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## Stimulating Lecturers' Innovative Behaviour in Malaysian Polytechnics

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# Academic Leadership Journal

## 1. Introduction

Technical and vocational education that has been laid out approximately a century ago provides an important route for secondary school leavers to gain access to post-secondary technical and vocational educational and training and be successfully employed. Polytechnics of Ministry of Higher Education were established to produce semi-skilled employees to fulfil the needs of public and private sectors in the field of commerce, engineering and hospitality. However, a majority of graduates from polytechnics do not join the work force straight away but instead further their studies first to seek their bachelor degrees from universities and colleges before entering the work force. In the effort to improve the employability skills of graduates of Polytechnics, the Annual Report of Tracer Study 2007 proposes an action plan that comprises strengthens problem solving skills and enhances creativity through innovative teaching. The action plan also suggests for the strengthening of student oriented learning approaches through interactive learning practices in e-learning environment, increase group learning activities and improve the lecturers' skills in the aspect of outcome-based learning.

The educational paradigm shift is needed to encourage lecturers to be more aggressive and progressive. The educational paradigm should be changed from receiving to creating and searching; from obeying to showing commitment; from individual to partnership; from routine to innovation and creativity; from reactive to proactive; and from passive to progressive (*Kertas Kerja Kajian Sistem Pendidikan Kebangsaan*, accessed on 2 March, 2009). The Strategic Plan for the Department of Polytechnic and Community College Education (2005 – 2010) was developed in 2005 to deal with various globalisation challenges that bring forth innovations in policy, strategy, program and activity. This strategic plan incorporates the Strategic Plan of National Higher Education and the Ninth Malaysian Plan in order to improve the knowledge and innovativeness as well as cultivating first class mentality. To initiate innovation, lecturers should engage in behaviours that explore opportunities, alternatives and solutions. Innovative behaviour refers to the creativity of lecturers and their involvement in bringing changes and new ideas in the teaching and learning process or in solving their problems. Innovative behaviour helps lecturers in dealing with problems that they face while carrying out their duties. Lecturers have to be bold to try out new ideas and making changes according to current needs (Lee 2004).

In order to realise a continuous flow of innovations, employees must have the willingness and abilities to innovate (Jong and Hartog 2007). Lecturers have to be empowered for them to be involved in innovative behaviour. Empowerment provides lecturers with the opportunity to be innovative and creative. According to Spreitzer and Quinn (2001), empowerment enables employees to be better prepared to accept changes and to be more innovative and not afraid to try something new. Empowerment of teachers as well as institution-based management is brought about by the decentralisation of the educational administrative system (Lee 1999). According to the Head of the Department of Education Foundation, Faculty of Educational Studies, Universiti Putra Malaysia, Associate Professor Dr. Mohd. Majid Konting, institution-based management provides empowerment to educational institutions because the institution leaders or headmasters know their own needs and

requirements better (Marzita 2005). Decentralisation of the educational administrative and management system has to be implemented because of the vast development and changes in education. These development and changes make it almost impossible for the educational administrative and management to be carried out effectively at the national level (Bahagian Perancangan dan Penyelidikan Pendidikan 1995). However, it is hard to practice decentralisation as the educational system of this country is still very much centralised (Marzita 2005).

To initiate innovations, employees may engage in behaviours that explore opportunities, identify performance gaps or produce solutions for problems. Opportunities to generate ideas may arise from things that deviate from normal or expected patterns (Jong and Hartog 2007). Innovations may result from changes in trends, unfulfilled needs of customers or problems in existing work methods. Innovative behaviour is defined as individual actions oriented towards the creation, introduction and application of something new or different that brings benefits to the organisation (Kleysen and Street 2001). This something new or different includes development of an idea or technology, changes in administrative procedure aimed at improving work relation and application of an idea or technology on work process aimed at improving efficiency and effectiveness. Innovative behaviour also involves the creation of product, service, idea, procedure or process (Woodman, Sawyer and Griffin 1993).

In contrast, Janssen (2000) defined work innovative behaviour as the intentional generation, promotion and realisation of new ideas within a work role, work group or organisation for the benefit of the particular role performance, the group or the organisation. The foundations of all innovative improvements are ideas (Scott and Bruce 1994) and these ideas are developed, maintained, reacted to and modified individually by employees (Van de Ven 1986). Kanter (1988) proposed that an innovative individual goes through three stages in the innovation process. At the first stage, the individual identifies the problem and generates ideas or solutions to the problem. At the second stage, the individual looks for sponsorship and builds a team that supports the generated ideas. At the third stage, an innovative individual completes the idea by producing a prototype or model that can be implemented and used productively (Kanter 1988). Innovation often involves discontinuous activities (Kanter 1988). Innovation is also viewed as a multistage process comprising different activities and different individual behaviour at each stage. Therefore, an individual can get involved in any combinations of these behaviours at any particular time (Scott and Bruce 1994). Innovative behaviour can be a result of an individual's reaction towards excessive work load. Employees may try to adapt themselves to the excessive work load by generating, promoting and implementing new ideas (Janssen 2000). Although innovative behaviour is said to be multidimensional (Janssen 2000), previous studies had treated innovative behaviour as one dimensional construct that encompasses these dimensions. This implies that differences in the relevant behaviours between the two/ three phases remain invisible (Jong and Hartog 2007).

Under the rubric of Vision 2020, the liberalisation of educational policies brought about the decentralisation of the national educational system. This decentralisation is aimed at encouraging institution-based management and empowerment of teachers (Lee 1999). Institution-based management provides empowerment to the educational institutions as the leaders or the headmasters know their own needs and wants better (Marzita 2005). According to Gamoran, Porter and Gahng (1994), teachers' empowerment is the main element in the educational reform strategies. However, empowerment can only be achieved if the psychological states produce perception of empowerment in the employees (Mishra and Spreitzer 1998; Quinn and Spreitzer 1997). This psychological

empowerment will result in active approach towards work that makes an individual work and feel empowered to create work roles and contexts (Spreitzer 1995b). This psychological empowerment is manifested through four dimensions, namely competence (the employees' confidence to carry out their work well), impact (the influence felt by employees in their work roles), autonomy (self-determination or the employees' perceived freedom to choose in carrying out their tasks) and meaning (feelings that their work are meaningful and important) (Spreitzer 1995b; Thomas and Velthouse 1990; Conger and Kanungo 1988).

Employees will feel empowered when they see the work environment as giving them opportunities and not constraining (Spreitzer 1995a). On the contrary, the traditional bureaucratic social structures with the characteristics of hierarchy, formalisation and centralisation are viewed as constraining the employees because of the extensive rigidity (Spreitzer 1995a). The fast changing global environment, harsh competition and reduction in predictability cause organisations to abandon the traditional orientation that is bureaucratic in nature and accept the characteristics that are oriented towards empowerment, group work, trust, communication, commitment and flexibility (Jamali, Khoury and Sahyoun 2006). It is hypothesized that psychological empowerment as a whole and by dimensional has a significant relationship with innovative behaviour of lecturers. The demographic factors under study include gender, highest academic achievement, teaching experience and teaching experience at polytechnic. Figure 1 shows the conceptual framework for this study that consists of psychological empowerment, innovative behaviour and demographic factors.

The general objective of this study is to examine the effect of psychological empowerment on innovative behaviour of lecturers in the higher education institutions. The specific objectives are two-folds namely to examine the construct of innovative behaviour as multidimensional or one-dimensional and to identify the level of lecturers' innovative behaviour. It is expected that his study can unveil innovative behaviour as a multidimensional or one-dimensional construct. In addition, it will help us to better understand innovative behaviour and to allow leaders to play bigger roles in stimulating innovative behaviour. Individual innovation is vital to teaching and learning environment. Innovative behaviour enables lecturers to engage in activities that benefit both the stakeholders as well as the institution. The findings also hope to provide information to the leaders regarding the level of innovative behaviour of lecturers and some exposure on the practices of psychological empowerment and broaden the knowledge in psychological empowerment in the educational setting in Malaysia.

## 2. Methods and materials

### 2.1 Operational definitions

Innovative behaviour in this study is defined as the extent to which lecturers intentionally strive to

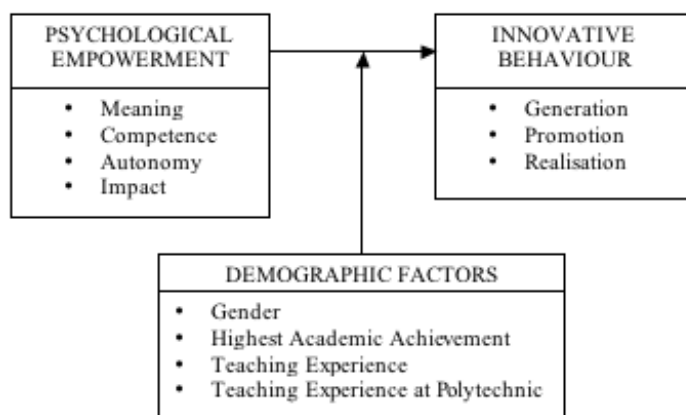


Figure 1 Conceptual Framework

generate, promote and realize new ideas within a work role, work group or institution in order to benefit role performance, the group or the institution (Janssen 2000). Innovative behaviour reflects the creativity of lecturers and their involvement in bringing changes and new ideas in performing their work or solving their problem. The level of innovative behaviour of lecturers is measured by averaging all scores for the 9-items scale developed by Janssen (2000).

Psychological empowerment in this study refers to the extent to which lecturers feel that their work is meaningful; the extent to which lecturers feel that they have the competency and autonomy to perform their work; and the extent to which lecturers feel that they have impact on anything that happens in their department. Psychological empowerment is a multidimensional construct comprising four cognitions or attributes, namely meaning, competence, autonomy and impact. The level of psychological empowerment is based on the lecturers' perception on the four cognitive dimensions using the psychological empowerment scale developed by Spreitzer (1995a). The level is determined by averaging the total scores from the four dimensions to form an overall score for each respondent as suggested by Spreitzer (1995b, 1996). It is assumed that all the cognitions are equally important and contribute to the feelings of empowerment as experienced by respondents.

## 2.2 Respondents

A total of 272 lecturers from two polytechnics have been selected as respondents using multi-stage sampling method. Table 1 shows the profile of the respondents based on gender, highest academic achievement, teaching experience and teaching experience in polytechnic. The questionnaire consists of Psychological Empowerment Scale (Spreitzer 1992; 1995b) and Innovative Behaviour Scale (Janssen 2000). The data collected are analysed using SPSS version 15.0 software utilising descriptive, correlation and regression analysis.

## 3. Results and discussion

### 3.1 Measure of innovative behaviour

Janssen's (2000) nine-item instrument was used to measure innovative behaviour. Although previous studies find that innovative behaviour comprised three subscales (generation, promotion and realisation of new ideas), this study finds that innovative behaviour is unidimensional. Exploratory data analysis utilising principal component with varimax rotation finds that all items are loaded on only one factor. The factor loading values ranged between .795 and .900 show that all items are reliable estimates to measure innovative behaviour construct. Cronbach alpha value of .953 shows that the reliability of the measurement scale for innovative behaviour is high. Figure 2 illustrates a measurement model of the construct using structural equation (AMOS 7.0). The figure shows that the correlations between the constructs are high ( $r$  ranges between .84 and .96) which reflect the existence of multicollinearity among the constructs.

### 3.2 Levels of innovative behaviour and psychological empowerment

All the measurement scales used in this study utilise a Likert scale of 1 to 7. The levels of each variable are set as high (mean values



between 5.0 and 7.0), moderate (mean values between 3.0 and 4.9) and low (mean values between 1.0 and 2.9) depending on the mean values. Descriptive analysis shows that the level of innovative behaviour is moderate while the level of psychological empowerment is quite high. For the dimension of psychological empowerment, the dimension of meaning receives the highest evaluation and the dimension of impact receives the lowest evaluation. Table 2 shows the means and standard deviations of psychological empowerment and innovative behaviour.

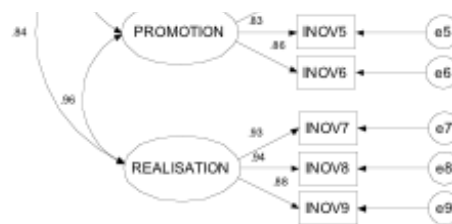


Figure 2 Measurement Model of Innovative Behaviour Constructs

The result of univariate test conducted to study the effect of demographic factors on innovative behaviour shows that there is a significant mean difference in innovative behaviour based on gender. The level of innovative behaviour is higher for male lecturers compared to female lecturers. However, there is no significant difference in innovative behaviour based on demographic factors of age, teaching experience and teaching experience in polytechnic.

### 3.3 Relationship between innovative behaviour and psychological empowerment

The correlation analysis is done to study the relationship between psychological empowerment and innovative behaviour. Cohen's (1988) interpretation is used to evaluate the strength of the relationship between variables. Based on Cohen (1988), it can be concluded that there is a moderate correlation between innovative behaviour and psychological empowerment. The analysis on the dimensions of psychological empowerment shows that there is a low positive relationship between the dimension of competence and autonomy with innovative behaviour; and moderate positive relationship between impact and innovative behaviour. The dimension of meaning, on the other hand, does not have any significant relationship with innovative behaviour of lecturers. Table 3 shows the findings of the analysis.

### 3.4 The influence of psychological empowerment on innovative behaviour

The regression analysis finds that psychological empowerment has significant relationship between innovative behaviour with the value of  $F_{1, 270} = 31.04$ ,  $p < .001$ . The correlation ( $R$ ) between psychological empowerment and innovative behaviour shows that there is a linear positive relationship between the expected score and the criterion score. The  $R^2$  value of .103 shows that 10.3% of variance in innovative behaviour is explained by its linear relationship with psychological empowerment. The adjusted  $R^2$  (.100) attained shows that 10.0% variance in innovative behaviour is explained by psychological empowerment after taking into consideration the fixed-effects model assumption.

The regression analysis finds that the dimensions of psychological empowerment have significant relationships with innovative behaviour with the value of  $F_{4, 267} = 12.70$ ,  $p < .001$ . The dimension of impact is the only significant predictor of innovative behaviour with  $\beta$  value of .38. In other words, when lecturers receive an increase of one standard unit in the dimension of impact, innovative behaviour will increase by .38 standard units. The dimensions of meaning, competence and autonomy are not significant predictors of lecturers' innovative behaviour. Table 4 below shows the result of the regression analysis.

It is to be noted that there are currently 24 polytechnics in Malaysia. However, this study was conducted in only two polytechnics in Peninsular Malaysia due to the constraint of time and budget. Therefore, the findings of this study may not be generalised to all of the polytechnics of Ministry of Higher Education. There may also be many other factors that influence lecturers' innovative behaviour such as structural factors (access to resources, access to opportunity to learn and develop; and access to information) and commitment. However, this paper focuses only on psychological empowerment of lecturers that comprises four cognitions (meaning, competence, autonomy and impact). Despite such limitations, this study finds that the level of innovative behaviour among lecturers is moderate. The moderate level of innovative behaviour may be a result of the lecturers' hesitation to bring forward new ideas for fear that they may be burdened with the necessary duties to develop and implement the ideas. Lecturers may not want to face frustration if the new ideas are criticised and rejected by their colleagues or by the administrators.

In order to increase the innovative behaviour of lecturers, training should be provided from time to time. Lecturers' involvement in seminars, courses, workshops, skills trainings and industrial attachments, for example, can reduce the individual differences in skills and enable lecturers to develop creative and innovative teaching and learning strategies. According to Chien (2007), in a knowledge-based economy, knowledge, skills and abilities must be continuously updated to remain creative and innovative in the dynamic world. Therefore, employees should be trained with new knowledge, skills and behaviours to enable them to perform their duties effectively. Leaders should create a supportive culture towards innovative behaviour. The sharing of information between leaders and lecturers will encourage lecturers to generate new ideas, work methods, techniques and tools to solve their problem and to enable them to perform their job more effectively. Leaders can use the institution's communication channels such as periodic bulletins or forum to disseminate the innovative ideas to other lecturers. Innovation competitions at the institution's level or inter-institutions can be organised to encourage generation and development of new ideas. Innovation awards and rewards given will also promote innovative activities among lecturers.

Psychological empowerment especially the impact dimension is found to contribute significantly to lecturers' innovative behaviour. Therefore, the level of lecturers' innovative behaviour can be improved by increasing the level of psychological empowerment. According to Thomas and Velthouse (1990), there are two ways to increase the level of psychological empowerment. The first method is to change the employees' thinking process or the way they interpret the environment. The second method is by changing the environment or psychological climate. The way employees interpret the environment or the employees' perception towards psychological empowerment structures is a factor that can be controlled by the administrator up to a certain extent (Nedd 2006).

#### 4. Conclusion

The leaders of polytechnics and community colleges should be given exposure on empowerment and the potentials of empowerment. The Department of Polytechnic and Community College Education can play its part by urging polytechnics and community colleges to improve their education quality so that these institutions are able to compete in the job market. Continuing supervision is necessary to ensure that all polytechnics achieve the promised level of education quality. Generally, among the interventions that can be taken into consideration by leaders are implementing training session and professional development; providing open and transparent channel of communication, supporting collaboration or

teamwork; and encouraging collegiality among lecturers. The leaders can also encourage and facilitate networking among institutions so that educational innovation can be fully implemented to improve the education quality in accordance with the aim of the government to make Malaysia the Centre of Educational Excellence.

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Table 1. Profile of Respondents

Demographic Factors Frequency Percentage

Gender:

Male 81 29.8

Female 191 70.2

Highest Academic Achievement:

Diploma 26 9.6

Bachelor 121 44.5

Masters 125 46.0

Teaching Experience:

Less than 4 years 94 34.6

4 to 7 years 123 45.2

More than 7 years 55 20.2

Teaching Experience at Polytechnic:

Less than 4 years 109 40.0

4 to 7 years 131 48.2

More than 7 years 32 11.8

Table 2. Mean and Standard Deviation of Variables under Study

	Mean	Standard Deviation
Meaning	6.14	.84
Competence	5.86	.77
Autonomy	5.14	1.06

Impact	4.23	1.18
Psychological Empowerment	5.34	.68
Innovative Behaviour	4.31	1.17

Table 3. Correlation Analysis

	Meaning	Competence	Autonomy	Impact	Psychological Empowerment	Innc Beh
Meaning	1	.544(**)	.284(**)	.064	.598(**)	.081
Competence	.544(**)	1	.487(**)	.193(**)	.721(**)	.169(**)
Autonomy	.284(**)	.487(**)	1	.459(**)	.812(**)	.207(**)
Impact	.064	.193(**)	.459(**)	1	.686(**)	.388(**)
Psychological Empowerment	.598(**)	.721(**)	.812(**)	.686(**)	1	.321(**)
Innovative Behaviour	.081	.169(**)	.207(**)	.388(**)	.321(**)	1

\*\* Correlation is significant at 0.01 level (2-tails).

Table 4. Regression Analysis: Psychological Empowerment towards Innovative Behaviour

Variable	B	$\beta$	t	p
Constant	1.88	.01	3.22	.001
Meaning	.01		.09	.930
Competence	.15	.10	1.38	.170
Autonomy	-.02	-.02	-.22	.825

Impact	.37	.38	5.93	.000
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R = .39,  $R^2 = .15$ , adjusted  $R^2 = .14$ , standard error  
= 1.0

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Dependent variable is innovative behaviour.

VN:R\_U [1.9.11\_1134]