Mentoring Program as a Predictor of Mentees' Academic Performance in Higher Education in Malaysia

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ABSTRACT

Most Islamic muamalat literature highlight that mentoring is an important activity in counseling, education and/or tasawuf. For example, counseling is often said as *al-irsyad* (al-Ghazali,1969) where mentors are viewed as experts in psychology that can be offered to solve individual problems. While, in an educational context, mentors are often called as *muaddib, murabbi, mursyid, mu'allim and/or mudarris* (Abd.halim, 2010). In addition, in a tawasuf viewpoint, mentoring is also known as *al-suluk* (good moral and well behaved) where a learning groups is properly guided by an individual who has comprehensive syariah knowledge, tarekat and hakikat, namely *Shaykh (mentor)*. The discussion clearly explains that mentoring concept has been successfully implemented in the era of prophet Muhmmad SAW and now its notion is adapted as a learning method to maintain and achieve the organizational strategy and goals. This study was conducted to examine the relationship between mentoring program and mentees' academic performance. A survey method was employed to gather self-report questionnaires from bachelor degree students in higher learning institutions in East Malaysia. The results of SmartPLS path model revealed two important findings: firstly, communication positively and significantly correlated with academic performance. Secondly, support positively and significantly correlated with academic performance. The result demonstrates that mentoring program does act as an important predictor of mentees' academic performance in the studied organization. In addition, discussion, implications and conclusion are elaborated.

Keywords: *communication, support, academic performance*

INTRODUCTION

In an ancient Greek literature, mentoring is first highlighted in the epic story of 'The Odyssey' written by Homer. In this story, Odysseus tells his loyal and experienced friend, namely, Mentor (a person who has great wisdom and trustworthy) to teach his son, namely, Telemachus (a mentee or protégé who has less experience) about the tips for handling challenging lifestyles before he goes to the Trojan War (Edlind & Haensly, 1985; Ismail et al., 2005, 2006; Merriam, 1993). Based on this classical story, mentoring is often related to as an important field of education (Little et al., 2010; Johnson et al., 1991) and/or counseling (Gregson, 1994; Zuraidah et al., 2004) whereby mentors are the elderly whom have wisdom, experiences and can be trusted to educate young men who have little experience and knowledge (Little et al., 2010; Johnson et al., 1991; Russell & Adams, 1997; Wanguri, 1996).

Hence, the traditional mentoring concept has been given new interpretations by contemporary educationists, social psycologists and management scholars in order to suit it with the current organizational development and challenges (Dennison, 2000; Ismail et al., 2005, 2006; Ismail & Ridzwan, 2012; Oliver & Aggleton, 2002).

In today organizations, mentoring is often seen as a learning method where it encourages comfortable relationship between mentors (i.e., knowledgeable and experienced person) and mentee (i.e., less knowledgeable and experienced person) as an instrument to develop group and/or individuals' potentials in carrying out particular duties

and responsibilities, familiarize with new techniques, and care for all aspects of mentees (Cummings & Worley, 2009; Johnson et al., 1991; Long, 2002; Noe et al., 2002). There is no one best mentoring program model to fit all organizations, but they are designed and implemented according to the uniqueness of organizational contexts in terms of beliefs, policy, orientations, stresses, strengths and weaknesses (Irving et al., 2003; Ismail et al., 2005, 2006; Santos & Reigadas, 2002, 2005). These factors have affected organizations to design and administer the various types of mentoring program, especially informal relationship (e.g., specific demands, spontaneous and adhoc) and/or formal relationship (e.g., structured and coordinated relationship between mentor and mentee, using standard norms, continuously action plans, time frame, and particular objectives). In organizations, formal and informal mentoring programs are viewed as equally important, but informal mentoring programs are often implemented to complement and strengthen formal mentoring programs in order to achieve organizational strategies and goals (Friday & Friday, 2002; Hansford & Ehrich, 2006; Hansford et al., 2003: Ismail et al., 2005, 2006).

A review of current higher education student development program literature highlights that effective mentoring programs have two salient practices, i.e., communication and support (Bernier et al., 2005; Ismail & Ridzwan, 2012; Tennenbaum et al., 2001). In the context of university mentoring program, communication is generally defined as mentors openly delivering information about the procedures, content, tasks and objectives of the mentoring programs, conducting discussions about tasks that should be learned, giving detailed explanations about the benefits of attending mentoring programs and providing performance feedback (Allen et al., 2005; Fox et al., 2010; Ismail et al., 2005, 2006; Santos & Reigadas, 2005; Stewart & Knowles, 2003). Conversely, support is broadly defined as mentors provide emotional support (e.g., acquire new knowledge, skills, and attitudes, and guide them to properly apply in daily life) and instrumental support (e.g., assist mentees to adapt campus environments) at varying times to mentees (Allen & Finkelstein, 2003; Davis, 2007; Fox et al., 2010; Stewart & Knowles, 2003; Zuraidah et al., 2004).

Surprisingly, recent studies in university/faculty mentoring programs reveal that the ability of mentors to appropriately implement such mentoring characteristics may have a significant impact on positive mentee outcomes, especially academic performances (Bernier et al., 2005; Tennenbaum et al., 2001). In an institution of higher learning context, academic performance is usually evaluated by the students' persistence rates, graduation rates, and grade-point average (Granger, 1995; Levin & Levin, 1991; Santos & Reigadas, 2005). Within a mentoring program model, many scholars think that communication, support and academic performance are distinct, but strongly interrelated constructs. For example, the ability of mentors to properly implement comfortable communication and provide adequate support have been essential factors that may enhance positive mentee outcomes, especially academic performance (Bernier et al., 2005; Tennenbaum et al., 2001).

The nature of this relationship is interesting, but not much is known the role of mentoring program as an important predictor of mentees' academic performance in the higher education mentoring program research literature (Allen & Finkelstein, 2003; Bernier et al., 2005; Ismail et al., 2005, 2006; Ismail & Ridzwan, 2012). Many scholars reveal that this situation is due to many previous studies have much emphasized on the internal properties of mentoring program, employed a simple survey method to explains different respondent perceptions toward the implementation of mentoring programs and used a simple correlation analysis to measure the strength of association between mentoring program and mentees' academic performance. The findings of these studies have neglected to quantify the effect size of mentoring program as an important predicting variable in the mentoring program research literature. Consequently, it has not provided adequate information to be used as useful guidelines by practitioners in formulating strategic action plans to improve the design and management of mentoring programs in learning organizations (Bernier et al., 2005; Davis, 2007; Ismail & Ridzwan, 2012; Tennenbaum et al., 2001). Therefore, it motivates the researchers to fill in the gap of literature by measuring the relationship between mentoring program practices and academic performance.

Literature Review

Several recent studies using a direct effects model to discover mentoring activities based on different samples like perceptions of 189 students in 9 departments at the University of California in Santa Cruz (Tennenbaum et al., 2001), perceptions of 110 students in Canadian colleges (Bernier et al., 2005), and 127 students at a defence based university in Malaysia (Ismail & Ridzwan, 2012). These studies proved that the ability of mentors to properly

implement comfortable communication and provide adequate support in formal and/or informal mentoring activities had enhanced mentees positive outcomes, especially academic performance (Bernier et al., 2005; Ismail & Ridzwan, 2012; Tennenbaum et al., 2001).

The empirical studies support the notion of adult learning theories. For example, Chickering's (1969) vector theory of identity development highlights seven important vectors to develop yound adult identities: developing competence, managing emotions, becoming autonomous, developing interpersonal relationships, establishing identity, developing purpose, and developing integrity. Besides that, Levinson's (1978) early adult transition model posits that an individual's life structure would face critical situations when he/she goes through the transformation process from childhood into adulthood. Application of these theories in institutions of higher learning shows that the essence of mentoring program is to enhance positive young adults identities and life styles. For example, the ability of mentors to properly implement comfortable communication and provide adequate support in formal and/or informal mentoring activities may lead to an enhanced positive mentee outcomes, especially academic performance (Bernier et al., 2005; Ismail & Ridzwan, 2012; Tennenbaum et al., 2001). Based on the conceptual framework, it can be hypothesized that:

H1: Communication positively related to academic performance

H2: Support positively related to academic performance

Methodology

Research Design

This study used a cross-sectional research design where it allowed the researchers to integrate the mentoring program literature, the pilot study and the actual study as a main procedure to gather data for this study. Using such methods may gather accurate data, decrease bias and increase quality of data being collected (Sekaran & Bougie, 2010; Zikmund, 2000). This study was conducted in higher learning institutions in East Malaysia, Borneo. For confidential reasons, the name of the organizations used is kept anonymous. At the initial stage of data collection, the survey questionnaires were drafted based on the information gathered from the mentoring program literature. After that, the pilot study was conducted involving 5 senior year students (2nd year and above) in public institutions and 5 senior year students (2nd year and above) in private institutions to verify that all questions were importance, relevance, clear and suitable for an actual study. Hence, a back translation technique was employed to translate the survey questionnaires into English and Malay languages in order to increase the validity and ensure the reliability of research findings (Sekaran & Bougie, 2010; Zikmund, 2000).

Measures

The survey questionnaire used in this study had three sections. Firstly, communication was measured using 3 items that were adapted from mentoring communication system literature (Foxon, 1993; Sullivan, 2000; Yamnill & McLean, 2001; Young & Cates, 2005). The item used to measure the construct were the importance of mentoring program, approachable and knowledge sharing. Secondly, support was measured using 5 items that were adapted from mentoring support system literature (Tsai & Tai, 2003; Chiaburu & Takleab, 2005; Langhout et al., 2004; Rayle et al., 2006; Vieno et al., 2007). The items used to measure the construct were interpersonal communication skills, giving suggestions, praise mentee performance in study, understanding the implications of actions taken, and listening. Thirdly, academic performance was measured using 4 items that were adapted from undergraduate student performance literature (Campbell & Campbell, 1997; Irving et al., 2003; Rayle et al., 2006). The items used to measure the construct were able to achieve CGPA, able to identify effective study methods, and able to improve answering skills in tests/exams. All items used in the questionnaires were measured using a 7-item Likert scale ranging from "strongly disagree/dissatisfied" (1) to "strongly agree/satisfied" (7). Demographic variables were used as controlling variables because this study focused on student attitudes.

Sample

The unit of analysis for this study is undergraduate students in Malaysian institutions of higher learning in Sarawak, Borneo. The researchers had obtained an official approval to conduct the study from the management of the organizations and also received advices from them about the rules for conducting the survey in the organizations. Considering the constraints of the organization rule, as well as the duration of study and finance, the researchers had

distributed 250 survey questionnaires using a convenient sampling technique to undergraduate students in the public and private institutions of higher learning. This sampling technique was chosen because the management of the organizations had not given the list of undergraduate students and this situation did not allow the researchers to randomly select respondents for this study. From the survey questionnaires distributed, 196 usable questionnaires from the institutions of higher learning were returned to the researchers, yielding 78.4 percent of the response rate. The survey questionnaires were answered by participants based on their consents and on voluntarily basis. The number of this sample exceeds the minimum sample of 30 participants as required by probability sampling technique, showing that it may be analyzed using inferential statistics (Sekaran & Bougie, 2010; Zikmund, 2000).

Data Analysis

The SmartPLS 2.0 was employed to assess the validity and reliability of the instrument and thus test the research hypotheses (Henseler et al., 2009; Riggle et al., 2009). The main advantage of using this method may deliver latent variable scores, avoid small sample size problems, estimate every complex models with many latent and manifest variables, hassle stringent assumptions about the distribution of variables and error terms, and handle both reflective and formative measurement models (Henseler et al., 2009; Riggle et al., 2009). The SmartPLS path model was employed to assess the magnitude and nature of the relationship between many independent variables and one or more dependent variables in the structural model using standardized beta (β) and t statistics. The value of R^2 is used as an indicator of the overall predictive strength of the model. The value of R^2 are considered as follows; 0.19 (weak), 0.33 (moderate) and 0.67 (substantial) (Chin, 1998; Henseler et al., 2009). Thus, a global fit measure is conducted to validate the adequacy of PLS path model globally based on Wetzels et al.'s (2009) global fit measure. If the results of testing hypothesized model exceed the cut-off value of 0.36 for large effect sizes of R^2, showing that it adequately support the PLS path model globally (Wetzels et al., 2009).

Results

Sample Profile

Table 1 shows the respondents' characteristics. The majority of the respondents were female (70.9 percent), their ages vary from 22 to 24 years (70.4 percent), the highest education level amongst the respondents were STPM holders (51.0 percent), (68.9 percent) comprises of third year students being the majority in the respondent group, students achieving CGPA between 3.01 to 3.50 also being the majority amongst the respondents consists of (48.5 percent), and students who study in a public institutions of higher learning consists of (85.7 percent).

Table 1.   Respondents' Characteristics (n=196)

Respondents' Profile	Sub-Profile	Percentage
Gender	Male	29.1
	Female	70.9
Age	19 to 21 years old	25.0
	22 to 24 years old	70.4
	25 to 27 years old	4.6
The Highest Educational Level	SPM	6.1
	STPM	51.0
	Diploma	10.8
	Matriculation	32.1
Current Year of Study	Second Year	6.1
	Third Year	68.9

	Fourth Year	24.5
	Fifth Year	0.5
Academic Achievement	CGPA 2.01-2.50	5.6
	CGPA 2.51-3.00	34.7
	CGPA 3.01-3.50	48.5
	CGPA 3.51-4.00	11.2
Institution	Public Institutions of Higher Learning	85.7
	Private Institutions of Higher Learning	14.3

Note:

SPM/MCE   : *Sijil Pelajaran Malaysia/ Malaysia Certificate of Education*

STPM   : *Sijil Tinggi Pelajaran Malaysia/ Higher School Certificate*

Model Measurement

The confirmatory factor analysis was employed to assess the psychometric of survey questionnaire data. Table 2 shows the results of convergent and discriminant validity analyses. All constructs had the values of average variance extracted (AVE) larger than 0.5, indicating that they met the acceptable standard of convergent validity (Henseler et al., 2009). Besides that, all constructs had the values of AVE square root in diagonal were greater than the squared correlation with other constructs in off diagonal, showing that all constructs met the acceptable standard of discriminant validity (Henseler et al., 2009; Yang, 2009).

Table 2. The Results of Convergent and Discriminant Validity Analyses

Variable	AVE	Communication	Support	Academic Performance
Communication	0.725	**.851**		
Support	0.741	0.418	**.861**	
Academic Performance	0.779	0.472	0.437	**.883**

Table 3 shows the factor loadings and cross loadings for different constructs. The correlation between items and factors had higher loadings than other items in the different constructs, as well as the loadings of variables were greater than 0.7 in their own constructs in the model are considered adequate (Henseler et al., 2009). In sum, the validity of measurement model met the criteria.

Table 3. The Results of Factor Loadings and Cross Loadings for Different Construct

Construct/ Item	Communication	Support	Academic Performance
Communication			
Objective	**0.836673**	0.387340	0.364466
Moral values	**0.897438**	0.393681	0.439693
Critical thinking	**0.818922**	0.287202	0.396970
Support			
Motivation	0.405739	**0.841673**	0.365410

Listen to suggestions	0.340172	**0.842116**	0.355063
Praise	0.339573	**0.875203**	0.389806
Help	0.327694	**0.868722**	0.394228
Listen to problems	0.384191	**0.875777**	0.373948
Academic Performance			
Cumulative grade point average	0.342061	0.329364	**0.847694**
Effective study	0.458355	0.435010	**0.914396**
Skills	0.436621	0.380145	**0.883913**

Table 4 shows the results of reliability analysis for the instrument. The values of composite reliability and Cronbach's Alpha were greater than 0.8, indicating that the instrument used in this study had high internal consistency (Henseler et al., 2009; Nunally & Benstein, 1994). These statistical analyses confirmed that the measurement scales met the acceptable standard of validity and reliability analyses as shown in Table 2.

Table 4. Composite Reliability and Cronbach's Alpha

Construct	Composite Reliability	Cronbach Alpha
Communication	0.888	0.810
Support	0.935	0.913
Academic Performance	0.913	0.859
Construct	Composite Reliability	Cronbach Alpha
Communication	0.888	0.810
Support	0.935	0.913
Academic Performance	0.913	0.859

Analysis of Constructs

Table 5 shows that the mean values for the variables are between 51.1 and 5.3, showing that the levels of communication, support and academic performance are ranging from high (4) to highest level (7). The correlation coefficients for the relationship between the independent variable (i.e., communication and support) and the dependent variable (i.e., academic performance) are less than 0.90, showing the data are not affected by serious collinearity problem (Hair et al, 2006).

Table 5. Pearson Correlation Analysis and Descriptive Statistics

Variable	Mean	Standard Deviation	Pearson Correlation analysis (r)		
			1	2	4
1. Communication	5.3	.92	1		
2. Support	5.1	1.17	.42**	1	
3. Academic	5.3	.91	.47**	.43**	1

Performance					

Note: *Significant at **p<0.01*

*Reliability Estimation is Shown in a Diagonal*

Outcomes of Testing Hypotheses 1 and 2

Figure 2 shows the outcomes of SmartPLS path model for testing the direct effects model. In terms of exploratory of the model, the inclusion of communication and support in the analysis had explained 76 percent of the variance in dependent variable. Specifically, the results of testing hypothesis highlighted two important findings: first, communication significantly correlated with academic performance (β=0.35; t=4.396), therefore H1 was supported. Second, support significantly correlated with academic performance (β=0.29; t=3.852), therefore H2 was supported. In sum, the result confirms that mentoring program does act as an important determinant of mentees' academic performance in the organizational sample.

Independent Variable

Dependent Variable

(Mentoring Program)

R Square=0.76

H1 (B=0.35; t=4.396)

Communication

Academic Performance

Support

H2 (B=0.29; t=3.852)
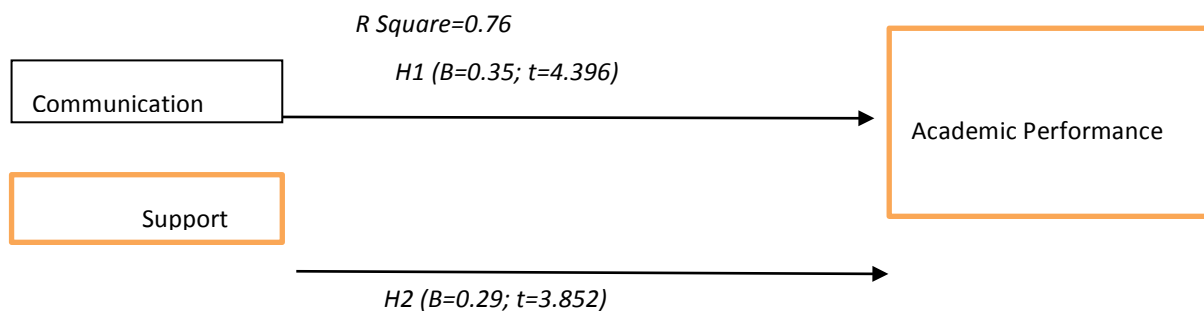
Note: *Significant at t >1.96*

Figure 3.   The Outcomes of SmartPLS Path Model

In order to determine a global fit PLS path model, we carried out a global fit measure (GoF) based on Wetzels et al.'s (2009) guideline as follows: GoF=SQRT{MEAN (Communality of Endogenous) x MEAN (R^2)}=0.756, signifying that it exceeds the cut-off value of 0.36 for large effect sizes of R^2. This result confirms that the PLS path model has better explaining power in comparison with the baseline values (GoF small=0.1, GoF medium=0.25, GoF large=0.36). It also provides strong support to validate the PLS model globally (Wetzel et al., 2009).

Discussion and Implications

The findings of this study confirm that mentoring program does act as an important predictor of mentees' academic performance in the studied organizations. In the context of this study, mentors have appropriately plan and implement mentoring activities based on the organizational policies and procedures. Majority respondents perceived that comfortable communication, and material and moral support are actively implemented in formal and/or informal mentoring activities. As a result, it may lead to enhanced mentees' academic performance in the higher institutions.

This study presents three major implications: theoretical contribution, robustness of research methodology, and practical contribution. In terms of theoretical contribution, the results of this study highlight that communication and support have beenn important predictors of mentees' academic performance. This result is consistent with studies by Tennenbaum et al. (2001), Bernier et al. (2005), and Ismail and Ridzwan (2012). With respect to the robustness of research methodology, the survey questionnaires used in this study have met the acceptable standards of validity and reliability analyses. This may lead to the production of valid and reliable findings. In regards with practical contributions, the findings of this study may be used to improve the design and management of mentoring programs in organizations. In order to achieve this objective, management needs to give more attention on improving the following aspects: firstly, update training content and methods for mentors to in order to improve their competencies in teaching, counseling and guiding students who have different ability levels. Secondly, form mentoring groups according to students' academic achievement in order to ease mentors fulfilling their needs and expectations. Thirdly, mentors who have high teaching loads and active in research, but can show high commitment in improving student studies need to be given a high priority in getting better promotions. Fourthly, plan various kinds of learning activities in order to attract students who have different interests and capabilities to actively involve in mentoring programs. Fifthly, students who have actively participated in mentoring activities and show improvement in academic performance need to be given better recognitions. If these suggestions are heavily considered this may motivate undergraduate students to enhance their academic performance.

Conclusion

The study developed a conceptual framework based on the higher education mentoring program research literature. The confirmatory factor analysis confirmed that the instrument used in this study met the acceptable standards of validity and reliability analyses. Thus, the results of SmartPLS path model showed that mentoring program does act as an important predictor of mentees' academic performance in the organizational sample. This result has also supported and extended mentoring program research literature mostly published in Western countries. Therefore, current research and practice within mentoring programs need to consider communication and support as crucial elements in the higher education student development program. This study further suggests that the capability of mentors to properly practice comfortable communication and provide adequate support will be essential factors that may enhance subsequent positive mentee outcomes (e.g., self-efficacy, satisfaction, commitment, career, leadership skills and ethics). Thus, these positive outcomes may lead to maintained and supported the higher learning institutions' strategis and goals.

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