (3) finding material, (4) manipulating material, (5) development and sampling.

#### **5. Implementing Pbl In Final Collection Of Fashion Design Education**

In PBL, the project is the central teaching strategy; students encounter and learn the central concepts of the discipline via the project (Thomas, 2000: 3). A project is a complex effort that necessitates an analysis of the target (problem analysis) and that must be planned and managed, because of desired changes that are to be carried out in people's surroundings, organization, knowledge, and attitude to life; it involves a new, complex task or problem; it extends beyond traditional organizations and knowledge; it

must be completed at a point in time determined in advance (Barge, 2010). In final Collection, the purpose of learning is students can create final collection through developing design collection to realize this garment collection and to show this work to public. PBL is applied in this learning approach. I offer five planning process for project-based learning by Klein (2009: 11) such as: (1) establish content and skill goals, (2) develop formats for final product, (3) plan of the scope of the project, (4) design instructional activities, and (5) assess the project. The implementation for fashion design education as follows:

### 5.1 Establish Content and Skill Goals

Projects should be directed toward essential ideas or themes in the curriculum that are rigorous enough to support in-depth study and student construction of meaning. Final collection is one of course in fashion design education. In Indonesia, this course is for final-year students. The content and skill goals of this final collection course are student can develop a collection, manage event organizer, and show their collection. The big idea or theme is developing collection and showing to the public. And the question is how to create the best collection and how to make succeed this big event.



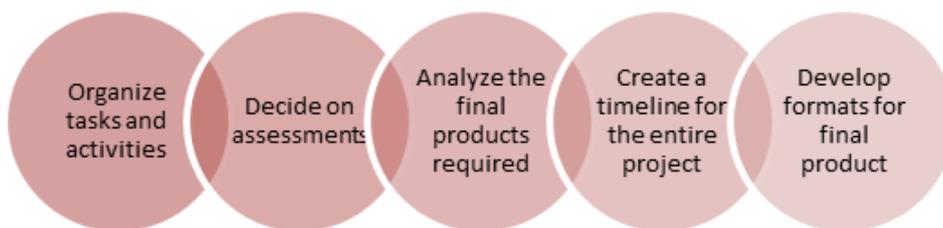
**Figure 1:** Elements of Establish Content and Skill Goals

### 5.2 Develop Formats for Final Product

Klein demonstrates two kinds in this plan as authentic Products and Presentation/Performance Formats and portfolio. To develop final product in fashion final collection needs long process. Students prepare for their collection. This collection need research process. Collections are usually presented to buyer or the press. Collection must be shown to the public. How to show to public we need event organizer. So this course very complicated and need well preparation and also took a long time. The authentic products are portfolio and 2 best collections. Portfolio contains start from inspiration, sketches, to prototype. It is essential to have a professional display portfolio from the very start as a way of keeping designs and artwork flat, orderly and portable (Jones: 194). The portfolio should look like the work of one person and show up your strengths. Portfolio should be organized to maximize your appeal and fit the advertised role.

### 5.3 Plan of the Scope of the Project

Students are more likely to be engaged in their learning if they see a connection to their own world. That connection can be made through the subject matter itself (e.g., science experiments or research on current issues), or through the product the student is expected to create or the presentation or performance the student is expected to give (e.g., a television talk show segment, a dance performance, or a podcast).



**Figure 2.** Plan of the Scope of the Project

Every student has project what to do. They must develop collection in one theme and collect in fashion portfolio. Every student has responsibilities for committee in event organizer. Every student creates two to three fashion works and shows in fashion show event.

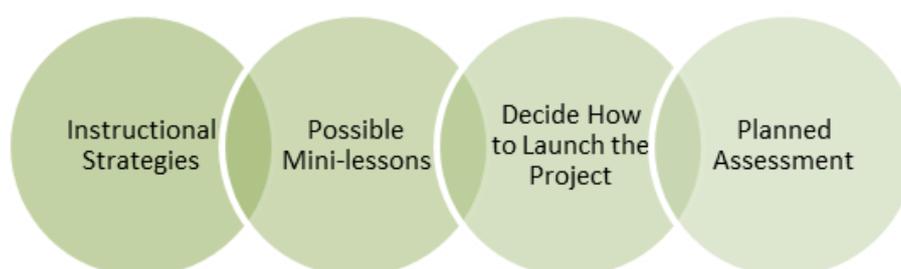
**Table 1.** Project based Learning Activity

Developing collection	<i>Research inspiration</i> First decide what for collection to say to audience, as well as what it should elicit visually. The research spent time for combing books, internet, museum, libraries and any other sources to unexpected ideas.	2 weeks
	<i>Using color for effect</i> Color, its scale and context of the surrounding colors must be evaluated closely to create the desire emotions.	1 weeks
	<i>Selecting fabric</i> Selecting fabric to consider silhouette and garment details, so select the fabric fiber, weaves and weight that will be required as well.	1 weeks
	<i>Working drawing</i> Working drawings are important aspects of developing collection. These drawings are more practical than illustrations or aesthetic drawing and are motivated by the need to problem solve a garment design or a detail.	3 weeks
	<i>Designing fabric idea</i> The close examination of the surface detail of inspiration can stimulate exciting ideas about texture and colors. The fabric can design by own textile, using methods as embroidery, dyeing, knitting or printing.	2 weeks
	<i>Using prototype and final sample</i> Like blueprint sketches are flats and need to realize the collection in 3D. The draping or pattern making process will enable to discover better solutions of fit, drape, proportion and overall construction.	3 weeks
	<i>Finalizing collection</i> After muslin and pattern corrections through the fitting process on live model, final samples in the selected fabrics are ready to be made. At this stage all design decisions, fabric choices and treatment; finishes should have been decided on.	6 weeks

Managing event organizer	<i>Leader, secretary, finance</i>	During study
	They are very important to make the event runs smoothly	
	<i>Event division</i>	
	Responsibility for the success of the event, make schedule, find the place of event	
	<i>Runway</i>	
	Responsible for model, choreographer and music	
	<i>Sponsor</i>	
	Responsible to find sponsor to support the event	
	<i>Documentation</i>	
	Responsible for photos and videos	
<i>Stage and decoration</i>	1 day	
Responsible for stage, backdrop, lighting, and decoration		
Responsible for all of equipment that needed by another divisions		
<i>Equipment</i>		
<i>Food and beverage</i>		
<i>Accommodation</i>		
Showing the collection	Showing the final collection, every student show the best creation. Collaboration with make-up expert and hair do to perfect performance. Every division cooperate to succeed the event.	

#### 5.4 Design Instructional Activities

A well-constructed project plan includes more than a sequence of activities; it is a design for supporting and directing students as they create products to complete the project. A plan helps you develop the timeline for the project with interim deadlines, decide the balance between teacher instruction and student investigation, incorporate both group and individual activities, and identify the skills that your students need to successfully complete the project. In this course has three domain, first developing collection, second managing event organizer, third showing the collections.



**Figure 3.** Design Instructional Activities

#### 5.5 Assess the Project

One of assessment form in PBL is rubrics. Teachers should develop their own rubrics, or have the class develop rubrics for project-based learning. According to Klein rubrics break down the tasks in an assignment into separate categories for assessment. For example, a rubric for a research paper might contain criteria for five categories: (1) content; (2) organization; (3) depth of research; (4) use of primary resources; and (5) writing mechanics (p. 17). Rubrics will help teachers create an assessment plan that is fair and accurate, targets specific content and skills, and provides timely, useful feedback to students.

In final collection, students learn about three kinds of knowledge and skill, first about developing collection, second managing event organizer, and showing the collection. In PBL students not just study about making project but students engaged in the inquiry process, problem-solving and decision making. In developing collection, students research about inspiration, selecting color and fabric, manipulating fabric, sketching/drawing, making prototype, and finalizing the project. All of this process, students make decision and all of the process involves the inquiry process. This is according to Jackson (2012) that "Project-based learning involves students in an extended process of inquiry in response to a real-world problem".

This course also engaged about social skill, students must collaboration with another organization such as model, choreographer, lighting, photographer, beautician, hair do and others. Students need social skill and good communication to build good network cooperation. Sometimes students have to face many hurdles in event organizing. This learning process require for students to solve the problem. Showing final collection is the moment awaited students to show the best of them. Dreaming of being a designer has been in front of the eye. They show their work on the stage. They will work hard and have high motivation. As a young designer only once they have a chance of performing in public. PBL is very suitable for implementing in this subject. This method gives high motivation for students, prepare students for real life, according to Rodriguez (2015) that PBL encourage students' motivation and improves their results. They not only acquire better technical training, but also improve their transversal skill. Both students and teachers identify a set of benefits of PBL, such as team work skills, increased student motivation, articulation between theory and practice, problem solving, amongst others (Fernandes, 2014). In the project-based learning, by solving different problems it is possible to develop creative ideas while improving highly developed skills (Sart, 2014).

## 6. Conclusion

To conclude, it is possible to implementing PBL in final collection of fashion design education. PBL methodology enhances students learning and improves students' confident, technical skill, soft skill and prepare graduate for professional practice. Several evidences from students and teacher support this idea. Teachers and students identify a set of benefit of PBL, such as team work skill, increase student motivations, articulation between theory and practice, inquiry and problem solving.

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## Production Based Training on Agro Industry Expertise Course to Improve Student's Competencies in Food Diversification based on Local Resources

Sri Handayani, Mustika Nuramalia Handayani, Dewi Cakrawati

Study Program of Agroindustry Education Technology, Universitas Pendidikan Indonesia, Indonesia

### ARTICLE INFO

*Article history:*

Received 02 December 2015

Received in revised form 12

January 2016

Accepted 28 January 2016

Available online 01 February 2016

*Keywords:*

Technology of Animal product

Production based Learning

Design based Research

*Corresponding author:*

srihandayani@upi.edu

### ABSTRACT

The research approach was developmental research for improving, implementing and evaluating a production based learning (PBL) on subject of Technology Processing of Animal Product at Study Program of Education on Agroindustry Technology, Universitas Pendidikan Indonesia. Syntax of Production based learning are (1) Explanation of the objectives and competencies to be achieved; (2) Explanation of course material; (3) the making of group where each member of the group is divided according to the division in the company; (4) Preparation of company profile by each group; (5) SOP for each part by each group; (6) Practical manufacture of processed products by each group - syntax 1 to 6 can be repeated according to the number of products produced by each group, each group member should play different role in every different, so that every group member possessed the skill in every work part of producing a product; (7) Naming the product and work report by each student. The result showed that there was improvement in students' knowledge seen from student's test score. The result also showed that there was improvement in student's skill seen by performance assessment.

### 1. Introduction

Vocational education has an important role to provide qualified workforce. Since the Study Program of Education on Agroindustry Technology, aims to fulfill the need of qualified vocational teachers on agro industry, its curricula has been developed by ratio of 60% agriculture processing science and 40% pedagogic science (Cakrawati et al, 2015). Alumna from this program are expected to have several competencies including psychomotor as they had to train students' skill in processing food. According to (Baker and Trussell, 1981), students' psychomotor skill derived from their teacher.



- a. written post test conducted at the end of cycle 3 and cycle 6 to determine the final results of student learning after learning development model Production Based Training;
- b. Reports about products made. Practical reports are made individually in the form of a paper on processing technology processed products that have been implemented.
- c. The paper not only contain practical implementation process, but starting with a review of the raw materials used up to the observations of the product. In this study, the student must make practical reports four refined products, namely: purple yam ice cream, yogurt with fruit leather dyes dragons.

## 2.2 Data Analysis

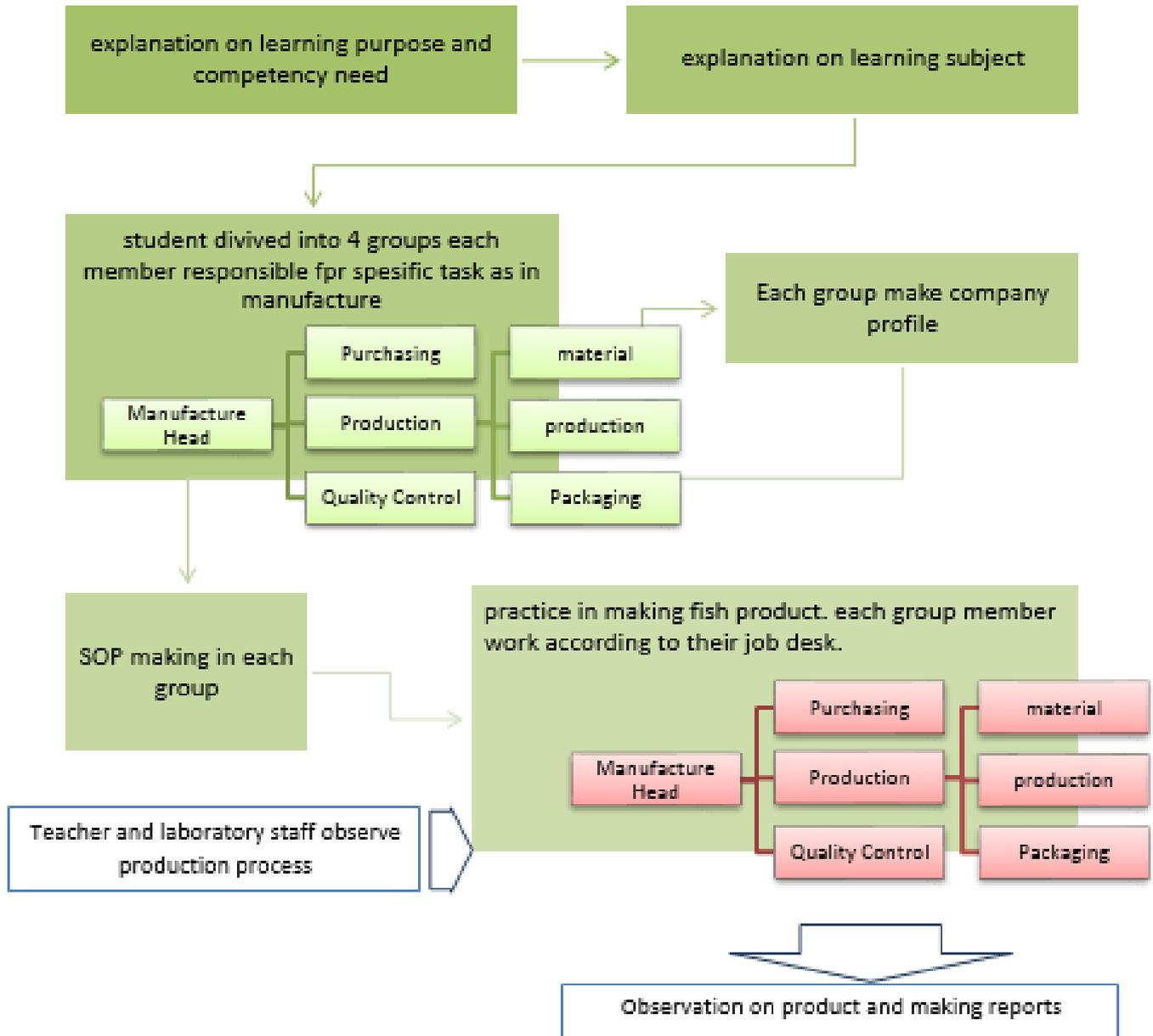
Data obtained from the test result furthermore processed and converted according to Universitas Pendidikan Indonesia's academic guidelines then distributed in table of frequency distribution. Students who have score below 70 need to be remedial before continue to the next cycle. Project reports were scored based on teacher's guideline with ratings range 4 = very good, 3 = good, 2 = adequate, and 1 = less. For students who get less value, then the student must rectify its report.

## 3. Result and Discussion

Production based learning is slightly different with project based learning, but almost simmilar with work based learning. In production based learning, students are given project to produce fish product that stated by the teacher. This learning also applied student-centered learning that according to ((Harmer, 2014), teacher act as tutor that helps student in their learning process by supporting them, if necessary. It is expected that with less teacher control, students have more responsibility for their learning. There were three steps conducted in the research; preparation, implementation and evaluation. In the preparations steps, researcher did some production trial on making fish ball and craker from fishbone. Production trial was needed to know time needed to make the products and to make sure the laboratory have all the equipment to do production.

Before the implementation step, researchers do some reflection and make improvement on production based learning syntaks, as stated in Picture 2. Improvement was made to make student feel motivated since they are given real problem, as in real manufacturer, each member has spesific task and responsible with their task shown by organisational diagram and also jobdesk that each group make. Students were making standard operational procedure (SOP) on each production step, so that production process was controlled. according to (Harmer, 2014), giving the student, the opportunity to explore learning process is important matters in production based learning. Production based learning not only improve student's hardskill but also soft skill especially the ability to work in group. Since according to (Hanney & Savin-Baden, 2013), in production based learning, students are exposed to a complex series of interaction between group member and they develop their communication, planning and team working skill.

Implementation of production based learning was conducted with Class action research, consist of 3 learning cycles. First cycle was explanation on production based learning where students was given task to create SOP, company profile and jobdesk on each member. Second cycle was explanation of subject which is the principal of making fishballs and fishbone craker, it was conducted in laboratory. Third cycle was producing fishballs and fishbone crackers in laboratory. Students were working suited with their jobdesk. Learning process was begin when students buy raw material for their product since they were expected to have knowledge on selecting good raw material with limited budget. They also learn to calculate the amount of raw material to buy in accordance with the product to produce. After third cycles are finished, researched continue with reflection and evaluation. The refection resulted that students and teacher need to adapt with the new learning process. So teacher need to provide more time for students consult after class, for example in making SOP and process flow of making fish product.



**Figure 2.** Syntaxes of Production Based Learning

Students assessment was conducted using written post test and reports. The result show that there were increasing in students score. the main advantage of production based learning are improving academic result, the development of soft skills and hard skills, increased student motivation and enjoyment, enhanced outreach and engagement beyond academia and advantages for lecturers (Harmer, 2014).

#### 4. Conclusions

1. Development on learning syntaxes are the addition of students tasks of making jobdesk, SOP and organizational charts. Syntaxes development was purposed to give student experience of working in “real worksite”.
2. Implementation of Production based learning help improve student academic achievement, softskills and hardskill, shown by inceasing in student’s test score, students ability to work in group, ability to solve problems.

## Acknowledgments

The work is funded by Dana DIPA (Bantuan Operasional Perguruan Tinggi Negeri - BOPTN) Universitas Pendidikan Indonesia Budget Year 2015 by virtue of Rector's Decree No. 3414/UN40/LT/2014.

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## Educational Program Evaluation using CIPP Model

Warju

Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Surabaya, Indonesia

### ARTICLE INFO

*Article history:*

Received 02 December 2015

Received in revised form 12

January 2016

Accepted 28 January 2016

Available online 01 February 2016

*Keywords:*

Evaluation

Education program

CIPP model

*Corresponding author:*

warjuunesa@gmail.com

### ABSTRACT

There are many models of evaluation that can be used to evaluate a program. However, the most commonly used is the context, input, process, output (CIPP) evaluation models. CIPP evaluation model developed by Stufflebeam and Shinkfield in 1985. The evaluation context is used to give a rational reason a selected program or curriculum to be implemented. A wide scale, context can be evaluated on: the program's objectives, policies that support the vision and mission of the institution, the relevant environment, identification of needs, opportunities and problems specific diagnosis. Evaluation input to provide information about the resources that can be used to achieve program objectives. Evaluation inputs used to: find a problem solving strategy, planning, and design programs. Evaluation process serves to provide feedback to individuals to account for the activities of the program or curriculum. The evaluation process is conducted by: monitoring sources can potentially cause failure, prepare a preliminary information for planning decisions, and explain the process that actually happened. Product evaluation measure and interpret the achievement of goals. Evaluation of the products also come to: the measurement of the impact of the expected and unexpected. The evaluation is conducted: during and after the program. Stufflebeam and Shinkfield suggest product evaluation conducted for the four aspects of evaluation: impact, effectiveness, sustainability, and transportability. The decision making process is done by comparing the findings / facts contained in context, input, process and product standards or criteria that have been set previously.

## 1. Introduction

### 1.1 Measurement, Assessment, and Evaluation

Speaking of the evaluation, we will be faced with three terms that are interrelated with each other even in the field sometimes occur overlapping in use, namely measurement, assessment, and evaluation. Actually, what the common thread of these three terms? Are these three terms together or is it different? If equal, the equation which is so well if different, the difference where? To answer these questions will be discussed with a review of the literature. Measurements used to collect information on which to base a decision, and evaluation using the measurement results to make a decision (Mehrens & Lehman, 1984). Meanwhile, according to Griffin and Peter (1991), measurement is the determination of the object observed numbers/data retrieval. The assessment is the interpretation of the results of observation and description of the results of the overall measurement. While evaluation is an activity use the assessment results as consideration for decision making. So, from both the above opinion can be concluded that measurement, assessment and evaluation have understanding and different functions, but between the one and the other interrelated.

In more detail, in the *Encyclopedia of Evaluation* stated that “*evaluation is an applied inquiry process for collecting and synthesizing evidence that culminates in conclusions about the state of affairs, value, merit, worth, significance, or quality of a program, product, person, policy, proposal, or plan*”(Mathison, 2005:140). From the above it can be seen that the evaluation is a process of inquiry that is used to gather and synthesize the evidence ended conclusions about the state of affairs, value, merit, feasibility, significance, or quality of the programs, products, people, policies, proposals or plans. The results of the evaluation involves two aspects, namely empirical and normative aspects. Therefore, the evaluation activities in contrast to the basic science research, clinical epidemiology, investigative journalism, or public poll.

Evaluation has a very broad sense and is not a new concept. Hadley and Mitchell (1994:48), defines evaluation as “*applied research carried out to make or support decisions regarding one or more service programs*”. While understanding the evaluation according to the United Nations Development Program/UNDP (2006:6)<sup>5)</sup> is “*selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome*”. Further evaluation is the process of delineating, obtaining and providing useful information for judging decision alternative. From the definition of the evaluation above it can be concluded that the evaluation is an activity to gather information about the workings of something, which then the information is used to determine an appropriate alternative in the decision.

### 1.2 Educational Evaluation

So what is the evaluation of education? Understanding evaluation of education, according to Law Number 20 Year 2003 on National Education System Article 1 stated that educational evaluation is control activities, underwriting, and determination of the quality of education to the various components of education at every track, level and type of education as a form of education provision <sup>7)</sup>. While accreditation is the program's eligibility assessment activities in education units based based on defined criteria. Criteria that refers to the eight National Education Standards, created by the National Education Standards Agency where the National Education Standards are the minimum criteria regarding the educational system in the whole territory of the Republic of Indonesia. Eight National Education Standards are: 1) the content standard, 2) the process standard, 3) the competency standard, 4) the teacher and staff standard and, 5) the facilities and infrastructure standard, 6) the management standard, 7) the financing standard, and 8 ) the assessment standard.

### 1.3 Monitoring and Evaluation

In the field of education is also often used the term monitoring and evaluation is commonly abbreviated as *monev*. Actually, what the common thread of the two terms? Do words have a striking difference? To answer these questions, we can find the answer from literature. According to the United Nations Development Program/UNDP (2006:6), monitoring is defined as “*a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of*

progress, of lack thereof, in the achievement of results. An ongoing intervention might be a project, programme or other kind of support to an outcome). While understanding the evaluation according to the United Nations Development Program/UNDP (2006:6) is “selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome”.

#### 1.4 Evaluation and Research

In the field of education is also often overlapping use of terms between evaluation and research. What is the common thread that can be drawn from both? Mertens (2009) states that “while there is much overlap between the world of research and evaluation, evaluation occupies some unique territory”. More detail, Trochim (2006) argues that “evaluation is unique because of the organizational and political context in which it is conducted, which require skills in management, group processes, and political maneuvering that are not always needed in research”. While Arikunto (2013) states that in terms of objectives, evaluation research, and evaluation of education, there are three differences. *First*, evaluation research is usually conducted in the context of decision making. *Secondly*, the evaluation is usually carried out with a limited purpose. *Thirdly*, evaluation studies with educational research related to consideration of the meaning and value.

In the research, researcher wanted to find a picture of something later described, whereas in program evaluation, the evaluator want to know how high the quality or condition of something as a result of the implementation of the program, after the data was collected as compared to specific criteria or standard. In the research, researcher led by the formulation of the problem, whereas in program evaluation, the evaluator would like to know the level of achievement of the program, and if the objectives have not been achieved, the evaluator wanted to know where the deficiencies and why. The results are used to determine the follow-up or a decision to be taken. There are many models of evaluation that can be used to evaluate a program. However, the most commonly used are Context, Input, Process, Product (CIPP) model.

## 2. CIPP Evaluation Model

The basic framework of the CIPP was complete (context evaluation to help develop goals, input evaluation to help shape proposal, process evaluation to guide implementation, and product evaluation to serve recycling decisions. This model has a basic framework that is complete, ie the evaluation context to help formulate objectives, evaluation input help in preparing the program, the evaluation process is to direct enforceability of a program, and product evaluation to determine the achievement of a program.



**Figure 1.** The CIPP model of evaluation

Source: <https://www.google.co.id/search>

Dharma, et al (2013:345) states that the curriculum evaluation carried out for two interests, namely the measure of accountability and feedback curriculum implementation. Evaluation of curriculum accountability measures if the evaluation of the curriculum aims to examine accountability in achieving educational goals with regard to quality and quantity of yield and cost-effectiveness. The evaluation is conducted to provide feedback on the implementation of the curriculum when the evaluation aims to eliminate the limitations and continuously improve performance at both the individual and institution. CIPP is an acronym of context, input, process, and product. CIPP evaluation model has been widely used to evaluate a program, policy, and can also be used to evaluate the curriculum on a small scale. Things that need to be evaluated in each component of the activities are:

## 2.1 Context Evaluation

Context evaluation is used to give a rational reason a program or curriculum have to be implemented. On a large scale, can be evaluated in the context of: the program's objectives, policies that support the vision and mission of the institution, the relevant environment, identification of needs, opportunities and specific problems diagnosis. Need assessment is a common example of context evaluation. In a small scale, can be applied to evaluate the learning program objectives. Context evaluation to serve planning decision.

## 2.2 Input Evaluation

Input evaluation to provide information about the sources that can be used to achieve program objectives. Input evaluation is used to: find a problem solving strategy, planning and design programs. The results of the input evaluation: budget, schedule, proposals and procedures. In learning activities, input evaluation can also be done to find sources that can be used in the learning process so that it can serve to establish appropriate learning strategies. Input may contain: student component, infrastructure, media, teacher, etc. Input evaluation to serve structuring decision.

## 2.3 Process Evaluation

Process evaluation serves to provide feedback to the individual to take responsibility for the activities of the program or curriculum. Process evaluation is carried out with: monitor potential sources can cause failure, prepare a preliminary information for planning decision, and explain the process that actually happened. Process evaluation requires: data collection instruments (observation sheet, assessment scale, field notes, etc.). Process evaluation to serve implementing decision.

## 2.4 Product Evaluation

Product evaluation measure and interpret the achievement of objectives. Product evaluation also arrive at: measuring the impact of the expected and unexpected. The evaluation is conducted: during and after the program. Stufflebeam suggest the product evaluation conducted for four aspects of evaluation: *impact, effectiveness, sustainability, and transportability*. Product evaluation requires: an instrument (such as test sheet, interview sheet, and observation sheet) to observe behavior change after the implementation of the learning program. Product evaluation to serve recycling decision.

The three stages in the technical educational activities interrelated, namely: (1) input is community needs and resources, (2) process is about learning, and (3) output is workforce skills (Kumar 2011). With the CIPP evaluation model will be produced four types of decisions, namely: 1) decision in planning that affects the choice of goals and objectives, 2) make decision that ensure the design of strategies and procedures are optimal to achieve the goals, 3) implement the decision: the work done to bring and improve by selecting the designs, methods, and strategies, and 4) repeat the decision to establish continuity, change or terminate the program activities.

### 3. The Objective and Benefits of Program Evaluation

What exactly is the purpose of implementation of the program evaluation? Wholey, Hatry & Newcomer (1994:1) state that “*program evaluation attempts to provide processes that agencies of all kinds can apply to obtain better, more valid, answers to these questions*”. While Dharma, et al (2013) explains that all program activities using the program evaluation to see the level of success that has been achieved, determine the effectiveness and efficiency of ongoing program and to obtain information to establish the next program is worth doing.

From the above it can be concluded that the program evaluation is a unit or entity activities aimed at collecting information about the realization or implementation of a policy, takes place in a continuous process, and occurs in an organization involving a group of people to decision-making.

There are four benefits that can be drawn from the program evaluation activities, namely:

1. Termination of program.
2. Revise program.
3. Continuing program.
4. Disseminate program.

At least five traits into program evaluation requirements, namely:

1. Referring to the rules which apply.
2. Do systematically.
3. Identified determinants of success and failure of the program.
4. Using standard benchmarks.
5. The evaluation results can be used for decision making.

To produce the right decision from the program evaluation depends on the ability of the person doing the program evaluation (evaluator). There are at least six conditions to be evaluator, namely:

1. Able to carry out.
2. Accurate.
3. Objective.
4. Be patient and persevering.
5. Carefully.
6. Responsible.

### 4. Evaluation Execution

According Arikunto (2013:228), there are several steps that must be done by the evaluator at the time of the program evaluation, namely:

1. Evaluator conduct a bookreview, field, and gather information from experts to gain an overview of the issues to be evaluated.
2. Evaluator formulates the program/research problem in the form of evaluation research questions.
3. Evaluator develop a evaluation research proposal.
4. Evaluator set evaluation planning, arranging instruments, preparing human resources, and carry out trials instruments.
5. Implementation of the evaluation in a form the evaluation model that has been adapted.
6. Evaluator collecting data with instruments that have been prepared based on the details of the components to be evaluated.
7. Analyze the collected data by comparing it to benchmarks/criteria has been established in accordance with the objectives set by the program manager.
8. Summing up the results of the evaluation based on an idea of the extent of the data in accordance with the benchmarks/criteria.
9. Information on the results of the evaluation study submitted to the program manager or the parties ask for help to the evaluation researcher.

According to Wholey, Hatry and Newcomer (1994:233-385), there are some procedures/methods for data collection that can be done in the implementation of program evaluation, namely:

1. Use of rating by trained observers.
2. Designing and conducting surveys.
3. The use of expert judgment.
4. The use of role-playing in evaluation.
5. The use of Focus Groups Discussion (FGD).
6. Managing field data collection from start to finish.
7. Collecting data from agency records.

Data analysis in the program evaluation can use some methods/approaches, namely:

1. Using statistics appropriately.
2. Using regression models to estimate program effects.
3. Cost-benefit analysis.

Further according to Wholey, Hatry and Newcomer (1994: 457)<sup>17)</sup>, steps in conducting a cost-benefit analysis, there are three steps, namely: (1) determine the benefits of a proposed or existing program and place a dollar value on those benefits, (2) calculate the total cost of the program, and (3) compare the benefits and the costs.

## 5. The Decision of Program Evaluation

In general, there are three follow-up/recommendations made by the evaluator to the decision maker to a running program, namely:

1. The program continued and disseminated because they were considered good and successful.
2. The program revised because there are things that are not in accordance with the benchmarks/criteria desired.
3. The program stopped because there is less evidence/not good or there was a violation in the implementation.

## 6. Conclusion

There are many models of evaluation that can be used to evaluate a program. However, the most commonly used are context, input, process, product (CIPP) evaluation model. CIPP evaluation model developed by Stufflebeam and Shinkfield in 1985. The purpose of the evaluation is to collect data or information to be compared with the criteria that have been made and then conclude. The gap between the real condition in the hope that is sought. The gap obtained a description of whether the implementation of the programs surveyed was appropriate, less appropriate, or not in accordance with predetermined criteria. The decision making process is done by comparing the findings/facts contained in context, input, process and product with a standard or predefined criteria.

## Acknowledgment

The author would like to thank the Vice Rector for Academic Affairs of the State University of Surabaya Dr. Hj. Yuni Sri Rahayu, M.Si which has funded the publication of this scientific article/paper.

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## **The Development of Non-Formal Technological and Vocational Education in Village Communities**

Lilis Widaningsih, Ade Gafar Abdullah

Vocational Technology Education Study Programs, School of Postgraduates Studies, Universitas Pendidikan Indonesia, Indonesia

### ARTICLE INFO

*Article history:*

Received 02 December 2015

Received in revised form 12

January 2016

Accepted 28 January 2016

Available online 01 February 2016

*Keywords:*

Non-formal Education

Vocational Education

Village Communities

*Corresponding author:*

[liswida@upi.edu](mailto:liswida@upi.edu)

### ABSTRACT

This article presents a preliminary study which was done through a literature review of various scientific references on the development of human resources through non-formal technological and vocational education. Current issues and problems in developing countries are related to the low quality of human resources in villages due to the low education and skills (technological and vocational skills). The development of non-formal technological and vocational education for village communities becomes an alternative solution, particularly when formal education does not provide solutions. With the concept of life-long learning, non-formal technological and vocational education is based on practical knowledge and skills. Non-formal education allows a learning model which addresses individuals' learning needs. Thus, it becomes one of solutions to overcome unemployment.

### 1. Introduction

Historically, the Indonesian society is known as an agricultural society; most of Indonesians live in villages and work as farmers. However, modernization has socially changed the structure of the society. The limited availability of land and the rapid increase of population growth influence the life aspects of the community, especially economic and employment aspects.

Modernization and the growth of the population are not followed by the improvement of quality and access for village people to further continue their study to higher levels. The development of infrastructures in villages and cities, including education infrastructures, is not even. Such a condition results in the decrease of the village communities' welfare as not many job opportunities are available for members of the communities. Thus, the issue of people migration (urbanization) has been a problem since the 1970s. Based on the 2010 national census, the population of villages and cities are still considerably equal, 50.21% in villages and 49.79% in cities. Based on the population analysis, this condition will change if the development of infrastructures and technological transformation are not implemented in villages. In 2015, it is estimated that the population of cities will be larger than the population of villages, with a composition of 56% to 44%

(Indonesian Population Projection, the Central Bureau of Statistics, 2010 – 2035). The uneven distribution of population in villages and cities will result in various gaps in various life aspects.

This article addresses the low quality of human resources in villages. It focuses on the development of villages to improve the quality of human resources through technological and vocational education. Thus far, the technological and vocational education model has only been implemented in formal education. It has not been developed for people in villages. Sustainable technological and vocational education is increasingly needed by village communities to improve the quality and welfare of human resources.

## **2. Village Human Resources**

The paradigm of policy makers, which is also common in local communities, still focuses on physical development. Infrastructures are regarded as the main indicator of successful development. In fact, infrastructure development without non-physical/infrastructure development, such as education, will result in substantial gaps, including the gap of human resources. The low quality of human resources in villages is closely related to the low level of formal education, which affects the productivity of the village communities in improving their welfare. Most villages in Indonesia have abundant natural resources. However, because the current paradigm gives more benefits to mid-income consumers living in cities, known as 'production-centered development' (Nasdian, 2014:20), it marginalizes village communities as producers who manage natural resources. Villagers, who generally have low skills, often do not have the ability to improve/develop the available natural resources, particularly for improving their welfare or the quality of their life.

The change of the development paradigm, focusing more on the development of human resources, is an urgent thing to do; it should be a national agenda. Development should include human resources, infrastructures, institutions which can support villagers, and the implementation of continuous education and training (Palmer, 2009). The improvement policy to achieve better life quality can be implemented if each individual has five aspects of essential freedom: economic opportunity, political freedom, social facilities, transparency, and security (Blaak, Openjuru, & Zeelen, 2013). Furthermore, the most important aspect of the improvement of human resources is education. Not only does education give individuals the ability to make a living, it allows them to criticize and reflect on their lives so that they can make social, political, and economic changes.

The education for improving the quality of human resources in villages is not limited to formal education. It also includes the implementation of life-long education which supports individuals to develop basic skills for their lives. Not only does life-long learning cover education provided by schools or formal institutions, it also includes all life aspects and individuals' interactions with their environments (Kocak & Baskan, 2012). The principle of life-long education is to provide education opportunities so that individuals can improve their skills in science, technology, economy, and socio-culture; it also encourages individuals to acquire various skills in many fields through the improvement of their knowledge and skills (Kocak & Baskan, 2012).

Life-long learning is a policy framework to improve technological and vocational education. Technological and vocational education should be able to develop innovations with an open structure, flexible in complementing education, vocational training and counseling through formal and non-formal education (Maclean & Pavlova, 2010). The policy related to human resources which has been formulated by OECD (Organization for Economic Cooperation and Development Strategy) Skill Strategy (OSS) focuses on technological and vocational education to prepare innovative individuals who have active roles at international level and are able to fulfil the market demand (Valiente, 2014).

## **3. Non-formal Vocational Education and Training**

Generally, villagers only finish elementary school or senior high school. This is due to the minimum availability of education facilities and their economic ability. It becomes a problem which should be solved. One of the ways is that policy makers and NGOs can provide education or non-formal trainings for improving the skills of villagers. Non-formal education is different from formal education which is managed by education institutions or trainings which have particular competency standards and give competency certificates to

individuals. In non-formal education, learning activities are more flexible, based on individuals' needs, and are not formalized in the form of a certificate (Beddie & Halliday-Wynes, 2010).

One of important agendas and challenges of education and training in developing countries post-2015 refers to the 3 education frameworks: post-MDG (Millenium Development Goals), post-EFA, and SDGs (Sustainable Development Goals). From the review of post-2015 education targets, developing countries should establish education policies which focus on skill specifications integrated with 21st century education. The 21st century education does not focus on cognitive ability; it covers life skills, improves social skills (including self-control), and increases knowledge which is relevant to vocational technical tasks (King & Palmer, 2013; Palmer, 2014).

In some developing countries, the policy and approach of technological-vocational education and training (VET) becomes the development priority in various sectors (Maclean & Pavlova, 2010), (Oketch, 2007), (King, 2012), (Cheng, 2015). The concern for improving the quality of villagers and marginalized communities can be realized through non-formal technological and vocational education as the form of education and training after the formal education (Tukundane, Minnaert, Zeelen, & Kanyandago, 2015), (Sugiharto & Kusumandari, 2016), (Beddie & Halliday-Wynes, 2010). The non-formal technological and vocational education for villagers generates outcomes which are different from the outcomes of formal education, because non-formal education prioritizes the process of empowerment based on required knowledge and practical skills (Blaak et al., 2013). Non-formal education allows the model of learning which emphasizes individual needs; this becomes an alternative solution for the problem of youth unemployment (Tripon, 2014).

Different from developing countries, non-formal technological and vocational education developed in Europe aims to create job opportunities and increase economic growth through learning opportunities which are not limited to conventional classroom learning. In non-formal education, individuals can acquire competency and skills not only in traditional settings, such as classrooms, but also outside the classrooms (Tripon, 2014). Non-formal technological and vocational education in Europe develops more distance learning systems by using information technology.

#### **4. Village Institutions**

Village institution refers to the concept of social institution which has the following main characteristics (Soekarno, 1990): (1) organising ideas and behaviours reflected by community activities and their products, (2) having particular purposes, (3) having symbols which represent the purposes, (4) having instruments to achieve the purposes, (5) having written or non-written tradition. Legally, village institutions are regulated by particle 94, law no.6 year 2014 which has a role to support the functions of village governments, the development of villages, and empowerment of villagers or village communities (Huda, 2015: 244).

The roles of village institutions in non-formal technological and vocational education are very important because they can function as supporting facilities for education activities and development. So far, empowerment programs to improve the skills of villagers have not solved the actual problems. Education and training programs are often given to communities considered homogeneous. Thus, there is homogenization of communities. The empowerment of village institutions is needed to optimize the local functions in decision making and empowering autonomy for developing village potentials and solving problems in order to realize better living quality in a transformative way (Surahman, n.d.).

Indonesia formulated the concept of vocational villages to empower human resources in the village spectrum by employing the area approach, that is the village area based on cultural values by involving local potentials. The developed programs are based on the need of functional literacy education to overcome the problems of education in the villages. Functional literacy is not limited to the target that villageers should be able to read, write, and do calculation. It also deals with the stage where villagers are able to analyse and solve problems in order to improve their life quality (Sugiharto & Kusumandari, 2016). This second stage has not given significant impacts on the effort to improve the autonomy of villages by using technological and vocational skills based on practical needs.

Developing countries optimizes their village institutions, such as Turkey where the role of village institutes has a significant effect on the education of village communities. The concept of 'village institutes' developed in Turkey is an implementation of life-long learning. The education focuses on the education of potential/talented children living in villages, so that they can be teachers in their own villages. The education

and training given covers life skills to improve the welfare of village communities, both individually and socially, and to increase/develop knowledge useful for their daily life (Kocak & Baskan, 2012).

The concept of village institutes implemented by the Government of Turkey to villages has a significant contribution to education, such as training individuals to be revolute, democratic, secular, and scientific in all situations. One of the learned lessons from Turkey is that autonomous management and alternative education can empower individuals (Erdal, 2014). Although village institutes are not used anymore in Turkey, the concept has been considered an ideal model of education which is efficient in providing equal education opportunities, participative and able to integrate village areas into the power structure of Turkey (Kucuktamer & Uzunboylu, 2015).

## 5. Conclusion

The problem of the low quality of village human resources is closely related to the formal education level; most villagers only complete elementary school (SD). The limited availability of education facilities and low economic power become key factors which cause difficulties for villagers in accessing education of higher levels. The low formal education level of villagers is a problem which should be solved. One of the solutions is that policy makers or NGOs can provide non-formal education and training to develop the vocational skills of the villagers. Non-formal education is different from formal education provided by education or training institutions, shown by the availability of competency standards and certificates which indicate that individuals have achieved particular academic qualifications. In non-formal education, learning activities are implemented in relatively flexible programs, suited to the needs of learners and generally not formalized in the form of certificates (Beddie & Halliday-Wynes, 2010). By understanding the condition of villages and village communities, including villagers, non-formal education and training can be developed based on the specific needs of the village communities. Vocational skills can be given through practices involving individuals who have certain competency (experts/trainers, etc.) according to the skills needed. For example, the program of vocational villages developed by the Ministry of Education and Culture can be effectively implemented and encourage the development of autonomous/independent villages.

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