

The Role Of Technical And Vocational Education In Career Development

Jamaliah Mohd Jamal ¹, Rohana Hamzah ² & Aede Hatib Musta 'mal ³

¹Faculty of Education, Universiti Teknologi Malaysia 81310 Johor, Malaysia

ABSTRACT : Technical and Vocational Education (TVE) is an education-oriented approach to train and focus on what needs to be done in the workplace as a result of either to meet the work requirements or enhance individual development. The teaching and learning competency-based career development is split into segments that have achieved learning outcomes based on standards set by the career. However, in a work field a combination of job-oriented skills and knowledge alone were not sufficient in order to develop the potential of career development. Therefore, the application of TVE should be considered as a medium that can be combined with elements of education and provide better results for individuals, educational institutions but also in terms of skills development. Application of career development should be instituted early stage of education if they want to produce a generation of highly skilled as well as having the characteristics of competency-based career development. This concept paper is to discuss the role of TVE in the career development of individual potential.

Keywords: *Technical and Vocational Education, Career Development*

ABSTRAK: Menyedari kepentingan Pendidikan Teknik dan Vokasional merupakan suatu pendekatan pendidikan yang berorientasi latihan dan memberi penekanan pada apa yang perlu dilakukan di tempat kerja sebagai hasil sama ada untuk memenuhi keperluan kerja atau meningkatkan perkembangan individu, pendekatan pengajaran dan pembelajaran berasaskan pembangunan kerjaya menjadi segmen hasil pembelajaran yang mesti dicapai berdasarkan pada standard yang ditetapkan oleh bidang kerja. Namun begitu, dalam dunia pekerjaan, gabungan kemahiran serta pengetahuan berorientasikan pekerjaan sahaja didapati tidak mencukupi dalam usaha pembangunan kerjaya. Oleh itu, peranan dalam pendidikan PTV harus diberi perhatian sebagai satu medium yang boleh digabungkan dengan unsur-unsur pendidikan dan memberikan kesan yang lebih baik kepada individu, institusi latihan kemahiran malahan dalam aspek kerjaya. Penerapan pembangunan kerjaya dimulakan diperingkat awal pendidikan jika mahu melahirkan generasi yang berkemahiran tinggi disamping memiliki ciri-ciri kompetensi yang diperlukan oleh kerjaya. Kertas konsep ini bertujuan untuk membincangkan sejauhmana peranan Pendidikan Teknik dan Vokasional dalam Pembangunan Kerjaya.

Kata Kunci : *Pendidikan Teknikal Dan Vokasional, Pembangunan Kerjaya*

1.0 INTRODUCTION

Vocational education and training are indispensable instruments for improving labor mobility, adaptability and productivity, thus contributing to enhancing firms competitiveness and redressing labor market imbalances (Caillods, 1994). The nature of today's workplace is different from that of the past. It is characterized by global competition, cultural diversity, new technologies, and new management processes that require workers to have critical thinking, problem-solving and communication skills as well as advanced levels of job skills. Some educators believe that this new and emerging workplace eliminates the viability of vocational education programs that concentrate solely on the acquisition of job skills. They contend that vocational education should concentrate more broadly on all aspects of their students' career development that it should expand its focus by initiating programs that prepare students with the basic academic skills, the teach ability and flexibility, the commitment to lifelong learning that permits them to rapidly change in ways required by new organizations of work or content changes in the processes and performances of work (Herr, 1995).

Kincheloe (1995) criticizes vocational education's focus on specific job skills. Contending that most observers agree that vocational education is indeed a failure he notes that very few vocational students find work immediately after high school that is related to their vocational education. Some studies report that high school vocational graduates are no more likely to find jobs than are high school dropouts. Another criticism of vocational education's focus on job-specific training is that it tends to filter the working class and poor students into its programs, thus neglecting the broader career development perspective that this vulnerable population needs to compete in the global workplace. Additionally, as mainstream society refuses to value the knowledge of job preparation, the status of work-related knowledge is low.

2.0 CAREER DEVELOPMENT AND VOCATIONAL EDUCATION

The concepts of career development offer an expanded focus for vocational education, one that extends beyond the limits of job training. Proponents of career development contend that vocational education should supplement its programs with transitional components such as academic skills, productive work habits, work values, and career decision-making skills (Hoyt, 1993). It should initiate connected and constructivist ways for students to think and learn as important aspects of career development and appreciate the contribution they make to students' development of career interests, choice, planning, and performance.

Successful career development in vocational education requires educators who are willing to take risks, to forego the need for control, and to allow students to pursue their own learning to ask their own questions and seek their own answers. They must invite students to search for understanding, appreciate uncertainty, and inquire responsibly (Brooks and Brooks, 1993) while accepting the uncertainty themselves as students pursue areas that are new to them as well. Teachers in newly designed vocational programs should provide opportunities for students to make connections with their own life experiences (ASCD, 1995a). Rather than helping students to memorize facts, "teachers should teach students meta cognitive and self-evaluative skills so they can assess what they need to learn in order to solve a problem or complete a project. Students who learn these skills will be able to direct their own learning to recognize what skills they need and to go off and learn their skills on their own (ASCD, 1995b). Then, they will be able to involve themselves in lifelong learning that continually prepares them for employment and career development.

3.0 THE RATIONALE FOR CAREER DEVELOPMENT

3.1 Productivity

When people acquire skills they make themselves more productive, able to produce more output and income for a given amount of time and effort. This applies both to wage employment and self-employment. Moreover, when people acquire skills, they typically make those around them more productive. Since most work is teamwork, the productivity of one worker generally depends on the productivity of others. The more training a worker has on or off the job, the more a worker can learn from others about doing a job effectively, and the more productively can workers interact in production, innovation, distribution, and sales (Ashton and Green, 1996).

3.2 Complementarities between Capital and Skills

Human capital is found to be a significant determinant of the amount of physical capital investment in an economy. A higher level of human capital enables machinery and plant to be used more efficiently, raising the rate of return on investments (Ashton et al. 1999). When labor and capital are complements, deficient investment in human capital reduces the productivity of physical capital and thereby leads to deficient investment in physical capital and insufficient economic growth (Booth and Snower 1996). The economic literature, as reviewed by O'Conner and Lunati (1999), suggests that a more educated labor force can raise the returns to investment in physical capital. Capital-skill complementarities largely reflect the skills required to master technologies in newly acquired capital equipment (O'Conner and Lunati 1999). Specifically, more educated people are needed to operate higher-cost capital equipment incorporating sophisticated technology. In addition, use of expensive machinery means greater costs of machine down time, and hence a higher return to preventive maintenance technicians (O'Conner and Lunati 1999). It can be argued that globalization raises capital flows from developed to developing countries. This means that, even without technology imports, capital output ratios in developing countries would rise and, given the complementarities between capital and skill, this would raise the relative demand for skilled labor (Mayer, 2000)

3.3 Technological Change

The acceleration of technical change in recent decades has been complemented by greater numbers of workers with higher skills. Without a workforce that is continuously acquiring new skills, it would be difficult to reap most of the returns from technological progress (Booth and Snower 1996). When technologies are changing rapidly, necessitating a high rate of labor turnover across industries and occupations, adaptability is crucial to keeping labor and capital employed and maintaining competitiveness. When people acquire skills, they commonly also make themselves more adaptable (Booth and Snower 1996). The advancement of knowledge and innovation, and the diffusion of new methods of production are aided by higher levels of education and training (Ashton et al. 1999). Technological change has shifted demand toward higher skills in the labor force (World Bank, 2002). New technologies are knowledge and skill intensive, and there is a need to train people to work with those technologies (IMF 2001). As with capital-skill complementarity, complementarities also exist between technology and skills. The stock of human capital appears to be positively correlated with technological dynamism. The introduction of new technologies in lower income countries implies a reallocation of labor from low to high productivity activities, the latter being generally both

more capital and skill intensive. This means that increased technology imports are likely to be accompanied by a rising ratio of capital to labor, and by demand for skilled labor (Mayer, 2000).

3.4 Changes in Work Organization

Demand for and effective use of skills within an enterprise depends on the ways that work is organized (Booth and Snower 1996). As noted by the ILO in "The Social Impact of Globalization," the progressive adoption of new techniques of work organization is among the key factors behind globalization. Enterprises traditionally organized work according to a tight division of labor and narrowly specialized jobs under close control of supervisors. These traditional management systems are based on the assumption that breaking each task into its most elementary components was the most efficient way of organizing the production of standardized goods for a mass market. Traditional (Taylorist or Fordist) forms of work organization minimized the skills and training required of most employees for job performance. However, increased competition and the introduction of ICT have prompted many firms to make fundamental changes in their internal organization and work practices. These include changes in factory layout, flow of production, quality assurance, and use of inventory. There is no one model of such transformation, but collectively, reorganized firms are called "high performance enterprises" (ILO, 1998a). High performance enterprises base their competitiveness not just on production cost, but also on incremental improvements in the quality of goods or services produced. The changes in work practices and organization in high performance enterprises have profound implications for the skills required of employees because skill demands are derived from the way work is organized. Work teams in high performance enterprises typically incorporate devolution of decision making, self-management, multi skills, job rotation, and cross training. These methods confer greater flexibility on the organization, but can only work if employees possess technical skills in addition those normally required in a traditional organization (Ashton and Sung 2002). In the high performance workplace, workers also must possess the cognitive and diagnostic skills necessary to perform a broad range of frequently changing tasks (Howell, 2000). Additionally, such workers must acquire social and problems-solving skills required for management of production. This generates the demand for learning to become a continuous process (Ashton and Sung 2002).

4.0 A BALANCE OF POWER

Eliminating "co-dependent" behavior has become as important for employment health as it is for psychological well-being. Today's workers are realizing that the only source of employment security is the security they create for themselves, by becoming self-reliant and career resilient (Brown, 1996). Continued employment is tied to lifelong learning and ongoing skill development, practices that enhance career growth and the potential for career advancement and mobility. This trend toward career independence is reflected in the new breed of independent contractors and temporary workers who move from job to job and project to project, marketing themselves for temporary assignments in a variety of organizations rather than seeking permanent jobs (Pink, 1997).

Workers are recognizing the need to ensure their marketability to employers, and employers are facing increased pressure to make their organizations attractive to workers. In the current tight labor market, where workers remember job loss as an outcome of corporate

restructuring and downsizing, company loyalty has gone by the wayside. Brown (1998a) reports that even newly hired workers are on the lookout for a "better" opportunity, with 50-60% of them changing jobs within the first 7 months of employment. To offset excessive turnover, many companies are offering advantages associated with free agency (Reich, 1998).

5.0 HIGHLIGHT CAREER MANAGEMENT SKILLS IN CAREER EXPLORATION

New career exploration practices that include school-to-work initiatives such as internships, apprenticeships, and worksite experiences are valuable ways for students to learn about work in a specific occupational area. Those who are already working can expand their experiences through various types of continuing education and work force education programs.

Because the workplace of the 21st century will be characterized by many complex, tactical, and strategic tasks that require the assimilation of increasing amounts of new knowledge; personal thinking, application, and problem-solving abilities; and high workloads with extremely variable content, senior management must acknowledge work force education as the driving activity that supports quality management and the work-team empowerment process (Gordon 1997). Mosca (1997) notes that employees need training to infuse creativity into their jobs, be able to tolerate ambiguity, and accept responsibility and accountability for their work.

Whether developed through work force or school-based career development programs, the tools for success in today's highly competitive workplace include self-awareness, assertiveness, conflict resolution, interpersonal communications, and managing relationships (Cunanan and Maddy-Bernstein 1997). Personality clashes between employees, often triggered by power issues, are continuing to escalate in the workplace (Brown 1998b). USA Today reports that bullying and browbeating behaviors are becoming a significant workplace problem, undermining productivity and morale (Armour, 1998). Career exploration activities should highlight strategies for managing relationships, including those that build self-esteem and promote an openness to different ways of thinking and acting (Brown 1998b).

6.0 CONNECT INDIVIDUALS TO TECHNOLOGY THROUGH CAREER PLANNING

The globalization of work, new technologies, and increasing numbers of jobs in the service sector are expanding the boundaries of where work is performed. Flavin (1997) reports that many workers are operating out of their homes and from mobile offices and hotel rooms. However, the ability to function independently from these locations requires workers to be self-motivated and have outstanding problem-solving, abstract reasoning, and planning skills, along with an attitude of persistence (Gordon, 1997).

Career planning should involve all stakeholders in the worker's career and engage those who can model new ways of functioning. For example, mentoring is one strategy that can help new workers learn about an organization and its culture (Kerka, 1998). It is also an effective way to help workers upgrade their skills. Through a mentoring program at Onsite Technologies, for example, less-experienced employees are paired with senior technical engineers to learn about new technologies (Kaufmann 1998).

The Internet offers another tool for career planning. It is useful for educating yourself on job searches and career transitions, researching prospective employers, tracking trends,

making contacts with other people, and identifying and generating professional opportunities" (Koonce 1997).

7.0 CONCLUSION

Career development practices must reflect the employment trends and practices of the workplace and support individuals in their efforts to develop the knowledge, skills, and behaviors that will enable them to be successful. In the school setting, collaboration, articulation, and communication between partnerships of parents, businesses, community organizations, teachers, and other school personnel are key support elements (Cunanan and Maddy-Bernstein 1997). In the workplace, companies can help their employees toward career growth by communicating opportunities that are available to them, mapping a course of action, facilitating employee training and education, offering an opportunity for employees to try out their new skills, and providing feedback and assessment to guide ongoing career planning (Kaufmann, 1998).

From the individual perspective, understanding the factors that shape and influence career choices helps you see where you fit in the larger scheme of things and helps you develop a better sense of direction and control in planning your life's work and future (Farren 1998). Workers can master the new skills and competencies of career development in partnership with employers, career educators, and counselors.

REFERENCES

- Ashton, David N. and Johnny Sung. 2002. Supporting Workplace Learning for High Performance Working. Geneva: International Labour Organisation (ILO).
- Ashton, David and Frances Green. 1996. Education, Training and the Global Economy. Cheltenham: Edward Elgar.
- Association for Supervision and Curriculum Development. "Understanding the Brain.", no. 7 (September 1995a)
- Booth, Alison L. and Dennis J. Snower, eds. 1996. Acquiring Skills: Market Failures, their Symptoms and Policy Responses. Cambridge: Cambridge University Press.
- Brown, B. L. Career Resilience. Eric Digest. 178. Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, Center on Education and Training for Employment, the Ohio State University, 1996. (ED 402 474)
- Caillods, Françoise. 1994. Converging Trends Amidst Diversity in Vocational Training Systems. International Labour Review 133 (2):241—257.
- Cunanan, E. S., and Maddy-Bernstein, C. Exemplary Career Guidance Programs 1995: Secondary and Post Secondary. Berkeley: National Center for Research in Vocational Education, University of California, 1997. (ED 406 547)

- Farren, C. "Sailing the Good Ship Career." *Training and Development* 52, no. 2 (February 1998): 42-48.
- Flavin, C. *Staete of The Union . Working in the USA, Making A Living, Making A Difference*. Pomfret, CT: Study Circles Resource Center, 1997.
- Gordon, E. D. "The New Knowledge Worker." *Adult Learning*, no. 4 (March-April 1997): 14-17.
- Herr, E. *Counseling Employment Among Youth*. Greensboro, NC: ERIC Clearing house on Counseling and Student Services, 1995. (ED 382 899)
- Howell, David. 2000. *The Skills Myth*. *The American Prospect* Vol. 5, Issue 18. From <http://www.prospect.org/print/V5/18/howell-d.html>
- Hoyt, K. B. "Career Education and Transition from Schooling to Employment." 1993. (ED 371 242)
- Kaufmann, A. J. C. "Managers Can Assist Employees in Charting Their Own Course." [http://www.infoworld.com/cgi-bin/displayArchive./98/28/202-28.99 .html](http://www.infoworld.com/cgi-bin/displayArchive./98/28/202-28.99.html)
- Kincheloe, J. *Toil and Trouble: Good work, smart workers and the integration of Academic and Vocational Education*. New York: Peter Lang Publishing, Inc. 1995.
- Koonce, R. "Career Power: Using the Internet as a Career Planning Tool." (September 1997): 15
- Mayer, Jorg. 2000. *Globalization, Technology Transfer and Skill Accumulation in Low-Income Countries*. Wider Project, No. 150, United Nations Conference on Trade and Development (UNCTAD). Geneva: UNCTAD. Available. http://www.unctad.org/en/docs/dp_150.en.pdf
- Mosca, J. B. "The Restructuring of Jobs for the Year 2000." *Public Personal Management* 26, no. 1 (Spring 1997): 43-60.
- O'Connor, David and Maria Rosa Lunati. June 1999. *Economic Opening and the Demand for Skills in Developing Countries: A Review of Theory and Evidence*. Technical Paper No. 149. Paris: Organisation for Economic Co-operation and Development, Development Centre. Available: <http://www.oecd.org/dev/publication/tp1a.htm>
Abstract at: [http:// www.maquilaportal.com/public/artic/artic211e.htm](http://www.maquilaportal.com/public/artic/artic211e.htm)
- Pink, D. H. "Free Agent Nation." *Fast Company*, no. 12 December, 1997 from <http://www.fastcompany.com/online/12/freeagent.html>.
- Reich, R. B. "The Company of the Future." 1998 from <http://www.fastcompany.com/online/19/comfuture.html>
- World Bank. 2002. *Globalization, Growth and Poverty*. Washington, D.C.: World Bank and Oxford University Press. Available: <http://econ.worldbank.org/prr/globalization/text-2857/>