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Challenges of the leader in creating innovation through of Technical and Vocational Education (TVE) in school

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ABSTRACT

Innovation in Technical and Vocational Education (TVE) is one of the required methods in this transformation era, thus a leader plays an important role in ensuring the successfulness of an organization. Which is, leader must have the leadership skill and it become a key component of an organization, management and administration of educational organizations and systems on going for future. This research was focused on five aspects which are attitude or personality of a leader, experience of a leader in administration as well as Learning and Teaching process (L & T), school environment, an organization's financial and leader workloads. The objectives of this research is to investigate the limiting factors of leaders' innovation and the encouragement that can help motivate the leader in implementing innovation in TVE. There were 48 respondents of technical teachers from Batu Pahat Vocational College for this research. This research is a quantitative survey and a set of questionnaire was used as the research instrument. The data will analyze the percentage, mean score and standard deviation. This research indicates that technical teachers have been moderately implementing innovation in their L & T process. The support from management encourage teacher to fully implementing the practices in school.Beside, these technical teachers had shown a positive attitude in making this innovation as a culture in their school.

Introduction

A review of almost a century of empirical research yields three essential elements of leadership. These elements reflect the realization that leaders must harness the internal resources of the group to deal with an external mission. In order for leaders to enlist the support of others, harness their capabilities and efforts, and use them to accomplish the collective goal, leaders must be able to ; (1) establish credibility for influence and authority, (2) build relationships that motivate and encourage cooperative effort, and (3) deploy the collective resources of the group to accomplish the mission.

A nation's and country's growth are depending on the level of innovation and creativity level of its people. Innovation is basically has been mostly said and discussed since early 1930's by Schumpeter where he saw innovation as an important mechanism for economy growth (Ruttan, 1971). Innovation is a process of learning, searching and scrutiny to find the best answer in producing any products or services. Garcia and Calantone (2002) stated that studies and discussion about innovation have evolves until now and it covers multiple aspects such as product innovation, process innovation, service innovation, improvement innovation, radical innovation, collective innovation and they defined then as,

"*…an iterative process initiated by the perception of a new market and / or new service opportunity for a technology-based invention which leads to development, production and marketing tasks striving for the commercial success of the invention.*"

Innovation development process in Malaysia today is at an encouraging level where government has allocate some of the funds to develop various programs that can improve innovation to a maximum level. The government has placed innovation as a mechanism to enhance the development of the country. Research and development (R&D) has been intensified and developed in public institutions of higher learning,public research institions and private sector. To ensure that all plans can run smoothly, the government has put forward a number of policies in Second National Science and Technology Policy and Plan of Action (DSTN2) and allocate high budget in Malaysia's Eight Plan (RMK-8) to ensure the development of R&D sector is more healthy and competitive (JPM, 2001; MOSTE, 2003).

Objective

The objectives are as follows:

1. To identify the challenges factor between innovative leader in performing their duties and role in technic and vocational education.
2. To identify the leaders knowledge level, skill and experience owned in administrative management and teaching and learning session.
3. To identify leaders' attitude in carrying out their duties and responsibilities in terms of school environment, finance organizations and leader workload.
4. To increase motivation in implementing TVE innovation through exercises and administrators' support.

Research Background

In this challenging and complex situation, leaders role has become important in achieving goals of certain organization. Leaders must be wise in adapting his leadership to bring his organization towards a more effective and excellent ways. According to Sergiovanni (1995),the task of making effective education institution can be done if leaders can perform all education activities and managing various education resources

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under his care. In this regard, leaders are advised to act as instructional leaders (Ibrahim , 2001). Rosenbaum et al. in Azizah (2001), stated that successful education institution, innovative, students' focal points, known for excellence in learning and there are persistent students according to their abilities is because its' leaders' leadership.

Researcher wants to observe leaders that are less innovative in implementing education especially in polytechnics, community colleges, primary schools and technical and vocational secondary schools. However, not all teachers particularly in primary schools and vocational schools has experienced in skills area. Teachers in primary and vocational schools have different academic background. Some of them are from normal daily school and there are some who come from vocational schools. This will bring out many problems from various aspects that are leaders' personalities or attitude, leaders' experience in administrative management and teaching and learning session, school environment, organizations finance and leaders' workload.

Attitude and Personality of a Leader

A quality leader is an individual that has his own special ability. Leadership authority of a person will be affected by various factors such as environment and ecology, perception, memory, cognitive development, emotion, commission and personality (Huitt, 2001). Awards and rewards or similar can stimulate the ability in leadership and able to generate action for engaging in an activity (Enabou & Tirole, 2003). At the same time, emotional and material support can make staff be more commited to give positive impact (Brandit. R, 1995).

Attitude and behavior of a leader will give impact to leader's commission and it will then influencing leadership performance in an organization. Wilhem (1996) believes that a clear and sound quality as the core characteristic for a leader really works. Leadership without quality can bring devastation and as seen through Adolph Hitler. Kanungo (2001) said, that individual that wants to be a leader with ethic need to has noble behavior and give benefits to other people. That leader also has to stay away from bad personality that may be harmful to the organization.

School Environment

Positive environment in an organization or institution including colleagues, working place and working environment are able to influence the pattern of motivation, innovation and behavior of a leader or students. This is based on study done by Amabile (1996) that hypothesized human will not involved in creative process unless there is an encouraging social environment. Environmental conditions according to Brophy (1983) also include people (teachers, peers and mentors) with whom the individual interacting or physical conditions such as school, curriculum, facilities and equipment resources available.

Climatic condition of the environment which is not conducive will make leader's innovation and creativity not aroused due to environmental pressure that is not supporting innovation process thus eventually the leaders' innovation level will sink because there is no support from environment. This condition is supported by Csikszentmihalyi (1988) where he insisted that 'social support network' is the heart of creativity and innovation and he expressed the importance of a sistem by referring to the attractive external environment around the individual. According to Innovative Organization Model In Tang (1998), information is put between external and internal environment to show that there is a clear relationship between external and internal environment with information.

Financial Challenges

Leaders' ability to meet the needs in innovation is a challenge in leadership style. Sufean (2002) defined innovation as a renewal, modification or improvement ideas, things, knowledge and artistic creation civilisation culture with the purpose of fulfilling certain functions, preferences or market needs. Based on innovation needs and demands, leaders are facing many predictions and obstacles to make it a success. According to Pratt (1980) the first thing and always been asked before making any suggestion is about cost and all aspects to implement curriculum at school level are involving cost implications.

The school or educational institution should take appropriate action on financial management because inefficient management willcause all the plans by the leader can not be implemented because Grimshaw and Keefe (1993) stated that the effectiveness of certain organization is closely related to learning facilities and financial allocation. Beyton (1997) said that even essence in education is its students' learning in school, but elements such as learning facilities and management system should helps learning process. Generally, relationship between innovation development of a leader is closely related with financial management or allocation because from enough allocation various programs can be planned and implement to improve the innovation level of leaders and their students.

Teachers' Workload

Kyriacou and Sutcliffe (1978) defined work pressure of teachers that have been said and disscuss a lot as negative reflection such as anger or depression that will affect the rise of hearbeat or secretion of 'andrenocontrophic' hormon into blood vessel. Those workload can threaten teachers' self-confidence and health. Overlapping responsibilities in work place should be prevented to overcome the work degradation that can affect the organization. Teaching and learning situation in classroom that is always in pressure will reduce its' effectiveness and lead to various discipline problems and influencing teachers becoming bored with their profession (Wisniewski and Gargiulo, 1997).

It can not be denied that work satisfaction of an individual is important because it is related to sincerity of a leader. Raymond and Baniel (1975) relate work satisfaction with emotion level of workers whether they like their job ar not. According to them satisfaction will only be felt by workers if there are positive attitudes towards work and job prospects and they can feel their job is appropriate with their life circumstances. According to Omardin (1996), as one of the leaders in school, Senior Assistant of Curriculum plys an important role in helping Principal or Headmaster/mistress, cooperationg with other Senior Assistant so that school administration and management runs smoothly along with core duty of teaching. This includes the works on security, the smooth process of teaching and learning session, formulate a plan in school calendar and monitor the implementation of various school programs.

Teachers' Experience

Past studies shows that unprepared teachers to face difficulties in teaching frequently consider themselves inexperienc and not getiing enough training (Buell et al. 1999; Cains & Brown ,1996; Martin et al.,1999). In the context of teaching profession, experience and teacher's training are two different issues. Experience is empirical knowledge while teachers' training is more theoretical. Both need each other to make a teacher achieve the required competence level.In this regards, Goodwin (1999) defined teacher's training and teaching experience as the basic qualification in effective teaching.

Education and professional training of teachers is the most improtant factor in determining teachers' quality and teaching quality. Experts have agreed that the acquitions of knowledge in the field of teaching to be the most important in teaching. The finding of study support a modest but consitently that knowledge in the field of study and knowledge in teaching methods to be a major determinant in the quality of teaching (Greenwald et al. 1996; Ingersoll 2000; Insergoll &Gruber 1996).

According to Cohen et al. (2003), statistical evidens shows that teaching practices coupled with the knowledge and actions influence the student's learning. Besides that, factor of teaching experience is the knowledge that created by interactions between work environment factors. Duration and frequency through teaching whether successful or otherwise, will gradually develop knowledge and required profession skills. Experienced teachers mostly depend on memories and interpretation from previous related teaching esperience (Gist & Mitchell 1992).

Research Methodology

The research design is a method to enable the information available to answer the research problem and is built to answer the overall research framework and objectives of the study. This study used questionnaires as the main tool for collecting quantitative data.

Mohd Najib (2003) stated that survey method through the use of questionnaires have been widely used because it is an effective and practical way to get information. The questionnaire consist of research items and usually the items are randomly arranged. Besides that, respondent could answer the questionnaire immediately because it has high validity and reliability.

The population of this study is all teachers in Batu Pahat Vocational College. 60 technical teachers were identified from four technical schools involved. Based on table of Krejcie, R. V and Morgan D. W (1970) for a population of 60 people, a total of 52 people needs as sample study. The type of sample used is simple random sample where by the selected teachers are teachers who teaches technical stream students.

The questionnaire consist of two parts,Part A and Part B. Part A consists of respondent personal information and Part B consist of items to measure the application of generic skills elements of students. Syed Arabi (1992) reckon that the choice of this method is the most suitable to be used, practical, effective and time saving. By making the code, data can be converted to numeric symbols which can be calculated. With this questionnaire, researcher is more confident to do this study because:

1. Researcher can be directly in contact with respondent
2. Researcher is assured that data and information been collected through this method are more accurate since respondent could give positive feedback toward the aspect surveyed
3. The answer for the questionaire is straight forward and given.
4. Saving researcher's time, energy and expenses

Likert Scale is suitable for conducting this survey. This is because Likert Scale enable researcher to control any biased feedback. This scale will state Strongly Disagree, Disagree, Slightly Agree, Agree and Strongly Agree. Data will be analized in mean score and the level of each item will be based on interpretation used by Mohd Najib Abdul Ghafar (2003). Scale will be given from 1 to 5. Details of the scale is given in Table 4.1 below.

Table 4.1: Classification of Likert Scale

Scale	Decription
1	Strongly Disagree
2	Disagree
3	Slightly Agree
4	Agree
5	Strongly Agree

Data collection was done by the researcher with the help form lecturers and students involved. The time taken to fill up the questionnaire is about 20 minutes and all respondents had return back the questionnaire directly to the researcher.

By using Statistical Package for Social Studies (SPSS) version 20.0, statistical descriptive analysis was done to calculate the mean and standard deviation while statistical inferens was used to analyze difference between variable to meet the objectives set. Interpretation of statistical mean that modified from Lendal (1997) is described in Table 4.2 .

Table 4.2 : Mean description

Skala	Description
1.0– 2.3	Disagree
2.4– 3.7	Slightly Agree
3.8– 5.0	Agree

Research Findings

The goal of this study is to examine the constraints for teachers to be innovative in applying TVET in T&T in school from teachers perspective. Discussions made were based on the research findings. It can be divided into several sections according to the research questions for a better explanation.

Researcher found that teachers' age are ranged 21-30 years (19%), 31-40 years (27%), 41-50 years (35%) and 51-60 years (19%). Part B of the questionnaire is seen from the attitude or personality element of a leader, the leaders' experience in administrative management of teaching & learning (T&L), the school environment, organizations financial and leaders workload.

Table 4.3 : Total Average Mean Score for Each Constraints

Bil	Element	Mean Average	Standard Deviation Average
1	Attitude or personality	3.19	1.179
2	Experience	3.81	0.927
3	School environment	3.50	1.029
4	Organization financial	3.35	1.109
5	Workloads	3.39	1.153

Table 4.3 is taken from the overall average number for five main elements. The data shown is just the overall average mean score and standard deviation. From all five main elements been studied, only teachers experience shows that teachers in Batu Pahat Vocational College have no problems in experience. This is because the teachers have wide experience in technical fields and able to contribute something if needed. There are also some teachers who had joined competition at international level and received awards, hence no doubt the teachers here are experienced in their fields.

Four elements shows mean below slightly agree. This shows that there are some constraints for teachers to be innovative in Batu Pahat Vocational College. The elements are attitude and personality, school environment, organization financial and workloads. All these elements are closely relates to

organization management whether or not they emphasize innovation. The lowest element with mean = 3.19 is the attitude of teachers and school leaders who played a role in the administration of an organization's business plan. Attitude is an element that involved character or personality in carrying out responsibilities as well as individual interest in developing talent or skills.

Workload element with mean = 3.39 shows that teachers workload is one of the reason teachers are less innovative in school. In this transformational era, many things have made teachers burdened with T&L and school administration. Thus, an action should be taken to ensure teachers have opportunity to apply innovation and improve productivity and teaching profession.

Organization financial or school is still one of the main constraints to innovate, and it shown with mean = 3.35. This happens because delivering assistance to the ministry rather small and mainly for other needs in the school cause this innovative practice somewhat marginalized by the management.

Last element that has the low mean from the questionnaire is school environment with mean = 3.5. School environment is the place to generate ideas of innovation, if there are no incentives to innovate and it is not a prioriy to them then fatigue innovative environment will occur and affect the productivity of an educator. Opportunity and support from management must be continuous so that the momentum of innovation exist in an organization.

Conclusion

Development process of technical and vocational education training of a coutry is related to the development and innovation process implements by the country. Since our country is focusing on economy growth based on industry and technology, thus high hopes are put on renewal and innovation in technical and vocational education. The ability of this technical and vocational education system to be implemented successfully will determined the fate of the future of the country's vision for achieving develop country that is competetive with other country.

Less emphasize on science and technology education, lack of technical and vocational education facilities have given big impact to the local institutions ability to produced adequate workforce for the job market (Siti and Nor Azizah, 1995).This condition is also seen very different from what have happen in other industrialized countries or developing countries. Those countries are seen having high percentage of students furthering their studies in technical fields compared to our country.

In an effort to improve and elevate technical and vocational education, a reform ideas need to be implemented. So, close cooperation is a need for a sincere and consistent among all parties in order to enhance leaders' motivation to perform the innovation in the field of technical and vocational education. This is needed to ensure technical and vocational education is able to follow the changes and align with the current changes in today's world technology and meet the needs of the current market. Thus, cooperation from all parties is needed for the realisation of our country's ideal to becoming a country that is comparable to other countries.

References

Abd Main Salimon (1989). Perkaitan Kepuasan Kerja dan Pencapaian Mendelegasikan Tugas dengan Faktor-faktor Personel dan Pentadbiran dalam Kalangan Pengetua Sekolah Menengah. *Jurnal Pendidikan UKM* 13 & 14; 51-57.

Ahmad Jawahir Tugimin (2005). *Perkaitan Antara Kepuasan Kerja Dengan Tekanan Kerja Dalam Kalangan Tenaga Pengajar Teknikal dan Industri di Kolej Universiti Malaysia*. Kertas Kerja: Universiti Teknikal Malaysia Melaka.

Andre, C. & Velasquez, M. 1992. Ethical relativism, *Issues in Ethics*, 5(2). (http://www.scu.edu/SCU/Centers/Ethics/publications/iie/v5n2/relativism.html)

Azizah Md. Isa. 2001. *Adakah pengetua-pengetua di Malaysia menjalankan tugas sebagai pemimpin pengajaran atau pemimpin pentadbiran atau kedua-duanya*. Jurnal Institut Pengetua Universiti Malaya 1(1): 29-39.

Amabile, T.M.(1996), *Creativity in Context, 2nd ed*., Westviews Press, Boulder, CO.

Brandt, R. (1995). Punished by rewards? A conversation with Alfie Kohn. *Educational Leadership*, 53, 13-16.

Buell, M., Hallam, R., Gamel-Mccormick, M. & Scheer, S. 1999. *A survey of general and special inservice needs concerning inclusion. International Journal of Disability, Development and Education* 46: 143-156

Beynon, J. 1997. *Physical facilities for education: what planers need to know*. UNESCO: Internationalinstitute for educational planning. pp 18.

Brophy, J. (1983). Conceptualizing student motivation. *Educational Psychologist*, *18*, 200-215.

Csikszentmihalyi, M. (1990) 'The Domains of Creativity', in Runco, M.A. and Albert, R.S. Theories ofCreativity. London: Sage Publications.

Cohen, D., Raudenbush, S. & Ball, D. 2003. Resources, instruction, and research.

Educational Evaluation and Policy Analysis 25(2): 119-142.

Enabou, R. B. & Tirole, J. (2003). Intrinsic and extrinsic motivation. *Review of Economic Studies*, 70, 489-520.

Garcia, R. and Calantone, R. (2002). "A Critical Look at Technological Innovation Typology and Innovativeness Terminology: A Literature Review." *The Journal of Product Innovation Management*. 19: 110-132.

Gibson, S. & Dembo, M. 1984. *Teacher efficacy: A construct validation*. Journal of Educational Psychology 76(4): P569-582

Gist, M.E. & Mitchell, T.R. 1992. *Self-Efficacy: A theoretical analysis of its determinants and malleability. Academy of Management Review* 17(2): 183-211

Goodwin, B. 1999. *Improving teaching Wuality: Issues & Policies*. Policy Brief. MidContinent Regional Education Lab., Aurora, CO. Offiece of Educational Research and Improvement (Ed.). Washington DC

Grimshaw, R. and Keeffe, G, ed. 1993. *Facilities management: the potential for research*. Edited by P. Barrett, *Facilities Management: Research Directions*: RICS Books.

Greenwald, R., Hedges, L. & Laine, R. 1996. *The effect of school resources on student achievement.* Review of Educational Research 66: 361-396.

Hargreaves, D.H. & Hopkins, D. 2003. *The empowerd school*. London: Cromwell Press.

Huitt, W. (2001). Motivation to learn: An overview. Educational Psychology Interactive.

Valdosta, GA: Valdosta State University (Retrieved 9/17/2007)

Ibrahim Mamat. 2001. *Pengetuasekolahmenanganiisudancabarankepimpinan*. Ed. ke-2.

Subang Jaya: Kumpulan BudimanSdn. Bhd.

Izhar Hisham Yahya. 1997. Keperluan program pembangunan tenaga pendidik di Politeknik

Ungku Omar. Tesis sarjana pendidikan. Universiti Kebangsaan Malaysia. Bangi.

Kanungo, R. N. 2001. Ethical values of transactional and transformational leaders. *Canadian Journal of Administrative Sciences*, 18: 257-265.

Krejcie, R.V. dan Morgan, D.W. (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement. 30: 607-610.

Kyriacou, C., & Sutcliffe, J. (1978). *Teacher stress : Prevalence, sources and Symptoms*. British

Journal of Education Psychology, 48, 159-167.

Malaysia, (2003) "Dasar Sains dan Teknologi Negara Kedua dan Pelan Tindakan: Persaingan Melalui Sains dan Inovasi" Malaysia: Kementerian Sains, Teknologi dan Alam Sekitar (MOSTE).

Mokhtar b. Ahmad (1998). *Tekanan kerja di kalangan guru sekolah menengah:*115 *Satu kajian di Daerah Kulim Bandar Baharu, Kedah Darul Aman*. Tesis Sarjana Sains. Bintulu: Universiti Malaysia Sarawak.

Mohd. Najib Abdul Ghaffar (2003). Reka Bentuk Tinjauan Soal Selidik Pendidikan. Johor : Penerbit Universiti Teknologi Malaysia

Miles, K.H & Frank, S. 2008. *The Strategic school*. USA: Corwin Press.

Omardin Ashaari (1996). *Pengurusan Sekolah : Suatu Panduan Lengkap*. Kuala Lumpur: Utusan Publication & Distributors Sdn Bhd.

Pratt, D. 1980. *Curriculum design and development*. New York: Harcourt Brace Jovanovich Inc

Proshansky, H.M & Fabian A.B ed. 1987. *The Development of Place Identity in the Child in Spaces for Children*. Edited by C. S. a. D. Weinstein, T.G. New York: Plenum Press.

Raymond dan Daniel (1975). *Age, Education, Job Tenure, Salary, Job Characteristic And Job Satisfaction: A Multi Variate Analysis.* Human Relation Journal. 8, 781 – 791.

Roslan Kamarudin. 2000. Persepsi guru-guru kanan terhadap pengetua di dalam pengurusan kewangan sekolah. Tesis sarjana pendidikan. Universiti Kebangsaan Malaysia. Bangi.

Ruttan, V. (1971). "Usher and Schumpeter on Invention, Innovation and Technological Change." dlm. Rosernberg, N. (ed.) *The Economics of Technological Change*. Middlesex: Penguin Books Ltd.

Syed Arabi Idid. (1992). Kaedah penyelidikan komunikasi dan sains sosial. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Sergiovanni, T. J. 1995. *The principalship: a reflective practice perspective*. Boston: Allyn and Bacon.

Sufean Hussin. 2002. Inovasi ke arah pembangunan pendidikan dinamik. Pyt: Sufean Hussin.

I*novasi dasar pendidikan perspektif sistem dan organisasi*. K.Lumpur: PenerbitUniversitiMalaya. hlm 1-17.

Wilhelm, W. 1996. Learning from past leaders. In Hesselbein, F., Goldsmith, M. and Beckhard, R. (eds.). *The Leader of the Future*, pp. 221-226. San Francisco: Jossey-Bass.

Wisniewski, L. dan Gargiulo, RM. (1997). *Occupation Stress and Burout among Special Educators: A Review of the Literature Journal of Special Educators: A Review of the Literature. Journal of Special Education*. Vol 31, Issue 3, ms 325.

Yusoff Bin Harun. *"Hala Tuju Pendidikan Teknik dan Vokasional*". Kertas dibentangkan di International Forum on Vocational – Technical Education, Hangzhao, China.17 – 20 Nov