

VOCATIONAL PEDAGOGY A DIMENSION OF VOCATIONAL LEARNING WITH WORKPLACE REQUIREMENT

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ABSTRACT

Rapid changes are taking place in industry, the labor market, work to work organization. The changes of taking places in industry have an important implication for Vocational Education and Training (VET). These widespread changes have significant implications for the learning requirement of workers and for the pedagogical methods to facilitate that learning. This paper focuses in the learning of instructor, learners in the perspective of their readiness with teaching and learning challenge in VET. Some theoretical consideration in behavioral and cognitive psychology will be discussed derived from the concept of learning content vocational institutions; pedagogical strategies such as demonstration, practice and feedback implemented by the instructors for learning occur. The learners' preferences based on their characteristics to cater their ability to learn in VET. Learners' learning styles were investigated to identify their preferences in learning and match with the curriculum and practices in teaching VET. The shift in pedagogical orientation will focus in potential of individual, engage learners in development of their own vocational knowledge and skills. VET instructors and trainers must be able to recognize and adapt their teaching and learning practice in order to response to these needs.

Keywords: vocational pedagogy, vocational learners, vocational trainers, teaching and learning practices in VET

1 Vocational Education

There is a tough choice in many developing countries to choose either general education or vocational education (Jin, 1998). In Western countries such as the United Kingdom (UK), Germany and Australia vocational education (VE) remained premised on behavioral accounts of the goals and process of teach (Darwin, 2003). Vocational education and training (VET) are an activity directed to identifying and developing human capabilities for a productive and satisfying working life (International Labor Office (ILO), 2002). According to this statement, it is possible to say VET is:

- 1 A component of educational activity oriented to provide the necessary knowledge and skills to perform a particular job post, an occupation or professional activity in the labor market. At the same time, it acts as a supplementary form other types of education by training people not only workers but also as citizens.
- 2 An activity connected with the process of technological transfer, innovation and development. Knowledge and skills should be transfer since it is the fundamental basis for the process of technological innovation and development.

VET is not a choice or favored by all students. The issue of VE is the second choices of education have been discussed years by years. Even so, in developed countries such as Germany the successful in VET is the example that VET can contribute in economy growth. Why VE in certain countries like developing countries not very successful. Jandhyala (2002) stated there are few factors why VE not progressed why several countries have made remarkable in VE and many others could not. First, the social factors, social attitudes to VE are not encouraging in many Asian countries. Negative attitudes to manual work severely dampen the demand for VET. In rural areas it is mostly considered as the second-class education against the expectation of pupils and parents. Low prestigious attached to vocational education and its inherent inquietude are somewhat a common phenomenon in many countries, including India, Indonesia, Philippines and Sri Lanka. Secondly, enrolments in VE and level of economic development are related. Demand for VE seemed to exist in industrially societies with growth and diversification of industrial structure. As Psacharopoulos and Loxley (1985). Observed in Jandhyala (2002) the lower overall levels of country development, the weaker is the case for introducing VE and diversify it. Emphasis on diversified industrial production emphasizes the need for labor force with vocational skills. Much growth in VE took place in countries like Korea during the early industrialization process, when employment opportunities could increase. So VE becomes more popular inions where jobs can be guaranteed.

2 Vocational Learning

Vocational has a pedagogic component as well as other types of education, but it is an emphasis on the technical, hands-on and technological aspects. Adopted from ILO (2002), VET could be considered by educational activity, provided knowledge and skills for an appropriate professional and labor performance, has both theoretical and practical components but with greater influence of the latter compared to other types of education, has a very strong technological dimension based on the need to go along with the

changes in the productive process of the field and has a clear labor aspect not only given by its technical contents but also because it prepares people to get involved in certain labor relation. Table 1 illustrates the comparing factors among general education and VE.

Table 1: Comparing General and Vocational Education

Factors	General Education	Vocational Education
Basic theory	Psychology	Habit psychology
Form of training	General training	Specific training
Character of content	Standardized	Widely diversified specific content
Origin of content	Traditional selection	Experiences of competent workers
Special interest	Not regarded	Regarded
Special aptitudes	Not capitalized	Capitalized
Basis of admission	Ability to meet standardized academic requirements	Ability to profit by the instruction
Scope of service	Limited-chiefly youth	Serve all groups, all ages
Repetitive training	Little	Much
Qualification of instructors	Knowledge content	Specific occupational experience/certification
Standards	Academic	Occupational
Objectives	Appreciation and trained faculties	Ability to meet demands of a specified occupation
Method of training	Illustrations. Information, exercises	On the job
Working conditions	Practically common to all courses	Different for each course
Basis of operation	To offer general opportunity	To meet specific needs
Leadership	General	In specific occupations
Group characteristics	Ignored	Considered
Administration	Easy, simple, rigid	Difficult, complex, elastic

Wonacott, 2003 as cited in Prosser, C.A and Allen, C.R 1975

The changing of industries trend and assessing information also VE pedagogy need improvement. It should have significant implications for the learning requirements of workers and for the pedagogical methods used to facilitate that learning. Many economic commentators see learning as the vehicle through which increased productivity, innovation and competitiveness can be delivered in an increasingly complex economic environment (Ellstrom, 2001). At the same time social commentators regard learning as the vehicle through which issues of social equity, cohesion, citizenship and cultural development can be addressed (Larsen & Istance, 2001). Governments have sought to take up both perspectives in the development of education and training policies that seek to achieve lifelong learning as both the rationale and integrating goal of all educational sectors (UNESCO, 2002). VE involved behavioral and cognitive psychology.

Judy described behavior focuses on observable behavior change and promotes the view that learning can be enhanced or inhibited by the manipulation of the environmental stimuli surrounding the learner. Consequently pedagogical strategies such as instructional cues, demonstration, practice, reinforcement, behavioral objectives and positive feedback mechanisms need to be planned and implemented by the teacher for learning to occur. Weber and Puleo (1998) documented to enhance students' cognitive learning the vocational teachers should used slightly more class time for activities, spent less time lecturing, work more with student in small group, engaged students more in

task or activities with physical demonstrations, practice and performance. Students in vocational classes worked more on tasks that different with non vocational students where they worked more on the similar tasks interacted more with teachers and other students. Figure 1 presents the learning model in VET based on students' characteristics and preferences modified from Ana & Liunir cited from Mimi & Rashid (2010). The degree of memory is low from the verbal receiving and increase to visual receiving, participating and doing.

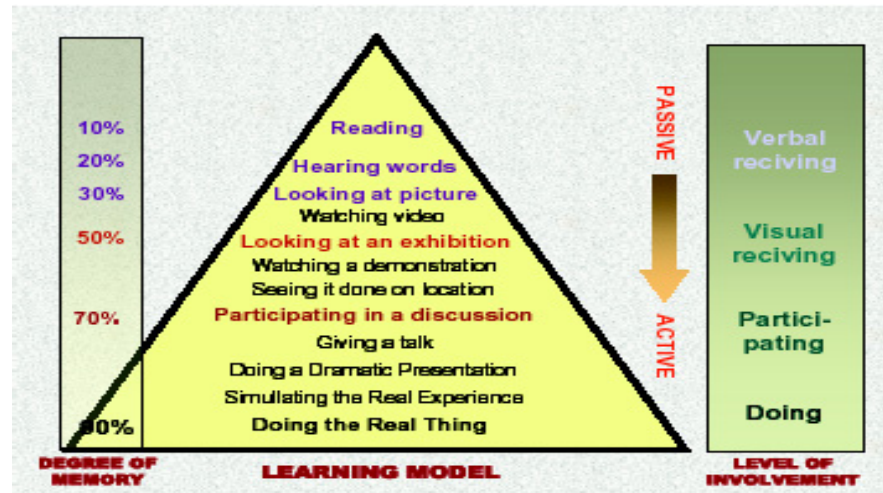


Figure 1: Learning Model- Behavior and Cognitive

Research had been conducted to identify the VET learners' learning styles in three Vocational Institutions in Johore, Malaysia. It involved 128 vocational students to answer the Index of Learning Style (ILS) based on Felder and Silverman Learning Style Model (FSLSM) (Felder & Silverman, 1988). The model actually originating for engineering students, after identify and investigates the model in can be significant for vocational students also. FSLSM defines learning styles as the characteristics strengths and preferences in the ways individuals take in process information. The 44 questions answered by VET students it represent the process dimension of students' learning styles which significant in VE. The dimension investigated are processing focus on active and reflective style, perception concentrate on sensing and intuitive style, input describes the visual and verbal style and understanding stand for sequential and global style. From descriptive analysis the VE students preferences is visual (mean = .8395) represent the type of learner prefer learn in presented materials such as picture, diagram and flow chart. It is related to the concept of VE in cognitive and behavior criteria.

Table 2: Vocational Students Learning Styles

	N	Minimum	Maximum	Mean	Std. Deviation
active	128	.27	1.00	.7647	.20981
sensing	128	.27	1.00	.6640	.21344
visual	128	.36	1.00	.8395	.16358
sequential	128	.27	1.00	.5529	.19304
Valid N (listwise)	128				

Identifying learners' learning styles can help educators enhance students' learning. Learning style is a component of the wider concept of personality (Thomas & Amit, 2007). The special characteristics of VE students where they tend to learn by doing rather than lecturing is the main factors why the changing of pedagogy needed by teachers, instructors or trainer to match with the learning need and workplace need. If focused in certain method for time limitation as a reason students will not get the learning content comprehensively. The implication by knowing and identifying students' learning styles will make teachers, instructors or trainers can prepare the learning material, design and learning process to broaden the opportunities for effective learning in their course. It believed that use variety teaching and learning approaches has the potential to enhance learning and performance for wider range of students and to expand the learning approaches with which students are comfortable and capable of learning (Thomas & Amit, 2007).

3 Vocational Pedagogy

The change of getting information, industries growth, quality of education and the quality of students have significant relation in pedagogical method and workplace requirements. The current method of teaching in VET, students will be taught in theory class and apply in a practical task. Yes it is true because this is the component of VET learning. The effects of this are, as yet, not fully apparent but there is a widespread belief in the importance of learning in contemporary times. Many economic commentators see learning as the vehicle through which increased productivity, innovation and competitiveness can be delivered in an increasingly complex economic environment (Ellstrom, 2001).

The changing needs in VET pedagogy such as learning methods, teaching methods and orientation differ than traditional VET approaches. How to innovate the pedagogy in VE? Dar, Shao, Yi and Ming discussed the innovation of curriculum development in VE pedagogy [13]. They stated first, technical manpower in the era of knowledge-based economy. It is important to appreciate features of such an era and the development of knowledge-based technical manpower before how industrial structures need to be transformed can be considered. The instructors in VET is the manpower for create the new approaches in teaching and learning. They should be more creative to produce the new ideas and expand in course content. The quality of instructors should be considered before they appointed in vocational institutions. Besides the academic

qualification, they should have been working experience, the specialist requirements. Lifelong learning concept must be compulsory to upgrade their skills level.

Second innovation is changes in society and social values (Jin, 2001). He said a knowledge-based economy place high important to innovate while innovation comes from cultural attainment. Cultural attainment is achieved in a rich cultural environment in which education is the most important element. The changes in a social environment have diversified social values (Jin, 2001). People are not satisfied with fair living anymore, but they ask for decent life. Curriculum development must take various needs and approaches into consideration. Teaching content needs to be revised and change constantly to meet the needs of time. The last suggestion is changers in and diversification of learning approach (Dar-Chin *et al.*, 2006). Learning is doesn't end and as the instructors or educators the lifelong learning is the way how to improve the self quality and skills. Lifelong learning places high importance to learning skills, which the keys to successful learning or learning skills are more important than one learns (Zhan, 2001). They described to learn how to learn; learners need to know what effective learning is and practice good learning method. Learn how to think; learners need to learn how to use thinking strategies.

4 Engaging Knowledge and Skills with Pedagogical Component

Bloom defined knowledge as the more rote recall of previously learned material from specific facts to a definition or a complete theory (Bloom, 1956). All that is required is bringing it forth in the form in which it was learned. It represents the lowest level of learning in the cognitive domain, since there is no presumption that the learner understands what is being recall. Knowledge is the basic elements that students must know to be acquainted with a discipline or solve a problem. In VE knowledge is referred to the students for knowing the specific skill is. Based on the VE specification for vocational institutions knowledge elements need students to define, to know, to state, to identify and to sketch. Teachers been suggested a few activities suitable with the learning objectives. The activities can be conducted either in class, workshop or field trip. Anderson and Krathwohl taxonomy suggest knowledge subcategories can be used in students' learning is knowledge of terminology and knowledge of specific details and elements (Krathwohl, 2002).

The National Skills Development Act 2006 (Act 652) defined skill is the work based and industry oriented activities which aim to provide the knowledge, skills and attitude required for effective and efficient performance of a task or job, and includes refresher, further, updating and specialized job-related training. Students need to know and understand how they can do the practical task according to the procedure given. They will use procedural knowledge and metacognitive knowledge for how to do something using their hands-on skills.

Engaging knowledge and skills in a pedagogical component is the main criteria in VE. The criterion of VE is stressed to develop the ability of students in knowledge and skills element so that they can be full skilled and knowledgeable workers in industries. It based on the VE students' tend to learn based on their learning styles. So the teaching approaches should emphasis in creative, flexible and inspire to engage the factors. First is the learner-centered approach, when teachers or instructors identified their learners'

learning style, they can apply a learner-centered approach in teaching. It can inspire students' creativity through flexibility of teaching. Application in theory of learning such as constructivism and behaviorism can make learners as active participants and contributors of knowledge. The creative and critical thinking can be created while working together with the flexible teaching methods and giving students' room and time to think themselves.

Second, the teaching approaches match with the workplace needs. Application of problem-based learning, work-based learning and work centered. These approaches encourage students to develop their ability in active learning, critical thinking and problem solving. To transfer knowledge into skill in a workplace the work centered approach can be implemented with integration between institutions and workplace. These methods expose students in an actual situation of work before they attend the industrial training or horsemanship during their courses or after graduate. The movement from lecture or course in institutions to workplace based on a work-integrated development program. The instructors also can observe students collaborate with the expert or skilled workers in a workplace. What is said to be required is an approach that enables the work environment itself to be seen as an authentic learning situation (Bryans and Smith, 2000). Further, the types of skills to be developed to have moved away from the exclusively technical or discipline based, towards the more general development of cognitions, skills, and attitudes that related directly to improved work performance (Lang, and Wittig-Berman, 2000).

Third is designing the concept of teaching activities. Besides the traditionally approaches of teaching, in VET with the value added from the current trend of economics or industrial growth can be embedded in teaching. Give an opportunity to students to give the idea using their knowledge and skills to create something new or solve the problem. Let them do some field work so that they can have featured how to generate their idea. The concept of teaching activities in VET can be started with find out the weakness of a certain situation and select the problems relate the problems to the situation of frequent life. Students can start with their previous knowledge and in will inspire them to give more ideas how to solve. Let them use their critical and creative thinking and find out the cause and effect about the problem given. This maybe can be a continuous process of learning or short activity in a classroom. The current of teaching activities usually need the teachers or instructors prepare to learn material, but new concept of teaching activities let students to collect the materials with the guideline given, and it can be used in self-learning. Finally, they can have their own learning material, and it is more meaningful to them because they more understand in what they had prepared.

5 Summary

The vocational track is the concept of carrier-oriented education. The combination of many factors in vocational curriculum will need the changing of how to deliver the content. The whole concept of vocational is the development of competency, including individual, work competence, effective training, a concept of teaching; concepts of learning are needed to enter the market. The growth of knowledge-based economy needs more requirements in expanding knowledge, improvement skills and

competence performance. So in this issue the multi teaching approaches need to be designed to develop students in various abilities.

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