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EVALUATING A MEASUREMENT MODEL OF LECTURERS' SELF-EFFICACY

BY

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ABSTRACT

Lecturers' self-efficacy is the lecturers' perceived ability to successfully complete tasks assigned to them according to job specifications at Teacher Education Institute. Research over the past few decades has shown that self-efficacy is the main predictor of performance, motivation and productivity. Lecturers with strong sense of self-efficacy are vital to improve the quality of education, to produce quality teachers, to face current challenges in teacher education and to improve the ranking of Teacher Education Institutes globally. However research on Teacher Education Institutes lecturers' self-efficacy is inadequate and there is a lack of psychometrically sound instrument to measure these TEIs' lecturers' self-efficacy. The study was conceived to add to the existing knowledge on lecturers' self-efficacy construct and the measurement of the construct. Three objectives of this study are; to develop and evaluate the measurement model of lecturers' self-efficacy in order to identify the underlying dimensions of lecturers' self-efficacy, to develop a psychometrically sound Lecturers' Self-Efficacy (LSE) instrument for the Teacher Education Institutes (TEIs) in Malaysia, and to assess the adequacy of the structural model for self-efficacy and spirituality in explaining the observed causal correlational relationship. This study employed a non-experimental cross sectional survey design involving 680 respondents who were solicited through quota sampling. An exploratory factor analysis followed by confirmatory factor analysis revealed that a five-factor measurement model of LSE fits the data collected from the LSE instrument. The five underlying dimensions of lecturers' self-efficacy are teaching, research, service, publication and management. The analyses provided evidence for the convergent, and discriminant validity of LSE, which extent current understanding about an important attributes of lecturer variable. The results indicate that the structural model of self-efficacy and spirituality adequately explains the observed causal correlational relationship. This study provide evidence for proposing spirituality as a source for self-efficacy which warrants further assessment for educational institutions.

خلاصة البحث

الكفاءة الذاتية لدي المحاضرين هي نظرة المحاضرين للقدرة على إنجاز المهام الموكلة إليهم بنجاح وفقا لمواصفات الوظيفة في معهد إعداد المعلمين. وقد أظهرت الأبحاث على مدى العقود القليلة الماضية أن الكفاءة الذاتية هي مؤشر رئيس للأداء، والدافعية والإنتاجية. المحاضرون الذين لديهم شعور قوي بالكفاءة الذاتية مستعدون لتحسين نوعية التعليم وإنتاج المعلمين ذو كفاءات عالية لمواجهة التحديات الراهنة في التعليم وتحسين معاهد تدريب المعلمين على الصعيد العالمي. لكن الأبحاث على الكفاءة الذاتية لدى محاضري معاهد التعليم غير كافية كما لا توجد أداه لقياس الكفاءة الذاتية للمحاضرين. وقد صممت هذة الدراسة لإضافة معرفة إلى وحدة الكفاءة الذاتية الموجودة لدى المحاضرين ومن ثم قياسها. تهدف هذه الدراسة إلى تطوير وتقييم نموذج القياس من الكفاءة الذاتية لدى المحاضرين من أجل تحديد الأبعاد الكامنة وراء الكفاءة الذاتية لدى المحاضرين، لتطوير أداة الكفاءة الذاتية لدى محاضري معاهد تدريب المعلمين في ماليزيا، ولتقيم مدى كفاية النموذج الهيكلي للكفاءة الذاتية والروحانية في تفسير العلاقة المرتبطة بالملاحظة السببية. هذه الدراسة استخدمت أسلوب مسح القطاعات الغير تجريبية والتي تضمنت ٦٨٠ محاضر بطريقة العينة المقصودة. وقد كشف تحليل العامل الاستكشافي والعامل المؤكد أن نموذج القياس للعوامل الخمسة من الكفاءة الذاتية لدى المحاضرين يناسب البيانات التي جمعت من استبيان الكفاءة الذاتية لدى المحاضرين. بينت النتائج أن تلك العوامل الخمسة الأساسية لكفاءة المحاضرين الذاتية هي التدريس والبحث والخدمة والنشر والإدارة. قدم التحليل أدلة متقاربة وصحيحة لتميز الكفاءة الذاتية لدى المعلمين، أي مدى فهم السمات الهامة للمحاضرين. وتشير نتائج النموذج الهيكلي للكفاءة الذاتية والروحانية يشرح بشكل كافي العلاقة المرتبطة بالملاحظة السببية. وتقترح هذه الدراسة دليل الروحانية كمصدر للكفاءة الذاتية والتي تستدعي المزيد من التقييم للمؤسسات التعليمية.

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DECLARATION

I hereby declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF STUDY

This chapter introduces a study that addresses the need for evaluating a measurement model of lecturers self-efficacy in developing a psychometrically sound instrument to measure lecturers' self-efficacy. The study was conceived to identify the underlying dimensions of lecturers' self-efficacy construct. Review of research on self-efficacy in Malaysia (Appendix 2.1) reveals that this is the first instrument of its kind to measure lecturers' self-efficacy in Malaysia. This instrument can accelerate research on lecturers' self-efficacy and related area in terms of quantity and quality. The distinctive feature of this research is the assessment of structural model of self-efficacy and spirituality adequately explains the observed causal correlational relationship.

This section explains the importance of lecturers' self-efficacy and measuring lecturers' self-efficacy in relation to their job performance and institutional performance. The problems in existing instruments for measuring self-efficacy is highlighted in terms of what is lacking and what needs to be addressed which will justify the need to have a valid and reliable instrument to measure the lecturers' self-efficacy. The chapter then presents the research objectives, research hypotheses, as well as the delimitations of the research. Lastly, the terms used in this research have been defined.

1.2 STUDY BACKGROUND

1.2.1 Self-efficacy of Lecturer

For decades, every branch of psychology: education (Ajala, 2013; Bandura, 1986, 1997; Hemmings & Kay, 2007; Lunenburg, 2011; Pajares, 2002; Pasupathy, 2010; Topkaya-Zehir, 2010), health (Thoresen & Harris, 2002), sports (Feltz & Lirgg, 2001) and business (Drnovšek, Wincent & Cardon, 2009), claims that self-efficacy has taken centre stage in predicting human behaviour. In keeping with this trend, self-efficacy of lecturers in universities and institutions of higher education has become an important criteria in predicting and rewarding lecturers' performance in teaching, research and publications as well as in service and engagement lately. Lecturers' performance is a vital part in judging the performance and ranking of universities and higher education institutions. An emerging global trend is the ranking of universities or higher educational institutions based on their performance particularly in research, innovation and publication. Lecturers' self-efficacy has become a crucial measure to predict the institutions' performance, especially in research productivity (Hemmings & Kay, 2007; Pasupathy, 2010). Research productivity is also one important measure to determine the institutions' status or ranking locally and globally.

Lecturers' self-efficacy has also been one of the predictors of novice lecturers' ability to balance the work demands of the institution in various aspects of their job such as teaching, research, service and engagement and more (Lucas & Turner, 2007; Hemmings and Kay, 2008) and this has a great impact on the quantity and quality of their output (Hudson, 2008; Goodyear, 2006). Hence in most universities and higher educational institutions, the measure of lecturers' performance has been a vital indicator for universities to consider for tenure promotion and promotion decision (Ito & Brotheridge, 2007; Pasupathy, 2010).

In August 2008, the Malaysian government upgraded the status of all 27 Teacher Training Colleges in Malaysia to Teacher Education Institutes (TEI). This transformation enabled all 27 institutions to now offer a Bachelor Degree in Teaching. This elevation had resulted in significant changes in job specifications for teacher educators. There is a vast change in the new job scope, whereby the primary focus on teaching alone has been reduced because the lecturers have to also focus on research, publication, management, service and engagement (Kementerian Pendidikan Malaysia, 2011).

This transformation is also aimed at improving the quality of teacher education in the country as well as to improve teacher quality in line with the aims of the Malaysian Education Blueprint (MEB) 2013-2025 (Ministry of Education Malaysia, 2013). The MEB also aims to improve the ranking of teacher education institutes (TEI) by means of increasing the number of internationally acclaimed publications that would help teachers and teacher educators achieve excellence (Ministry of Education Malaysia, 2013). These moves have brought tremendous change to the lecturers' job specifications and responsibilities.

Self-efficacy is a perception of being in control of any situation and it is defined as one's self evaluation of one's competence to successfully execute a course of action which is necessary to attain a desired outcome (Bandura, 1986, 1994, 1997). Self-efficacy activated processes are believed to be based on cognitive, motivation, and emotion aspects. Self-efficacy has an effect on choices of behaviour, efforts and persistence, as well as in learning and achievement. Lecturers with strong self-efficacy would believe that they can perform well, and they are more likely to view difficult tasks as something to be mastered than to be avoided. If they perceive themselves to have strong self-efficacy, they will put in sufficient effort and strive to produce

successful outcomes. On the other hand, if they perceive themselves to possess low/weak self-efficacy, it is very likely they would cease their efforts prematurely (Stajkovic & Luthans, 1998). Hence, lecturers with strong self-efficacy would be able to cope with current challenges at work and would continue their efforts and strive for success (Lee & Jangga, 2009). However, little is known about how much this transformation has affected the lecturers' productivity and their motivation due to a lack of research related to TEIs lecturers' self-efficacy, lecturers' performance or productivity.

1.2.2 Measuring Lecturers' Self-efficacy

Self-efficacy is a domain specific psychological construct (Bandura, 2006; Zimmerman & Clerly, 2006). Therefore, the instrument to measure this construct should measure self-efficacy (SE) in specific domains and must be psychometrically sound (Cook & Beckman, 2006; Kimberlin & Winterstein, 2008; Linn & Gronlund, 1995; Thanasegaran, 2009). More than 13 instruments tailored for specific purpose on teachers' self-efficacy have been reported (Gavora, 2011). To ensure the instrument to measure self-efficacy is valid across culture, the instrument was tested in their home countries and across regions. Although self-efficacy has become a mature topic, a decisive and stringent measurement model has to be developed for implementation in Teacher Education Institutes (TEI) in Malaysia.

Researches claim that self-efficacy is complex and domain specific; therefore they developed the scale to measure self-efficacy based on a specific purpose (Bandura, 1986). Self-efficacy measures for teaching seem to focus on different aspects by different scholars and the underlying dimensions of the construct also vary accordingly as demonstrated in the following examples. Gibson and Dembo (1984)

and Podell and Soodak (1993) focused on the dimension of teachers' efforts and persistence in handling challenges in teaching as a means of measuring teacher self-efficacy. Ross (1992) and Caprara, Barbaranelli, Steca and Malone (2006) focussed on students' academic achievements, while Evers, Brouwers, and Tomic (2002) focused on the dimensions of implemention of instructional practices. These examples explain that the instruments to measure self-efficacy are developed to measure the same construct but with varied dimensions depending on the objectives of the study (Bandura, 1986). The instrument to measure teacher educators' self-efficacy has to be domain specific, and relevant to TEIs. Therefore, the underlying dimensions must be carefully identified.

1.2.3 Spirituality and Self-efficacy

Malaysia is a multi-cultural, and multi-religious country, a social fabric which is pluralistic in nature, living in harmony as the citizens pledge their allegiance to the five fundamental principles of the country, the *Rukun Negara*. Malaysian citizens make a pledge that their united effort is to attain unity, create a just society, and build a progressive society guided by the five principles of the *Rukun Negara*: Belief in God, Loyalty to King and Country, Upholding the Constitution, Rule of Law, and Good Behavior and Morality (Kementerian Pelajaran Malaysia, 2008). The first of the five principles stated in the *Rukun Negara* is Belief in God. Every citizen who practices religion, abides by this principle. The importance of believing in God and spirituality is also reflected in the National Education Philosophy in producing a balanced individual.

> Education in Malaysia is a continuous effort towards enhancing potentials of individuals in a holistic and integrated manner in order to create individuals who are well-equipped intellectually, physically, spiritually and emotionally. This effort aims to produce knowledgeable, ethical and responsible Malaysian citizens who can contribute towards the harmony and prosperity of the community and nation. (Ministry of Education Malaysia, 2013, p2-3)

Education in Malaysia is geared towards producing such individuals with potential and who are holistic in nature. The education system is designed to produce students who acquire the potential to become competitive globally and are well-rounded in physical, spiritual, intellectual and emotional terms (Ministry of Education Malaysia, 2013). There are studies that report that religious and spiritual foundation could nurture good values, such as commitment to job, accountability and positive self-efficacy. Organisations in eastern countries encourage employees' spiritual practices as they are believed to be conducive for yielding more productive work (Petchsawang and Dunchon, 2012). In fact, most religious scriptures emphasise the importance of commitment to job, to perform with full responsibility, and to be truthful.

Studies conducted in the medical field too make claims that there is a positive correlation between spirituality and self-efficacy. Andrea (2007) reported that there is a significant correlation between spirituality and self-efficacy ($r = .63$) among individuals with sickle cell disease. While, Konopack and McAuley (2012) suggested that spirituality may influence quality of life in a path mediated by self-efficacy. In another study, spirituality and self-efficacy influenced weight loss among African American women (Griffin, 2012). However, the author suggests further investigation in this area.

1.3 STATEMENT OF PROBLEM

1.3.1 Study on Lecturers' Self-efficacy in Malaysia is Still in its Infancy.

Lecturers' self-efficacy is a psychological construct, an important construct in determining the success of a lecturer and inevitably the success of their students (pre-service and in-service teachers) (Bandura, 1986). Lecturers with high self-efficacy would be able to improve the performance of the institution in general and specifically through improving students' academic achievement. In meeting the current educational challenges, teacher quality in terms of knowledge, skills, cognitive ability and attitude is very important and this in turn demands high quality of teacher educators (Siti Rafiah Abd Hamid, Syarifah Sariah Syed Hassan, & Nik Ahmad Hisham Ismail, 2012; European Commission, 2013).

Many studies among local researchers and elsewhere have related self-efficacy of school teachers to students' performance or students' outcome (Ashton & Webb, 1986; Bakar, Mohamed & Zakaria, 2012; Guskey, 1984; Ismail, & Nordin, 2012; Lim, 1997; Rosna, 1999; Ross, 1992; Wong & Wong, 2001; Wong, 2006; Woolfolk, Rosoff & Hoy, 1990).

There is significant correlation between lecturers' self-efficacy and their performance in terms of research and publication, teaching and service and engagement (Debowski, 2006; Hemmings & Hill, 2009; Hemmings & Kay, 2007; Lucas & Tuner, 2007). There might be a correlation between lecturers' self-efficacy and pre-service teachers' performance; however studies on LSE are scarcely reported in literature searches in Malaysia.

A substantial number of studies have been conducted in the 1980s to understand ways to improve teachers' quality and teacher education programmes (Ashton & Webb, 1986; Guskey, 1984, 1988; Lee, 2000; Ross, 1992; Woolfolk &

Hoy, 1990). Extensive literature review revealed that by enhancing one's self-efficacy (Bandura, 1986; Gavora, 2011), one's motivation, and effort, job performance increases. This research concerns the level of self-efficacy of lecturers in TEIs in Malaysia.

In the present situation of the Malaysian teacher education system, there have been higher expectations in relation to research and further emphasis of work life balance in the teaching profession. These actions had affected job performance and commitment towards lecturers' roles and responsibilities (Mohd Noor, 2011). The demands of this profession and the challenges that come along with it are iterated to be overwhelming, causing a shift in the balance between teaching, research and services activities (Hemmings & Kay, 2007). This could lead to lecturers low morale, burnout, and some may even quit the job due to lack of job satisfaction and low performance (Baron, 2000; Edward, & Teoh, 2009; Fauziah, Sharifah Suzana, Siti Mardinah, & Jamil, 2013; Mohd Noor & Amat, 2010). Noraini et al., (2008) have reported the level of competency of lecturers in Malaysian Polytechnic colleges with empirical evidence, emphasizing the need to enhance the competency in quality education. Competency is a vital source of self-efficacy (Bandura, 1986); these could be an indicator that the lecturers' self-efficacy need to be enhanced.

Teacher Education Institutions (TEIs) are responsible for training and producing teachers, designing teacher education programmes and improving training quality for teachers as stated in the Malaysia Education Blueprint 2013-2025 (MoE, 2013). To ensure high quality teacher education, the teacher educators, in this case called 'lecturers' should have high self-efficacy in providing quality education for pre-service teachers. Clearly, investigating the lecturers' self-efficacy, in other words, the perceived capabilities to organize and execute a course of action required to

produce given attainments towards performing assigned tasks as lecturers, will give invaluable insights to the institutions to do the necessary in ensuring the quality of education.

Several informal public information sites related to teacher educators' or lecturers' readiness and capability to meet challenges in TEI are highlghted in public domains such as blogs and newspapers where on numerous occasions, expressions of grouses and displeasure over teacher educators' workload has been said to be due to the transformation in teacher education. Among others, it was reported that academic staff feel highly stressed due to the increased workload (Mohd Noor & Amat, 2010) and the increase of staff-student ratio. Evidently, there has been increasing pressure to obtain external funds, pressure to obtain recognition and rewards. Despite this increase of concern over quality teacher education system, little published local research has explored the self-efficacy of teacher educators in teacher education institutes in Malaysia and there exists no instrument to measure Lecturers' self-efficacy in TEIs.

The transition of teacher training colleges to teacher education institutes in 2008 poses as a challenge for many teacher educators and it is affecting their job performance as per the pilot study conducted by Velu and Nordin (2011a). This further reiterated the job performance issues highlighted in the work of Mohd Noor and Amat (2010). However, studies conducted in Malaysia from 2000 till 2012 rarely investigated the self-efficacy of lecturers who are instrumental in this successful transition (Appendix 2.1).

1.3.2 Lack of Valid Instrument to Measure TEIs' Lecturers' Self-efficacy

Self-efficacy is situational and task specific (Ritchie & Williamon, 2007) and it varies