

## TECHNICAL SKILLS ANALYSIS ON INDUSTRIAL CLOTHING PRODUCTION LEARNING OF VOCATIONAL HIGH SCHOOL

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### ABSTRACT

*Technical skills of students in learning Industrial Clothing Production are needed in introducing the process of producing mass clothing to the selling stage. This study is a descriptive quantitative research, which generally aims to depict the students' technical skills in Industrial Clothing Production learning in vocational high school. Sample of this study is selected by using cluster random sampling technique proportionally, which has taken 180 students from 11 vocational high schools in South Sulawesi.*

*The result of this study shows that the level of students' skills, based on their technical ability with 9 categories such as knowledge of fashion industry, pattern/ maker, cutting, sewing/knitting, finishing, pressing, quality control, packing, and deliveries, shows that the skills of students is averagely good in the process of producing fashion industry. This means that the learning process in vocational high schools already facilitates students in strengthen technical skills, however this skills need to be developed through learning models with adequate facilities and infrastructure.*

**KEYWORDS:** *technical skills, industrial clothing production, vocational high schools*

### 1. INTRODUCTION

Vocational competences as stated in Vocational High School Curriculum consists of several subjects that aim to support the establishment of vocational competence and the development of the ability to adapt in the field of expertise of learners. The subjects in the specialization group for vocational high schools consist of Subject Group of Expertise, Basic Subject Group of Expertise Program, and Subject Group of Expertise Package. Subjects and Basic Competencies are set by the Directorate General of Secondary Education of the Ministry of Education and Culture to adapt to technological developments, business, and industry needs. (*Permen Dikbud* Number 70 Year 2013).

The distribution of subject based on specialization group on Fashion Program covers Applied Natural Sciences and Introduction to Tourism. Basic Group of Vocational namely: Basic design, Basic Pattern of Technology Tailoring, Textile; for Vocational Competency Subjects are: Making of Decoration is studied in grade eleventh and twelfth, Clothing Pattern Making is studied in grade eleventh and twelfth, Costume Made in grade twelfth, and Clothing Production is studied in grade twelfth.

Industrial Dress Making is a subject that discusses the clothing produced for the trade. The principles of this subject are 1) mass-produced; 2) the model made is generally the same; 3) using standard size 3) cutting techniques with large quantities usually using cutting machine; 4) production systems on conveyor belts or wholesale;

- 5) production of clothing by order or on the basis of the wishes of the enterprise itself;
- 6) using the company's brand (Structure of SMK Curriculum).

The subjects of Fashion Industry are studied in grade twelfth from odd semester and even semester with a load of 3 hours per week. Learning materials refer to core competence and basic competence. The learning content in industrial fashion is to introduce to students about the processing and management of industrial clothing where it contains about the management of industrial clothing from starting stage to finishing stage.

This study is based on the fact that the fashion industry is one of the manufacturers with very tight competition in the AEC Era when other countries producing clothing freed from export quotas. According to Cepolina (2012), in terms of economics, significant changes that affect the pattern of clothing production also occur in developing countries, the structure of clothing distribution to consumers, generally moving towards an increase concentrating on market share in the hands of a larger national and international. According to Collins & Glendinning (2004), problems in the fashion industry that is still labour-intensive are consumers demand more new models at cheaper prices, so production in small quantities requires the work team on sewing production leads to improved management and shorter time planning.

Based on the aforementioned explanation, the graduates of Fashion Design program in Vocational High School are guided to master competencies related to fashion design skills. According to Bukit (2014), the criteria of a vocational education graduate should have the skills; 1) minimum knowledge and special skills for position or occupation; 2) a minimum of social, emotional and physical knowledge and skills in social life; 3) minimal as well as knowledge and academic skills for the position, individual and future.

Referring to expected criteria and characteristics, it is undeniable that students should master technical skills to survive in the workplace. As mentioned by Manara (2014), technical skills play important roles in developing insights about method, process, procedure and technique in doing something for students' future career prospect. Technical skill is traditionally related to the prospective workers' technical ability such as able to analyse data, operate computer, broad insights. Those ability is considered as hard skills or technical skills.

In designing the learning process, it is important to consider the external competences that must be mastered by the students. The learning process is not merely on introducing the students to the process of making clothing to the sales process but rather to give experience in terms of the skills that can be practiced directly, designing and creating prospects to enter job world both as a labour and independent self-employed.

## **2. RESEARCH METHOD**

This research is a descriptive study, which will depict the students' technical ability in the teaching and learning process of industrial clothing production in vocational high school. The population in this study is 326 students of 11 Vocational High School (SMK) majoring Fashion Design academic year 2017 in Makassar. The sample size is determined by cluster random sampling taken proportionally with the 180 students. The analysis used in this research is Descriptive Analysis. This method is used to examine the variables that exist in the study of students' technical skills on the learning process of industrial clothing production in Vocational High School.

### 3. RESEARCH RESULT AND DISCUSSION

#### a. RESULT

The description of students' technical ability in learning industrial clothing production in vocational high school is showed in the following table.

**Table 1: Students' technical ability in Industrial Clothing Production subject**

| No | Indicators                  | Superior | Expert | Sufficient | Less comprehend |
|----|-----------------------------|----------|--------|------------|-----------------|
| 1. | Industrial Clothing Concept | 4,90%    | 53,83% | 41,02%     | 0,25%           |
| 2. | Pattern                     | 0,75%    | 20,00% | 79,00%     | 0,25%           |
| 3. | Cutting                     | 20,97%   | 32,55% | 45,99%     | 0,38%           |
| 4. | Sewing/ knitting            | 17,94%   | 25,66% | 28,20%     | 28,20%          |
| 5. | Finishing                   | 22,61%   | 32,87% | 43,74%     | 0,78%           |
| 6. | Pressing                    | 23,08%   | 23,08% | 43,59%     | 10,25%          |
| 7. | Quality Control             | 1,54%    | 43,79% | 46,69%     | 7,98%           |
| 8. | Packing                     | 20%      | 30.8%% | 46,12%     | 3.8%            |
| 9. | Deliveries                  | 15,38%   | 23,09% | 46,15%     | 15,38%          |

A description of students' technical skill in learning the manufacture of industrial clothing production viewed from 9 indicators indicates that:

First, in Table 1 shows that the concept of students' conception of the material of industrial clothing is in the master category of 53.83% of the 180 students This means that theories about the concept of industrial manufacture is sufficient to be implemented into the practice of industrial fashion making, because this subject is 80% practice and 20% theory.

Second, the indicator of skill to make pattern in learning process of making of industrial clothing is in the medium category. Among 180 students, 7.98% of them that are sufficient. This means that mastery of pattern making still need to be keep improving considering this skill is the initial process or the foundation in producing industrial clothing.

Third, the cutting skill indicates that only 0.38% of the 180 students who have not mastered the cutting skills of industrial clothing production learning, this means that students have good skills in cutting out the main materials as well as the complementary materials in the learning-making industry.

Fourth, sewing or knitting skill shows that the amount of sewing technique skill is 71.06% and 28.20% less comprehend. It means that sewing skill in learning process of industrial fashion making still needs to be improved in terms of motivation and skill, because success in a learning process is if all students who follow the learning comprehend in the theory and practice.

Fifth, the finishing skill indicator shows that the less master is 0.78%, it means that the skill finishing ability which include adding detail, buttoning, decorating, repairing or working on the defective part is considered sufficient in the learning process of fashion industry.

Sixth, the indicator of pressing skill shows that 10.25 % of 180 students who follow the learning process still less comprehend the ability of pressing skill. This means that although most of students are capable in pressing skill but in

learning process still have to be improved their skill with learning process and supporting facilities because these skills are inseparable from the process of industrial clothing production.

Seventh, the quality control indicator shows that the students in general have sufficient skill. This can be seen from the number of students who have less mastered only 1.54% of the 180 students who follow the learning process.

Eighth, indicator of packing skill shows that students' packing ability in learning process of industrial clothing is generally good enough. It shows that the learning process, facilities and infrastructure are supportive for this skill activity.

Ninth, the delivery indicator indicates that out of 180 students, 15.38% of them who have less comprehend, this possibility occurs due to lack of students' understanding of the process of activities that should be done on the shelf delivery or distribution of consumer goods, this can be minimized by providing practical lesson with adequate facilities and infrastructure.

## **b. Discussion**

Finishing and quality control capability is the third sufficient technical skill controlled by students when viewed from the number of students who have less comprehend (0.7%). The finishing capability is the technical skill of the final settlement of a product in industrial clothing and quality control is the technical skill in checking the quality of the product before it is marketed in accordance with consumer standards.

Furthermore, pressing skill is the technical capability of pressing techniques that will provide the formation and tidiness of the clothing, it is a requirement that must be applied to shape the clothes that have been sewn. The ability of this technical skill is the fourth ability that is sufficient mastered by the students since only 10% of them are less comprehend.

The ability of delivery skill is a technical skill on the delivery of clothing to the consumer or sales agents. 15% of the students who have not mastered this skill. Sewing/ knitting skill is a technical skill about assembling or connecting clothes according to unit pieces that have been cut, assembly in the Industrial Clothing Production plays an important role in determining the quality of a product. Based on the results of data analysis, this skill still needs to be developed because about 28% of students have not mastered this skill.

Based on the result of this research, several technical skills should be mastered by the students. As mentioned by Cepolina (2012), businesses in the fashion industry need a variety of technical skills such as garment technology, information technology, management, textile technology and marketing techniques.

Briefing on the technical skills of students about the Industrial Clothing Production certainly started from the learning gained from the school plays as foundation to introduce the skills. Improving quality of education in schools can be pursued in various ways, such as increasing students' the initial insights, improving teachers' competences, improving the contents of the curriculum, learning quality and assessment of student learning outcomes, the provision of adequate teaching materials and the provision of learning tools. This is similar to that proposed by Arasinah et al (2014) that graduates who want to work in the fashion industry sector need to prepare themselves with knowledge about the management of fashion business, understand the market economy, and improve their skills and knowledge. It further discloses that in order to enhance the role of educational institutions as training institutions in training skilled workers for the clothing industry, agencies

must create relevant programs that enhance the credibility of the programs, facilities and infrastructure used to be updated in accordance with industry standards.

#### 4. CONCLUSION

Students' technical skill on learning Industrial Clothing Production viewed from 9 categories that is knowledge of industrial fashion concept, pattern, cutting, sewing / knitting, finishing, pressing, quality control, packing, deliveries, the result of recapitulation shows that in generally students have good enough ability in the learning process of making industrial clothing. Students' technical skill training on industrial clothing can be further improved by learning process and supporting facilities, so that students can be ready to enter the work world or independent self-employment.

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