

Confirmatory of Behaviour Competency and Employability Skills Domains and Elements for Industry's Automotive Trainees

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ABSTRACT

The quality of skilled workers in the TVET training system of Malaysia as assessed by the automotive industry includes technical and non-technical skills. However, Public Training Skills Institutions (PTSI) have failed to produce highly skilled, competent and high workability trainees for the workforce. This study aims to confirm the domain and element that contribute to the formation of competent behaviour and workability skills for trainees in the automotive industry. Questionnaires involving 361 respondents from three focus groups involved centre advisers from the southern districts of Johor, Malacca and Negeri Sembilan. The Delphi technique of processing the data is used. The findings of the study revealed that the 11 experts on the panel agreed that 12 domains contribute to the formation of behavioural competence and workability skills. The findings based on the survey identified the 12 domains and most of the elements, which received a mean score of 3.00 to 4.00, as: (i) governance; (ii) standard of competence; (iii) industrial relations; (iv) qualifications framework; (v) standard skill suppliers; (vi) delivery; (vii) evaluation; (viii) industry work experience; (ix) twinning programmes; (x) community service programmes; (xi) industry based curriculum; and (xii) entrepreneurship education. In conclusion, industry and training institutions need these 12 domains to enhance the automotive industry to enable it to contribute to building a high-income nation.

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INTRODUCTION

The weakness of Technical and Vocational Education and Training (TVET) lies in its failure to nurture technical skills and high employability skills among graduates to aid in building an equitable national automotive industry (Department Skills Development, 2012). Callan (2002), Esa (2006), and Jab (2007) advocated that TVE institutions should provide workers with industry knowledge and implement broader skills such as applying employability skills on the job for training purposes. The weakness of TVET apparent in training institutions should also be reviewed in order to nurture a skilled workforce that is productive and possesses technical expertise and high employability skills (Buntat, 2004; Ministry of Higher Education, 2006; Department of Institutional Management of Higher Education, 2006; Rasul, Ismail, Ismail, Rajuddin, & Abdul Rauf, 2009; Tahir, Mohd Yasin, & Ramlee, 2009). Similarly, methods of teaching and learning (P&P) of instructors in institutions should be reviewed in line with industry changes so that trainees are produced in accordance with the needs of the labour market (Md Yunus, 2004; Pillai & Yusof, 2005; Majumdar, 2008). According to Hanafi, Bakar, Hamzah and Abu (2008) and Ahmad (2012), the TVET system is considered effective when it can produce skilled manpower needs of highly skilled industry. This can be achieved by focusing on learning based on industry experience of studying theory at institutions. For example, the National Dual Training System (SLDN) matched the needs of industry, but lacked

the support of industry to make it work (Othman, 2003; Wan Ahmad, 2004; Fong, 2005; Pang, 2008; Tomiran, 2008; Ahmad, 2012).

Unfortunately, at this point, of the 12 million workforce in this country, more than 70% are unskilled workers (Department of Skills Development (DSD), 2012). The DSD found that almost 80% of the 1.2 million holders of the Malaysian Skills Certificate (SKM) held Level 1 and Level 2 certificates. They are categorised as low skilled and earning an income below RM2000 within five years after graduation. The data show that there are 100,000 school leavers each year with SPM qualification who do not participate in any training or skill acquisition programme. This only adds to the number of unskilled workers every year. At the same time, these youths are entering employment without any type of qualification (DSD, 2012). In the long run, this will delay the achievement of the nation's vision of becoming a developed country, particularly in the automotive industry. Behavioural competency is important because it is related to the ability of individuals to perform certain tasks and responsibilities in accordance with the desired performance in the workplace (DSD, 2012). Similarly, employability skills are an important aspect because they are complementary to technical skills or job skills. According to Rasul and Abdul Rauf (2010), technical skills alone will not guarantee jobs for graduates whether professional or semi-professional. Similarly, Rasul and Abdul Rauf (2010), Buntat (2004), and Ali (2012)

discovered that employers are not only looking at technical skills but also require high employability skills from potential employees. Therefore, employability skills are important as a catalyst for greater availability of work required by employers. It is crucial that Public Training Skills Institutions (PTSI) pay attention to and also emphasise on employability skills training programmes in addition to technical skills (Mustapha, 2008; Awaluddin, 2008; Rasul et al. 2009).

The TVET system used in Public Training Skills Institutions (PTSI) must equip their graduates to possess both behavioural competencies and employability skills. This is because industry has created millions of automotive state jobs and downstream sectors, such as spare parts and skilled labour, enabling the transfer of technology (DSD, 2014). The Performance Management Unit (PEMANDU) has estimated that the automotive industry will continue to grow, especially that of Energy Efficient Vehicles (EEV), which can attract some RM328 million FDI and domestic direct investment (DDI) in addition to donating more than RM5 billion to the gross domestic product (GDP) and create more than 14,000 jobs by 2020 (Sarudin, 2016). This fact shows that there is a need for curriculum change or improvement to the TVET system in PTSI; with regards to the automotive industry, this calls for the incorporation of awareness of green technology. This is because green technology such as that used in the EEV sub-sector of the automotive industry is growing rapidly. Similarly, the provision of a skilled

workforce will need to be consistent in EEV green technology because it has the potential of becoming a hub for automotive production in the country.

With this solid foundation and close collaboration by stakeholders including the government and the private sector, Malaysia can be a leader in the EEV sub-sector among Southeast Asian nations. Greentech Technology Corporation (GreenTech Malaysia), a market leader in the EEV sub-sector, was responsible for developing key strategies and action plans to help the public sector with the aim of developing private EEV sustainable ecosystems, as well as performing interactive education and awareness campaigns promoting EEV (Sarudin, 2016). GreenTech Malaysia is now leading in the development of electric mobility between countries to make Malaysia a dynamic market in Asia.

The big question is whether PTSI graduates, upon leaving the institution, have acquired the competence and employability skills required to meet the needs of this high-tech automotive industry to play a meaningful role in it or at least to find jobs in it to sustain themselves. Can PTSI supply a workforce that is capable of contributing to national economic growth?

LITERATURE REVIEW

The National Automotive Policy (NAP), which was published on 22 March, 2006, reflects the government's efforts to assist the growth and development of the automotive industry in the face of various challenges and problems. NAP aims to improve the

competitiveness of the national economy while promoting direct investment in the automotive industry. To further strengthen the automotive industry, the government has to improve the implementation of the policy that was adopted from 2006 to 2014 and outline several new initiatives, particularly on air pollution, for instance to reduce production of carbon monoxide gas and dependence on fuels such as petrol and diesel. The automotive sector is an important industry to the economy of Malaysia (Alli & Mohamad, 2016). The automotive industry's contribution to the economy is huge and closely related to the manufacturing and services sectors. The automotive sector began with the importation of vehicles; this was later expanded to assembly operations and the development of the automotive components industry. Changes in the structure and activities of the national economy as a result of the implementation of the EEV programme, of course, leads to changes in labour. In addition, rapid technological changes constantly impact on employment practices in the automotive industry, causing workers to stay alert to the need to update themselves on knowledge and skills. This has led to the creation of a new job profile for new workers (Boreham, 2002; Fischer & Boreham, 2004). According to Billett (2009), the trend of the future world of work will not be based on any one routine concept but will boast the following features: specialisation and variety; enthusiasm; concept-based; relying on wisdom; complex; networking; centred on equipment and facilities. Wagner (2008)

studied the changes in the market place and highlighted that the old world of the classroom needed to be revamped to cater for new jobs of the present and future that require a core set of survival skills that can support lifelong learning and active citizens. Survival skills as defined by Wagner (2008) in the new world of work comprise critical thinking and problem solving, collaboration and industry-led networks, intelligence and adaptability, initiative and entrepreneurship, effective oral and written communication skills, achievements and analysis of information and curiosity and imagination.

Stern (2003), and Ahmad, Rajudin and Cartridges (2008) proposed that in addition to having specialised skills, good employees must possess skills to perform job-related duties and generic skills. Buntat (2004) defined skills as expertise needed to carry out assignments that each employee must possess to be a competent and capable worker in the world of work in which they operate. Global changes in technology, particularly in the automotive industry, require a skilled workforce and a comprehensive training system. The Technical and Vocational Education and Training (TVET) holistic system for training of knowledge workers (k-Worker) focusses on both technical and non-technical skills (Sulaiman, 2010; Jab, 2007). Studies by Kasa (2006) and Pillai (2005) found that there is still a gap, especially in training systems and training equipment in PTSI versus Private Training Centres (PTC). Skilled workers must show coherence between behaviour and

competence employability skills based on specified criteria and standards sets. Failure of PTSI graduates to master both skills has led to their inability to find employment in the EEV sub-sector, which looks for these skills in its selection of skilled workers for the automotive industry. Lack of behavioural competency and employability skills has also produced graduates lacking in capability and self-esteem to perform a given task. With these matters in view, this study was conducted to verify the domain and behavioural competence element and employability skills of automotive industry trainers. Behavioural competence and employability skills are needed by the automotive industry as industry catalysts to drive the country towards industrialised, developed country status.

METHODOLOGY

The study design utilised the quantitative survey approach involving three focus groups consisting of: (i) PTSI instructors; (ii) one PTC instructor; and (iii) the supervisory and advisory service centre. The data-collecting tool used was the questionnaire. The three focus groups were chosen as they were the main players in developing human capital for the automotive industry. The data collected for this descriptive study were measured in percentage, mean scores, standard deviation (SD) and level. The survey is a field study using the questionnaire as instrument. The research depends on the type of information to be reviewed. This study cannot explain circumstances that might occur in the future. The area studied

was the southern provinces of Johor, Melaka and Negeri Sembilan. Questionnaires were distributed to the groups involved and collected two weeks later.

RESULTS

A total of 1,069 questionnaires were distributed to three focus group study in South Johor, Melaka and Negeri Sembilan: (i) instructor PTSI; (ii) supervisory and advisory service centre; and (iii) instructor PTC (Selangor, Federal Territory of Kuala Lumpur and Kedah). A total of 420 questionnaires were returned to the researchers (40.8%), but the remaining 649 (59.1%) were not returned. The researchers tried to collect more completed questionnaires, but they were not able to do so although they re-contacted respondents and appointed a coordinator to collect the questionnaires. The analysis done in this study was based on data collected from the returned questionnaires only. Table 1 shows the number and percentage of the returned questionnaires.

Table 1
The number and percentage of returned questionnaires

Status	Number (set)	Percentage (%)
Returned	420	40.8
Not returned	649	59.1
Total	1069	100

Part of this quantitative study involved the analysis of 12 domains identified in this research that involved three focus groups. Analysis was carried out on the level of

importance of the findings' mean score and the standard deviation related to the three focus groups i.e: (i) PTSI instructors; (ii) PTC instructor; and (iii) the supervisory and advisory service centre. To be expected, there were differences in the findings based on the mean scores obtained from the 12 domains. The level of interest and the level

of agreement between the averages mean scores of the domains were analysed. Based on the analysis the researchers created a position based on the consent of all three focus groups. Table 2 shows the analysis of the level of interest and the level of agreement.

Table 2
Analysis of the level of interest and the level of agreement

Domains	Level of Interest	Rank No.	Level of Agreement	Rank No.
Governance	4.23	1	4.25	1
Standard of Competence	4.14	2	4.10	2
Industrial Relations	4.13	3	4.09	3
Qualification Framework	4.06	4	4.05	4
Standard Skills Suppliers	4.05	5	4.03	5
Delivery	4.04	6	4.02	6
Evaluations	3.98	7	4.01	7
Industry Work Experience	3.89	8	3.89	8
Twinning Programme	3.79	9	3.77	9
Community Service Programme	3.78	10	3.76	10
Industry-based Curriculum	3.76	11	3.74	11
Entrepreneurship Education	3.70	12	3.71	12

DISCUSSION

This study examined the entrepreneurial intention among impaired student. Entrepreneurial intention is considered to be the motivating factor that affect behaviour, in which the intention itself showed how the person is ready to try on their efforts in the realization of a behaviour. It also explains and predicts how the cultural and social environment affects human behaviours.

Entrepreneurship has been explored to measure the tendency of motivation and

determination has an important impact in influencing a person's decision to become an entrepreneur. Entrepreneurship is described as a motivating factor to influence individuals to pursue an entrepreneurial venture. The analysis depicts the interpretation of the special needs of entrepreneurship in polytechnics to become entrepreneurs is high. It was found that among all the items tested, the highest mean score is of the fourth item whereby, the high score is 4.48, which is the item, "I like to help

my family". This is because students have high motivation to become entrepreneurs because they want to improve the life of their family. This showed that they believe entrepreneurship can help and benefit them. This means that students with special needs tend to become entrepreneurs upon graduating from polytechnics.

Entrepreneurship is perceived as the relationship between the entrepreneur as an individual and how business is framed. According to them, where an individual has a desire to become entrepreneur, they certainly have no intention or plan regarding the type of business they will venture, methods of obtaining funds, and other business-related issues. Although it is still only considered as the intent, but it happened due to the tendency of entrepreneurship.

This study also identified the significant difference of entrepreneurial intention to become entrepreneurs based on gender. T-test analysis showed that there is a statistically significance difference of entrepreneurial intention to become entrepreneurs by gender in which female students' were found to have higher mean score of 4.139 compared to 3.193 of male students. Therefore, it can be concluded that female students have a high level of entrepreneurial intention than male students. The financial services industry shows that the involvement of women in business is highly in demand.

CONCLUSION

The study found that there are 12 domains that are important for the formation of behavioural competencies and high

employability skills among trainees in the automotive industry i.e.: (i) governance; (ii) standard of competence; (iii) industrial relations; (iv) qualifications framework; (v) standard skills suppliers; (vi) delivery; (vii) evaluation; (viii) industry work experience; (ix) twinning programmes; (x) community service programme; (xi) industry-based curriculum; and (xii) entrepreneurship education. This study also confirmed the potential for improving behaviour and employability skills among workers in the automotive industry.

These findings may provide guidance to policy makers and others involved in TVET training who are keen to increase cooperation with the industry to improve competence and employability behaviour skills. System changes related to new technology such as Energy Efficient Vehicles (EEV) significantly and dramatically affect various aspects of job performance. The power of globalisation is intensifying the development of automotive technology such as EEV and bringing many changes in the workplace that will certainly affect the individual as well as groups. A study by Mohd Salleh, Sulaiman and Gloeckner (2015) revealed that in order to meet the human capital needs of technological change workers must have the correct knowledge, attitude and skills. Apart from technical skills, graduates also need non-technical skills acquired in real business situations. This clearly shows that the integration of both of these skills can enhance the employability of graduates in the automotive field.

Similarly, research by Ahmad Jailani and Hasmori (2015) investigating TVET challenges showed that the emphasis on employability skills among graduates is no longer a one-off requirement. Every graduate who intends to find a job in today's market place must be able to show they have employability skills in addition to having knowledge and aptitude related to the job. Employability skills prepare graduates for entry into the working world, allowing them to be received as suitable employees in industry (Billing, 2003; Knight & Yorke, 2013). It is not only academic achievements that add value to the individual in the competition for a good job, but also soft skills such as oral and written communication, critical thinking, problem solving, self-management, ability in interpersonal interaction, leadership and teamwork (SCANS 1991; DEST 2002; Cassidy, 2006; Rosenberg, Heimler, & Morote, 2012; Mohammad Yasin, Mohd Nordin, Mohd Noor, Rahim, & Faizal Amin Nur Yunus, 2015).

The results of this study suggest that the country is able to achieve its aim of becoming a developed nation by improving training offered by Public Training Skills Institutions (PTSI) and Private Training Centres (PTC) in terms of competence and employability skills in order to ensure that younger generations of workers are able to achieve Malaysia's economic visions as well as steer it into becoming a leading country in the automotive industry. Therefore, it is crucial for all involved to revisit the curriculum, a key element in the education

process, of training bodies engaged in Technical and Vocational Education and Training (TVET) in order to make changes to it that might be necessary. In conclusion, this study is important as the results can be used to support the government's policy to produce high-income skilled workers and its vision of becoming a developed nation by the year 2020.

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