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Relationship of multi-dimensional leadership with lecturers work commitment: A study on Malaysian heads of polytechnic's academic departments

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The purpose of this study was to determine if Malaysian polytechnic's heads of department multi-dimensional leadership orientation affects the lecturer commitment and mediating effects in leadership effectiveness as perceived by the lecturers. The department heads leadership orientations was determined by the structural, human resource, political, cultural, and educational frame used based on Bolman and Deal's reframing the organization perspective and Sergiovanni's leadership model. Eight hundred forty-one lecturers and 76 department heads from 24 polytechnics participated in this study. Hierarchical linear modeling was used to determine the department head's multi-dimensional leadership effect on lecturers commitment. The study proves that polytechnic's heads of department practiced multi-dimensional leadership, with human resource frame as the predominant frame. There is a significant relationship between human resource and cultural frames and lecturers commitment. The department head's leadership effectiveness as perceived by the lecturers mediates the relationship between department head's multi-dimensional leadership and lecturers' commitment.

Key words: Leadership frames, leadership effectiveness, lecturer's commitment, hierarchical linear modeling.

INTRODUCTION

Malaysia needs to create a better educated and more highly skilled population to achieve the goal of becoming a developed nation by the year 2020. Hence, it is the objective of Malaysian Higher Education to produce professionals as demanded by the nation 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 (Nordin, 2008). However, Malaysian Higher Education's success is directly related to the capability of its workforce. To achieve the government aspiration to instill a new performance culture, educational leaders must

apply effective leadership skills and create an environment that fosters a culture of excellence to attract the most able and motivate existing staff. Malaysian Higher Education leadership is challenged on how to best approach educational reform and the changing nature of our fast-paced, technology-rich, competitive, global world only adds to their complexity. This is particularly pertinent for educational leaders in polytechnics. As one of the tertiary education provider, polytechnics' contributions are significant to the development of first-class mentality human capital; therefore it needs to embark on changes in educational leadership (Imran, 2009). Polytechnic leaders articulate the strategic intent of the organisation 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 polytechnics education in these complex and competitive environment, depends largely on leaderships practice that drive human capital towards optimal perform-

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ances, increased productivity, creative innovations and a committed work force.

The concern for the best leadership orientation rests on the need for leaders, who will not only set goals and direct organizations' resources towards these goals but also stimulate the right attitude and behaviors among workers to enhance their commitment to high performances and values. As has been suggested in earlier studies, commitment to organizations is reflected by how employees feel about leaders and the behaviors they exhibit (Lok and Crawford, 2001). The strength and quality of leadership skills and effectiveness of the educational leaders plays a vital role in influencing educational organizations characteristics and was shown to have significant impact on lecturer commitment to the institution (Brown and Moshavi, 2002; Cheng, 2005; Gabbidon, 2005; Norasmah et al., 2010; Shirbagi, 2007; Zaharah, 2002). Effective leadership behaviors will influence the employees to remain employed and increase their productivity (McColl-Kennedy and Anderson, 2002).

A paradigm shift in leadership roles in today's complex and dynamic environment requires a flexible and multiple leadership to fulfill the client's needs (Avolio and Bass, 1998; Abdul Shukor, 2004). Academic leaders are required to use a multi-dimensional leadership orientation as there are shortfalls in every leadership model and may not be appropriate for every context and situation (Cheng, 2005). A flexible and multiple leadership orientation leads to effective leadership (Bolman and Deal, 1991m, 1997; Thompson, 2000; Abdul Shukor, 2004; Cheng, 2005). Leaders ability to switch between multiple leadership orientations shows high degree of cognition. Leaders who incorporated several elements of leadership orientation were more flexible in carrying out multiple administrative tasks (Bolman and Deal, 1991, 1997) and are competent in fulfilling the subordinates expectations. The purpose of this study was to determine the extent to which department heads practiced multi-dimensional leadership orientations when carrying out their roles and responsibilities.

Polytechnic's academic department heads

Academic departments form the building blocks of institutions of higher learning, and their functioning heavily depends upon the department head's leadership ability. The academic department is considered the basic decision-making units responsible for the institutional missions of teaching, research and public services (Bragg, 2000). Hence, academic heads of department perform key and critical roles within the polytechnics leadership structures (Coats, 2000). Polytechnic's academic department heads are charged with creating a shared vision for the department, and they are responsible for developing a climate conducive to

motivating faculty members to achieve in their respective faculty roles and encouraging scholarship. They form the main component in the administrative structures and responsible for leading their departments towards greater efficiency, functionality and excellence (Rosser, 2003); through fiscal and resource administration as well as ensuring the quality of the academic curriculum (Rodd, 2001) by providing a suitable environment for the development, sustainability and transfer of knowledge. This new reality requires polytechnics academic department heads to focus on leadership behaviors that suit the consumer-driven environment (Wergin, 2004; National Higher Education Action Plan, 2007).

The organizational climate creates excitement when department leadership is strong. In addition, the strength and quality of leadership skills possessed by department heads may determine the success and effectiveness of polytechnics in facing challenges and capitalizing on opportunities to deliver quality education. A strong leadership orientation plays a vital role in influencing educational organizations characteristics, shaping the values and beliefs, as well as lecturers work attitude and commitment (Brown and Moshavi, 2002; Zaharah, 2002; Gabbidon, 2005). Overall commitment to a department should increase when an open environment is present and faculty members believe they are making meaningful contributions. Thus, department heads need a clear understanding of how their leadership styles and credibility influence the commitment of their subordinates. A sense of openness and consideration towards lecturers' career development can contribute to leader effectiveness (Ishak, 2006). Effective leadership behaviors will influence the lecturers to remain employed by polytechnics and increases their productivity (McColl-Kennedy and Anderson, 2002).

Multi-dimensional leadership orientation

Modern leadership and management research has typically addressed leadership challenges and strategies in terms of "frames of reference". Bolman and Deal (1997) suggest that the four different metaphors could be used to understand the way leaders of organizations think and respond to routine issues and problems. As they defined, frames are both windows on the world and lenses that bring the world into focus. The ability to reframe experience enriches and broadens a leader's selection. These researchers offered four frames to look at organizations: structural, human resource, political, and symbolic, all generated from a broad knowledge base of social sciences-sociology, psychology, political science and anthropology. They suggest that leaders can increase their effectiveness by learning to recognize the "frame" in which problems and conflicts are presented and by adaptively pursuing solutions within the appropriate frame.

The structural frame views organizations as rational systems that emphasize goals and efficiency. It posits that effective organizations define clear goals, evaluate and assign people to specific roles, and coordinate activities through policy rules and chain of command (Bolman and Deal, 1997). Structural leaders would value analysis and data, keep their eye on the bottom line, set clear directions, hold people accountable for results, and attempt to solve organizational problems through the introduction of new policies and rules (Bolman and Deal, 1991, 1997). They align the internal processes of the organization to the external environment while dealing with organizational dilemmas (Bolman and Deal, 1991, 1997). Differentiation of work roles and tasks provides for clarity of purpose and contribution, but leads to the need for appropriate coordination and integration.

The human-resource frame focuses attention on human needs and assumes that organizations that meet basic needs will work better than those that do not (Bolman and Deal, 1991, 1997). The human resource leadership refers to leadership characteristics that are supportive and participative. Human resource leaders will value the relationships and feelings of people, and assume the organization must meet basic human needs through facilitation and empowerment (Bolman and Deal, 1991, 1997). Productivity is high when people feel motivated to bring their best to their work. They tend to define problems in individual or interpersonal terms and seek ways to adjust the organization through training (Bolman and Deal, 1997; Cheng, 2005).

The political frame emphasizes the individual and group interests that often displace organizational goals. Political leadership refers to strengths that are related to power and political sensitivity. The frame assumes the constant competition of different interests for scarce resources (Bolman and Deal, 1991, 1997). Conflict is regarded as a normal by-product of collective action. Political leaders are advocates and negotiators who value realism and pragmatism and build power bases through networking and negotiating compromises.

The symbolic frame perceives a chaotic world in which meaning and predictability are social creations, and facts are interpretative as opposed to objective. The symbolic leader develops symbols and culture to shape human behavior and reflects a shared mission and identity for the organization (Bolman and Deal, 1991, 1997). Leaders practicing the symbolic frame instill a sense of enthusiasm with their charisma and tendency to drama (Bolman and Deal, 1991, 1997). They pay careful attention to myth, ritual ceremony and symbolic forms.

Similar to Bolman and Deal's leadership model, Sergiovanni's (1984) hierarchy of leadership forces groups leadership orientation into critical domains that he described as forces - technical, human, educational, symbolic and cultural. The leadership forces can be thought of as a means available to educational leaders to bring about changes needed to improve education

process. The technical leadership emphasizes planning and time management techniques and organizational structures. The human leadership harness the institution's social interpersonal potential to maximize institutions capability. The human leaders emphasize human relations, interpersonal competence, and provide support, encouragement and growth opportunities to the educators. The educational leaders bring expert of professional knowledge that relate to teaching effectiveness and educational program development. The symbolic leadership emphasizes the modeling of important goals and behaviors in stirring human consciousness in the institution, network and community. The cultural leaders lead the institution community by defining, strengthening and articulating values and beliefs that give the institution its unique identity over time.

Each of the leadership frames or forces has its own view of the organizational landscape, rooted in distinct academic disciplines. Each also has its own points of focus, underlying assumptions and path to organizational effectiveness. Each frame captures important parts of organizational reality, but not independent of each other (Bolman and Deal, 1997; Sergiovanni, 1984). Reliance on any one perspective can lead to mistaking a part of the field for the whole, or to misinterpreting the root cause of events or challenges. Studies (Bolman and Deal, 1991, 1997; Cheng, 2005; Sergiovanni, 1984) show that effective leaders and effective organizations rely on using multiple frames and the use of the multiple frames can assist the leader to see and understand more broadly the problems and potential solutions available. It encourages the leader to think flexibly about their organization and opens various opportunities to the leader to view events from multiple angles.

Based on these review, we may conclude that frames form the foundations of human thought and action in organizations. Following this logic, it can be hypothesized that Malaysian polytechnics heads of department use different lenses to interpret events in their department, choose their course of action and evaluate the outcome of their response.

Academic department heads leadership effectiveness

The success of any organizations including educational institutions depends on effective and efficient leaders. Many studies has relates the relationship of leadership effectiveness with the organizational performance (Bass, 1996; Sasnett and Ross, 2007). Leaders who are flexible in their leadership reaction and approach for various situations are more effective (Goleman, 2001). Leadership effectiveness, according to Addison (2006) is the ability to influence the activities of an individual or group toward the achievement of a goal.

In higher education, views on effective leadership often vary according to constituencies, level of analysis and

institutional types. An effective leader is one who has been able to balance the conflicting demands acceptably to critical constituencies that include faculty, students, institution administrators, and communities, without merely currying favor or buying support (Birnbaum, 1992). As yet, there is no adequate definition on the leadership effectiveness of academic leaders in higher educational institutions (Rosser, 2003). Studies measuring the effectiveness of the academic heads of department are not numerous, and tend to be descriptive that list specific duties, roles, responsibilities and issues facing the department heads (Gmelch and Miskin, 2004; Gmelch et al., 2002; Seagren et al., 1993; Tucker, 1992). To date, there has been limited examination of lecturer evaluation on their department heads effectiveness especially in Malaysian polytechnics.

Effective department heads is one who enjoys the respect and confidence of the lecturer whose sense of achievement are based in part on lecturer perceptions (Rosser, 2003). They are constantly judged by their actions and reactions to the problems, opportunities and challenges they face (Tucker and Bryan, 1991). The department heads balancing act of their varying roles are often viewed differently by lecturers, senior-level management and students (Gmelch et al., 2002). Perceptions of effective leadership often consist of a view of what ideal leaders should be like, what they should accomplish, or how they should carry out the role of leadership (Bensimon et al., 1989). Studies conducted by Gmelch and Miskin (2004), had identified four comprehensive roles of academic department heads that are critical to lecturers performance and productivity (Gmelch and Miskin, 2004; Wheeler, 2002). The four roles are department managers, leaders, faculty developers, and scholars. On the other hand, students as one of the stakeholders, who had various needs and specific interest, also may have affected institution performance and effectiveness.

Lecturers work commitment

The study of behaviors within organizational setting has highlighted critical variables that are supportive or detrimental to the performance of workforce. This notion holds true while focusing on quality of human resources that is major factor which contribute significantly to the organizational success (Meyer and Allen, 1997). These factors are even more important to study in academic institutions, especially higher institutions, which are the sources of human resources and sole responsible for educating the intellect of nations. Regardless of the efforts of the most capable leaders in a school, accomplishing school goals depends in large part on a better understanding of the sources, nature and development of a teacher's commitment (Dannetta, 2002). An understanding of teachers' level of

commitment is important because it reflects their personal interpretation of how absorbing and meaningful their work experiences are.

Malaysian polytechnics like other educational institutions were established to serve specific purposes and to carry out designed missions. The overall performance of polytechnics depends upon their lecturers and ultimately their level of commitment. Teacher commitment has been identified as one of the most critical factors for the future success of education and schools (Bowen and Schuster, 1986). Thus, it is important that lecturers share the vision of their organization, be committed to its mission and goals, and give unreservedly of themselves in order to attain these purposes. Lecturers are the central element in polytechnic educational system holding various important responsibilities. Lecturers' commitment is closely connected to their work performance and their ability to innovate and integrate new ideas into their own practice, as well as having an important influence on students' achievement in, and attitudes toward school (Tsui and Cheng, 1999). The level of teachers' commitment is considered to be a key factor in the success of any educational institution.

Researchers have studied the concept of teacher commitment in a number of ways. The literature in this review explores three major areas associated with lecturer commitment related to (1) the organization, (2) the profession, and (3) students. Commitment to the organization creates a sense of community, affiliation, and personal caring among adults within the schools and facilitates integration between personal life and work life (Louis, 1998).

Lecturer commitment to profession refers to the teaching in a general sense. Firestone and Rosenblum (1998) described this dimension as emphasizing fulfillment from exercising craft skill. They also suggested that higher levels of commitment are experienced when there is a sense of relevance or purpose in one's work.

Lecturer commitment to students can be conceptualized as unique, whole individuals (Louis, 1998) or as a commitment to student learning (Dannetta, 2002). Hoy and Sabo (1998) conception of teacher commitment consists of the committed behaviors directed toward both the social and intellectual development of students. Commitment to students as unique, whole individuals is a form of commitment that may motivate lecturers to interact with students on a more sensitive level, such as adolescent development issues or extracurricular activities (Louis, 1998). Commitment to student learning involves lecturer dedication to helping students learn regardless of academic difficulties or social background (Dannetta, 2002).

Lecturers generally feel a sense of calling and responsibility to their work. The impact of the profession on work/non-work interactions, along with increased pressures of student affairs work, may be negatively

influencing commitment to the profession. Understanding of how lecturers become satisfied and committed to their institutions and to what degree various factors contribute to their level of commitment, is really important to boosting up their performance. Thus, it is important to identify types of leadership that enhance lecturers' commitment so that academic department heads can work to maximize the productivity of lecturers. Although a significant amount of research focusing on organizational commitment and leadership behavior in business organizations has accumulated, comparatively little data addressed the role of academic department heads leadership orientations on faculty members' commitment in higher education settings. There also was very little information to be found regarding these concepts within Malaysian polytechnics.

Aims of the study

The aim of the study was to investigate the role of academic department heads leadership orientation as predictors of lecturers' commitment. Another aim of the study was to examine the extent to which perceived leadership effectiveness mediates the relationship between the leadership orientations of academic department heads and lecturer's commitment. The objectives of this study are as follows:

- 1) To identify the leadership orientations by the head of academic departments, in the aspect of structural, human resource, political, cultural and educational leadership styles.
- 2) To identify the relationship between the practice of multi-dimensional leadership of heads of academic department towards lecturer's commitment.
- 3) To explore the mediating effect of leadership effectiveness between the practice of multi-dimensional leadership of academic department heads and lecturer's commitment.

CONCEPTUAL FRAMEWORK

Despite the differences in leadership theories and models, scholars generally agree that the multi-dimensional leadership theory is more appropriate in understanding educational leadership (Bolman and Deal, 1997; Thompson, 2000; Cheng, 2005; DeFavero, 2006). This theoretical approach was more comprehensive with broader leadership knowledge and more practical for a cognitive understanding of the leadership perspective (Bolman and Deal, 1997). Bolman and Deal's theory of leadership combines existing research and theories on organizations, leadership and management, and categorizes the information into four leadership frames. The four frames are structural leadership, human resource leadership, political leadership, and cultural or

symbolic leadership (Bolman and Deal, 1991). This model helps to explain the variations in leaders' perspectives when defining organizational realities (Bensimon, 1989). Leader's ability to use more than one frame should increase a person's ability to act effectively and make clear judgments (Bolman and Deal, 1991, 1997; Cheng, 2005; Sergiovanni, 1984).

Sergiovanni's (1984) hierarchy of leadership forces shares some similarities with Bolman and Deal's, (1991, 1997) model. It includes leaderships in the aspects of technical, human, educational, symbolic and cultural. In this study, Bolman and Deal's, 1991, 1997) leadership frames and Sergiovanni's (1984) hierarchy of leadership forces model was incorporated and used to explore the leadership orientation of academic department heads in polytechnics based on five leadership orientations; 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 was shown to be strongly related to lecturer's performance, job satisfactions and commitment (Cheng, 2005; Shirbagi, 2007). Therefore, the department heads leadership effectiveness as perceived by their lecturers, that relates to the quality of their performance in their roles as managers, leaders, faculty developers, scholars and students affairs managers (Gmelch and Miskin, 2004; Tucker, 1992), was predicted to have significance influence on the relationship between their leadership orientation and lecturers commitment.

Lecturers' commitment is viewed based on the 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), which is used in this study to determine lecturers commitment towards the polytechnic, their students and profession. This exchange process begins with the leadership orientation of academic department heads in performing their roles effectively, thereby enhancing the lecturers abilities and skills to achieve organizations goals. At the end of this process, the lecturers shows their commitment to the polytechnic, their students, and profession. Lecturers commitment towards the department and institution was influenced by department heads effectiveness in their leadership roles and their supports towards the lecturers (Neuman and Finaly-Neumann, 1990; Cheng, 2005). Therefore as leaders, academic department heads should have clear understanding of the impact of their leadership orientation and credibility on their subordinate's level of commitment (Lowe, 2000).

METHODOLOGY

Research sample

This study used questionnaires to gather the data. Multistage

cluster sampling and proportional stratified sampling were used to determine the number of department cluster, while 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. Seventy six department heads representing 11 academic department clusters completed the leadership orientation questionnaires – self, for a response rate of 79.2%. For lecturer, 841 completed the questionnaire for a response rate of 80.5%. The overall response rate obtained and analyzed was 83%.

Research instrument

Two sets of questionnaires were used to gather information from the academic department heads and lecturers. The academic department heads questionnaires consist nine items on demographic characteristics and 35 items of self-evaluated leadership orientation. The questionnaire for the lecturers consist four parts – demographic characteristics, their perception on academic department heads leadership orientation and role performance, and self-evaluation of their commitment.

The perceptions of the leadership orientations of department heads was obtained using 35 items adapted from the *Leadership Orientation Survey (LOS)* (Bolman and Deal, 1991) and Sergiovanni's transformational leadership forces model (1984). Respondents indicated the extent to which the department heads exhibited each of the 35 behaviors using a 5-point likert scale (1 = never to 5 = always). The scores on each leadership dimension were compared to the mean of all scores to determine the use of leadership dimension.

The academic department heads leadership effectiveness was measured by their roles performance as perceived by the lecturers. The perceived roles performance was measured using the integration of *Department Chair Role Orientation Instrument* (Gmelch and Miskin, 2004) with various department heads roles and leadership effectiveness questionnaires based on Malaysian polytechnics department heads jobs scope. Thirty seven items were used to obtain lecturers perception on academic department heads effectiveness in their roles as department manager, leader, faculty developer, scholar and student affairs managers based on a 5-point Likert scale (1 = low performance to 5 = excellence).

Lecturer commitment was measured using 19 items related to commitment towards the polytechnic and students. *Organizational Commitment Questionnaires (OCQ)* (Mowday et al., 1979) was used to obtained lecturers perceptions of their commitment to the polytechnic. Respondents indicated the extent to which they exhibited each of the 10 behaviors using a 5-point likert scale (1 = strongly disagree to 5 = strongly agree). Lecturer commitment to students was measured using a combination of nine items adapted from Kanungo's (1982) job involvement questionnaires, committed behaviors (Hoy and Sabo, 1998) and lecturer interactions with students (Blackburn and Lawrence, 1995), based on a 5-point Likert scale (1 = never to 5 = always). Where as lecturers commitment to their profession was measured using eight items adapted from professions, careers and occupation questionnaires (Blau, 1985; Greenhaus (1971) in Celep, 2000). The lecturers evaluated their commitment to the profession based on a 5-point likert scale (1 = strongly disagree to 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 with 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 0.6 to 0.82. The reliability for the organizational commitment, students commitment and commitment to professions scales was 0.93; 0.91 and 0.90 respectively, with corrected item-total correlation ranged from 0.52 to 0.84. Whereas, the reliability

for the leadership effectiveness scales was between 0.89 to 0.94, and the corrected item-total correlation scores ranged from 0.61 to 0.87.

Data analysis

The study's data were analyzed using descriptive statistics and statistical testing techniques for single, multi-level and mediation analysis. For this study, descriptive statistics was used to describe the characteristics of the sample.

Researchers has agreed that multi-level structures in data collected need to be considered when studying educational phenomena (Coryn, 2011; Raudenbush and Bryk, 2002; Wang, 1999). This study encountered multi-level issues involving organization and individual levels of theory and analysis. In this study, the lecturers and department heads were the unit to be analyzed. Lecturer commitment was nested within the structure of the department and the department heads characteristics. Commitment of individual lecturers is a function of the department heads leadership orientations. Therefore, multi-level modeling analysis using the hierarchical linear model (Raudenbush et al., 2004) was used as an analytical approach to examine the relationship between academic departments head leadership orientations (level 2 predictor), their perceived leadership effectiveness (level 1 predictor) and lecturers' commitment (level 1 outcome variable). Raudenbush and Bryk (2004) and Hoffman (1997) argue hierarchical linear modeling (HLM) is the best approach when dealing with multi-level issues. They suggest HLM overcomes weakness of disaggregation and aggregation methods and account for individuals and group level variances while assessing predictors at individual and group levels. In sum, HLM measures within and between groups variances for more meaningful results provides a higher to lower outcome at the correct analysis level (Raudenbush and Bryk, 2004; Hoffman, 1997).

RESEARCH FINDINGS

Academic department heads multi-dimensional leadership orientations

The department heads leadership orientations is categorized into three leadership types that indicates the degree to which perceptions of the behaviors of department heads reflect their balanced (or unbalanced) use of the five leadership dimension 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 less leadership dimension were categorized as having unbalanced leadership.

Department heads leadership orientation

Table 2 presents the mean and standard deviations for the respondents' ratings on the department heads leadership orientation.

Table 1. Department heads leadership types.

Types of leadership	Details
Balanced leadership	Leaders in this category scored above the overall mean in at least four leadership dimensions
Moderately balanced leadership	Leaders in this category scored above the overall mean on any three leadership dimensions
Unbalanced leadership	Leaders in this category scored above the overall mean on not more than two leadership dimensions

Source : Thompson (2000).

Table 2. Mean score and standard deviation for leadership dimension.

Leadership orientation	Lecturer (n = 841)		Department head (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 overall mean of each leadership orientation as evaluated by the department heads and the lecturers was between 4.18 and 4.39, and 3.79 and 3.88 respectively. Inspection on the leadership orientation mean score, shows that human resource leadership orientation has the highest overall mean score obtained by both respondents group evaluation, department heads (4.39), as well as lecturers (3.88), indicating that it was the predominant leadership orientation among the department heads. The next most frequent predominant leadership orientation was the educational leadership and structural leadership orientation. Whereas political and cultural leadership were the most least used leadership orientation as perceived by both. The standard deviation for each leadership dimension for the two groups of respondents, ranged from 0.56 to 0.65, and from 0.4 to 0.46 for lecturers and department heads respectively. It shows that lecturers and department heads agreed on the perceptions towards leadership orientations of department heads.

The details of how respondents perceive department heads leadership orientations based on either single or multi-dimensional leadership can be referred as in Table 3.

The study found that both lecturers and department heads agrees that polytechnic's head of department has used at least one leadership orientation in their leadership practice with majority of them perceived that department heads practised a multidimensional leadership orientation by using at least three leadership dimensions.

Of the 386 (45.9%) lecturers that perceived the department heads as having an unbalanced leadership orientations, a total of 267 agreed that department heads did not practise any leadership dimensions, 45 lecturers perceived their department heads employed two leadership dimensions, where as 74 perceived their

department heads practiced only one leadership dimension. The human resource leadership was perceived by the lecturer as the predominant leadership orientation among the department heads that employed only one leadership dimension. The combination of structural/cultural leadership dimensions and human resource/political leadership was perceived as the most commonly used leadership dimensions by department heads who employed two leadership dimensions.

The department heads was perceived by the majority of lecturers as using multiple leadership dimensions in their leadership practiced. A total of 312 lecturers perceived that their department heads used all five dimensions in their leadership orientation. The human resource, political and cultural leadership dimensions was the most frequently used by department heads that employed three leadership dimensions, where as department heads that employed four leadership dimensions, frequently used a combination of human resource/political/cultural/education leadership dimensions.

From the department heads perspective, a majority of department heads, as at 31.6%, perceived themselves as using all leadership dimensions followed by 19 respondents (25%) that did not used any leadership dimensions in their leadership practice.

It can be summarized that in the aspect of multi-dimension leadership, structural, human resource, political and cultural leadership dimension obtained high percentage by lecturers, whereas, head of departments seem to prefer structural, educational, political, human resource and cultural leadership.

Hierarchical linear modeling

The first step in evaluating a hierarchical linear model

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

Types of leadership	Combination of leadership dimensions used	Lecturer		Department head	
		Frequency	(%)	Frequency	(%)
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

was to estimate the variance components and significance test of the within- and between-group variance in lecturer's commitment. This model is known as a *null model* because no predictors are used. The associated variance components were then used to calculate the intraclass correlation coefficient (ICC),

which indexes the ratio of between- department heads variance in commitment to the total variance. The intraclass correlation specifying the percentage of the total variance residing between groups. Consequently, the ICC(I) can be calculated as $\tau_{00} / (\tau_{00} + \sigma^2)$, where τ_{00} represents the between-group variance and σ^2

Table 4. Within- and between-group variance component in lecturer's commitment.

Dependent variable	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***

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

represents the within-group variance. The presence of a larger ICC (10% or more) warrants use of multi-level methods (Bliese, 2000; Lee, 2000). The second step involved performing the coefficient regression model and the intercept-as outcome model, in which, the level 2 predictor was entered into the equation. The Level-2 predictor was grand mean centered to produce a comparative result (Hofmann and Gavin, 1998).

The results indicate that the between-group variance (τ_{00}) for the lecturer's commitment variables was significantly different from zero (Table 4). The intraclass correlation (ICC) of more than 10% indicates that majority of the variance in lecturers commitment variables resides between groups. Thus, it shows that the level of lecturer commitment to polytechnics, their students and profession varied significantly between department heads. The intraclass correlation for commitment to polytechnic is 0.116, [$ICC=3.71/(28.37+3.71)$], indicating that 11.6% of the variance resides between groups, and shows that the level of lecturer commitment to polytechnics varied significantly between department heads. Thirty two percent of the variance in lecturer commitment to their student [$ICC=8.88/(18.99+8.8)=0.32$], also resides between group indicating the significant variability in lecturers level of commitment to their students between department heads. However, the result of intraclass correlation analysis on lecturers' commitment to their profession showed only 4% of the variance was caused by group level characteristics. These findings indicated that there was no significant difference in lecturers' commitment to the teaching profession between the academic department heads.

Academic department heads multi-dimensional leadership orientations and lecturer commitment

Department heads leadership orientations and lecturer 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 lecturer commitment to polytechnics. Political leadership showed a significant negative relationship [$\gamma_{03}= -0.39$; $p < 0.05$], whereas cultural leadership had a significant positive relationship [$\gamma_{04}=0.31$; $p < 0.10$] in lecturer 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 lecturer commitment to polytechnics (Model 2 of Appendix A).

Department heads leadership orientations and lecturer commitment to the students

Research findings shows that the between-group variance for lecturer commitment to student was significantly different from zero [$\chi^2(466.01)$; $p < 0.001$]. Results for the group level model indicated that none of the leadership dimensions (level 2 predictors) was positively related to lecturer commitment to students (Model 5 Appendix A). The structural leadership showed marginally significant negative relation with lecturer commitment to students, [$\gamma_{01}= -0.32$; $p < 0.10$]. Results indicated that department heads leadership orientation was not positively associated with lecturers' commitment to their students. Therefore, department heads leadership orientation does not explained the large between-group variance component in lecturer commitment to students.

Department heads leadership orientations and lecturer commitment to profession

The results of the coefficient regression model (Model 8 of Appendix A) indicates that the department heads leadership dimension were significantly related to lecturers commitment to their profession except for educational leadership [$\gamma_{05}= 0.06$; $p=0.710$]. 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, where as structural [$\gamma_{01}= -0.31$; $p < 0.01$] and political leadership [$\gamma_{03}= -0.24$; $p < 0.05$] showed a significant negative relationship. Collectively, all four predictors account for 25%, [$R^2 = (1.36-1.02)/1.36 = 0.25$] of the between-group variance in lecturer commitment to profession.

The result of the analysis on the coefficient regression model showed that a different aspects of lecturers commitment was influenced by a different leadership orientation practiced by the department heads.

Department heads leadership effectiveness as mediator between the relationship of leadership orientations and lecturer's commitment

To examine the mediating effect of leadership

Table 5. The relationship between department heads leadership orientation and leadership effectiveness.

Predictor variable (Level 2)	Outcome variable (Level 1)				
	Manager	Leader	Faculty developer	Scholar	Student affairs
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*

*** p < 0.001 ; ** p < 0.01; * p < 0.05; ⁺ p < 0.1; ns = not significant.

effectiveness between department heads leadership orientation and lecturers 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 department heads leadership orientation (X) and lecturers' commitment variables (Y) if: (1) leadership orientation is significantly related to lecturers 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 commitment; and (4) there is a change in X-Y relationship, after controlling for leadership effectiveness.

Department heads leadership orientation, leadership effectiveness and lecturer commitment

The study predicted that the positive effect of leadership orientation dimensions to lecturers' commitment was primarily mediated by the perceived leadership effectiveness of department heads in performing their roles. The statistics in Table 5 shows that the dimensions of leadership orientation are either significant or slightly significant to department heads leadership effectiveness in performing their roles as manager, leaders, faculty developer, and student affairs manager, thus meeting the second requirement for mediator. Structural leadership orientation showed a significant positive relationship with department heads effectiveness as leader [γ_{01} = 0.36; p<0.05] and student affairs manager [γ_{01} = 0.72; p<0.01], and had a significant negative relationship with the effectiveness in their roles as department manager [γ_{01} = -0.34; p<0.05] and faculty developer [γ_{01} = -0.55; p<0.051]. The department heads human resource leadership had a significant positive relationship with their perceived effectiveness as leaders [γ_{02} = 0.46; p<0.05] and showed a weak relationship in their effectiveness in the roles of department manager [γ_{02} = -0.44; p<0.10] and student affairs manager [γ_{02} = 0.58; p<0.10]. Political leadership orientation had a significant positive relationship only with the perceived effectiveness in department heads role as

leaders [γ_{03} = 0.28; p<0.01], where as department heads educational leadership orientation showed a significant positive relationship with their perceived effectiveness as leaders [γ_{04} = 0.25; p<0.05] and student affairs managers [γ_{03} = 0.40; p<0.05].

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

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

As shown in Appendix A, the structural, human resource, political and cultural leadership were significant to lecturers commitment to their profession (Model 8), thus the first requirement for mediation was met. The department heads perceived leadership effectiveness in their roles as manager, faculty developer, and scholar were positively related to lecturers' commitment to their profession (Model 7), thus meeting the third requirement

for mediation. The structural [$\gamma_{01} = -0.14$; $p = ns$], human resource [$\gamma_{02} = 0.07$; $p = ns$] and political leadership [$\gamma_{03} = -0.11$; $p = ns$] became insignificant to lecturers' commitment to profession, whereas the effect of cultural leadership [$\gamma_{04} = 0.18$; $p < 0.10$] became less significant (Model 9) after controlling the leadership effectiveness variables. The results indicated that the effect of leadership orientation on lecturers' commitment to the profession was mediated by the perceived leadership effectiveness.

DISCUSSION

Lecturers and academic department heads in the Malaysian polytechnics agree that department heads used multi-dimensional leadership orientations as proposed by Bolman and Deal (1991, 1997) and Sergiovanni (1984) which comprises of structural, human resource, political, cultural and educational leadership dimensions. Results indicate department heads in Malaysian polytechnics practice multiple leadership orientations in their administrative duties. This proves the capability of academic department heads to adapt their leadership orientations according to the needs and demands of the current educational environment that is constantly changing and becoming more complex. Lecturers and academic department heads generally agree that department heads are more inclined to use human resource, educational and structural leadership in their leadership orientations. These leaderships create a conducive and harmonious environment for the teaching and learning process to take place.

As mid-level leaders, department heads were responsible for their professional roles in academic curriculum and co-curriculum as well as 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 their 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 to be adhered by the lecturers and students. Through the use of human resource leadership, department heads were deemed as being considerate and sensitive towards problems and welfares of their lecturers and students. Furthermore, department heads employed human resource leadership to increase the productivity, performance and commitment of lecturers. As education leaders, department heads were responsible for the development of the curriculum and planning of academic programmes to improve the performance quality of their students. Thus, department heads employed educational leadership when they showed sensitivity and monitored the academic development of the polytechnics, provided the stimulus for the professional and intellectual growth of their lecturers and for themselves.

Political and cultural leaderships are leadership dimensions that are rarely employed by department heads when managing their departments. Department heads would use cultural leadership when they become sources of inspiration and good models to their lecturers and students. Through departmental events and activities, department heads were able to instill among the lecturers and students, the mission and aims of their organizations, making the latter a part of the culture of the departments and institutions. As for political leadership, it is used by department heads to build a network or relationship between departments and other units within the organization in the polytechnic, or with other organizations like industries, local communities and politicians.

The leadership of academic department heads is not only crucial in determining the success of his department, its mission and programmes, but also in generating quality performance and commitment in their lecturers. The outcome of this research also shows that only the cultural leadership orientation led to an increase in lecturer commitment to polytechnics, whereas political leadership shows a negative relationship. The relationship of this leadership dimension was mediated by the perceived leadership effectiveness of department heads in their roles as leader and student affairs managers. This finding proves 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. The department heads' ability in creating a quality learning environment and committed work force was by balanced the power and authority they used in gaining lecturers' support and trust.

The effect of department heads' structural leadership on lecturers' commitment towards the quality of learning and teaching process and students' achievement was influenced by department heads' effectiveness in performing the roles of manager and faculty developer. The findings suggest that the department heads' structural leadership is negatively associated with the lecturer commitment to the students within the dynamic competitive environment. Besides the economic exchange of leadership-lecturer commitment relationship, the use of structural leadership which uses authoritarianism is not conducive to improving lecturer commitment. This indicates that department heads who exhibit a high level of authoritarianism is destructive to lecturers' psychological states and commitment. In order to manage the lecturers more efficiently and effectively, it is critically important for department heads to demonstrate appropriate leadership behaviors to enhance their level of commitment. The effectiveness of department heads in administering the department, and in their support and encouragement of lecturers' professional development and growth will enhance the lecturers' motivation and commitment towards the students.

The relationship between department heads' human

resource and cultural leadership practice 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 leadership dimension may stimulates the sense of relations in teaching career among the lecturers, in enhancing their career development and professionalism, and helping them to achieved their potential in teaching, researching and services. The department heads ability in interpreting a clear vision and objectives may influence the lecturers views on their values and self-achievement, which will motivates and inspire them to devote their energy and loyalty to their profession.

Conclusion

This research was able to identify the multi-dimensional leadership orientations employed by department heads in Malaysian polytechnics from the perspectives of lecturers and academic department heads. The findings confirms that department heads employ multi-dimensional leadership orientations, at least four leadership dimensions with human resource leadership perceived as the predominant leadership orientation employed by department heads.

In analyzing the relationship between department heads multi-dimensional leadership and lecturer commitment, it is found that the level of lecturers' commitment varied significantly between department heads. The variance in the lecturers' level of commitment was due largely to the department heads leadership orientations. Specifically, the findings of this research proved that activities and programmes carried out by department heads affected lecturer commitment and encouraged the lecturers to work towards achieving the aims of the polytechnic, their aims towards the profession and in fulfilling their responsibilities to the students. However, there was differing feedback from lecturers regarding their commitment to students. Polytechnic lecturers stated that their commitment to students was not influenced by leadership orientations of department heads. This meant that the leadership orientations of department heads neither significantly influenced nor contributed directly to lecturer commitment to students.

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

Further scientific studies and research using a larger population is 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 views of academic department head's performance rather than relying on the single interpretation resulting from the assessment of lecturer. It is also suggested that future studies should pursue more objective measures of effectiveness such as lecturer turnover, program growth (number of student, size of budget), and the rates of student achievement. These types of measures speak directly to the duties of academic department heads to maintain operations and develop their programs and department.

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APPENDIX

Table 1. Relationship between department heads leadership orientations, leadership effectiveness and lecturers' commitment.

Variable	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})	39.25***	39.28***	39.25***	36.59***	36.72***	36.60***	32.23***	32.29***	32.24***
manager (γ_{10})	0.09		0.10	0.16**		0.16**	0.11*		0.11*
leaders (γ_{20})	0.17**		0.16*	0.001		0.002	-0.01		-0.02
Faculty developer (γ_{30})	0.11		0.12	0.23**		0.23**	0.14*		0.14*
scholar (γ_{40})	0.12		0.11	0.08		0.08	0.14*		0.14*
Student affairs (γ_{50})	0.14+		0.15+	0.11		0.11	-0.01		-0.003
Level 2									
structural (γ_{01})		-0.22	-0.03		-0.32+	-0.16		-0.31**	-0.14
Human resource (γ_{02})		0.06	-0.07		0.36	0.23		0.19+	0.07
Political (γ_{03})		-0.39*	-0.20		-0.43	-0.12		-0.24*	-0.11
cultural (γ_{04})		0.31+	0.26*		0.19	0.17		0.24*	0.18+
educational (γ_{05})		0.16	-0.16		0.04	-0.30		0.06	-0.16
Within-group variance (σ^2)	18.42	28.38	18.41	13.88	19.00	13.91	13.53	17.4	13.60
Between group variance (τ_{00})	2.10	3.52	1.72	9.31	8.38	9.26	0.93	1.06	0.76
Variance of intercept									
Chi squared (χ^2)	89.42+	167.55***	78.65	227.99***	406.96***	223.16***	90.58+	119.56***	83.32
Deviance	4985.87	5267.11	4993.15	4802.26	4994.84	4808.42	4703.02	4817.9	4712.20

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; + $p < 0.1$; ns = not significant.