COMPETENCY OF NATIONAL DUAL TRAINING SYSTEM INDUSTRY ADVISORS

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ABSTRACT

National Dual Training System (NDTS) is a system of training between the public and the private sector to produce competitive workers (k-worker) who meet the industry needs. This system consists of day release approaches that mean trainees undertake practical studies for four days and one day they receive theories while block release means trainees undertake practical studies for four months in industries and one month they receive theories. This study aimed to determine the advisors' level of knowledge, skills, attitudes and their relationship with gender and work experience in the NDTS. This descriptive study used questionnaires with a likert scale as an instrument involving 84 respondents of qualified NDTS advisors. The data were analyzed using SPSS 21.0 and the results showed that the advisors had high knowledge, skills and attitudes. The inference analysis showed there was not difference of the level of knowledge, skills and attitudes based on advisors' gender and the pearson correlation analysis showed that there was not relation between the advisors' competence and work experience.

Key words: advisor, competency, national dual training system, training institute, trainee

INTRODUCTION

National Dual Training System (NDTS) has been organized by the Department of Skill Development by the Ministry of Human Resources of Malaysia since 2005 (*Jabatan Pembangunan Kemahiran*, 2012). Deros et al. (2012) state that the main purpose of this system is to produce skilled manpower (k-worker) to meet the country's desire to develop the economy. Othman et al. (2011) explains that this system was introduced by the Cabinet on May 19, 2004 with four sets of skills creation tools (tool and die), automated process control, automotive and mechanical operation of the plant. Hasmori et al. (2011) found out this system was established by the joint venture agreement between Germany and Brazil in 1996. The initiative of the implementation of this system was to generate the skilled and knowledgeable employees, to continue the learning interest, and to enhance the ability to get and to use other knowledge, especially in the latest technology.

Skills training is a crucial component in the context and the needs in Technical and Vocational Education Training (TVET). Mahfud (2016) states that the training will improves the students' skills . In addition, Alwi (2006) suggested that the skills training component has become increasingly known and vary in skill training system in Malaysia. The main issue in the case of TVET in Malaysia is effective learning skills training programs to meet the needs of industries. NDTS is implemented to provide skilled workers (k-worker) who are competent in the technical, social and learning methodology through a comprehensive training method and in line with the needs of industry. Rochmadi also (2016) claims that the implementation of partnership with industries showed the feasibility and the effectiveness to prepare the students with the competencies required by the world of work.

There are several implications of the industrial NDTS system. Deros et al. (2012), stated that this system was a step towards excellence to produce k-worker to resolve the problem of rapid and complex technological development. The system could also provide skilled manpower who had characteristics that were relevant and necessary in the industry. Stockmann (1997) stated that this system acted as a solution to the problem of shortage of skilled workers in the industry in Latin America. Technology and skills available through the private sectors and industries in this system can help in improving skills training, particularly in the private ones. Clutterbuck (2009) also stated that this system would be benefit for individuals and organizations to facilitate the development of the system by using appropriate mechanisms.

There are two approaches in this system that are day release and block release. Day release approaches implementation means that the trainees will undergo a training for 4 to 5 days in the industry and 1 to 2 days in the training institution. Block release approaches are applied when a training is conducted in the industry for 4 to 5 months and for 1 to 2 months it is conducted in the training institution. Trainees who successfully complete the two year course that divided into four semesters will be awarded a certificate of k-worker. In addition, Malaysian Skill Development Department (MSDD) has commissioned a number of training centers and the company as a Certified Company NDTS to implement the training together in fourteen states of Johor, Kedah, Kelantan, Kuala Lumpur, Malacca, Negeri Sembilan, Pahang, Perak, Perlis, Penang, Sabah, Sarawak, Selangor and Terengganu (MSDD, 2012).

Pang, Narunan & Sim (2010) stated that the first enrollment of NDTS began in 2005 by Daimler Chrysler Malaysia that had been recruit 29 trainees while Naza Automotive Manufacturing Company trained 14 trainees in automotive mechanics. Horton (2000) explained that in United Kingdom, competency refers to behavior that could reflect skills performance while in the United States, competence is assessed through basic features of self-supervising an apprentice to achieve excellent performance. In this study, competence means abilities of NDTS advisors to guide in terms of knowledge, skills and attitudes.

Hudson et al. (2012) suggested that an advisor should act as a leader who could monitor the progress of trainees thus generate ideas by thinking during the teaching process in order to lead effectively and become a role model for the trainees. Advisors should have positive qualities such as supportiveness, showing attentive, creating comfortable talk while discuss about lessons, fostering a positive attitude and assessing practices. A guidance strategy by using thought that is adapted into a learning situation needs to be applied by each advisor. The study also said that the support of the advisor could establish a relationship of sharing, tutoring and becoming friends at a critical time. Maria-Monica & Alina (2013) stated that advisors must have skills in implementation, communication, ability to draw the attention and the interests of the trainees, the ability to distinguish the activities required by the trainees, interpersonal skills and management skills.

Most of advisors are not competent due to the negative attitudes that exist in themselves. Azlan (2011) notes that some advisors who have negative attitude are not concerned about the responsibility to guide trainees. Irresponsible advisors typically have insenssible attitudes and they are unconscious about possible consequences when they neglecting guidance to trainees. Negative

attitudes of the advisors in psychosocial problems are for example bullying, overly aggressive behavior, abusing power. They will create a bad relationship between the advisor and the trainees. Gray & Smith (2000) states that there are advisors who renege, whose idea is not clear, who make students fear and who are difficult to meet.

Hubbard et al., (2006) explains individuals assigned to advise a trainee in the industry would face problems if they are not competent in the guide. The result is that the advisor is unable to perform the skills in this system smoothly. Advisors who are less professional in guidance will result in inefficiency in supervising the trainees. Othman et.al. (2011) states that the implementation of NDTS system in United States faces languange problem in teaching and learning. Small medium enterprise business entrepreneurs who take part in this system acting as advisors mostly only acquire secondary level qualifications thus they lack of teaching abilities. It results limited training and the trainees become incompetent.

Advisors who have negative attitudes in the guide are due to the lack of knowledge in guiding apprentice. Walton (2005) claims advisors who have less knowledge would have problems to identify and to develop trainers' talent and strength. The advisors who cannot apply a new challenging task caused the trainees does not focus on skills through this system. Marx (1982) states that advisors have led to deficiencies in the application of new knowledge on the job. This is caused by there is not a follow up from the advisors to trainee and to prove the lack of concern about the impact of training.

Advisors who lack of knowledge will also produce trainees with lower skills. Scribner & Wakelyn (1998) in their study said there were trainees who questioned the skills of advisors who did not carry out their monitoring role of advice and who were unwilling and unable to work because of a lack of skills. The trainees also gave poor perception of advisors because of low skills and the advisors cannot help them in the learning process. Trainees will undergo skills training without guidance from advisors and this will cause them difficult to get the proper skills to be applied in the workplace in the future.

Advisors with low skills have less time to guide. Hamlin & Stewart (2011) in their study claimed that the trainee would be neglected and acvieve less specific skills required in the system when advisors have not enough time in guidance process. Azlan (2011) explains less interaction between trainers and advisors will also lead to diminished influence of guidance. This occurs because the advisors are too busy with teaching management and cause failure in implementing the appropriate guidance. Ellinger, Beattie and Halmin (2011) add a lack of time experienced by the advisors must be coped with learning and implementing certain skills such as management skills.

Discussion sessions between advisors and the trainees are not conducted effectively when the advisors have less time to be allocated to the trainees due to the workloads. Lai, Shum and Zhang (2014) stated that many workloads resulted less time to guiding. Sutton (2003) suggested the trainees did not have enough time to communicate with the advisor in terms of personal problems. Industrial advisors pay less attention with training issues. Trainees who face problems with emotional issues or skills training will choose to see advisors as a last resort because a gap between them to solve common problems.

Lot of advisor's work loads result less of sessions with the trainees. It will bring impact to the communication between them. Advisors will easily provide assistance to trainees when

there is effective communication between them. Zakaria (2010) states that the lack of communication leds to less experience sharing and there is not opportunity to build a good relationship between the advisor and the trainees. Ineffective communication between them has also led to low trainee ratings. Moreover, new information is also scarce when communication is not effective. As a result, trainees who are unskilled workers due to bad rating will find difficulty to adapt in industry and new environment.

Advisors who do not have effective communication with the trainee are less sensitive to the scope of the tasks of their performance. Advisors are unsuccessful to establish interaction or relationship with the trainees because of the vagueness of their role as mentors. Cherian (2007) argued that there was no comprehensive documentation about the expected advisors to train who have lack of understanding of the scope of their work and their actual performance. New and inexperienced advisors are usually not good advisors because they have less basic knowledge and are insensitive of the advisor's duties and responsibilities. The trainee is not undergoing specialized skills training if they are not guided properly.

The scope of advisors' duties is poorly understood and resulted in a substandard system. Mehra and Rhee (2006) declared incompetent advisors in this system will produce graduates who are incompetent and do not have the skills required by employers. Boahin and Hofman (2014) states that if the advisors do not have time to give guidance to trainees during the training sessions of skills, it will lead to the low quality of the training process.

The objectives of this study are to (1) identify the level of competency of the qualified advisors for the national dual training system (2) identify the competency differences of the qualified advisors for the national dual training system based on gender (3) identify the competency relationship of the qualified advisors for the national dual training system based on work experience.

METHOD

This was a descriptive survey study using a questionnaire to assess the competence of a qualified advisors of NDTS companies in terms of knowledge, skills and attitudes. The population consisted of qualified advisors of NDTS companies which included 27 companies chartered in the State of Johor and the selected respondents were 84 people. The sample of this study used individual advisors who were formally appointed by the company. They had responsibility for the project, supervision, guidance and assessment of the trainees.

The instrument used a likert scale questionnaire. It consisted of 72 questions separated by two main questions, including demographic questions such as gender and work experience, the rest questions were about knowledge, skills and attitudes. The obtained data were analyzed using the Statistical Package for the Social Sciences (SPSS). The data obtained in this study was normal, thus the parametric tests was used. In the question number 1, 2 and 3, the data analysis had been processed by using means, percentages and frequencies, while data analysis of the questions 4 to 6 were processed by using t-test.

The data analysis was used to show whether there was a significant difference between two-dimensions and accordingly to construct the score based on five categories. The questions number 5 to 7 were analyzed using a pearson correlation test to examine the

relationship between advisors' competence and their working experience.

RESULTS AND DISCUSSION

The respondents' gender distribution is presented in Table 1. The male respondents are 31(36.9%), while the female respondents are 53 (63.1%).

Table 1. The Distribution of Respondents by Gender

Gender	Number of Respondents	%
Male	31	36.9
Female	53	63.1
Total	84	100

Table 2 describes the number of respondents who have work experience less than one year, who have work experience 1 to 5 years, and who have work experience more than 6 years are 4 (4.8%), 21 (25 %) and 9 (70.2 %) respectively.

Table 2. Distribution of Respondents According to Work Experience

Work Experience	Number of Respondents	%
< 1 year	4	4.8
1 - 5 years	21	25.0
> 6 years	59	70.2
Total	84	100

The mean scores of the measurement range which is used for the first, the second, and the third research questions is shown in Table 3. A descriptive analysis was conducted to determine the level of competence of the advisors. This table summarizes the mean scores for each aspect within the competence of the surveyed advisors. The highest mean score on the assessment of competence of certified NDTS advisors is knowledge with the mean score of 4.1895 at the high level. The lowest mean in this assessment is attitude with the mean score of 4.1839 which is also at high level thus, the overall mean score of the competency assessment of the respondents is 4.1869 remained at the high level.

Table 3. Mean Scores Competency Assessment of NDTS Advisors

Research questions	Mean	Mean Interpretation
What is the level of knowledge of qualified advisors for the National Dual Training System?	4.1895	High
What is the level of skill of qualified advisors for the National Dual Training System?	4.1882	High
What is the level of attitude of qualified advisors for the National	4.1839	High
Dual Training System? Competency Evaluation of NDTS Advisors	4.1869	High

According to the fourth research question, the Levene's test for equality of variances Sig. p= 0.358 is greater than the α value, thus the first line information is considered. Therefore, the value of p is equivalent to 0.798, given a value equal to 0.05, it can be concluded that $p > \alpha$. The variation data is the same and accepts the null hypothesis. This shows that there are significant differences in terms of knowledge among male and female thus, the results interpreted as shown in Table 4. From the result, it can be concluded that Ho is accepted that there are no significant differences in terms of knowledge among them.

The fifth research question has the Levene's test for equality of variances Sig. p =

0.990 whish is greater than the value of α concluded by same data variation and accept the null hypothesis. Therefore, the value ρ equivalent to 0.821, given α value equal to 0.05, it can be concluded that p > α. This shows that there are significant differences in terms of skills between them. The results in Table 5 shows that Ho is accepted. There is not significant difference in skills between male and female

Table 4. Differences of Knowledge between Genders

NDTS advisors competency	Gender	Mean score	S.Dv.	T/Sig. p	ρ	α
Knowledge	Male	4.198	0.249	0.358	0.798	0.05
	Female	4.184	0.230			

Table 5. The Advisors' Skills between Genders

NDTS advisors competency	Gender	Mean score	S.Dev	T/Sig p	ρ	α
Skill	Male	4.181	0.187	0.990	0.821	0.05
	Female	4.191	0.198			

The sixth research question shows results of Levene's test for equality of variances that is Sig. p = 0.039 which is smaller than the value of α point and variety of data are not same. When p < α, information in second line should be consulted. Therefore, p value is equivalent to 0.769 while α value is 0.05, it can be concluded that p > a. This result concludes that there is not significant differences of attitude between male and female. Based on Table 6, Ho is accepted. It can be concluded that there is not significant difference in attitude between male and female.

Table 6. The Significant Difference between the Attitudes of Advisors

NDTS advisors competency	Gender	Mean score	Standard Devuation	T/Sig p	ρ	α
Attitudes	Male	4.174	0.188	0.039	0.769	0..05
	Female	4.189	0.289			

The correlation coefficient for the pair of variables namely knowledge and work experience are low between 0.001 to 1.0 The value of p is 0.990 that mean p > α proving that the null hypothesis is accepted thus there is not significant correlation of knowledge and working experience. According to Table 7, it can be concluded that Ho is accepted. It means there is no significant correlation in terms of knowledge based on experience.

Table 7. Relationship in Terms of Knowledge Based on Experience

NDTS advisors competency	Sig (r)	Correlation strength	p value	α value
Knowledge	0.001	Low	0.990	0.05

The correlation coefficient of the variables skills and work experience is low, which is between 0.100 – 1.00. In this data

analysis, p value is 0.364 that indicates there is not significant difference in terms of advisor's skills and work experience. According to Table 8, the results showed that Ho is accepted concluding that there is not significant difference in terms of skills based on work experience.

Table 8. Relationship between Skills Based on Work Experience

NDTS advisors competency	Sig (r)	Correlation strength	p	α
Skill	0.100	Low	0.364	0.05

Based on the summary on Table 9, the correlation coefficient, r of the variables is low based on work experience between 0.028 until 1.00. Significant p values is 0.804 that means $p > \alpha$. It indicates that there are not significant differences between the attitude of the advisors and working experience. The analysis shows that Ho is accepted. It can be said that there is not significant relationship between attitudes and work experience.

Table 9. Relationship between Attitude and Work Experience

NDTS advisors competency	Sig (r)	Correlation strength	p	α
Attitude	0.028	Low	0.804	0.05

These findings can be interpreted that the respondents of NDTS advisors have high knowledge, skills and attitudes. The highest of construct are followed by a counselor knowledge, skills and attitudes so on. Advisors need a high knowledge in order to explain clearer to trainees in order to produce skilled trainees. These findings coincide according to a study conducted by Evanciew and Rojewski (1999) which stated advisors' guidance in the workplace could improve the ability of trainees to think and perform assigned tasks without relying on others.

Through the knowledge dimension counselor in the discipline, the items that have a high score is always demonstrating exemplary to trainees. This finding is consistent with studies by Kram (1988) which stated that advisors provides support and development of a career as a mentor, to expose, to show discipline, to give counseling, to build positive relationship, to advise, to emphasize skills such as wearing appropriate clothing for protection in the workplace, and to provide a challenging task.

Analytical skills of the advisors for experience dimension, has a high score on the items related to skills in installing machinery. This finding is consistent with studies by Donovan et al., (2001) which states positive displacement between advisors occur when the relationship is relevant that is the advisors take what they learn from them who are skilled in installing the machines for applying it to the learning environment and move it to the working environtment. They should had high technical skills, especially skills of machine tools installing in industrial sector.

The communication skills of NDTS advisors are also at a high level. This finding coincides with a study Clutterbuck & Megginson (2006) which states that the advisors is associated with individuals who guide trainers to improve performance so that good communication between them can influence the next advisors' commitment to strengthen the career. They must have good communication skills, counseling skills, handling skills, interpersonal skills, and knowledge of related guidance.

Based on the attitude of the advisors in the dimension of cooperation, an item that has a high score is they always cooperate if help is

needed. The study conducted by Smith (1999) is coincided with the data analysis that said the advisors have to always cooperate in implementing the tasks, to guide, and they do not only help trainees to acquire skills but also help them to understand the rules in the workplace or training place. The advisors are also responsible for guiding the trainees in terms of regulation, creativity in diversifying ways of learning, skills to explain, how the training process will be more trainee centered.

The advisors attitude such as easily contacted by trainees while working could maintain the relationship between the advisors and trainees. Same opinion is also expressed by other researchers as a result of the study by Sutton (2003), which states the positive attitude of the advisors as caring, commitment, confidence, compassion and conducting the professional duties such as skills and theories will help in the learning process. According to him, the advisor who had negative attitudes such as not sharing information will make the students cannot get important information related to special programs, sources of financial assistance and employment opportunities properly.

It was revealed that there were not significant differences in terms of knowledge of certified NDTS advisors between male and female advisors. The analysis of the findings was conducted by using t-test. This means the overall competence of the advisors of knowledge is uninfluenced by gender. This finding is consistent with Ahmad Shah (2012) who states knowledge is not influenced by gender. This finding is also consistent with Saemah and Phillips (2006) who found knowledge in teaching is not influenced by gender. Siti Rohayah et al. (2011) state that intelligence and knowledge of women is diverse and there is not relationship between them.

The findings also show there is low effect of the knowledge and experience on the competence of advisors. This means the effect of knowledge in working in NDTS could gain experience in low level based on the size of the correlation coefficient. The effect of knowledge in terms of work experience in the system has a low positive correlation. The results of the overall analysis showed there is not significant difference between knowledge and work experience.

There is a small or low influence between advisors' competency attitudes based on experience of working in the NDTS. This means that the influence of knowledge on the advisor's work experience are at a low level based on the size of the correlation coefficient. Due to the analysis results, null hypothesis is accepted that shows that there is no significant difference between advisors' attitude and work experience.

The results of this study also found that most trainees adopt positive transfer of knowledge (cognitive), skills (psychomotor) and attitude (affective) that can be absorbed efficiently in the field of employment and transfer of learning such as early project at works allows them to finish the job in time. There are similarities between the job and the responsibiliity. These are transfer learning in the learning process, the first is a positive transfer of knowledge, skills and attitudes that the trainees easily applied in the field of employment, and secondly is a negative transfer which means the advisors have a negative effect after attending the course.

CONCLUSION

In this study, it was revealed that advisors had the knowledge, skills and attitudes to conduct their duties and there were not differences between a qualified NDTS advisors

based on gender. The analysis also found that there was no relationship between the advisors' qualified competence in NDTS with work experience. The results of this study are expected to contribute to the development of technical and vocational fields to support the government's goal of developing skilled workers in supporting the country's future. The advantages that can be gained from these programs is the companies need the trainees for their own production benefits and analyzing the number of trainees in accordance with the number of available training places. This program is a solution to provide qualified labor who are capable of adapting the state and the new technologies. They are skilled labor who are educated and trained by bilingual education that have high mobility in the labor market. This program can maintain a good relationship between the education system and its greater involvement in the process of education and skills training. This system is cheaper than school-based vocational education system. The involvement of different parties who accept this system will lead to development and trade issues. This program is an effective way to create a skilled workforce to help youth in transition from school to the workforce.

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