ISSN : 1985-5826 **AJTLHE Vol. 4, No.2, July 2012, 33-50**

MULTIDIMENSIONAL LEADERSHIP ORIENTATIONS AND LECTURERS' WORK COMMITMENT: THE MEDIATION OF LEADERSHIP EFFECTIVENESS AMONG MALAYSIAN POLYTECHNIC HEADS OF DEPARTMENT

Mohammed Sani Ibrahim[1]
Saedah Siraj[1]
Siti Junaidah Mohd Mujir[2]

[1]University of Malaya, Malaysia
[2]Nilai Polytechnics, Malaysia

Abstract
The purpose of this study was to determine if the perceived leadership effectiveness of heads of departments in Malaysian polytechnics mediates the relationship between their leadership orientation and the work commitment of lecturers. Leadership orientation was defined in its structural, human resource, political, cultural, and educational dimensions, based on Bolman and Deal's leadership frame and Sergiovanni's leadership model. A total of 841 lecturers and 76 department heads from Malaysian polytechnics participated in this study. Hierarchical Linear Modelling was used to determine the department heads' perception of the impact of their leadership effectiveness on the relationship between their leadership orientation and lecturers' work commitment. The study proved that the heads of department practised multidimensional leadership, and that the effect of this on lecturers' work commitment was mediated by lecturers' perception of department heads' leadership effectiveness.

Keywords: hierarchical linear modeling, leadership effectiveness; leadership frames; work commitment

INTRODUCTION

In order to achieve its goal of becoming a developed nation by 2020, Malaysia needs to create a better educated and more highly skilled population. It is the objective of higher education to produce professionals that meet the nation's demand for human resources, who can acquire and apply their knowledge in the context of contemporary society and also provide facilities for research and consultant services (National Higher Education Action Plan, 2007). Malaysian higher education is responsible for developing human capital with the capability to compete in the global economy (Mohamed Khaled, 2008); and the success of higher education is directly related to the competence of its workforce. Accordingly, educational leaders must apply effective leadership skills and create an environment that fosters a culture of excellence to attract the most able, and to motivate existing staff. Leadership in Malaysian higher education is challenged on how to best approach educational reform, in order to deal with the changing nature of a fast-paced, technology-rich, competitive, and globalized world. This is particularly pertinent to educational leaders in polytechnics. As a tertiary education provider, polytechnics contribute significantly to the development of first-class mentality human capital, and therefore must embrace changes in educational leadership (Imran, 2009). Polytechnic leaders articulate the strategic intent of

the organization, and achieve success through the leadership and management of others. They determine values, culture, change tolerance, and employee motivation, through the shaping of institutional strategies, including their execution and effectiveness. The success of polytechnic education in this complex and competitive environment depends largely on leadership practices that drive human capital towards optimal performance, increased productivity, creative innovation, and a committed work force.

The academic department is the basic decision-making unit responsible for the institutional missions of teaching, research, and public services (Bragg, 2000). Hence, academic heads of department play a critical role (Coats, 2000) in leading their departments towards greater efficiency, functionality, and excellence (Rosser, 2003), through fiscal and resources administration, as well as in ensuring the quality of the academic curriculum (Rodd, 2001). In polytechnics, heads of department are charged with creating a shared vision for their departments, and are responsible for developing a climate conducive to the development, sustainability, and transfer of knowledge. The new reality requires polytechnic heads of department to focus on leadership behaviours that suit our consumer-driven environment (Wergin, 2004; National Higher Education Plan, 2007).

The concern to optimize leadership orientation springs from the need for leaders who will not only set goals and direct organizational resources towards these goals, but will also stimulate positive attitudes and behaviours among workers, enhancing their commitment to high performances and values. As earlier studies have suggested, commitment to an organization is reflected in how employees feel about their leaders and the behaviours they exhibit (Lok & Crawford, 2001). The strength and quality of leadership skills and the effectiveness of educational leaders play a vital role in influencing the characteristics of educational organizations (Sasnett & Ross, 2007), and has been shown to have significant impact on the commitment of lecturers to their educational institution (Brown & Moshavi, 2002; Cheng, 2005; Gabbidon, 2005; Shirbagi, 2007; Zaharah, 2002). Effective leadership behaviours will influence employees to remain employed, and will increase their productivity (McColl-Kennedy & Anderson, 2002).

A paradigm shift in leadership roles in today's complex and dynamic environment requires flexible and multiple leaderships skills to fulfil the needs of clients (Avolio & Bass, 1998; Abdul Shukor, 2004). Academic leaders are required to adopt a multidimensional leadership orientation, as no individual leadership model is without its shortcomings, or appropriate for every context and situation (Cheng, 2005). A flexible and multidimensional leadership orientation leads to effective leadership (Abdul Shukor, 2004; Bolman & Deal, 1991; 1997; Cheng, 2005; Thompson, 2000). The ability of a leader to switch between multiple leadership orientations demonstrates a high degree of cognition. Leaders who incorporate elements of several leadership orientation models are more flexible in carrying out multiple administrative tasks (Bolman & Deal, 1991; 1997) and more competent in fulfilling the expectations of their subordinates.

Understanding how lecturers become satisfied and committed to their institutions, and to what degree different factors contribute to their level of commitment, is crucial to boosting their performance. Thus, it is important to identify leadership orientations and practices that enhance lecturers' commitment, so that academic heads of department can work to maximize the productivity of lecturers. Although a substantial quantity of research focusing on organizational commitment and leadership behaviour in business organizations has accumulated, comparatively little data has been employed to address the impact of the leadership orientations of academic heads of department on faculty members' commitment

in higher education settings. There is particularly little information to be found regarding these concepts within Malaysian polytechnics.

RESEARCH AIMS & OBJECTIVES

The aims of this study were to investigate the role of academic department heads' leadership orientations as predictors of lecturers' commitment, and to examine the extent to which perceived leadership effectiveness mediated the relationship between the leadership orientations of academic department heads and lecturers' work commitment. The objectives of this study were as follows:

1. To identify the leadership orientations of heads of academic departments in the following aspects: structural, human resource, political, cultural, and educational leadership.
2. To explore the mediating effect of leadership effectiveness between the practice of multidimensional leadership as practised by academic heads of department and lecturers' work commitment.

CONCEPTUAL FRAMEWORK

Despite the differences between the leadership theories and models that have been proposed, scholars generally agree that the multidimensional leadership theory is most appropriate for understanding educational leadership (Bolman & Deal, 1997; Thompson, 2000; Cheng, 2005; DelFavero, 2006). This theoretical approach is more comprehensive, incorporating broader leadership knowledge, and more practical for developing a cognitive understanding of the leadership perspective (Bolman & Deal, 1997). Bolman and Deal's theory of leadership combines existing research and theories about organizations, leadership, and management, categorizing this information into four leadership frames: structural leadership, human resource leadership, political leadership, and cultural or symbolic leadership (Bolman & Deal, 1991). Structural leadership emphasizes analytical skills and organizational management; human resource leadership refers to leadership characteristics that are supportive and participative; political leadership refers to strengths that are related to power and political sensitivity; and cultural or symbolic leadership is based on the leader's inspirational and charismatic qualities.

Sergiovanni's Hierarchy of Leadership Forces model (1984) shares some similarities with Bolman and Deal's leadership frame (1991; 1997). It describes leadership in its technical, human, educational, symbolic, and cultural aspects. Such models help to explain the variations in leaders' perspectives when defining organizational realities (Bensimon, 1989).

The different leadership frames each have their own viewpoint and capture important parts of organizational reality, but they are not independent of each other (Bolman & Deal, 1997; Sergiovanni, 1984). A leader's ability to use more than one frame should increase their ability to act effectively and make clear judgments (Bolman & Deal, 1997; Cheng, 2005; Sergiovanni, 1984).

In this study, Bolman and Deal's leadership frames (1991; 1997) and Sergiovanni's Hierarchy of Leadership Forces model (1984) were used to explore the leadership orientations of the heads of academic departments in polytechnics, based on five leadership

dimensions: structural leadership, human resource leadership, political leadership, cultural leadership, and educational leadership.

The leadership practice and effectiveness of department heads in performing their various roles were shown to be strongly related to lecturers' performance, job satisfaction, and commitment (Cheng, 2005; Shirbagi, 2007). An effective department head, whose sense of achievement is based in part on lecturers' perceptions (Rosser, 2003), is a person with the ability to influence the activities of the lecturer toward goal achievement (Addison, 2006), and to enjoy their confidence and respect. They are constantly evaluated in terms of their actions and reactions to the problems, opportunities, and challenges they face (Tucker & Bryan, 1991). Gmelch and Miskin (2004) have identified four comprehensive roles of academic department heads that are critical to lecturers' performance and productivity (Gmelch & Miskin, 2004): managers, leaders, faculty developers, scholars, and students affairs managers (Gmelch & Miskin, 2004; Tucker 1992). In this study, therefore, the leadership effectiveness of academic department heads as perceived by the lecturers, and as it stands in relation to the quality of their performance in these roles, was predicted to have a significant influence on the relationship between their leadership orientation and lecturers' work commitment.

Lecturers are the central element in the polytechnic educational system, and hold various important responsibilities. Their commitment is closely connected to their work performance and their ability to innovate and integrate new ideas into their own practices, and further has an important influence on students' achievement and attitude toward school (Tsui & Cheng, 1999).

Lecturer commitment is viewed here on the basis of social exchange theory. Social exchange is a mechanism that eases social interaction and group structure, encouraging a sense of personnel responsibility, appreciation, and trust (Blau, 1964). It is employed in this study to determine lecturers' commitment towards their institution, their students, and their profession. The exchange process begins with the leadership orientation of department heads in performing their roles effectively, thereby enhancing the lecturers' skills and ability to achieve organizational goals. The process culminates in the lecturers' demonstration of their sense of community, affiliation, and personal care toward their institution (Louis, 1998), student learning, and social and intellectual development (Dannetta, 2002; Hoy & Sabo, 1998), and their sense of the relevance of the teaching profession (Firestone & Rosenblum, 1998).

METHODOLOGY

Research Design

This study used a questionnaire survey to gather data. Multistage cluster sampling and proportional stratified sampling were used to determine the size of each department cluster, and respondents were randomly selected for each cluster. A sample of 96 department heads and 1044 lecturers from 24 polytechnics were selected to participate in this study. A total of 76 department heads, representing 11 academic department clusters, and 841 lecturers completed the questionnaires, giving an overall response rate of 83%.

Researchers have agreed that multilevel structures in the data need to be considered when studying educational phenomena (Coryn, 2011; Raudenbush & Bryk, 2002; Wang, 1999). This study encountered multilevel issues, involving organizational and individual levels of

analysis. It was determined that the lecturers and the department heads were the appropriate unit for analysis. Lecturers' work commitment was nested within the structure of the department and the department heads' characteristics. The work commitment of individual lecturers is a function of the department heads' leadership orientations. Therefore, multilevel modelling analysis, using the Hierarchical Linear Model (HLM; Raudenbush et al., 2004), was adopted as the analytical approach to examine the relationship between academic department heads' leadership orientations (level 2 predictor), their perceived leadership effectiveness (level 1 predictor), and lecturers' work commitment (level 1 outcome variable). Raudenbush et al. (2004) and Hoffman (1997) have argued that HLM is the best approach when dealing with multilevel issues, suggesting that it overcomes the weakness of disaggregation and aggregation methods, and accounts for individual and group variances, while assessing predictors at individual and group levels. In sum, HLM measures within and between group variances for more meaningful results, providing a higher to lower outcome at the correct analysis level (Raudenbush & Bryk, 2002; Hoffman, 1997)

Research Instrument

The perceptions of the department heads' leadership orientations were obtained using 35 items adapted from the *Leadership Orientation Survey* (LOS; Bolman & Deal, 1991) and Sergiovanni's *Transformational Leadership Forces Mod*el (1984). Respondents indicated the extent to which their department head exhibited each of the 35 behaviours, using a 5-point Likert scale (1 = never; 5 = always). The score for each leadership dimension was compared to the mean of all scores, to analyse the department heads' employment of each leadership dimension.

The leadership effectiveness of the department heads was measured through their role performance as perceived by the lecturers, through an integration of the *Department Chair Role Orientation Instrument* (Gmelch & Miskin, 2004) with various questionnaires related to department heads' roles and leadership effectiveness, based on the job scope of department heads in Malaysian polytechnics. Thirty-seven items were used to obtain lecturers' perceptions of their department heads' effectiveness in their roles as department managers, leaders, faculty developers, scholars, and student affairs managers, based on a 5-point Likert scale (1 = low performance; 5 = excellence).

Lecturers' work commitment was measured using 27 items related to commitment towards both their polytechnic and their students. The *Organizational Commitment Questionnaire (OCQ*; Mowday et al., 1979) was used to obtain lecturers' perceptions of their own commitment to the polytechnic. Respondents indicated the extent to which they exhibited each of the 10 behaviours, using a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Lecturers' commitment to students was measured using a combination of nine items adapted from Kanungo's *Job Involvement Questionnaire* (1982), and from studies into committed behaviours (Hoy & Sabo, 1998) and lecturer interactions with students (Blackburn & Lawrence, 1995), based on a 5-point Likert scale (1 = never; 5 = always). Lecturers' commitment to their profession was measured using eight items adapted from professions, careers, and occupation questionnaires (Blau, 1985). The lecturers evaluated their commitment to their profession based on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree).

Cronbach's Alpha was used to test the reliability of the instruments. The result of the data analysis showed that the instruments had a high degree of validity and a consistent reliability. The reliability for the leadership dimensions scale ranged from 0.90 to 0.94, and the corrected item-total correlation scores ranged from 0.60 to 0.82. The reliability for the

scales measuring organizational commitment, student commitment, and commitment to profession was 0.93, 0.91, and 0.90 respectively, with corrected item-total correlation ranging from 0.52 to 0.84. The reliability for the leadership effectiveness scales was between 0.89 and 0.94, and the corrected item-total correlation scores ranged from 0.61 to 0.87.

RESEARCH FINDINGS

Academic Department Heads' Multidimensional Leadership Orientations

The department heads' leadership orientations were categorized into three leadership types, which indicate the degree to which perceptions of their behaviours reflect their balanced (or unbalanced) use of the five leadership dimensions, as shown in Table 1. Department heads were perceived to have balanced leadership orientations if they scored above the overall mean in at least four leadership dimensions, and as having a moderately balanced leadership orientation if they scored above the overall mean in three leadership dimensions. Department heads who scored above the overall mean in two or fewer leadership dimensions were deemed to have an unbalanced leadership orientation.

Table 1 Leadership types of department heads

Types or Leadership	Details
a) Balanced leadership	Leaders in this category scored above the overall mean at least four leadership dimensions
b) Moderately balanced leadership	Leaders in this category scored above the overall mean on any three leadership dimensions
c) Unbalanced leadership	Leaders in this category scored above the overall mean on not more than two leadership dimensions

Source: Thompson, M. D. (2000)

Table 2 presents the mean and standard deviations for respondents' ratings of their department head's leadership orientation. The overall mean for each leadership dimension as evaluated by the department heads and the lecturers was between 4.18 and 4.39, and between 3.79 and 3.88 respectively. Analysis of the mean scores for each leadership dimension shows that human resource leadership obtained the highest overall mean score, from both department heads (4.39) and lecturers (3.88), indicating that it was the predominant leadership orientation among the heads of department. The second highest rating was obtained for educational and structural leadership. The political and cultural leadership orientations were the least dominant leadership dimension, as perceived by both groups. The standard deviation for each leadership dimension for the two groups of respondents ranged from 0.56 to 0.65 for the lecturers, and from 0.40 to 0.46 for the department heads respectively, showing that lecturers and department heads generally agreed in their perceptions of the leadership orientations of department heads.

Table 2 Mean score and standard deviation for each leadership dimension

Leadership Orientation	Lecturers (n = 841)		Department Heads (n = 76)	
	Overall Mean Score	Standard Deviation	Overall Mean Score	Standard Deviation
Structural	3.84	0.65	4.25	0.42
Human Resource	3.88	0.56	4.39	0.40
Political	3.80	0.61	4.18	0.46
Cultural	3.79	0.63	4.19	0.43
Educational	3.85	0.61	4.32	0.45

The details of how respondents perceived department heads' leadership orientations, in terms of single or multidimensional leadership, are displayed in Table 3. According to these results, both lecturers and department heads agreed that the heads of department in polytechnics used at least one leadership dimension in their leadership practice, with the majority of them perceiving department heads to practice a multidimensional leadership orientation, using at least three leadership dimensions.

Of the 386 (45.9%) lecturers who perceived the department heads as having an unbalanced leadership orientation, a total of 31.7% agreed that department heads did not practice any leadership dimension, while 5.4% of lecturers indicated that their department heads employed two leadership dimensions, and 8.8% only one. Human resource leadership was perceived by the lecturers as the predominant leadership orientation among the department heads who employed only one leadership dimension. A combination of structural/cultural leadership and human resource/political leadership was perceived as the most common leadership orientation for department heads who practiced two leadership dimensions.

The department heads were perceived by the majority of lecturers as using multiple leadership dimensions in their leadership practice. A total of 37.1% of lecturers perceived that their department heads integrated all five dimensions into their leadership orientation. Human resource, political, and cultural leadership were most frequently employed by department heads who exhibited three leadership dimensions, whereas department heads who used four leadership dimensions most frequently showed a combination of human resource, political, cultural, and educational leadership.

To focus on the heads of department, the majority (31.6%) perceived themselves as using all five leadership dimensions, although this was followed by 25% who did not use any leadership dimensions.

It can be summarized that in the aspect of multidimensional leadership, structural, human resource, political, and cultural leadership dimensions obtained higher ratings from lecturers, whereas heads of departments seemed to prefer structural, educational, political, human resource, and cultural leadership dimensions.

Table 3 Department heads' leadership orientations, as perceived by lecturers and heads of department

Types of Leadership	Combination of Leadership Dimensions Used	Lecturers		Department Heads	
		Freq.	(%)	Freq.	(%)
Unbalanced		386	45.9	36	47.4
	No Dimension	267	31.7	19	25.0
	One dimension	74	8.8	11	14.5
	Structural	15		2	
	Human Resource	33		5	
	Political	8		0	
	Cultural	9		1	
	Educational	9		3	
	Two Dimensions	45	5.4	6	7.9
	Structural/Human Resource	3		0	
	Structural/Political	2		0	
	Structural/Cultural	7		0	
	Structural/Educational	3		2	
	Human Resource/Political	7		0	
	Human Resource/Cultural	6		0	
	Human Resource/Educational	5		1	
	Political/Cultural	6		2	
	Political/Educational	4		0	
	Cultural/Educational	2		1	
Moderately Balanced		79	9.4	7	9.2
	Three Dimensions	79	9.4	7	9.2
	Structural/Human Resource/Political	12		0	
	Structural/Human Resource/Cultural	2		1	
	Structural/Human Resource/Educational	5		1	
	Structural/Political/Cultural	7		1	
	Structural/Political/Educational	3		3	
	Structural/Cultural/Educational	6		0	
	Human Resource/Political/Cultural	24		0	
	Human Resource/Political/Educational	5		0	
	Human Resource/Cultural/Educational	6		1	
	Political/Cultural/Educational	9		0	
Balanced		376	44.7	33	43.4
	Four Dimensions	64	7.6	9	11.8
	Structural/Human Resource/Political/Cultural	18		0	
	Structural/Human Resource/Political/Educational	8		2	
	Structural/Human Resource/Cultural/Educational	4		3	
	Structural/Political/Cultural/Educational	9		2	
	Human Resource/Political/Cultural/Educational	25		2	
	Five (All) Dimensions	312	37.1	24	31.6

Hierarchical Linear Modelling

The first step in applying a hierarchical linear model was to estimate the variance components and test the significance of the within-group and between-group variance in lecturers' work commitment. This mode is known as a *null model*, because no predictor is used. The associated variance components were then used to calculate the intraclass correlation coefficient (ICC), which indexed the ratio between department heads' variance in work commitment to the total variance. The ICC specified the percentage of the total variance residing between groups, and consequently can be calculated as $\tau_{00} / (\tau_{00} + \sigma^2)$, where τ_{00} represents the between-group variance and σ^2 represents the within-group variance. The presence of a larger ICC (10% or more) warrants use of multilevel methods (Bliese, 2000; Lee, 2000). The second step involved applying the coefficient regression model and the intercept as outcome model, for which the level 2 predictor is entered into the equation. The level 2 predictor is the grand mean, centred to produce a comparative result (Hofmann & Gavin, 1998).

Table 4 Within-group and between-group variance component in lecturers' work commitment

Dependent Variables	τ_{00}	σ^2	ICC	χ^2
Commitment to Polytechnic	3.71	28.37	0.11	186.15***
Commitment to Students	8.88	18.99	0.32	466.01***
Commitment to Profession	1.36	32.28	0.04	142.88***

Notes: *** $p < 0.001$; ICC = $[\tau_{00}/(\sigma^2 + \tau_{00})]$

The results indicate that the between-group variance (τ_{00}) for the lecturers' work commitment variables was significantly different from zero (Table 4). An ICC of more than 10% indicates that majority of the variance in lecturers' work commitment variables resided between groups, showing that the level of lecturer commitment to polytechnics, their students, and their profession varied significantly between department heads. The ICC for commitment to polytechnic was 0.116 [ICC = 3.71/(28.37 + 3.71)], indicating that 11.6% of the variance resided between groups, and thus that the level of lecturers' commitment to polytechnics varied significantly between department heads. Thirty-two percent of the variance in lecturers' commitment to their students [ICC = 8.88/(18.99 + 8.8) = 0.32] also resided between groups, again indicating a significant variation in lecturers' level of commitment to their students between department heads. However, the result of ICC analysis with regard to lecturers' commitment to their profession showed that only 4% of the variance was caused by group-level characteristics. This finding indicates that there was no significant difference in lecturers' commitment to the teaching profession between academic department heads.

Identifying Mediation: Department Heads' Leadership Effectiveness as a Mediator in the Relationship between Leadership Orientations and Lecturers' Work Commitment

To examine the effect of leadership effectiveness on the relationship between department heads' leadership orientations and lecturers' work commitment variables, the researcher followed the recommendations of Kenny et al. (2003) and Krull and MacKinnon (2001). Based on Kenny et al. (2003), department heads' leadership effectiveness (M) mediates the relationship between their leadership orientation (X) and lecturers' work commitment variables (Y), if (1) leadership orientation is significantly related to lecturers' work commitment in the absence of M; (2) leadership orientation is significantly related to department heads' leadership effectiveness; (3) department heads' leadership effectiveness

is significantly related to lecturers' work commitment; and (4) there is a change in the X-Y relationship, after controlling for leadership effectiveness.

Department Heads' Leadership Orientations and Lecturers' Commitment to Polytechnics

The results for the coefficient regression model indicate that political leadership and cultural leadership were the only predictors that significantly related to lecturers' commitment to polytechnics. Political leadership showed a significant negative relationship [γ_{03}: = -0.39; $p < 0.05$], whereas cultural leadership had a significant positive relationship [$\gamma_{04} = 0.31$, $p < 0.10$] with lecturers' commitment to polytechnics. Collectively, the two predictors account for 9% [R^2 = (3.71–3.39)/3.71 = 0.09] of the between-group variance in lecturers' commitment to polytechnics (Model 2 of Table 5).

Department Heads' Leadership Orientations and Lecturers' Commitment to Students

The findings showed that the between-group variance for lecturers' commitment to students was significantly different from zero [$\chi^2 = 66.01$; $p < 0.001$]. Results for the group-level model indicated that none of the leadership dimensions (level 2 predictors) were positively related to lecturers' commitment to students (Model 5 of Table 5). Structural leadership exhibited a marginally significant negative relation to lecturers' commitment to students, [$\gamma_{01} = -0.32$; $p < 0.10$]. The results indicate that the leadership orientation of department heads was not positively associated with lecturers' commitment to their students, and therefore does not explain the large between-group variance component in lecturers' commitment to students.

Department Heads' Leadership Orientations and Lecturers' Commitment to Profession

The results of the coefficient regression model (Model 8 of Table 5) indicate that all of the department heads' leadership dimensions, with the exception of educational leadership [$\gamma_{05} = 0.06$; $p = 0.710$], were significantly related to lecturers' commitment to their profession. Human resource [$\gamma_{02} = 0.19$; $p < 0.10$] and cultural leadership [$\gamma_{04} = 0.24$; $p < 0.05$] showed a significant positive relationship with lecturers' commitment to their profession, whereas structural leadership [$\gamma_{01} = -0.31$; $p < 0.01$] and political leadership [$\gamma_{03} = -0.24$; $p < 0.05$] showed a significant negative relationship. Collectively, all four predictors accounted for 25% [R^2 = (1.36–1.02)/1.36 = 0.25] of the between-group variance in lecturer commitment to profession.

The results of the analysis of the coefficient regression model demonstrate that different aspects of lecturers' work commitment were influenced by different leadership orientations practised by department heads.

Table 5 The relationships between department heads' leadership orientations, leadership effectiveness, and lecturers' work commitment

Variables	Commitment to Polytechnic			Commitment to Students			Commitment to Profession		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level 1									
Intercept (γ_{00})	39.28***	39.28***	39.25***	36.59***	36.72***	36.60***	32.23***	32.29***	32.24***
Manager (γ_{10})			0.09	0.16**		0.16**	0.11*		0.11*
Leader (γ_{20})			0.17**	0.001		0.002	-0.01		-0.02
Faculty Developer (γ_{30})			0.11	0.23**		0.23**	0.14*		0.14*
Scholar (γ_{40})			0.12	0.08		0.08	0.14*		0.14*
Student affairs (γ_{50})			0.14^{+}	0.11		0.11	-0.01		-0.003
Level 2									
Structural (γ_{01})	-0.22				-0.32^{+}	-0.16		-0.31**	-0.14
Human Resource (γ_{02})	0.06				0.36	0.23		0.19^{+}	0.07
Political (γ_{03})	-0.39*	-0.41*			-0.43	-0.12		-0.24*	-0.11
Cultural (γ_{04})	0.31^{+}	0.29*			0.19	0.17		0.24*	0.18^{+}
Educational (γ_{05})	0.16				0.04	-0.30		0.06	-0.16
Within-Group Variance (σ^2)	28.38	28.38	18.42	13.88	19.00	13.91	13.53	17.4	13.60
Between-Group Variance (τ_{00})	3.52	3.39	2.10	9.31	8.38	9.26	0.93	1.06	0.76
Variance of Intercept									
Chi-Squared (χ^2)	167.55***		89.42^{+}	227.99***	406.96***	223.16***	90.58^{+}	119.56***	83.32

Notes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; $^{+}$ $p < 0.1$; ns = not significant

Department Heads' Leadership Orientation, Leadership Effectiveness, and Lecturers' Work Commitment

The study predicted that the positive effect of leadership orientation on lecturers' work commitment was primarily mediated by the perceived leadership effectiveness of department heads in performing their roles. The statistics in Table 6 shows that the various dimensions of leadership orientation are either significant or slightly significant to department heads' leadership effectiveness in performing their roles as managers, leaders, faculty developers, and student affairs managers, thus meeting the second requirement for mediation, as outlined above. Structural leadership orientation showed a significant positive relationship with department heads' effectiveness as leaders [γ_{01} = 0,36; $p < 0.05$] and student affairs managers [γ_{01} = 0.72; $p < 0.01$], but had a significant negative relationship with their effectiveness in the role of department managers [γ_{01} = -0.34; $p < 0.05$] and faculty developers [γ_{01} = 0.55; $p < 0.05$]. Human resource leadership showed a significant positive relationship with the department heads' perceived effectiveness as leaders [γ_{02} = 0.46; $p < 0.05$], but a weak relationship in their effectiveness as department managers [γ_{02} = -0.44; $p < 0.10$] and student affairs managers [γ_{02} = 0.58; $p < 0.10$]. The political leadership orientation had a significant positive relationship only with the perceived effectiveness of department heads in the role of leader [γ_{03} = 0.28; $p < 0.01$], whereas the educational leadership orientation showed a significant positive relationship with their perceived effectiveness both as leaders [γ_{05} = 0.25; $p < 0.05$] and as student affairs managers [γ_{05} = 0.40; $p < 0.05$]. However, cultural leadership showed only a weak relationship with the perceived effectiveness of department heads as leaders [γ_{04} = 0.21; $p < 0.1$] and student affairs managers [γ_{04} = 0.37; $p < 0.1$], and a significant negative relationship with their perceived effectiveness as department managers [γ_{04} = -0.26; $p < 0.05$].

Table 6 The relationships between department heads' leadership orientation and leadership effectiveness

Predictor Variables (Level 2)	Outcome Variables (Level 1)				
	Manager	Leader	Faculty Developer	Scholar	Student Affairs Manager
Structural (γ_{01})	-0.34*	0.36*	-0.55*	0.17	0.72**
Human Resource (γ_{02})	-0.44^{+}	0.46*	-0.59	0.36	0.58^{+}
Political (γ_{03})	-0.20	0.28**	-0.29	0.14	0.32
Cultural (γ_{04})	-0.26^{+}	0.21^{+}	-0.30	0.19	0.37^{+}
Educational (γ_{05})	-0.17	0.25*	-0.34	0.07	0.40*

Notes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; $^{+}$ $p < 0.1$; ns = not significant

As shown in Table 5, the cultural and political leadership dimensions practiced by department heads (Model 1), together with their effectiveness in their roles as leaders and student affairs managers (Model 2), are significant to lecturers' commitment towards their polytechnic institution, thus meeting the first and third requirements for mediation. The results also showed that the effect of cultural [γ_{04} = 0.26; $p < 0.05$] and political leadership [γ_{03} = -0.20; p = ns] on lecturers' commitment to their polytechnic, after controlling the dimension of perceived leadership effectiveness, was slightly reduced (Model 3). This indicates that the relationship between the cultural and political leadership practiced by department heads, and lecturers' commitment to their polytechnic was mediated by the department heads' perceived effectiveness as leaders and student affairs managers.

The results also indicate that structural leadership was slightly negatively significant to lecturers' commitment towards their students (Model 5), thus partially meeting the first requirement for mediation. The department heads' perceived leadership effectiveness in performing the roles of manager and faculty developer was positively related to lecturers' commitment to the students (Model 4), thus meeting the third requirement for mediation. Their perceived leadership effectiveness as managers and faculty developers mediated the relationship between department heads' structural leadership and lecturers' commitment to the students, as structural leadership became insignificant [γ_{01} = -0.16; p = ns] (Model 6) after controlling the leadership effectiveness variables.

As Table 5 demonstrates, structural, human resource, political, and cultural leadership were significant to lecturers' commitment to their profession (Model 8), and thus the first requirement for mediation was met. The department heads' perceived leadership effectiveness in their roles as managers, faculty developers, and scholars were each positively related to lecturers' commitment to their profession (Model 7), thus meeting the third requirement for mediation. Structural leadership [γ_{01} = -0.14; p = ns], human resource leadership [γ_{02} = 0.07; p = ns], and political leadership [γ_{03} = -0.11; p = ns] became insignificant to lecturers' commitment to their profession, while the effect of cultural leadership [γ_{04} = 0.18; p < 0.10] became less significant (Model 9), after controlling the leadership effectiveness variables. The results indicate that the effect of leadership orientation on lecturers' commitment to their profession was mediated by their perceptions of leadership effectiveness.

DISCUSSION

Lecturers and academic heads of department in Malaysian polytechnics agreed that department heads used the multidimensional leadership orientations proposed by Bolman and Deal (1991, 1997) and Sergiovanni (1984), comprising structural, human resource, political, cultural, and educational dimensions. The results indicate that department heads in Malaysian polytechnics practise multiple leadership orientations in their administrative duties. This proved the capability of academic department heads to adapt their leadership orientations to the needs and demands of the current educational environment, which is constantly changing and becoming more complex. Lecturers and academic department heads generally agreed that department heads were more inclined to incorporate human resource, educational, and structural leadership dimensions into their leadership orientations. These leadership orientations create a conducive and harmonious environment for the teaching and learning process to take place.

As mid-level leaders, department heads are responsible for their professional roles in the academic curriculum and co-curriculum activities, as well as for their functional roles, including the organizational and administrative aspects of their departments. In carrying out these roles, department heads employed structural leadership to ensure that lecturers and support staff discharged the daily work and responsibilities assigned to them. Structural leadership was also employed when department heads set the direction or pathway of their department and enforced rules among the lecturers and students. Through the use of human resource leadership, department heads were seen as acting considerately and sensitively towards the problems and welfare of their lecturers and students. Department heads also employed human resource leadership to increase the productivity, performance, and commitment of lecturers. As educational leaders, department heads are responsible for the development of the curriculum and the planning of academic programmes to improve the performance quality of their students. Thus, department heads employed educational

leadership in that they showed sensitivity and monitored the academic development of the polytechnics, providing the stimulus for the professional and intellectual growth of their lecturers and of themselves.

The political and cultural dimensions of leadership were, in contrast, rarely employed by department heads when managing their departments. Department heads used cultural leadership in their capacity as sources of inspiration and role models for their lecturers and students. Through departmental events and activities, department heads are able to instil among the lecturers and students the mission and aims of their organizations, making the students a part of the culture of the departments and institutions. As for political leadership, it was used by department heads to build a network or relationship between departments and other units within the polytechnic, or with other organizations, such as businesses, local communities, and politicians.

The leadership of academic heads of department is not only crucial in determining the success of the department, its mission, and its programmes, but also in nurturing quality performances and commitment in their lecturers. The outcomes of this research further showed that only the cultural leadership dimension led to an increase in lecturer commitment to polytechnics, while political leadership even showed a negative relationship. The relationship of these leadership dimensions was mediated by the perceived leadership effectiveness of department heads in their roles as leaders and student affairs managers. This finding demonstrated that activities and programmes carried out by department heads affected lecturers' commitment and encouraged lecturers to work towards achieving the aims of the polytechnic. The ability of department heads to create a quality learning environment and a committed work force was balanced by the power and authority they used in gaining lecturers' trust and support.

The effect of department heads' structural leadership on lecturers' commitment towards the quality of the learning and teaching process and to student achievement was influenced by department heads' effectiveness in performing the roles of manager and faculty developer. This finding suggests that structural leadership is negatively associated with lecturer commitment to students within a dynamic, competitive environment. Beside the economic exchange of the relationship between leadership and lecturers' commitment, the use of structural leadership, which involves authoritarianism, is not conducive to improving lecturers' commitment. This indicates that a high level of authoritarianism on the part of heads of department can be destructive to lecturers' psychological states and work commitment. In order to manage lecturers more efficiently and effectively, it is critically important for department heads to demonstrate appropriate leadership behaviours. The effectiveness of department heads in administrating the department, and in supporting and encouraging lecturers' professional development and growth enhance the lecturers' motivation and commitment towards their students.

The relationship between department heads' human resource and cultural leadership and lecturers' commitment towards their profession was affected by the perceived effectiveness of department heads in performing the roles of manager, faculty developer, and scholar. The effectiveness of these leaderships dimensions may stimulate a sense of relationship in teaching career among the lecturers, by enhancing their career development and professionalism, and helping them to achieve their potential in teaching, research, and service. The department heads' ability to provide a clear vision and objectives may also influence the lecturers' views about their values and self-achievement, which will further motivate and inspire them to devote their energy and loyalty to their profession.

CONCLUSION

This research was able to identify the multidimensional leadership orientations employed by department heads in Malaysian polytechnics, from the perspectives of lecturers and academic department heads. The findings confirmed that department heads employed multidimensional leadership orientations in at least four leadership dimensions, with human resource, political, cultural, and educational dimensions perceived as the leadership combination frequently used by department heads.

In analysing the relationship between department heads' multidimensional leadership orientations and lecturers' commitment, it was found that the level of lecturers' work commitment varied significantly between department heads, and furthermore that the variance in the lecturers' level of work commitment was largely determined by the department heads' leadership orientations. Specifically, the findings of this research proved that activities and programmes carried out by department heads affected lecturers' commitment and encouraged the lecturers to work towards achieving the aims of the polytechnic, enhancing their commitment to their profession, and encouraging them to fulfil their responsibilities to their students. However, there was different feedback from the lecturers regarding their commitment to students. Lecturers stated that their commitment to students was not influenced by the leadership orientations of their department heads. This indicates that the leadership orientations of department heads neither significantly influenced nor contributed directly to lecturers' commitment to students.

The outcome of the study also showed that the department heads' leadership effectiveness in performing their various roles, as perceived by the lecturers, mediated the effects of their leadership orientations on the lecturers' work commitment. Therefore, as educational leaders of the 21st century, academic heads of department should instil strong beliefs and commitments among the lecturers to push forward in transforming higher education.

Further scientific studies and research, using a larger population, are needed to validate the findings of this research. Future studies may wish to rely on other measures of effectiveness. The perceptions of the superior would provide a broader assessment of effectiveness and the ability to obtain multiple perspectives on the performance of academic heads of department, rather than relying on the single interpretation resulting from the assessment of lecturers. It is also suggested that future studies should pursue more objective measures of effectiveness, such as lecturer turnover, programme growth (number of students, size of budget), and the rates of student achievement. These types of measures speak directly to the duties of academic heads of department in maintaining operations and developing their programmes and departments.

REFERENCES

Abdul Shukor Abdullah. 2004. Kepimpinan Unggul Tonggak Pengurusan Pendidikan Cemerlang. Prosiding Seminar Nasional Pengurusan dan Kepimpinan Pendidikan ke 12. Institut Aminudin Baki.

Addison, E. P. 2006. *The Principles of Leadership Effectiveness in Higher Education.* New York, NY: Harper & Row.

Avolio, B. J. & Bass, B. M. 1998. You can drag a horse to the water, but you can't make it drink except when its thirsty. *Journal of Leadership Studies*, 5:1-17.

Bensimon, E.M. (1989). The meaning of “good presidential leadership”: A frame analysis. *The Review of Higher Education,* 12(2): 107-123.

Blackburn, R. T. & Lawrence, J. H. 1995. *Faculty at Work*. Baltimore, MD: John Hopkins University Press.

Blau, P. M. 1964. *Social Exchange: Exchange and Power in Social Life.* New York: John Wiley & Sons.

Blau, G. J. 1985. The measurement and prediction of career commitment. *Journal of Occupational Psychology,* 58: 277-288.

Bliese, P. D. 2000. Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K.J. Klein & S.W.J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349-381). San Francisco: Jossey-Bass.

Bolman, L. & Deal, T. 1991. Leadership and management effectiveness: A multi-frame, multi-sector analysis. *Human Resource Management,* 30(4): 509-534.

Bolman, L. & Deal, T. 1997. *Reframing Organizations: Artistry, Choice, and Leadership.* San Francisco, CA: Jossey-Bass.

Bragg, D. D. 2000. Preparing community college deans to lead change. *New Directions for Community Colleges,* 109: 75-85.

Brown, F. W. & Moshavi, D. 2002. Herding academic cats: Faculty reactions to transformational and contigent reward leadership by department chairs. *Journal of Leadership Studies,* 8(3): 79-103.

Cheng, Y. C. 2005. *New Paradigm for Re-Engineering Education: Globalization, Localization, and Individualization.* Asia-Pacific Educational Research Association. Netherlands: Springer.

Coats, L. T. 2000. Interpersonal behavior and the community college department chairperson. *Community College Journal of Research and Practice*, 24(10): 773-783.

Coryn, C. L. S. 2011. Role of evaluation to improve the school quality: Experience from various countries. Paper presented at The 2nd Kasetsart University International Conference on Education 2011, Bangkok, Thailand.

Dannetta, V. 2002. What factors influence a teacher’s commitment to student learning? *Leadership and Policy in Schools*, 1(2): 144-171.

Del Favero, M. 2006. An examination of the relationship between academic discipline and cognitive complexity in academic deans’ administrative behavior. *Research in Higher Education*, 47(3): 281-315.

Firestone, W. A. & Rosenblum, S. 1998. Building commitment in urban high schools. *Education, Evaluation and Policy Analysis,* 10(4): 285-289.

Gabbidon, S. L. 2005. A study on the attitudes and experiences of chairpersons in American criminology and criminal justice programs. *Journal of Criminal Justice Education*, 15(1): 1-17.

Gmelch, W. H. & Miskin, V. 2004. *Chairing an Academic Department.* Thousand Oaks, CA. Sage Publication.

Hofmann D. A. 1997. An overview of the logic and rationale of hierarchical linear models. *Journal of Management*, 23(6): 723-744.

Hofmann, D. A. & Gavin, M. B. 1998. Centering decisions in HLM: Theoretical and methodological implications for organizational science. *Journal of Management,* 24(5): 623-641.

Hoy, W. K. & Sabo, J. D. 1998. *Quality Middle Schools: Open and Healthy*. Thousand Oaks, CA: Corwin Press.

Imran Idris. 2009. Merealisasikan kecemerlangan melalui penjajaran semula JPPKK. Amanat tahun baharu Jabatan Pengajian Politeknik dan Kolej Komuniti. UNITEN, Januari 2009.

Kanungo, R. N. 1982. Measurement of job and work involvement. *Journal of Applied Psychology*, 67(3): 341-349.

Kenny, D. A., Korchmaros, J. D. & Bolger, N. 2003. Lower level mediation in multilevel models. *Psychological Methods*, 8(2): 115-128.

Krull, J. L. & MacKinnon, D. P. 2001. Multilevel modeling of individual and group level mediated effects. *Multivariate Behavioral Research*, 36(2): 249-277.

Lee, V. E. 2000. Using hierarchical linear modeling to study social contexts: The case of school effects. *Educational Psychologist,* 35(2): 125-141.

Lok, P. & Crawford, J. 2001. Antecedents of organizational commitment and the mediating role of job satisfaction. *Journal of Managerial Psychology*, 16(8): 594-613.

Louis, K. S. 1998. Effects of teacher quality of work life in secondary schools on commitment and self efficacy. *School Effectiveness and School Improvement*, 9(1): 1-27.

McColl-Kennedy, J. R. & Anderson, R. D. 2002. Impact of leadership style and emotions on subordinate performance. *The Leadership Quarterly*, 13: 545-559.

Mohamed Khaled Nordin. 2008. Mengubah senario global dalam pengajian tinggi. Seminar Pengurusan Akademik IPT 2008. Langkawi, Ogos 2008.

Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment. *Journal of Vocational Behavior*, 14: 224-227.

National Higher Education Action Plan 2007: *Beyond 2020*. Ministry of Higher Education Malaysia.

Raudenbush, S. W. & Bryk, A. S. 2002. *Hierarchical Linear Models: An Applications and Data Analysis Methods* (2nd ed.). Thaousand Oaks, CA: Sage Publications, Inc.

Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R. & Du toit, M. 2004. *HLM 6: Hierarchical Linear and Nonlinear Modeling.* Scientific Software International, Inc.

Rodd, L. R. 2001. The act of chairing: What dreaming thought the Japanese and the Japanese thought me. Association of Departments of Foreign Languages Bulletin, 32(3). www.mla.org/adfl/bulletin/V32N3/323005.htm [Dec 2009]

Rosser, V. J. 2003. Faculty and staff members' perceptions of effective leadership: Are there differences between women and men leaders? *Equity and Excellence in Education*, 36(1): 71-81.

Sasnet, B. & Ross, T. 2007. Leadership frames and perceptions of effectiveness among health information management program directors. *Perspectives in Health Information Management,* 4(8).

Sergiovanni, T. J. 1984. Leadership and excellence in schooling. *Educational Leadership,* 41(5): 4-13.

Shirbagi, N. 2007. Exploring organizational commitment and leadership frames within Indian and Iranian higher education institutions. *Bulletin of Educational and Research,* 20(1): 17-32.

Thompson, M. D. 2000. Gender, leadership orientation, and effectiveness: Testing the theoretical models of Bolman & Deal and Quinn. *Sex Roles,* 42(11/12): 969-990.

Tsui, K. T., Cheng, Y. C. 1999. School organizational health and teacher commitment: A contingency study with multi-level analysis. *Educational Research and Evaluation,* 5(3): 249-268.

Tucker, A. & Bryan, R. A. 1991. *The Academic Dean: Dove, Dragon and Diplomat*. American Council on Education, New York: McMillan Publishing.

Tucker, A. 1992. *Chairing the Academic Department: Leadership Among Peers* (3rd ed.). New York: Macmillan.

Wang, J. 1999. Reasons for hierarchical linear modeling: A reminder. *Journal of Experimental Education,* 68: 89-93.

Wergin, J. L. 2004. Leadership in Place. *The Department Chair*, 14(4). Bolton, M.A.: aiker Publication.

Zaharah Mokhtar. 2002. Amalan pengurusan pentadbir akademik universiti: Satu kajian kes. Tesis Doktor. Falsafah, Fakulti Pendidikan, Universiti Kebangsaan Malaysia.

Corresponding Author: mohammedsani@um.edu.my