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From Training Institution to Workplace: Towards a Training Model in the Industrial Training Institutes

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Abstract

The Malaysian Education Development Blueprint's (2013-2025) emphasis on the holistic formation of students in line with quality human capital formation is based on the national philosophy of education. This blueprint is in line with the Government Transformation Program (GTP), which propels Malaysia towards becoming a developed and high-income country. Quality students are able to learn through formal, non-formal, and informal education as well as through meaningful experience. However, what are the factors that support the creation of awareness that knowledge is essential to life? We explored these factors through the use of grounded theory methods. A total of 32 respondents comprising of trainees, employers and industry supervisors were interviewed. In order to obtain a deeper understanding, we only focused on one public skills training institute which implements best practices. The results showed that there are six main factors that contribute to an environment, which is conducive to effective learning. These factors can serve as a guide to policy makers in the implementation of a comprehensive education system, which supports the holistic formation of students.

Keywords: workplace learning, work-based learning, grounded theory, apprenticeships

1. Introduction

Malaysia needs skilled workers to support the country's development to achieve vision 2020 (Ramlee & Rohana, 2013). The era of knowledge economy and globalization leads to the necessity of human capital, which comprise professional and semi-professional as well as knowledgeable and skilled labor (Brockman, Clark, & Winch, 2008; Ramlee et al., 2008; Ruhizan et al., 2013; Wan-Seman, 2007). Over the years, the country has relied heavily on foreign labor from Indonesia and Bangladesh to fill positions in plantation and construction industries and also as domestic help (Malaysia, 2010). If employees released from Public Training Institutions (PTI) do not have the skills required by the industry, investors will not be interested in investing in Malaysia.

A study by Bakar and Hanafi (2007) quoted a report carried out by the Asian Development Bank on industrial workers in several countries, including Malaysia, revealing that the technical and vocational education apprentice products did not meet the quality standards nor were they willing to work. This may lead to decreased trust among employers in skilled workers, and at a more serious level, it may even cause the loss of potential foreign investors (Malaysia, 2010). Thus, the issue of the low quality and quantity of skills trainee output from the Malaysian technical education system should be addressed immediately in order to enhance investors' confidence in our country.

2. Work-Based Learning in Learning Institutions

Work-based learning is usually described as informal learning environments and informal learning (Spottl, 2007). Therefore, the common perception that learning through work is informal is incorrect (Billet, 2002). This narrow understanding of the workplace learning process has caused employers to underestimate its importance. Similar to vocational training institutions, the workplace also outline work practices, structures, and have goal-directed activities that are vital to the continuity of the organization, as well as interactions and judgments of well-shaped performance to their end (Berge, 2008; Boud & Middleton, 2003; Conor & Richard, 2013; Griffith & Guile, 2003; Nor Aishah et al., 2007; Ruhizan et al., 2014; Shamuni & Ruhizan, 2010). The implementation of

work-based learning should have a clear structure for the relationship between training institutions and workplaces.

Structuring activities at learning institutions should have a work-related dimension to sustainability practices and directed learning, which also involve quality and pedagogy (Bryson et al., 2006; Billet, 2002). On the other hand, learning is suggested to be the interdependence between individuals and social practice (Berge, 2008; Guile & Young, 1998). It is suggested that the consideration of learning, workplace learning and pedagogical development work are necessary to establish the concept of precision in practice in communities of practice (Wenger, 2000). Thus curriculum developed in training institutions should have in common with the skills required by industry. The knowledge gap between graduates and industry needs to be addressed by industry players and educational institutions so that graduates can meet the needs of all industries (Bernama, 2013). The work environment has become a major source of learning, especially for lifelong learning (Brockmann, Clarke, & Winch, 2010; Bryson et al., 2006; Nor Aishah et al., 2007; Spottl, 2007). Therefore, the actual working environment must be provided at the training institution.

Training institutions and programs of work-based learning cannot be separated because they need each other (JPP, 2009; Mohamad & Norhayati, 2011; Nor Aishah et al., 2007; Shamuni & Ruhizan, 2010). Skills required by the industry are to be the benchmark of success for training systems (Spootl, 2000) asthe primary goal of skills training centers is to meet the demands of the industry. Thus, knowledge of work-based learning is imperative because the success of work -based learning depends on the effectiveness and strength of both sides (JPP, 2009; Mohamad & Norhayati, 2011; Pot, 2011; Rashidi, 2013; Ruhizan et al., 2007; Shamuni & Ruhizan, 2010). Good cooperation between both sides will contribute to the formation of students according to the quality required by the industry.

There is an assumption that, on their first time working in the real world, students are able to perform their working duties well. There are various forms of knowledge transfer that occurs between work and training institutions. Sometimes, new knowledge is learned by going through the instructions, and sometimes through observation and imitation of behavior (Guile & Young, 1998; Moore, 1999; Taylor & Matt, 2007). Participation in the working environment and workplace practices should be emphasized as a basis for learning concepts. These practices consist of various activities and interactions, which test the students' capability to work and determine how individuals choose to participate in activities at work and interact with others (Billet, 2004).

In analyzing what happens when trainees are involved in workplace learning, we need to avoid the perception that students learn easily simply because they are following commands from the instructor (Beaufort, 2000). The fact that trainees spend time in an environment rich in information and knowledge does not necessarily indicate that they acquire that knowledge. What is important is the nature of the trainee participation in activities at work (Moore, 1999). Failure to deal with stress in training institutions will limit the knowledge gained. Similarly, trainees faced with the need to create a balance in the workplace, which limits their learning processes (Fuller & Unwin, 2003; Taylor & Matt, 2007).

One of the main imperatives for considering the relations among work, subjectivity and learning has arisen from discourses about the changing nature of work (Fenwick & Sommerville, 2006). Changes the nature of work must always be followed by an trainees whether formal or informal work. A good place to start considerations of subjectivities is the commonly held assumption that there is something being constructed by the trainees (Mansfield, 2000). Successful training institutions have to create a culture of learning outside of the main learning processes and effective learning through community of practices. Work communities are powerful sites of identity, practices, and knowledge systems in which individual workers' desires for recognition, competence, participation, and meaning are imbricated (Fenwick & Somerville, 2006). A key point of distinction is, however, the degree to which the personal or social, or some combination of both, play in the construction of individuals' subjectivity, including how relations of power contribute to this construction (Billet, 2006).

Roziah, Nor Sham, and Zarina (2010) in research on work-based learning (WBL) found that both educational institutions and industry agree that the teaching and learning with the WBL approach is an innovation in learning methods. Studies have shown that the method is able to provide a platform for knowledge, expertise, and experience-sharing between educational institutions and industry in order to improve the effectiveness of teaching and learning. In addition, this method is also able to increase graduates' generic skills such as the ability to adapt, learn quickly, work as a team, as well as enhance communication skills, punctuality, responsibility, integrity, confidence and leadership skills.

Studies done by Raelin (2011) related to work-based learning policies in the U.S. found that there is a loose correlation between actual work experiences in the industry with the structure of the curriculum offered at

universities. However, he suggested that students be given the opportunity to do real work formed by the university to support and integrate the curriculum with the real work of universities in the industry.

Trainees and instructors are two essential sides in the modern apprenticeship system. The readiness of trainees to receive the learning system will guarantee the success of the training set. Nor Hayati (2005) in her study of the development of a well-balanced student through national science education suggests Islam as a basis for curriculum planning and design of science education: the balanced presence of science educators, the presence of students who are willing to be educated, and the availability of teachers that foster a culture of science. She also discusses Islam and the nature of the development process and potential students. The readiness of students in this system refers not only to mental readiness but also physical, emotional and personality readiness. In line with the concept of k-workers, trainees should acquire the knowledge and skills appropriate to their fields. However, what form of knowledge should the trainees accept?

Moore (1999) states that knowledge refers to facts, theories, procedures, social skills, strategies, styles, worldviews, and values of the workplace. The most important use of knowledge its practice and its understanding of knowledge (Moore, 1999). In many cases, trainees have to adjust their knowledge, skills, and attitudes to perform tasks required by the industry. Contemporary workplace conditions require employees to sustain their employability throughout their working lives (Billet & Choy, 2013). There is a possibility that the trainees are asked to help their partners in implementing new activities that are not known or expected as high work pressure or production lot (Blokhuis, 2006). Therefore, we have known little of how learning happens at the workplace in terms of cognitive, social, affective, and physical factors.

3. Statement of the Problem

Various Technical and Vocational Education System (PTV) certifications such as the Malaysian Skills Certificate (SKM), the National Dual Training System (SLDN), and National Modular Certificate (CIS) are conducted in Malaysia. Implementation of the above certification programs are based on a training system that involves learning at the workplace and in Public Skills Training Institute (ILKA). The goal of this system is to create high-skilled workers, which are an important asset to the formation of a higher-income nation. Therefore, it is important to increase student enrollment in TVE and improve the overall quality of training offered (Mohd, 2011).

Human capital, knowledge, and skills are key assets to achieve the status of a high-income country. 77 per cent of the labor force has only 11 years of basic education through the Malaysian Certificate of Education or its equivalent, and only 28 per cent of the employers are in the high-skilled workers group (Malaysia, 2010). The Tenth Malaysia Plan Report (Malaysia, 2010) noted that many studies have found that competent Malaysian graduates lack the technical skills required in the industry and have weak soft skills, including professional work ethics, communication skills, teamwork, decision making, and leadership. Therefore, a solution to this problem should be implemented at the training institutions as well as the workplace so that students become knowledgeable and skilled workers. Current conceptual and procedural understandings of learning in the workplace, informed by fields of cognitive science, and learning and development are limited because learning in the workplace is multimodal and complex, considering the socio-cultural nature and boundaries that influence learning in multiple ways (Billet & Choy, 2013). However, the question of how highly skilled knowledge workers are formed still remains.

4. Research Question

According to Glaser (2004), researchers should explore the relationship patterns of behavior that occur within the scope of the research. Two key questions should be asked of any relevant or important aspects that happen and how respondents continued to resolve and manage the matter. The research conducted will try to answer the following research questions: firstly, what are the main concerns of ILPKL students to gain skills? Secondly, how do students in Kuala Lumpur Industrial Training Institute (ILPKL) continuously strive to obtain and maintain their skills for future career needs?

5. Method

5.1 Participants

Respondents were selected based on theoretical sampling in which we believe that those elected can contribute to the substantive area of the study. Selected sampling method uses the snowball method and is convenient. Respondents selected among the group of students started were excellent and able to provide information on research topics. Studies were conducted to achieve theoretical saturation when the number of respondents reached 32 participants comprising administrators, teachers, employers and industry supervisors as well as

trainees. Specifically 15 of the respondents were trainees, two administrators, 10 instructors, and five industry employers/supervisors were interviewed. Respondents were selected from various areas of study offered at selected locations. A variety of individual perspectives was sought in various areas in order to see the diversity that exists. Explorations of different depths will give better meaning to the main concern studied and how it is resolved in different contexts.

5.2 Data Collection

To achieve the objectives and answer the research questions set, we used three main methods of data collection i.e. interviews, observations, and document analysis. Interview sessions were conducted using a set of open interview questions, which we developed as a guide for initial questions before going to the general question of existence based on the responses. Interview sessions were conducted at various locations in accordance with the requirements of the respondents and typically took between 60-90 minutes depending on the time available to respondents. As a customary practice, respondents provided a letter of consent so that they can be interviewed and they are read their rights before the interview begins.

In addition to the interview memos, notes of observations were also recorded for the researcher to reflect on the perceived situation and the concepts developed during the observation. Written memos exist in a variety of shapes and sizes, including memos during the formation of concepts. Document analysis was conducted on appropriate documents as it helps researchers gain more in-depth information about the basic social processes studied.

5.3 Data Analysis

Grounded theory methods were used during the process of data analysis. We started with writing memos after each interview was conducted, and after a while, patterns emerged and the memos could be categorized according to indicators, incidents, concepts, and categories. According to Glaser (1998), writing memos is a core process in grounded theory study. Ideas emerge during the coding process, data collection, and analysis as well as relationship codes that exist in theory during the process of writing the memo. Codes and categories that were formed according to our own synthesis based on emerging patterns. This is different from the common qualitative method based on the analysis of themes that have been formed earlier.

The data was then analyzed using substantive coding involving open coding and selective coding (Glaser, 2004). The constant comparative method was run simultaneously in which we compared incident to incident, incident to concept, and concept to concept (Glaser & Strauss, 1967). Each concept that emerged was compared to other concepts. All of these processes were compared with each other to see the emergence of concepts that eventually formed the core categories of the study.

6. Results

The results showed that a total of six main themes were acquired in the coding chosen through writing memos. The process subsequently sorted these themes. It supports the process of skill development in the training institution. The process is exactly the same place as training institutions before they work in industries.

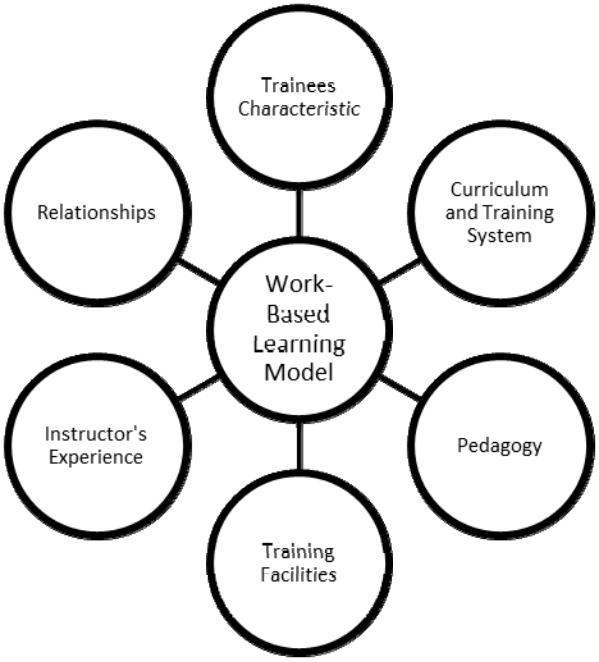

Figure 1. A proposed model of work-based learning at training institution

Learning and training process, whether formal, informal, or non-formal, happens only when an trainees and employee has the willingness to learn. This will come from a passion for learning and motivation to learn. Willingness to learn should be supported by a system of training in the workplace, which is based on an existing hierarchy, work needs and technological change. This demands that workers train, enhance their own skills or learn to improve their skills. This process happens in a wide context of cultivating learning such as learning through experience and learning through supervisors as learning is cultivated around the work environment.

This process is supported by the training delivery methods. As mentioned earlier, even though it looks informal or non-formal, it still has its own method of delivery. This delivery method must also be supported by workplace learning facilities such as machine, learning spaces and expertise. This expertise is typically shared by a senior training supervisors or experienced workers. This requires a symbiotic relationship between the trainee, senior workers, industrial supervisors, and employers. The complete results of the coding process through a memo and also open; axial and selective coding is as below.

6.1 Trainee Characteristics

Trainee characteristics contribute to the formation of high employability skills. It found as a major influences contributing to the formation of high skill. According to respondent trainee 1, "*I'm really interested in the field I am in now. That's why I managed to be among the outstanding trainees here*". Interview data show the characteristics of primary importance trainer is as follows in Table 1:

Table 1. Trainee characteristics construct

Construct	Description
Trainee Characteristics	Interest
	Discipline
	Motivation
	Dare to Change
	Clearest Vision
	Right Intention

Trainers opt to choose ILPKL because they have interest. This interest is formed by a number of factors such as family influence, the influence of friends, teachers and the influence of it easy to get a job. However, there are also trainees who were forced by their parents to enter the training institutions for not successfully pursue their studies to college. This situation has caused some trainees who failed to follow the learning process very well. Trainees who are interested will be working hard to get as much knowledge. This makes the trainee motivation and a clear vision and mission are why the trainers in training institutions ILPKL. Trainee 1 said;

"I'm really interested in this field I choose. This made me work hard and try to change as much as possible to get the skills"

Statement from trainee 1 supported by some other statement also noted that the trainees who are interested usually have a high level of discipline as they clear with what they want during the training process. Trainers opt to choose ILPKL because they have interest. This interest is formed by a number of factors such as family influence, the influence of friends, teachers and the influence of it easy to get a job. However, there are also trainees who were forced by their parents to enter the training institutions for not successfully pursue their studies to college. This situation has caused some trainees who failed to follow the learning process very well. Trainees who are interested will be working hard to get as much knowledge. This makes the trainee motivation and a clear vision and mission are why the trainers in training institutions ILPKL. Trainee 1 said;

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6.2 Curriculums and Training System

A training system is used to give a clearer picture of the quality of trainees produced from training institutions. The results showed that the system of curriculum-based training and industry facilitation help trainees to enter the working world. According to trainee 8, "*When I went for industrial training, I found that the work environment is similar to training in the ILP system. This makes it easier for me to adapt to the working environment*". His opinion is supported by trainee 7, "*I am grateful for the training I get in the ILP as it helped me to be a good employee*" Good lecturers and facilities helped me to succeed".

Each trainee characteristics obtained by the coding process needs to be supported by curriculum and quality training system. The results showed (Table 2) that there are several sub-constructs of the constructs that make up the curriculum and training system:

Table 2. Curriculum and training system construct

Construct	Description
Curriculum and Training System	Modular
	Hands-on
	Industry based curricular
	On-the Job Training

The results showed that the modular-based training system used to train the trainees in a particular program. It has a number of modules that have to be followed to meet the requirements to obtain the certificate of proficiency level 1, level 2 and level 3. The curriculum is also designed to use a hands-on to allow each individual trainee have a skills. It uses a full industries based curriculum. Thus, training institutions should have the training industry to support skills development in the context of the actual work.

6.3 Pedagogy

The results showed the constructs of pedagogical concepts are very important after the curriculum and training system. Methods of teaching and learning in training institutions play an important role in ensuring effective input and output. According to trainee 5, "*Supervisors show us how to do things before we do them on our own. Subsequently, we are able to do the job by ourselves, and if there are any mistakes, the lecturer will help*". This statement is supported by trainee 4, "*I love the way a lecturer teaches. Once there is a reason, I will be able to practice in earnest* ".

Good instructor will identify the potential of each trainee. The results showed the trainees are categorized into two groups by teaching the slow learner and fast learner. Each category is developed informally by the instructor to allow focus on the trainees who are slow learner. Different teaching methods applied by instructors depending on the ability of trainees.

6.4 Training Facilities

The results showed training facilities emerged as an important construct to support the formation of highly skilled trainers. There are several key issues related to the preparation of the machine exists in training institution that is consistent with industry. Training facilities provided here are consistent with what is used in the industry. According to trainee 15, "*Training facilities that are available in the industry use the latest technology. This allows us to practice the technology and help us compete in the workplace*". Trainee 2 supports his opinion, saying, "*We are given the opportunity to try all the manufacturing tools to gain experience, but due to insufficient time, we were unable to use all of the available machines.*"

This shows that all of the above factors clearly contribute to the development of skills in the workplace. However, the trainers themselves need to have clear goals in order to obtain as much information and experience.

6.5 Instructor's Experience

Instructor's experience in a related field is an important aspect in the development of technical skills. According to trainees, during their time in the industry, their supervisors shared their experiences with them. This is important as the supervisors gave a true picture of the workplace environment relevant the industry. This will enable the trainee to equip themselves with the necessary skills to survive in the workplace. Teaching experience related industries emerge as key constructs. It is represented by several sub-constructs, namely in Table 3.

Table 3. Instructors experience construct

Construct	Description
Instructors Experience	Industrial Experience
	In-Service Training
	Accountability

6.6 Relationships

Relationships with various parties found to modeling training in training institutions. In particular relationship formed by trainees with various stakeholders to help all the concepts that formed before. A trainee's success depends on them and is assisted by various related parties in the ILP. According to trainee 5, "*Friends and supervisors helped me, as well as the work here. During practical workshops, if there is a problem, I ask my friend. If they do not know, then I will refer to my seniors*". The relationship with God was seen to have an important role because most trainees here are Muslim. Relationships with parents, the community, employers, seniors, and co-workers also play important roles.

7. Discussion

Characters or trainer characteristics play an important role in the social process of review. This is clear because the focus of this study is to observe basic social processes that occur through the study and observation of key issues that happen in the ILPKL and way the issues are resolved. This is consistent with previous studies, which show that the characteristics of trainees are an important concept in the system of apprenticeship or vocational training (Alan, 2009; Guile & Young, 1998; John & Vikki, 2004; ILO, 2001, 2003; Lang, 2010; Miller, 1985; Moore, 1999; Praat, 2003; Nielsen, 1999; Thomas & Dun, 1993; UNESCO, 2001). Contemporary workplace conditions require employees to sustain their employability throughout their working lives (Billet & Choy, 2013).

Based on interviews conducted in the industry, trainees from ILPKL are accepted and recognized by employers. Employers see that ILPKL trainers have the basic skills that can be honed by the production process in the industry. This finding is supported by previous studies (Kilpatrick & Guenther 2003; Kammerman, Stalder, & Hattiich 2010; Nyhan, 2009), which suggest that a good training system will produce quality trainees. However, the interview results among instructors found that there is a problem because some trainees show no interest.

An important theme that emerged in this research is the experience of supervisors. The results showed that the sharing of experiences in the industry by teachers and master trainers help students to adapt to the industrial environment. Supervisors always provide in-service training to meet current skills and teaching methods; however, their functions need to be expanded. John and Vikki (2004) and Lang (2010) support this finding as they found that low industry experience sharing and teaching causes inherent problems in the apprenticeship system.

Training facilities include machine facilities, materials, and other teaching equipment while learning support facilities includes resource centers, wireless internet etc. All these facilities are provided in order to ensure that the process of teaching and learning inside and outside the workshop is productive. The results show that the main problem is the maintenance of instructional equipment; many of the machines used in the teaching process are damaged and cannot be fully utilized (Alias, Rahimi, & Ruhizan, 2011; Mohamad & Norhayati, 2011; Hellwig, 2006). As a result, teaching has to be scheduled, shared or done in an ILP le tour ILPKL through a machine.

A diverse array of teaching methods should be adapted to the needs of the industry as well as students' socio-economic differences, levels of thought, culture, and ethnic background. This makes teachers aware of the teaching methods that will be used. Background diversity also affects the quality of trainee instructors and the difference in the ILPKL teaching experience. Different backgrounds lead to different learning styles among trainees. The tendency among trainees to favor psychomotor skills was clearly seen as they see academic subjects as a burden. In this regard, several important aspects need to be addressed by senior management and laboratory management such as providing laboratory facilities at all levels according to the needs of teaching and learning (Lang, 2010; Zunuwanas, Ruhizan, & Nizam, 2010).

Trainees' relationships with others, such as supervisors, involve a significant process of teaching and learning. Findings showed that students from diverse backgrounds have different learning and thinking abilities. Teachers need to accept this fact. If there are trainees who respond relatively slowly during the teaching and learning process, teachers should strive to overcome the problem. The existence of this relationship is important to ensure that students are provided with the help they need. This process requires commitment from the instructors. The findings are consistent with that of Colley et al. (2003), Nor Hayati (2005), Hodkinson (1998) and Khadijah and Hair (2013). Good supervisors play an important role in the teaching process.

8. Conclusions

This model can be used as a guide by implementing agencies such as skills training and skills development departments and public training institutions to look at the various factors supporting the learning and training process of trainees. The model may help improve the quality of trainers and produce higher quality trainees. This will in turn help the government achieve the needed level of high-skilled workers.

Six factors have been found to contribute towards workplace learning. The quality of trainees is the main issue of employers and industries. Learning happens in various contexts that influence workplace learning according to trainees' priorities. Trainees need to be knowledgeable and become high-skilled workers in order to support Malaysia's goal to become a developed nation and achieve a higher economic status.

References

Alias, M. S., Nik, M. R. N. Y., Ruhizan, M. Y. (2011). Penilaian Kemudahan Pembelajaran, Peruntukan Kewangan dan Kursus dalam Perkhidmatan bagi Kursus Pendidikan Islam di Politeknik Malaysia. *Journal of Islamic and Arabic Education*, *3*(1), 123-134.

Bakar, A. R., & Hanafi, I. (2007). Assessing Employability Skills of Technical-Vocational Students in Malaysia. *Journal of Social Sciences, 3*(4), 202-207.

Barab, S. A., & Hay, K. E. (2001). Doing science at the elbows of experts: Issues related to the science apprenticeship camp. *Journal of Research in Science Teaching, 38*(1), 70-102.

Beaufort, A. (2000). Learning the Trade: A Social Apprenticeship Model for Gaining Writing Expertise. *Written Communication*, *17*(2), 185-223. http://dx.doi.org/10.1177/074108830001700200

Bernama. (2013). *Siswazah perlu memenuhi keperluan industri*.

Billett, S. (2006). *Exercising self through working life: Learning, work and identity* (September 2005), 1-18.

Billett, S. (2006a). Work, Subjectivity and Learning. In S. Billett, T. Fenwick, & M. Somerville (Eds.), *Work, Subjectivity and Learning* (pp. 247-265). The Netherlands: Springer.

Billett, S. (2010). Lifelong learning and self: work, subjectivity and learning. *Studies in Continuing Education*, *32*(1), 1-16. http://dx.doi.org/10.1080/01580370903534223

Billett, S., & Choy, S. (2013). Learning through work: Emerging perspectives and new challenges. *Journal of Workplace Learning*, *25*(4), 264-276. http://dx.doi.org/10.1108/13665621311316447

Brandt, B. L., Farmer Jr., J. A., & Buckmaster, A. (1993). Cognitive apprenticeship approach to helping adults learn. *New Directions for Adult and Continuing Education, 59*, 69-78.

City and Guilds. (2008). *Skills Development: Attitudes & Perceptions*.

City and Guilds. (2009). *Apprenticeships: Briefing Note*.

Colley, H., James, D., Diment, K., & Tedder, M. (2003). Learning as becoming in vocational education and training: Class, gender and the role of vocational habitus. *Journal of Vocational Education & Training*, *55*(4), 471-498.

Collins, A., Bown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, Learning, and Instructional Essays in Honor of Robert Glaser*. Hillsdale, NJ: Erlbaum.

Dreyfus, S. E., & Dreyfus, H. L. (1980). *A Five-Stage Model of the Mental Activities Involved in Directed Skill Acquisition*. University of California, Berkeley. Report.

Engeström, Y. (1987). *Learning by expanding–An activity-theoretical approach to developmental research*. Helsinki, Finland: Orienta-KonsulititOy.

Fenwick, T., & Somerville, M. (2006). Subjectivity and Learning: Prospects and Issues. In S. Billett, T. Fenwick, & M. Somerville (Eds.), *Work, Subjectivity and Learning* (pp. 247-265). The Netherlands: Springer.

Glaser, B. G. (1998). *Doing Grounded Theory: Issues and Discussions*. Ed. Mill Valley, CA: Sociology Press.

Glaser, B. G. (2004). *Naturalist inquiry and grounded theory*. Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research Ed*. New York: Aldine Transaction.

Guile, D., & Young, M. (1998). Apprenticeship as a Conceptual Basis for a Social Theory of Learning. *Journal of Vocational Education & Training, 50*(2), 173-193.

Hamilton, S. F. (1990). *Apprenticeship for adulthood: Preparing youth for the future*. New York: Free Press.

Hansman, C. A. (2001). Context-based adult learning. *New Directions for Adult and Continuing Education, 89*, 43-51.

Hellwig, S. (2006). The competency debate in German VET: an analysis of current reform approaches. *International Journal, 4*(1), 1-17. Retrieved from http://pubs.e-contentmanagement.com/doi/pdf/10.5172/ijtr.4.1.1

Hodkinson, P. (1998). Technicism, teachers and teaching quality in vocational education and training Technicism , Teachers and Teaching. *Journal of Vocational Education & Training*, *50*(2), 193-208.

International Labour Organization (ILO). (2008). *Skill for Improved Productivity, Employment Growth and Development*. Report.

Kammermann, M., Stalder, B. E., & Hättich, A. (2011). Two-Year Apprenticeships–a Successful Model of Training? *Journal of Vocational Education & Training, 63*(3), 377-396.

Kementerian Pengajian Tinggi (KPT). (2011). *Pelan Strategik Pembelajaran Sepanjang Hayat 2011-2020*.

Khadijah, A. R. M. S., & Hair, A. (2013). Image of Technical Education and Vocational Training From The Perspective of Parents and Teachers. *Journal of Technical Education and Training, 5*(1), 68-88.

Kilpatrick, S., & Guenther, J. (2003). Succesfull VET partnerships in Australia. *International Journal of Training Research, 1*(1), 23-43.

Kolb, A. D. (1984). *Experiential learning: Experience as the source of learning and development Ed*. Englewood Cliffs, N.J: Prentice Hall.

Lang, M. (2010). Can mentoring assist in the school-to-work transition? *Education + Training, 52*(5), 359-367. http://dx.doi.org/10.1108/00400911011058307

Malaysia. (2010). *Rancangan Malaysia ke-10 (Tenth Malaysia Plan)*. K. Malaysia. Kuala Lumpur, Percetakan

Nasional.

Mansfield, N. (2000). *Subjectivity: Theories of the self from Freud to Haraway*. Sydney: Allen and Unwin.

McGrath, V. (2009). *Reviewing the evidence on how adult students learn: An examination of Knowles' model of andragogy*. Adult Learner, 2009: The Irish Journal of Adult and Community Education. Retrieved from http://www.eric.ed.gov

McKay, M. (2006). *Education and Training for Agriculture In Australia*. Ucaputama Persidangan Pendidikan Pertanian Kebangsaan anjuran Kementerian Pelajaran Malaysia.

Mohd, G. A. (2011). *Isu-isu semasa Dalam Pendidikan Latihan Teknikal dan Vokasional di Malaysia*. Economic Planning Unit. Kuala Lumpur.

Nyhan, B. (2009). Creating the Social Foundations for Apprenticeship in Ireland. *Journal of European Industrial Training,* 33(5), 457-469.

Pratt, D. D. (1998). *Five perspectives on teaching in adult and higher education*. Malabar, FL: Krieger Publishing Company.

Ramlee, M., & Rohana, R. (2013). Integration of social skills and social values in the National Dual Training System (NDTS) in the Malaysian automotive sector: Employers ' perspective. *tvet@asia, 1*(1), 1-15.

Reese, D. E. (2011). *21st Century Apprenticeship and the New Millennial Generation* (PhD Dissertation, Educational Administration, University of South Dakota).

Ruhizan, M. Y., Amin, N. Y. F., Ridzwan, C. R., Ashikin, H. T., & Bekri, R. M. (2013). Current Trends in Technical and Vocational Education Research: A Meta-Analysis. *Asian Social Science*, *9*(13), 243-251. http://dx.doi.org/10.5539/ass.v9n13p243

Ruhizan, M. Y., Nur, Y. F. A., Ridzwan, C. R., Bekri, R. M., Arif, A. R. A., Mahazir, I. I., & Ashikin, H. T. (2014). Learning Transfer at Skill Institutions' and Workplace Environment: A Conceptual Framework. *Asian Social Science, 10*(1), 179-188. http://dx.doi.org/10.5539/ass.v10n1p179

Shamuni, K., & Ruhizan, M. Y. (2010). Stepping Up the Ladder: Competence Development through Workplace Learning Among Employees of Small Tourism Enterprises. *Procedia-Social and Behavioral Sciences, 7*(C), 10-18. http://dx.doi.org/10.1016/j.sbspro.2010.10.002

Spottl, G. (2007). *Learning through the work process-challenges and shaping requirement*. Report.

UNESCO. (2001). *Revised Recommendation concerning Technical and Vocational Education*. Report.

Universiti Putra Malaysia (UPM). (2012). *Kajian Tahap Penerimaan Masyarakat Terhadap Latihan Kemahiran*. Report.

Wan-Seman, W. A. (2007). To inculcate training culture amongst Malaysian Industry Through National Dual Training System. *Jurnal Jabatan Pembangunan Kemahiran Malaysia*.

Wenger, E. (2000). Communities of Practice and Social Learning Systems. *Organization, 7*(2), 225-246.

Wolek, F. W. (1999). The skill development processes of apprenticeship. *International Journal of Lifelong Education, 18*(5), 395-406. Retrieved from http://www.voced.edu/ Ziess

Zimmerman, B. (2002). Becoming Learner. *Self-Regulated Overview, 41*(2).

Zunuwanas, M., Ruhizan, M. Y., & Nizam, M. (2010). Laboratory Quality Management Requirements of Engineering at the Polytechnics Ministry of Higher. In *Proceedings of the 1st UPI International Conference on Technical and Vocational Education and Training* (pp. 10-11).