

Relationship Between Implementation of Cooperative Vocational Education and Job Offering among Apprentice of National Dual Training System in Malaysia

Hazril Azmin Saari and Abdullah Mat Rashid

Faculty of Educational Studies, Universiti Putra Malaysia

Abstract: The objective of this research is to examine a relationship between implementation of cooperative vocational education and job offering among apprentice of national dual training system in Malaysia. Furthermore, the study also identifies several factors to predict job offering to the respondent. The total respondent of the study are 285 apprentices which enrolled for Malaysian Skills Certificate Level 2 at various types of programs and companies that offer national dual training system. These respondents were selected through stratified random sampling based on location of training institutions. Data was analyzed by frequency and percentage for descriptive statistics and logistic regression for inferential statistics. The result shows MNC and GLC companies' offers block release training mode meanwhile SME companies' offers day release training mode. The result shows that the three combination independent variables significantly predict getting a job offer. However, only type of company and training mode are significantly contributing to the prediction. Further chi square analysis results indicate that getting a job offer are significantly different in regards respondent program of study, training mode and type of company they attached during the SLDN program.

Key words: Malaysian Skills Certificate • Day release training mode • Block release training mode • Small and medium enterprise company • Government linked company • Multinational company

INTRODUCTION

Cooperative vocational education (CVE) also known as cooperative education or co-op education was implemented in Malaysia to strengthen workforce skills training systems. [1] states that CVE is important in education system and curriculum development in view of the fact that apprentice or student have been expose to real work situation, working culture and hands on experience. An example of CVE is dual training system and school to work program. The CVE program refers to the cooperation between the training institutions or school and the work place for apprentices or students to gain knowledge and skills. About 70 percent to 80 percent of learning instruction and experience occurs in work place and the balance of 20 percent to 30 percent occurs at the training institution. There are two modes of how apprentices been release from training institution to workplace which is called release mode namely day release or block release. Day release training mode refers

to student been release after 1 or 2 days at learning institution and go to work place for learning for 3 or 4 days on weekly basis. For block release, student been release by semester where 6 to 9 weeks are at learning institution and the other 21 to 24 weeks are at work place. For this research, we categorized the type of company involved as small and medium enterprise (SME), government linked company (GLC) and multinational company (MNC).

The CVE program was introduced in 1998 at the secondary school level by the Department of Curriculum through the Sekolah ke Kerjaya program. There were 25 schools with 495 students involved in this program. Meanwhile, the cooperation between the Malaysian and Germany governments on training makes a suggestion that training institutions in Malaysia need to strengthen an existing training system. Therefore, the national dual training system had introduced for tertiary level in 2000 [2-3]. The Department of Skills Development (DSD) is responsible implementing the national dual training

Corresponding Author: Abdullah Mat Rashid, Faculty of Educational Studies, Universiti Putra Malaysia.

system in the country. The objective of the program is to train skills worker as well k-worker for industrial needs. The DSD introduce two types of training mode which are day and block release to accommodate flexibility for work place in given training to students. The dual training system is also useful for apprentices in gaining experience in real work situation and hands on experience from the industry. According to [4], experiences from different training will have an impact on apprentice performance. Furthermore, apprentices also can be offer a job by the company that they attached after finished their training.

Survey findings from the Jobstreet.com in first quarter of 2013 shows that top opening position are in sales, marketing, manufacturing, accounting, electrical engineering, mechanical engineering, human resources, administration and customer services. According to Unit [5], the changes in manpower structure were a result of changes in Malaysian economics which emphasized more on services and commercial industry. A 2011 report by the Department of Manpower shows that 82,253 jobs were available in skills labor, followed by 165,757 job opportunities in agriculture, forestry and fishery and 200,839 opening position in sales and services sector. Therefore, in 2012, the DSD approved additional 11 sectors to be comprised in the national dual training system including financial, business services, textile and apparel, oil and gas, metal and steel industry and resource based sectors.

Involvement from various companies such as SME, GLC and MNCs gave positive impact on implementation of CVE in Malaysia [6]. There are 1,787 companies involved as industrial partners in the national dual training system. In details, there are 1,697 SME's companies involved in the dual national training system, followed by MNC's companies with 65 companies and lastly 25 of GLC's companies. According to Jabatan Pembangunan Kemahiran (2013) [6], the involvement of these companies will benefit them in term of not hiring new skills workers for specific task. In addition, the program gives an opportunity to senior employee to train the apprentices of the national dual training system. For an apprentice, there was a claim that the national dual training system will increase job opportunities among them after finished their training. Therefore, the objective of this study is to seek an evidence of the implementation of CVE ascertain job offers among apprentices of the national dual training system.

MATERIALS AND METHODS

This study utilized a survey design to measure attitudes and behaviors of respondents to make inferences describing the whole population [7]. In addition, this design is useful and accurate in predicting and reporting information [8]. The population of the study is students who are enrolled in the Malaysian Skills Certificate level 2 in 10 programs which are electric, computer numerical control machining (CNC), automotive, computer, welding, sewing, beautician, baker, hotel services and industrial mechanic. Based on a current list of student enrolment in the stated program provided by the DSD, researchers used random stratified sampling method to select a sample. The stratified sampling with differential probabilities of selection is used since samples are geographically spread across the country. According to Gliner, Morgan and Leech (2010) [8], this type of sampling accurately represents the population of the study since appropriate proportions of the selected sample come from different regions of the country. The number of samples is 320 and the complete survey questionnaire by the respondent is 89 percent. All data in the survey are categorical which question about program of study, training mode, type of company and job offer.

RESULTS

Table 1 shows training profile of the study including program of study, training mode and type of company. The percentage of respondent based on their programs of study is as follows: 17.54 percent from computer program, 14.74 percent from automotive program, 10.37 from welding program, 10.53 percent from CNC machining program, 10.18 percent from beautician program, 8.77 percent from hotel services, 7.72 percent from industrial machining, 7.37 percent from electric and sewing programs and 4.91 percent from baker program.

Majority of respondent in the study go through block release mode of training compare to day release mode which only 37.5 percent. However, only 4 programs offer both type of training mode, day and block release, which are electric program, automotive program, computer program and hotel service program. Meanwhile, 6 other programs only offer either day release or block release training. There are 4 programs that offer only day release which are welding program, sewing program, beautician program and baker program. The other programs offer

Table 1: Training Profile for Program of Study, Training Mode and Type of Company involved in the National Dual Training System of the Study

Program	Training Mode					
	Day			Blok		
	Type of Company					
	SME	MNC	GLC	SME	MNC	GLC
Electric	4 (1.4%)	-	-	-	-	17(5.9%)
CNC machining	-	-	-	-	30 (10.5%)	-
Automotive	28 (9.8%)	-	-	-	-	14 (4.9%)
Computer	36 (12.6%)	-	-	-	-	14 (4.9%)
Welding	31 (10.8%)	-	-	-	-	-
Sewing	21 (7.4%)	-	-	-	-	-
Beautician	29 (10.2%)	-	-	-	-	-
Baker	14 (4.9%)	-	-	-	-	-
Hotel services	15 (5.3%)	-	-	-	10 (3.5%)	-
Industrial mechanic	-	-	-	-	22 (7.7%)	-
Total	178 (62.4%)				62 (21.8%)	45 (15.8%)

Table 2: Logistics Regression Predicting gets a Job Offer

Variable	β	SE	Exp β	<i>p</i>
Program of Study	.07	.05	1.07	1.19
Type of Company	.90	.48	2.46	.004
Training Mode	.07	.80	1.07	.011
Constant	-2.74	2.39	.065	.254

Table 3: Chi Square Analysis of Prevalence of Getting Job Offer or Not among Student after Finish the SLDN Training

Variable	<i>n</i>	Job Offer		χ^2	<i>p</i>
		Yes	No		
Program of Study				74.58	.001
Electric	21	14	7		
CNC machining	30	23	7		
Automotive	42	31	11		
Computer	50	9	41		
Welding	31	23	8		
Sewing	21	3	18		
Beautician	29	8	21		
Baker	14	4	10		
Hotel services	25	15	10		
Industrial mechanic	22	17	5		
Totals	285	147	138		
Training Mode				28.50	.001
Day release	178	70	108		
Block release	107	77	30		
Totals	285	147	138		
Type of Company				30.26	.001
SME	178	70	108		
GLC	45	29	16		
MNC	62	48	14		
Totals	285	147	138		

only block release type of training which is CNC machining and industrial mechanic. For type of companies indicates that 62.5 percent respondent affiliate with SME companies, follow by 21.8 percent of MNC companies and 15.8 percent attach with GLC companies.

Table 2 illustrates the results of logistic regression to assess whether the three predictor variables: program of study, training mode and type of company significantly predicted whether or not a student would get a job offer after they finished their training. The result shows that these variables significantly predict whether or not student would get a job offer after finished their training, $\chi^2 = 33.15$, $df = 3$, $p = .001$.

However, as seen in Table 2, only type of company and training mode are able to significantly predict job offering after students finished their training in the national dual training system. Program of study does not significantly predict whether or not student getting a job offer. The Exp β gives the odds ratio for each variable. The odds ratio for type of company was 46 percent and for training mode was 7 percent. These indicate that the odds of estimating correctly who would get job offer improve by 46 percent if we know the type of company and by about 7 percent if we know the training mode. To investigate further whether students get a job offer or not in regards to the program of study, training mode and type of company, a chi square analysis was used.

Table 3 shows the Pearson Chi-Square results and indicates that apprentices who get a job offer or not are significantly different in regards to their program of study, training mode and type of company the attached during the SLDN program. The Pearson Chi-Square results indicates that apprentices program of study are significantly different on whether they get a job offer or not, $\chi^2 = 74.58$, $df = 9$, $p = .001$. Cramer's V indicates the strength of association between the two variables is .512 which considered large effect size [9]. Meanwhile, the other two variables also shows that there are significantly on whether get or not get job offer after finish the SLDN training. The Pearson Chi-Square results indicates that block release training mode are more likely than expected under the null hypothesis to get a job offer than day release training mode, $\chi^2 = 28.50$, $df = 1$, $p = .001$. Phi, which indicates the strength of the association between the two variables is -.316 and, thus, the effect size is considered to be medium to large [9]. Finally, the Pearson Chi-Square indicates that the type of company apprentices attached during the SLDN program are significantly different on whether they get a job offer or not, $\chi^2 = 30.26$, $df = 2$, $p = .001$. Cramer's V is .326 which is considered to be medium to large effect size [9-16].

DISCUSSION

The national dual training system (SLDN) is one example of cooperative vocational education program that designed to strengthen quality of workforce. The SLDN will only work after two parties collaborate in providing training to students which is training institution and industrial partner. The program is accomplished by 20 to 30 percent training is conducted at a training institution and the remaining portion is at industrial work place. In Malaysia, the Department of Skills Development (DSD) is responsible for evaluating and validating the program usually between public skills training institutions with industrial partners. Industrial partners willing to be involved in the program need to identify the coach who will teach and supervise student during training at the work place.

The finding shows that popular program of study among students are computer, automotive, welding, CNC machining, electric, beauty, hotel service, industrial mechanic and baker. A program of study offers to student identified by the DSD. However, finding shows that program of study does not significantly predict whether or not student would get a job offer. Students usually get an allowance between RM350 and RM500 monthly during in the program. A company that shows interest becoming a partner of the SLDN program needs to go through a verification process by the DSD. The company that is involved in the SLDN will give an incentive by the government such as tax reduction.

Table 1 indicates that SME offers 80 percent program of study for students compared with MNC and GLC. However, all programs of study at SME are conducted through day release training mode. Meanwhile, both GLC and MNC companies' are conducted the SLDN training through block release mode. Since the beginning of implementation of the SLDN, there are two training modes which is day release and block release. Day release refers to students will learning for a day at training institution in a week and 4 more days at industrial partner or work place for a semester. Meanwhile, block release refers to 1 to 4 weeks at training institution and 12 to 16 weeks at industrial partner for a semester. The total duration semester of training depends on program of study. Finding from logistic regression indicates that training mode significantly predict job offering after student finished the SLDN program. However, the result also shows that training mode only can correctly estimate about 7 percent of students would get job offer. Furthermore, the result of logistic regression also shows that type of company significantly predict job offering

after students finishing their training in the SLDN. The result shows that the type of company can correctly estimate about 46 percent of students would get a job offer. [10] found out that there is significant difference on size of company in organization culture, such as attitude and behavior in the workplace. These finding supported by [11] that states the MNC companies always make sure their SLDN student undergo a program to enhance their skills during the training as the MNC companies equipped with proper classroom, have a train coaches, systematic curriculum for their SLDN students. [12] states that MNC companies able to provide the best vocational training since they have expertise and latest technology. In addition, MNC companies also instill communication skills and help creativity flourish in their work place [13]. Finding from [11] also shows there is a significant difference between the employability skills of the SLDN student in regard to their companies attached. Their result shows that the SLDN students who are attached with the MNC companies are more likely to have better employability skills compare to the GLC and SME companies. The result also shows that the NDTS apprentices attached with the GLC companies have significantly better employability skills compared to the NDTS apprentices at the SME companies.

The cooperative vocational education (CVE) program such as the national dual training system (SLDN) has a big impact on national workforce needs. In conclusion, the result shows that program of study does not significantly predict on job offer for the SLDN students. On the other hand, type of company and training mode significantly predict a job offer for the SLDN students. Therefore, immediate action should be taken not to offers a program of study that less job opening in the market. At the same time, the SLDN should offer a relevant program of study with high job opening in line with economic growth since it is involved with immense training cost from the government. A block release training mode should be exercise more for the SLDN student since it gives more advantage than day release such as avoiding absences and other disciplinary problems. The DSD should encourage more participation from MNC and GLC companies in the SLDN program. A MNC and GLC companies' will give students better learning environment through systematic training method, curriculum content, excellent tools and equipment and high-quality supervision.

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