

The Relationship between Learning Motivation and Competency-Based Learning with Fashion Designing Skills for Fashion Design Programme Students at Vocational College

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Abstract

Technical and Vocational Education Training (TVET) highlights the mastery of skills as a key element before entering a career field. This study was conducted to identify the relationship between learning motivation and competency-based learning (CBL) and fashion designing skills for students in the Fashion Design Programme at Vocational colleges. This quantitative study with correlational research design involved 200 Diploma in Fashion Design Programme students. Simple random sampling technique was used, and data was collected through questionnaires. Findings of inferential analysis showed that fashion designing skills and learning motivation were at a moderate level with mean = 2.88 (SD = .43) and mean = 4.05 (SD = .30). Meanwhile, Competency-Based Learning recorded a mean of 3.08 with a

standard deviation of .35. It was found that learning motivation had a weak relationship ($r = .249$, $p < 0.05$) while CBL had a strong relationship ($r = .542$, $p < 0.05$) with fashion designing skills. These findings indicate that motivation and competency-based instruction implemented during Teaching and Learning are related with mastery skill. Following that, lecturers need to ensure that the knowledge and skills imparted can be mastered by the students. It can be concluded that the management of Vocational colleges needs to provide continuous motivation to the students as well as support the lecturer to increase their knowledge on CBL in order to produce students who are highly skilled in Fashion Design.

Keywords: vocational college, competency-based learning, learning motivation, fashion designing skills

1. Introduction

Mastery of skills is a key factor required by fashion design diploma students before stepping into the fashion industry. In clothing production, individuals need to be skilled in planning, measuring, cutting, sewing and finishing, as well as adept in entrepreneurship and communication skills related to the field of fashion design. The production of a piece of clothing involves a detailed process in order to produce high quality results that are not only sellable but also reflect on the philosophy, culture and aspirations of the designer. Therefore, students' mastery in theory and practice must be very high and thorough (Ramly and Shaari, 2019). According to Dandira, Maphosa and Nsubuga (2017) some of the skills required in the industry are designing skills, garment cutting and manufacturing, marketing and retail, fashion quality management and communication skills. These skills are also mentioned by Kamis A., Bakar. Hamzah, and Asimirin (2014) in their study entitled Competency Requirements in Fashion Design (ReFP) in the Fashion Industry. The mastery of these skills can increase graduates confidence to venture into the fashion industry and increase their employability in this competitive field.

Fashion designing skills can be acquired through in-class practical training and industrial training. Industrial training provides an avenue for students to build and hone skills and improve in aspects such as self-discipline, working according to actual work rules, performing tasks in groups and preparing themselves for a successful career after graduating from their respective educational institutions (Piah M and Haron, 2018).

Lecturers are an important agent in disseminating knowledge to students to ensure that they master the necessary skills in fashion design. Competency-based learning (CBL) methods are practiced in vocational colleges in line with its main purpose of producing students who possess skills and expertise in the field studied. According to ismail, Andin, Abdullah, Nordin and Buntat (2014), the Technical and Vocational Education Training system provides a pathway for students to acquire knowledge and expertise in accordance with their interests, abilities and skills regardless of their academic prowess. Kandar and Asnul Dahar (2006), posited that the competency-based training approach is an alternative to assessing students rather than relying solely on their exam results. Performance is also assessed through the required competencies in terms of knowledge and skills to assure the quality of the students. This supports the statement of Foster and Jones (2020) that the CBL method can improve

students' skills.

To ensure optimum learning, students need to always be motivated. According to the Self Determination Theory, an individual will always strive to understand and improve their progress by integrating new experiences; fulfilling needs, desires, and interests; and interacting with others in the outside world. However, this situation could reverse i.e. it can become uncontrollable, conflicting and isolated if the basic psychological needs in autonomy, competence and relatedness are not supported or thwarted due to problems occurring in the social environment (Deci and Ryan 2008).

Accordingly, this study was conducted to identify the relationship between motivation and CBL and fashion designing skills. The strength of the relationship will shed some light on the effects of CBL and motivation to fashion designing skills for students in the Diploma in Fashion Design Programme at vocational colleges.

1.2 Statement of Problem

Through the 11th Malaysia Plan (RMK-11) 2016-2020, it was expected that 1.5 million workers in the field of TVET would be needed by 2020. As a result, educational institutions have a role to provide graduates with the knowledge and skills appropriate to the job market in the 21st century. However, a study conducted by Hanapia, Nordin and Rus (2014) found that the lack of competence and quality of education among graduates in the technical fields is a contributing factor to the problem of unemployment.

According to the National Graduate Employment Development Plan 2012-2017 (Ministry of Higher Education Malaysia, 2012), there is a gap between the skills required by the industry and the skills learned in school. In addition, the Plan also reported that students did not master technical knowledge and generic skills to face business challenges. Further, Joy and Hiller (2014) in their study found that the skills and knowledge of students who perform industrial training are still at a low level.

Problems related to the competency and quality of education among graduates of technical fields are closely related to the teaching and learning process in educational institutions. According to Hanapia et al., (2014) the production of unskilled graduates can be attributed to instructor-focused teaching and learning process as well as insufficient teaching and learning hours. Further, deficiency in practical skills causes graduates to face difficulties in meeting the demands of employers (Amankwa, Gbadegbe, Gbetodeme and Agra, 2015).

Encouragingly, Le and Steinberg (2014) found that competency-based learning (CBL) provides flexibility in learning as guidance is given continuously to students towards the mastery of skills and knowledge for future careers. CBL is also a student-centered approach that engages students and has been found to have positive impact on learning outcomes (Ryan and Cox, 2016). Similarly, Tran, Nguyen, Van De, Soryaly and Doan (2019) found that fun learning activities can increase learning motivation. This increase in learning motivation can in turn increase students' efficiency (Ramli, 2014).

Therefore, this study was conducted to identify the relationship between learning motivation

and CBL with the fashion designing skills of students in the Diploma in Fashion Design Programme in Vocational colleges. The research question is to determine the levels of fashion designing skills (KRF), learning motivation and CBL among Fashion Design Students in vocational colleges and consequently, the relationship between learning motivation and CBL and fashion designing skills among these students.

1.3 Literature Review

1.3.3 Fashion Designing Skills

A study was conducted by Kiong, Florentius, Abu, Rubi, Mohamed, and Heong (2016) involving 100 Home Economics (ERT) students in public universities to identify their level of theoretical and practical mastery. The results of the study showed that the ERT students in public universities have a moderate level of mastery of theory and practice, with a mean of 0.65 for theory and a mean of 3.5 for practice.

Ab Rahman, Zolkifly, Hanafi, and Yusof (2014) conducted a study to identify competencies that encompass students' skills and knowledge in building logic programming (PLC). A survey was administered involving a total of 90 students in the Electronic Technology programme at vocational colleges. The results of the study revealed that the students in the manufacturing industry programme scored at the competent level for knowledge and skills with a score range between 69 and 79. The competency level of these students was determined by using the Malaysian Pre-Diploma and Diploma Vocational Programme Grade System. This level of competency indicates that the students possess sufficient knowledge and skills in the field studied.

Another study was carried out by Ishak N. (2019) that identified the level of students' competency in performing practical work. This quantitative study involved a total of 118 final year students in the Database and Application Management System Programme and the Computer Systems and Network Technology Programme in four Vocational colleges in the Southern Region. This study utilised a questionnaire that assessed the 7 psychomotor levels of Simpson's learning domains (citation). The results of the study found that the competency of the vocational colleges students was high; the Mean value was equal to 3.97 while the Standard Deviation was equal to .370.

1.3.2 Competency-Based Learning (CBL)

There are several studies showing that CBL has a positive relationship with students' skills, especially students in the technical and vocational fields (McIntyre, 2016). This situation lends support to the suggestion that the CBL approach is effective in the teaching and learning process in Vocational colleges.

According to Ndile (2018), the competency-based education and training approach in the TVET curriculum is able to produce students who are competent in terms of knowledge and skills. This is evidenced by his study which involved 229 respondents consisting of TVET graduates, trainees and employers which found that TVET students scored 87.7% in the aspect of skills and 78.9% in the aspect of knowledge.

Foster and Jones (2020) supported the effectiveness of the CBL delivery method in improving students' competency. The CBL method in the TVET curriculum also promotes the construction of students' knowledge because it emphasises on continuous learning or knowledge acquisition as well as encourages students to achieve a high standard in their performance (Hashim, Utami, Rahman, Jumaat and Phon, 2019).

In conclusion, the CBL method influences the knowledge and skills aspects of students (Rainwater, 2015) including TVET students. The CBL method which emphasises on learning outcomes and is student-focused encourages students to progress to more advanced levels upon mastering content and skills (Henri, Johnson and Nepal, 2017). This coincides with one of the educational objectives of TVET which is to produce graduates with high levels of knowledge and skills in the job market in order to meet the needs of the country in the future (Dason, Hamzah dan Udin, 2010).

1.3.3 Learning Motivation

To ensure that the learning process takes place effectively, students need to always be motivated. According to the Self Determination Theory, an individual will always strive to understand and improve self-progress by integrating new experiences; fulfilling needs, desires, and interests; and interacting with others in the outside world. However, this situation will happen the other way around i.e. it can become uncontrollable, conflicting and isolated if the basic psychological needs in autonomy, competence and relationships cannot be met due to problems occurring in the social environment (Deci and Ryan, 2008).

There are several studies that examine the relationship between learning motivation and the skills of vocational college students. One of them is a study conducted by Makhtar, Fauzi, Hasan, Othman and Ahmad (2016) which focuses on the level of motivation of Vocational College students in performing technical skills work. This study was conducted on 148 students taking the Malaysian Skill Certificate (SKM) Level 1 Semester 2 of Kluang Vocational College who majored in technical courses. The findings showed that the level of intrinsic motivation (mean = 4.28, SD = .30) was high while the extrinsic motivation (mean = 2.98, SD = .38) of vocational colleges students was at a moderate level. This study also found that intrinsic motivation affects students' skills more than extrinsic motivation.

Ramli (2014) conducted a study entitled *The Effect of Learning Motivation On Student's Productive Competencies In Vocational High School, West Sumatra* which utilised a questionnaire answered by 160 students. The results of the study revealed that the motivation vocational students in West Sumatra was good (mean = 197.92, SP=21.59). This shows that vocational students have fun and to enjoy the motivation for carrying out activities in learning vocational college.

Putro, Pramadi, Setiawan, Gunawan, Hadiprakoso, and Kabetta, (2019) conducted a study to determine the relationship between motivation and achievement of competencies through hands-on learning. The study was designed quantitatively involving a total of 18 second year students in the Fundamental Information Security Programme. The findings showed that intrinsic motivation and extrinsic motivation had a significant relationship with learning

outcomes ($p = .04, p < .05$).

1.3.4 Research Theory

The theory used in this study is Walberg's Model of Educational Productivity. According to Walberg (1981) aptitude and aspects of teaching influence learning outcomes which are measured in terms of students' knowledge, behavior and affect. Aptitude includes ability, development and motivation, while aspects of teaching are measured through quantity and quality. In this model, student motivation refers to the readiness of students to learn and their perseverance in completing the assigned tasks. Teaching quantity is defined as the amount of time taken in teaching and learning while teaching quality refers to the extent to which knowledge and skills are imparted to students. This aspect is in line with CBL where learning materials are prepared and designed to help students acquire knowledge that supports the production of skills. In the Walberg Educational Productivity Model, one of the key independent variables with the most significant impact on learning outcomes is behavior. This refers to the skills that students acquire through the behaviors performed by the students. The hands-on learning method practiced in VOCATIONAL COLLEGES is one of the methods to help students acquire the skills taught. Diagram 1 shows Walberg's (1981) Model of Educational Productivity.

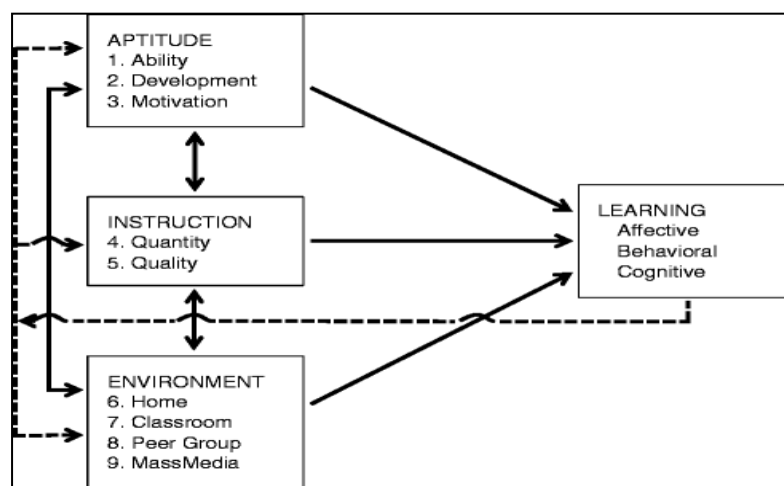


Diagram 1. Model of Educational Productivity Walberg's (1981) (source: Fraser et al. 1987)

2. Research Design

This quantitative research uses a correlational design to examine the relationship between learning motivation and CBL and fashion designing skills. Questionnaires was administered to obtain feedback from the respondents.

2.1 Sample and Population

The study population consisted of vocational colleges students in the Diploma in Fashion Design Programme at Vocational colleges in Peninsular Malaysia. First and second year students were selected as the participants because they had passed the Malaysian Vocational Certificate (SVM) at vocational colleges. The study population was 418 students.

A simple random sampling technique was used. Out of the eleven Vocational colleges that offer Fashion Design Programme in Peninsular Malaysia, only six were selected as the study sample, namely Sultan Abdul Samad Banting Selangor Vocational College, ERT Azizah Johor Vocational College, ERT Setapak Vocational College Kuala Lumpur, Puteri Temerloh Pahang Vocational College, Dungun Vocational College and Sg Petani 2 Kedah Vocational College. The Cochran's (1977) formula was used to determine the study sample size which was revealed to be 200.

2.2 Instrument dan Validity

This study used a questionnaire instrument that is divided into four parts, namely demographics, learning motivation, CBL and fashion designing skills. The dimensions studied for the learning motivation variables consist of intrinsic motivation and extrinsic motivation. The dimensions of CBL are divided into four, namely progression through demonstration of mastery, personality, flexible assessment, and development of specific skills and disposition. On the other hand, the dimensions of fashion design skills include designing or drawing skills, pattern drawing skills, sewing skills and entrepreneurial skills.

The questionnaire instrument for the learning motivation items was adapted from the study of Ahmad and Rahman (2014) entitled *Intrinsic and extrinsic: a survey of motivation among Religious Schools students*. This instrument uses a 5-point Likert scale. For the CBL instrument, the questionnaire was adapted from the study of Ryan and Cox (2016) *Guide to the competency-based learning survey for students*. The fashion designing skills questionnaire was adapted from the study of Kamis et al., 2014.

To ensure the validity and reliability of the instrument, a pilot study was conducted on 50 respondents. The Cronbach's Alpha (α) values for the pilot study and the actual study questionnaire were between 0.69–0.89.

3. Research Findings

3.1 Demography

Table 1 displays the distribution of respondents by gender. The study respondents consisted of 6 (3.0%) male respondents and 194 (97.0%) female respondents. The results showed that Malay respondents dominated the Fashion Design Programme at vocational colleges.

Table 1. Demographic Factors

Demographic Factors		Number	Percentage (%)
Gender	Male	6	3.0
	Female	194	97.0
Race	Malay	196	98.0
	Chinese	-	-
	Indian	-	-
	Others	4	2.0
Total		200	100%

3.2 Fashion Designing Skills

The variables of fashion designing skills are divided into four dimensions, namely design/drawing skills, pattern drawing skills, sewing skills and entrepreneurial skills. Table 2 displays the mean values for fashion designing skills and their dimensions. The findings of the study showed that fashion designing skills were at a moderate level with a mean of 2.88 (S.P = .43). The sewing skills dimension recorded the highest mean value of 3.04 (SP = .56) followed by design/drawing skills (Mean 2.83, SP = .49), pattern drawing skills (Mean = 2.97, SP = .56) and entrepreneurship (Mean = 2.81, SP = .51). All the skills measured recorded mean values between 2.81 to 3.04. These findings indicated that sewing skills have been mastered well by the Diploma in Fashion Design Students in the various Vocational colleges.

Table 2. Fashion Designing Skills

	Mean	Standard Deviation (SD)
Fashion Designing Skills	2.88	.43
- Designing/Drawing Skills	2.83	.49
- Pattern Drawing Skills	2.97	.56
- Sewing Skills	3.04	.56
- Enterpreneurial Skills	2.81	.51

3.3 Learning Motivation

Learning motivation consists of two dimensions: intrinsic and extrinsic motivation. According to the results in Table 3, the min value of overall learning motivation is high (Min=4.05, SP=.30) with intrinsic motivation recording a high Min = 4.12, SP = .35 and extrinsic motivation with a Min = 3.99, SP = .39).

Table 3. Learning Motivation

	Mean	Standard Deviation (SD)	Interpretation
Learning Motivation	4.05	.30	High
- Intrinsic motivation	4.12	.35	High
- Extrinsic motivation	3.99	.39	High

4. Discussion

The findings showed that the fashion designing skills of vocational colleges Fashion Design Programme students are at a moderate level. These findings are in line with the results of the study by Tee et.al (2016) which implies that students in the vocational colleges Fashion Design Programme should constantly improve their skills. The learning motivation variables which are intrinsic and extrinsic motivation are at a high level. The findings are in line with the study by Ramli (2014) and Makhtar et.al (2016) which found that the motivation level of vocational students is good. Meanwhile, the CBL in this study is also high, similar to the study by Ndile (2018) which found that the competency-based education and training

approach in the TVET curriculum is capable of producing competent students in terms of knowledge and skills.

Looking at the relationship between dependent and independent variables studied, there was a significant relationship between learning motivation and fashion designing skills. However, the relationship was weak. These findings indicated that the increase in learning motivation does not help improve the mastery of fashion designing skills for students in the vocational colleges Fashion Design Programme. In essence, fashion designing skills require mastery in the psychomotor domain in the learning process (Norulaini et.al, 2018). The psychomotor domain involves the activities and movement of gross and fine motors (Long and Malim, 2019) where increased efficiency in implementing psychomotor movements can be achieved through continuous, repetitive training. This means that even if the students have the motivation to study, it does little to improve their mastery of skills if they do not commit to rigorous practical training (Ramly et.al, 2018).

Odedewumi and Dekom (2020) proposed that CBL be implemented in TVET classrooms as it can produce skilled graduates. This suggestion supports the findings obtained in this study. Researchers found a strong link between the CBL independent variable and fashion designing skills (Russanti, Nurlaela, and Basuki, 2018). These findings support Walberg's theory that teaching and learning influence learning outcomes. In other words, the implementation of CBL in classrooms or workshops can help increase the students' ability to master the skills taught (Foster et. al, 2020). The findings also support the study by Rainwater (2015), and Ndile (2018) that found that CBL should be practiced continuously among vocational colleges students so that mastery of skills can be achieved effectively.

CBL is a teaching and learning approach aimed at enabling all students in the classroom or workshop to acquire knowledge and skills (Smith, Hernandez and Gordon, 2019). Lecturers play an important role in ensuring that all students master the learning outcomes in a learning unit before moving on to the next unit (Gervais,2016). This implies that students need to have a strong mastery of the prerequisite knowledge and skills before proceeding with new learnings. In the case that the student fails to master the required skills, however, they would go through a recovery process with the lecturers until they have mastered the skills. This process will help fashion design programme students in mastering the necessary skills to make them successful in their career.

In order to master designing skills, pattern sketching skills, sewing skills and entrepreneurship skills, the student and teacher-centered learning process in CBL must be implemented (Hsu and Ho, 2012). A teacher-centered approach helps students get explanations and elaboration of the knowledge. The student-centred approach, on the other hand, improves students' mastery in the aspect of skills through demonstration, project development and practical work. The aim is to measure a student's knowledge, behavior, and skills in practical activities in order to help them progress more efficiently and effectively (Russanti, Nurlaela, and Basuki, 2018). The continuous assessment in CBL serves to track students' achievement; identify students who are advanced, moderate and weak; and determine whether or not the learning outcomes have been achieved. Lecturers also need to

plan recovery and enrichment activities to determine the effectiveness of their teaching and learning methods as well as activities. As such, the implementation of CBL to ensure mastery of the designing skills, pattern sketching skills and sewing skills is relevant.

5. Conclusion

The results showed that the elements contained in CBL can build students' confidence in mastering each skill while performing continuous training (Ayonmike, 2014). The implementation of CBL in teaching and learning can help students develop the necessary skills and knowledge in their chosen field of study. In this regard, lecturers need to prepare assignments in various forms so that students can effectively and comprehensively demonstrate their mastery of the knowledge and skills in the courses they take. Lecturers are also required to carry out continuous assessments using the checklists or rubrics provided to ensure that the levels of students' mastery of theory and practice are in accordance with the standards outlined in the curriculum (Ismail et.al., 2014). Competency-based learning implemented in the TVET curriculum is capable of producing skilled and competitive graduates. This is in line with TVET's objective to ensure graduates of Vocational colleges meet the needs of the current labour market (11th Malaysia Plan).

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