Cognitive, Psychomotor and Affective Domain Conceptual Framework Validity and Reliability in TVET Fashion Program Curriculum

Norulaini Mohd Ramly[1], Nazlina Shaari[2]
{ainieyramly@gmail.com[1], nazlinashaari@upm.edu.my[2]}

Design and Visual Communication Department, Politeknik Ibrahim Sultan[1],
Faculty Design and Architecture, Universiti Putra Malaysia[2]

Abstract. The TVET fashion programme is one of the courses that provides *Sijil Pelajaran Malaysia* (SPM) graduates with apparel creation and production skills. The objective of this study was to find out about the effectiveness of three main domains in teaching and learning on the conceptual framework produced for the use of TVET Fashion Program curriculum in Community Colleges. Among the study methods used were observation, Kawakita Jiro method, and questionnaire instrument validation by field experts for acquiring and compiling study data. The quantitative research method was used to collect data, which was then analyzed using the Statistical Package for Social Sciences, or SPSS. A TVET fashion programme conceptual framework will be developed by the end of this study to serve as a guideline and reference source for future fashion programme curriculum development. As a result, the course aligns with the government's vision of graduates who are skilled, critical, and innovative enough to meet the nation's skilled manpower needs in the industry sector.

Keywords: TVET Fashion Programme, Teaching and Learning, Effectiveness of Key Domains, Conceptual Frame Work

1   Introduction

In Malaysia, training, vocational, and technical programmes, or TVET, are becoming increasingly popular. Without a doubt, the TVET fashion programme is one of the most popular courses among Malaysian youth of both genders. In accordance with globalization, knowledge-based economies, technological advancements, and global workforce mobility, the course was introduced to meet industry needs while contributing to economic growth. By enabling an industry-led approach, TVET is critical to providing the skilled human capital required by industry, particularly to support the economic sector's transition to knowledge-based activities, in line with the goal of becoming a developed nation by 2020 [1]. The objective of this study is to assist lecturers in forming the components of conceptual framework based on three main domains namely cognitive, psychomotor, and affective or CPA in the production of manual pattern drafting. According to Anderson, L.W [2], skills should focus on several key aspects like skill (psychomotor), knowledge (cognitive), and attitudes (affective). The combination of the three main domains consisting of CPA in practical classes producing clothing patterns is a very important behavior in this skill-oriented learning [3].

In Malaysia, education is a continuous effort to enhance and develop individuals' potential in a comprehensive and integrated manner to produce a balanced human being intellectually, spiritually, emotionally, and physically balanced and harmonious, based on faith and obedience to God [4]. As a result, various types of skill education institutions are emerging throughout the country. Various initiatives are being implemented to encourage *Sijil Pelajaran Malaysia* (SPM) graduates to enroll in programmes offered by the Ministry of Higher Education, or MOHE.

In Community Colleges, student competence is measured by their knowledge and skills in skill education. Students must master each field of study that best suits their interests. Mok Soon Sang [5] defines education as a process that emphasizes an individual's physical, intellectual, social, and emotional aspects, as well as improving skills, abilities, knowledge, and experience to motivate students to acquire knowledge.

2 Research Methodology

Primary and secondary data are two of the research methods employed. Primary data is derived from the researchers' knowledge, experience, and observations as instructors in the TVET fashion programme. Based on the observations made, it was discovered that there is a need to improve the level of reference materials and guidance provided to instructors while implementing the teaching and learning process.

The use of journals, articles, books, and magazines as resources aided in the effective, systematic, and efficient implementation of this study. Researchers, on the other hand, prioritize the collection of research data from observations, questionnaires, and group activities with fashion experts [6]. This research also used Kawakita Jiro method (KJ's method) for data collection from TVET fashion programme students on pattern drafting module. KJ's method uses several aspects of data collection including i) brainstorming through experience, ii) workshops with students and, iii) existing equipment / innovation equipment. This method can assist researchers in collecting the required data from respondents consisting of Community College students of TVET fashion programme. According to Raymond Scupin [7], the use of KJ's method can help researchers in obtaining information easily and effectively using keywords related to issues and problems faced by TVET fashion programme students.

The KJ's method, according to Craig Plain [8], aims to obtain and collect data from study respondents consisting of ten lecturers of TVET fashion programmes in Community Colleges in group activities at a single time and location.

Fig. 1. Fashion expert conceptual frame and guideline validation process for a systematic pattern drafting process

Figure 1 depicts the conceptual framework and guidelines validation process used by fashion experts to create a more systematic pattern drafting for TVET fashion programmes, particularly in Community Colleges. The ten lecturers involved were able to observe the situation firsthand and acknowledged the use of questionnaires on TVET fashion programme students as a certified method and that there were indeed problems with the production of clothing patterns. The use of questionnaires is critical for any study. To determine the validity and reliability of the instruments used, TVET fashion programme lecturers were recruited from three different Community Colleges and given the same questionnaire.

3 Data Analysis

The validity and reliability of this study were determined by administering a questionnaire instrument to the teaching staff of three different Community Colleges' TVET fashion programmes. The following is the data analysis performed by the researcher via the Statistical Package for Social Sciences, or SPSS, for the questionnaire (Figure. 2). Each question's overall average value was calculated using descriptive analysis data.
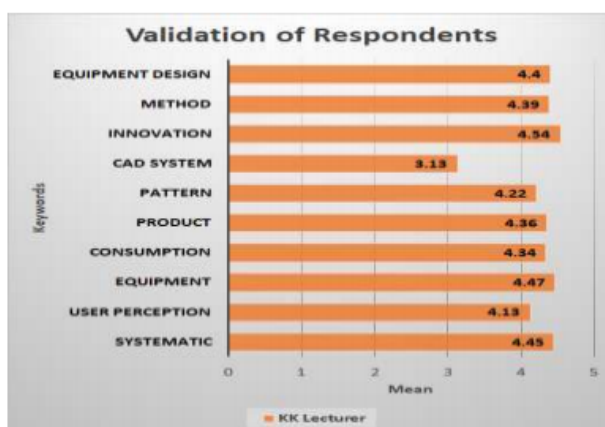

Fig. 2. The keywords listed in the questionnaire for TVET fashion programme lecturers at Community Colleges.

Figure 2 depicts the validation analysis data of fashion experts on the validity and reliability of the questionnaire instruments used in this study. The item with the highest average value, item H, which contains the keyword "Innovation," has the highest average value of 4.54. Following that is a 4.74 average value for item C, which contains the keyword "Equipment." Item A has the third highest average value of 4.45 for the keyword "Systematic."

Item G, which used the keyword "CAD System," had the lowest average value, with 3.13. This is followed by the second lowest average value, 4.13, for item B "Consumer Perception," and the third lowest average value, 4.22, for item F "Pattern." The average value of the items used was moderate, falling between the highest and lowest.

It was discovered that TVET fashion programme lecturers need to broaden their skill set to include new skills such as CAD systems, which use computer technology to create clothing patterns. This is because TVET-oriented skill teaching and learning continues to rely on a

manual learning system delivered directly to students. This contrasts with other countries that followed the industrial revolution and employ advanced and modern technology. If skill education is to be enhanced through cutting-edge technology, the existing education system must be improved, from the use of appropriate equipment in accordance with current manufacturing industry world conditions to the syllabus offered. Lecturers should also receive practical and technical training relevant to the technology offered in the fashion program's TVET skills syllabus.

4   Cognitive, Psychomotor, and Affective Domain (CPAD) Conceptual Frame for TVET Fashion Programme

The CPA domain conceptual framework for the TVET fashion programme was developed through group activities of ten lecturers using a questionnaire instrument. Several keywords were generated from the questionnaire instrument based on the researcher's questions. Table 3 displays the keywords that were generated.

Table 1. CPA domain category conceptual framework

CATEGORY	COGNITIVE	PSYCHOMOTOR	AFFECTIVE	THEME
Systematic	Understanding	Adjustment	Assess	Standardization
	Knowledge	Adaptation		
	Assessment	User Friendly		
	Application			
Perception	Analysis	Connect	Accept	Impressions
	Surface	Distinguish	Responsive	
		Choose		
Innovation	Problem Understanding		Integration	Creative
	Creative Thinking			
Consumption	Manual	Mechanism	Handle in a careful manner	Guideline
		Mobility		
Product	Design	Sustainable	Quality	Commercialization
	Can be marketed	Long lasting	Fragile	
			Affordable	
Pattern	Instructions	Draf	Discipline	Mechanism
	Formula	Pattern Manipulation		
CAD Design	Understanding	Application	Exercise	Design
	Equipment		Amali	
Solution	Pattern Direction	Skills	Objective	Procedure
		Expertise		
Method	Demonstration	Pragmatic	Feedback	Effectiveness
Number of Keywords	17	16	14	9

Table 1 describes the use of the questionnaire in greater detail based on some of the items developed by the researchers. There are nine keywords that represent each group of questions that can be identified from the nine question categories provided. The first is Systematic, the second is Perception, the third is Innovation, the fourth is Consumption, the fifth is Product, the sixth is Pattern, the seventh is CAD Design, the eighth is Solution, and the last is Method.

It is then subdivided into three major domains: cognitive, psychomotor, and affective (CPA). Each domain plays a distinct role in the teaching and learning provided to students. The cognitive domain includes the respondent's existing knowledge. The psychomotor domain, on the other hand, refers to students' existing skills involving movement and competence in practical and technical training. The last domain is the affective domain, which is concerned

with the relationship between students' noble values, such as attitudes, temperaments, and personalities both in and out of class.

The main theme is produced through this conceptual framework for each category for the three main domains, namely a) standardization for systematic category, b) screening for perception category, c) creative for innovation, d) guidelines for consumption category, e) commercialization for product category, f) mechanism for pattern category, g) design for design or CAD category, h) procedure for solution category, and i) effectiveness. These main themes are for the method category used in garment pattern production.

The use of the conceptual framework for the CPA domain category can assist lecturers in determining work division by category and scoring student work according to the guidelines in the conceptual framework produced based on nine CPA domain themes.

The study's findings from the observation method, questionnaire, and validation of the questionnaire instrument used in this study discovered that students in Community Colleges lack mastery of the manual use of clothing pattern drafting equipment. As a result, a visual use guideline and manual for a systematic method in clothing pattern drafting for TVET fashion programmes should be developed. This can be accomplished through activities with a group of fashion experts and professionals, and a guideline of systematic methods in drafting will be proposed for curriculum development, particularly in fashion programmes.

5 Recommendation

According to the study's findings, it can help instructors at Malaysian Community College develop modules based on the conceptual framework that was developed. This conceptual framework can be used as a guideline for future TVET fashion programme module developers. Several critical factors can be analyzed and used to develop this skill-oriented programme. The method used in this study resulted from observations, interviews, and questionnaires administered to ten lecturers with experience teaching in the TVET fashion programme. The instructor's knowledge and experience in dealing with students' problems and needs is extremely beneficial in the creation of this conceptual framework. It is hoped that in the future, researchers will be able to study other modules in the TVET Fashion Certificate programme, particularly in Community Colleges throughout Malaysia.

6 Conclusion

This study was successful in developing a conceptual framework of the CPA domain that can be used by teaching staff of TVET fashion programmes when performing practicals. Aside from that, it serves as a guideline for developing or refining the existing fashion and apparel programme curriculum in response to Malaysia's apparel industry's current needs. The three main domains are extremely important to students, and they can improve the prestige and quality of teaching and learning, as well as the skills offered in Community Colleges based on the level of Fashion and Apparel Certificate graduates.

This study demonstrates the validity and reliability of CPA conceptual framework use for TVET fashion programmes. As a result, it can be used as a guide and reference source for lecturers in the future to provide training and develop TVET fashion programme curriculum in a more systematic and efficient manner, while also assisting in determining the future of TVET

fashion skills based on current industry needs. This study demonstrates that the discovery inquiry teaching and learning strategy is one of the mediums for producing students with complete and balanced development in the CPA domain while also allowing them to make and risk decisions on their own.

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