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Tracking the potential of vocational high school students leading to eighteen strategic creative industry sub-sectors in Indonesia

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Tracking the potential of vocational high school students leading to eighteen strategic creative industry sub-sectors in Indonesia

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Abstract. This study aims to trace the interest of Vocational High School (VHS) students to meet the sub-sectors of strategic creative industry in Indonesia which is divided into eighteen sub-sectors such as animation, architecture, design, photography, music, crafts, culinary, fashion, research and development, publishing, film, advertising, interactive games, performing arts, visual arts, information technology, television, radio and video. The study will also track the reasons why students choose these sub-sectors with three priority-scale options.The research method used is an exploratory survey with the dominant approach is quantitative. This study was conducted in 7 VHS in DIY-Indonesia with a sample size of 350 people. The subjects of this study are students with a background of educational concentration is technology and engineering. The technique of collecting data using questionnaire of specialization. Data analysis techniques used descriptive statistics that aims to determine quantitatively the percentage of student's interest in sub-sub creative industries.Quite unique findings are generated in this study because researchers want to explore the other side of the engineering students who in fact work by relying on hard skill instead of developing their soft skill. The results of this study indicate that the dominance of student interest to eighteen creative industry sub-sectors exists in the sectors of music, photography, and design. While the sub-sector that they are not interested in the fashion sector. Other tracking results are the reason students choose the three priority sectors of interest are because their hobbies are relevant to the sub-sectors of the creative industry of their choice. This study will have implications for schools to attend the potential of other gifted students in the creative industries. If this can be effectively explored, employment opportunities for engineering students will become wider and foster an entrepreneurial spirit so they can open new jobs for others in need.

1. Introduction

1.1 Problem of Statement

he creative industry has an important role in the development of the creative economy in developed countries. The impact of rapid progress in developed countries has been felt by developing countries, especially in increasing the country's foreign exchange. Data generated by United Nations Year 2003 states that 50% of G7 (United States, UK, France, Canada, Italy and France) come from creative industry products [1]. Indonesia as a part of developing countries in the world began to look at the creation of millions of employment since by compiling "The Development Plan of 2009-2015 Creative Economic".[1]

The existence of a policy of the development of creative industries, it should be directed to creative pilot cities in Indonesia such as Bandung, Yogyakarta, Surakarta, and Pekalongan [2]. The four big cities are a tourist destination that can provide satisfaction in cultural, nature, religious, entertainment and culinary travel based on Creative City Network (CCN) program developed by UNESCO in 2004. Therefore, the four creative cities become the focus of creative industry development in Indonesia considering that the inputs of these cities are very potential to be explored more comprehensively [3].

Daerah Istimewa Yogyakarta (DIY) is one of the provinces in Indonesia that is capable of producing young entrepreneurs capable of competing in regional, national and international scale. According to Vice Chairman of Indonesian Chamber of Commerce of Banking and Finance, the value of creative industry export in Jogja continues to increase, from the US $ 220 million in 2013 to the US $ 242 million in 2014 [4]. In fact, the Yogyakarta government is ready to disburse funds of 10 million rupiahs for each business group. This means DIY readiness in supporting the creative city of the world has been well responded by the government as a companion, director and facilitator for the creative industry in DIY can compete regionally, nationally and internationally.

Department of Industry, Trade, Cooperatives and Small-Medium Enterprises DIY noted that every year the number of creative industry businesses from 2012 to 2015 jumped 6-10% [5]. Fluctuations in these figures because of many specific sub-sectors such as handicrafts, fashion, and design that dominates almost all regions in DIY [6]. The growth of the three sub-sectors of the creative industries are less feel complete if it does not fill the sub-sectors other consisting of animation, architecture, design, photography, music, crafts, culinary, fashion, research and development, publishing, film, advertising, interactive games, performing arts, visual arts, information technology, television, radio, and video. The complete sub-sector of industry demands the role of the Indonesian government to encourage the entrepreneurial spirit of young people to transfer their capabilities to other creative industries sub-sectors in order to be equitable and strategic.

The fulfillment of the workforce in the creative industry varies greatly in educational background. Their driving motor is creativity [1] and brilliant ideas generated by business actors [7]. The results of field observations in some 20 industry actors in the sub-sector of creative industries in DIY showed that 55% came from SMK graduates and 45% came from high school graduates. This phenomenon shows that many SMK graduates who work in the creative industry even those who turn around work in the creative industry with a background of non-linear educational concentration. The transformation of SMK graduates who switched jobs into the focus of attention is important to explore why they prefer to work in the sub-sectors of the creative industry.

The direction of the vocational graduates' work can be traced back to the beginning by tracing the talents, interests, and potentials of students since class X. Contrast, talent, interest, and potentially developed in schools are more inclined toward discipline, work, technology, sports, and cultivation. Meanwhile, the expected work behind these fields is so small that it is profound that it produces high economic value. It is also no relevant to the Indonesian government's policy to accelerate millions of entrepreneurs in the creative industry sectors. The existence of this research will provide an overview of the vocational school student's interest, especially in preparing his graduate candidates to work in the creative industry labor market. Early detection provides inputs for schools especially in preparing graduates through self-development, extracurricular, as well as local content learning tailored to the growing creative industry sub-sector in DIY.

1.2 Purpose of Study
The existing research trends in Indonesia about the creative industry are much more studied about the world of work in the creative industry sector, while inputs from qualified human resources are rarely the concern

of researchers in Indonesia. Human resource input can be obtained by finding talented talents to fill the sub-sectors of the creative industries so that there is equality of work sectors related to the development of local creative industries. Related to that, it is very appropriate with the purpose of the fulfillment of creative industry workers if we see the main vision of SMK is work, continue to college, and entrepreneurship.

This research will focus on mapping the interest of students of SMK X class in filling the sub-sector of creative industry in Indonesia in general and DIY in particular. The purpose of this study is to provide an overview of student's interest in 18 sub-sectors of creative industries in Indonesia as well as trace factors that influence students in selecting sub-sectors of the creative industry based on what they experience or interest.

2. Method

2.1 Research Design
The research used exploratory survey method with quantitative approach. The research will explore students' interest in the creative industry sub-sector in DIY based on their perception. Student perspectives can be a trend for the creative industries they are interested in and inform stakeholders to align the needs of the newest world of work. In the instrument is divided into two types namely the interest of students to each sub-sector and 3 alternative choices of sub-sector of the most interested by students. This research is part of the initial study of the potential empowerment model of vocational students for the development of creative industries in DIY. This model will further inform the direction and development of appropriate local creative industries to align with local school needs.

2.2 Research Sample
Research participants who contributed to this research are the students of class X of SMK in the field of technology and engineering expertise spread in 7 schools in DIY. The number of respondents is 350 students with the division in each school is 50 students so that the total class that is caught is 14 classes. The study program involved 3 classes of light vehicle engineering, 4 engineering classes, 1 class of computer and network engineering, 2 classes of building drawing techniques, 2 welding engineering classes, 1 mining engineering class, and 2 motorcycle engineering classes. This sampling is chosen randomly so that the researcher avoid the bias and subjectivity of research sample selection.

2.3 Data Collecting
Data collection in this study using questionnaires. The questionnaire used to collect data of student's interest in all sub-sectors of creative industries with 4 criteria Likert scale: very interest, interest enough, less interest, and not interest. This instrument consists of 32 statements that can represent each sub-sector of the creative industry and 3 alternative choices of student interest based on the highest level of interest preferred by the research respondents. The content of the questionnaire instrument is validated by an expert and declared eligible for a trial. The result of the instrument test with product moment correlation stated that the item 87.5% of the questions stated valid with the instrument reliability score is 0.838 based on the test with Alfa Cronbach's. After the validity and reliability requirements are met then the instrument is feasible to be used as data collection in the research sample.

2.4 Data Analysis

Data analysis used in this research use descriptive statistic. This is similar to the type of research used is a survey research method where researchers will explore the potential and interest of students in filling sub-creative industry sector in DIY. Analysis of this data is the result of student perceptions are poured in the questionnaire instrument based on 4 criteria of choice answers. This research will provide data and the quality of each student's interest to the creative industry sub-sector.

3.　Result

The study was conducted in 7 vocational schools that are public and private. There are 4 public schools namely SVHS 3 Yogyakarta Regency, SVHS 2 Pengasih-KulonProgo Regency, SVHS 1 Sedayu-Bantul Regency, and SVHS 2 Depok-Sleman Regency. While private schools representing amounted to 3 namely PVHS National Berbah-Sleman Regency, PVHS Muhammadiyah 1 Bantul Regency, and PVHS 45 Wonosari- Gunungkidul Regency. The background of the study program is 14% motorcycle technique, 7% mining technique, 14% welding technique, 7% computer network engineering, 29% mechanical engineering, and 29% light vehicle technique. Based on this information shows that the areas of technology and engineering expertise dominated in this research are automotive engineering and mechanical engineering. The results of the questionnaire respondents tabulation showed 92% of respondents gendered men, and 8% female gender. The male-dominated tendency in this study is in line with the VHS competence map (DVHSD, 2017) recorded in the Vocational The Big Data's of SMK that the field of technology and engineering that many dominated by men [8].

The prospective creative industry as a focus of future work by students can be identified through the distribution of inquiry questionnaire. The questionnaire was first tested feasibility and consistency so deserve to be disseminated. The results obtained from each school can be reflected in the interests of the sub-sectors of creative industries by referring to the following table:
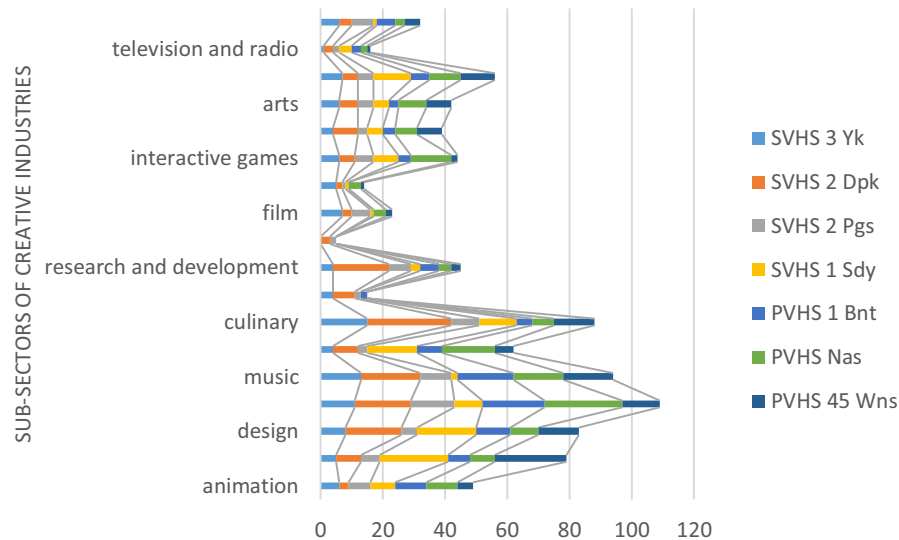
Table 1. Specialization of creative industry sub-sectors based on students' perception

No.	Creative Industries Sub-sector	School name							Mean
		SVHS 3 Yk	SVHS 2 Dpk	SVHS 2 Pgs	SVHS 1 Sdy	PVHS 1 Bnt	PVHS Nas	PVHS 45 Wns	
1	Animation	0,62	0,50	0,56	0,58	0,50	0,60	0,56	0,56
2	Architecture	0,60	0,52	0,58	0,68	0,56	0,57	0,65	0,59
3	Design	0,67	0,66	0,58	0,63	0,57	0,61	0,72	0,63
4	Photography	0,70	0,60	0,67	0,62	0,69	0,69	0,65	0,66
5	Music	0,65	0,61	0,64	0,66	0,66	0,67	0,70	0,66
6	Handycrafts	0,65	0,61	0,55	0,66	0,58	0,61	0,62	0,61
7	Culinary	0,65	0,66	0,58	0,60	0,55	0,55	0,65	0,61
8	Mode	0,53	0,50	0,49	0,45	0,44	0,44	0,48	0,48
9	Research & Development	0,50	0,59	0,57	0,46	0,51	0,52	0,51	0,52
10	Publishing	0,50	0,50	0,51	0,48	0,44	0,47	0,50	0,49
11	Film	0,60	0,48	0,56	0,51	0,46	0,55	0,54	0,53
12	Advertising	0,57	0,55	0,48	0,48	0,48	0,51	0,54	0,52
13	Interactive Games	0,67	0,51	0,55	0,60	0,51	0,55	0,56	0,56

14	Performing Arts	0,60	0,55	0,52	0,55	0,58	0,63	0,54	0,57
15	Arts	0,68	0,57	0,55	0,60	0,61	0,68	0,59	0,61
16	Information Technology	0,61	0,51	0,58	0,60	0,54	0,63	0,61	0,58
17	Television & Radio	0,58	0,50	0,52	0,53	0,50	0,56	0,58	0,54
18	Video	0,63	0,50	0,55	0,58	0,55	0,62	0,62	0,58
Interest in Creative Industries		0,61	0,55	0,56	0,57	0,54	0,58	0,59	0,57

Based on the above table can be obtained information that the sub-sectors of the most popular creative industry of the seven objects of research are the music and photography sector with a percentage of choosing is 66%, followed by 63% design and art, craft, and culinary with a percentage of 61 %. This shows the trend among students in filling the creative industry sub-sector leading to the music and photography sector. Another case with a sub-sector that is less desirable. The above tabulation results show that the fashion sector is less desirable by students of technology and engineering with a percentage of 48%. When viewed from the average of all respondents of the study obtained 57% interest in student creative industries. If referring to the result of student interest to creative industry, the biggest value is owned by SVHS 3 Yogyakarta which in fact is the state school with high enough value that is 61% while the lowest is PVHS Muhammadiyah 1 Bantul Regency which is 54%.

The search is more comprehensive by providing the three most popular choices of students. The results obtained as presented in Figure 2 below show that the most desirable sub-sector of students in school is photography. The dominance of this sector compared to other sectors gives researchers speculation that the majority of students are using a smartphone to capture the moment through photos and then published to social media. While the second sequence is filled by the music industry sector, and the next is the culinary sector followed by the design sector. The survey results of three alternatives to the selection of creative industry sub-sectors that are least desirable are the sector of publishing

Figure 1. Selected sub-sectors based on priority scale

Interest searches and factors influencing the selection of creative industry sub-sector were done by socialization method. The great enthusiasm of respondents in participating in the socialization of creative industries in VHS shows that creative industry programs are highly anticipated for action to be followed up by schools in order not to open self-development that is not in tune with the potential of the majority of VHS students. In exploring why students choose the priority sub-sectors, researchers use matching instruments based on what they choose. The results of matching sub-sector interests with the reasons for choosing can be seen in the following table:

Table 2. Reasons for selecting creative industry priority sub-sectors

Reasons for choosing	Aggregate
Passion	54
Expectations	122
Hobby	243
Environment	54
Personal needs	47
Family wishes	9
Job demands	16
Supporting facilities	20
Follow the trend	21
Existence	34
Curiosity	209
Etc.	16

Based on these results, the hobby is a factor that dominates VHS students to select the creative industry sub-sector of their choice. Then the next highest score is the sense of student curiosity and student expectations of the sub-sectors of his choice. When viewed in the table above, the expectation factor of parents to direct their children to work in the creative industry is very small compared to other factors. It is, of course, a record to all of us that in this era of openness students have a broad perspective to look at their bright future based on what they want not because of the will of the parents.

4.   Discussion and Conclusion

The creative industry should indeed be introduced early to the students about the scope of work to become a new labor market for VHS graduates [9, 10]. The importance of the creative industry for VHS students provides an opportunity for those who want to develop their talents and hobbies toward the creative industries sub-sector. The results of this study also provide findings that the reasons students choose the sub-sector of the creative industry because it is dominated by hobbies or passion that they do in filling their daily activities. This indicates that the sustainability of the achievement of the creative industry program into the activities in the school is not independent of what the students are fond of. Very difficult to apply if students can do the development of sub-sector insight if not included with the daily penchant.

This research is limited to reveal the potential of VHS in the field of technology and engineering expertise. Consideration of researcher uses this field because creative industry in Indonesia still very layman for them. In their daily activities in the more activities toward engineering that provides a reference for researchers to explore whether there is another potential outside techniques that can support local creative industries. From the results of the tabulation of the research indicates that there is considerable potential for VHS students to explore the world of creative industries.

The creative industry sub-sectors that most students choose are photography and music, although the data comprehensively shows the photography sector that students are passionate about. The results of the research interviews during the data collection as a confirmation of the results reinforce that the reason they choose photography as an option because almost 95% of students in the class have a smartphone. They use a smartphone camera to capture the moment to upload to social media or youtube channels. This shows that there has been a trend called narcissism where all smartphone users will use their handphones to take pictures as desired [11].

Another sub-sector of interest is the music industry. This sector is widely developed by VHS through extracurricular music, both art gamelan, chorus, and band. The tendency of students much interested in this sector because students can hone their intelligence and emotional to poured into the music [12]. Sectors other than music that VHS students are not interested in is a mode. Random interview results show the reasons for the lack of interest in the sector because the sector is more likely to be fashionable where VHS students are less attention to his appearance when on the move. The reasons are supported because the population of this study is dominated by the gender of men who in fact choose a sector that tends to masculine.

The results of research on the interests of students in each sub-sector need to be detailed by making three levels of priority that should be selected respondents. The result of the instrument of interest based on the priority of choice is obtained that the reason they liked the industrial sub-sector of choice due to the hobby.

This means hobby becomes the most important part of directing students to deepen its ability in sub-sectors of choice. But the problem for students is the school facilities that are not ready to meet the needs of the sub-sector based on the student's choice. This is certainly a barrier to the creation of qualified creative industry resources.

The second reason is the students' curiosity towards the sub-sectors of the creative industry. This curiosity that is able to encourage students to love the sub-sector of creative industries of his choice. While the reason for the smallest students in the creative industry sub-sector is the expectation of parents. This is very contradictory because today's children learn faster to develop their talents and interests without the influence of parents. Access and information disclosure factors give students much less fulfillment of what future parents expect in relation to the filling of creative industries sub-sectors.

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