**Post doctoral proposal**

**Teacher self-efficacy within entrepreneurship education**

**Introduction**

Recent research on the impacts of entrepreneurship education revealed that graduates lack entrepreneurial motivation and competence required for new venture creation ([Oosterbeek *et al*., 2010](#Oosterbeek, H., M. Praag, and A. Ijsselstein, 2010); [Matlay, 2008](#Matlay, H., 2008.)). Students’ motivation, learning, and achievement can be highly improved by teachers’ tendency and ability to teach effectively ([Bayraktar, 2011](#Bayraktar, S., 2011), [Tschannen-Moran and Hoy, 2001](#Tschannen-Moran, M., and A. W. Hoy, 2001); [Tschannen-Moran *et al*., 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). To improve students’ entrepreneurial learning and competencies, therefore, they should be taught by qualified teachers who have a strong sense of entrepreneurial self-efficacy ([Peltonen, 2008](#Peltonen, K., 2008.)). However, there is little knowledge about self-efficacy of teachers in general ([Bayraktar, 2011](#Bayraktar, S., 2011); [Adedoyin, 2010](#Adedoyin O. O., 2010)) and entrepreneurship teachers in particular (Pihie and Bagheri, 2011; [Peltonen, 2008](#Peltonen, K., 2008.)). Furthermore, no other researcher focused on developing a specific scale for measuring self-efficacy of teachers within entrepreneurship education. The importance and necessity of technical and vocational education and training for entrepreneurs and those who are involved in entrepreneurial endeavors has been identified ([Hussain and Matlay, 2007](#Hussain, J., and H. Matlay, 2007.); [Matlay, 2001](#Matlay, H., 2001.)). Yet, few empirical researches have been published about entrepreneurial competencies in the context of technical and vocational education ([Pihie and Bagheri, 2011](#Pihie., Z.A.L. and A. Bagheri, 2011); [Pihie and Bagheri, 2010](#Pihie., Z.A.L. and A. Bagheri, 2010.)). In response, this study aims to narrow the gaps through developing a questionnaire for teachers’ entrepreneurial self-efficacy and specifying the sources that shapes entrepreneurial self-efficacy among secondary school teachers in Technical and Vocational education.

**Teacher self-efficacy: Definition and sources of formation**

A review of the definitions proposed for teacher self-efficacy indicates a process of evolution from first definitions focused on teacher efficacy as general beliefs in one’s abilities to enhance motivation and learning of all students “even those who may be difficult or unmotivated” ([Guskey and Passaro, 1994](#Guskey, T.R., and P.D. Passaro, 1994.), p. 4). Derived from “locus of control” construct, teacher efficacy in this sense is a personal perception on one’s ability to overcome the impacts of the environment and enhance students’ motivation, attitude, learning, and achievement ([Huang *et al.,* 2007](#Huang, X., M. Liu, and K. Shiomi, 2007); [Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). The deficits of this definition in terms of neglecting specificity of teacher efficacy to the subject and context has led researchers to seek more robust theoretical foundations for teacher efficacy definition and measurement ([Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)).

Later, scholars based teacher efficacy on the social cognitive theory ([Bandura, 1997](#Bandura, A., 1997.)) and defined it as a multi-dimensional construct which develops through an analytical process ([Adedoyin, 2010](#Adedoyin O. O., 2010); [Chong *et al.,* 2010](#Chong, W.H., R.M. Klassen, V.S. Huan, I. Wong, and A.D. Kates, 2010); [Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). Based on the theory, “Teacher efficacy is the teacher’s belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context” ([Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.), p. 233). Teachers’ beliefs about their abilities to teach and influence students’ motivation and learning take shape through dynamic, continuous, and reciprocal interactions between personal, behavioral, and environmental factors ([Bandura, 1997](#Bandura, A., 1997.)). These beliefs highly affect the time and effort they spend in teaching practices, their persistence in the face of difficulties, and the extent of emotional arousal such as stress or anxiety they experience in dealing with difficulties ([Tschannen-Moran and Hoy, 2001](#Tschannen-Moran, M., and A. W. Hoy, 2001); [Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)).

According to this definition, teacher efficacy consists of two main aspects including personal teacher efficacy and outcome or general teaching self-efficacy ([Bayraktar, 2011](#Bayraktar, S., 2011)). Personal teacher self-efficacy reflects teachers’ perceived capacity to successfully perform the roles and tasks of a teacher. General or outcome teaching efficacy indicates teachers’ perceived abilities to effectively create the desired behaviors, skills and competencies in students. While teacher efficacy motivates teachers to select or avoid teaching a specific subject, teaching efficacy enables them to effectively perform various instructional roles and tasks in a particular subject and context. It is argued that personal teacher self-efficacy precedes and facilitates outcome teaching self-efficacy formation and has more influential impact on its development ([Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). Although there is a correlation between personal and specific teaching self-efficacy, they are two different constructs that build teacher self-efficacy independently ([Tschannen-Moran and Johnson, 2011](#Tschannen-Moran, M., and D. Johnson, 2011.)). Importantly, teacher self-efficacy develops through involvement in practicing real teaching roles and tasks ([Tschannen-Moran and Johnson, 2011](#Tschannen-Moran, M., and D. Johnson, 2011.); [Tschannen-Moran and Hoy, 2001](#Tschannen-Moran, M., and A. W. Hoy, 2001); [Wah, 2007](#Wah, W.K., 2007. Sources); [Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.); [Bandura, 1997](#Bandura, A., 1997.)). Examining secondary school teachers’ self-efficacy formation, [Adedoyin (2010)](#Adedoyin O. O., 2010) recently concluded that the teachers build their teaching self-efficacy through interacting and in relation to their teaching practices, students, and teaching environment. The authors emphasized that secondary school teachers construct their teaching efficacy mostly based on their capability to create an encouraging teaching and learning environment in the classroom.

Focusing on situational nature of teacher self-efficacy, [Tschannen-Moran et al. (1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)) developed a comprehensive model for teacher self-efficacy development. Based on the model, teacher self-efficacy takes form through a personal cognitive process through which teachers construct a sense of capability for their future instructional behaviors by analyzing their past experiences and outcomes of their current performances. Therefore, teacher self-efficacy formation and development is both a retrospective (based on previous experiences) and a prospective (future-oriented) process that occurs over time. In this sense, teacher self-efficacy is a complex personal process that can be formed and developed by environmental factors. Cognitive abilities of teachers to analyze, weight, and interpret the information from different sources play a key role in developing their teaching self-efficacy. Therefore, teachers differ in terms of their teaching self-efficacy beliefs and consequently their effectiveness based on their cognitive and reflective abilities. Various personal and environmental factors such as teachers’ current task performances, outcome expectations, and social interactions contribute to teacher self-efficacy development.

**Entrepreneurial self-efficacy of teachers**

Given the assumption that teacher efficacy is a subject-specific and contextual-oriented construct, a growing body of research focused on measuring teachers’ efficacy in different subjects and contexts ([Tschannen-Moran and Johnson, 2011](#Tschannen-Moran, M., and D. Johnson, 2011.); [Siwatu, 2011](#Siwatu, K.O., 2011.); [Chong *et al.,* 2010](#Chong, W.H., R.M. Klassen, V.S. Huan, I. Wong, and A.D. Kates, 2010); [Tschannen-Moran and Hoy, 2007](#Tschannen-Moran, M., and A.W. Hoy, 2007)). Accordingly, entrepreneurship researchers have shown an increasing interest in conceptualizing and measuring entrepreneurship teachers’ efficacy and specifying the contextual and environmental factors that influence development of a strong sense of self-efficacy among them ([Peltonen, 2008](#Peltonen, K., 2008.); [Gibbs, 2002](#Gibbs, C., 2002)). It is argued that analysis of teaching tasks in a specific subject and context is one the significant factors that shapes teacher self-efficacy ([Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). Therefore, to explain how self-efficacy may assist teachers to effectively teach entrepreneurship, the tasks that entrepreneurship teachers need to accomplish should be specified.

[Peltonen (2008)](#Peltonen, K., 2008.) emphasizes that it is vital for teachers to become more entrepreneurial if we are to improve entrepreneurial learning among students. Particularly, teachers need “…to act in an entrepreneurial way in discovering opportunities and innovatively exploiting them” ([Heinonen and Poikkijoki, 2006](#Heinonen, J., and S.A. Poikkijoki, 2006), p.88). Entrepreneurship teachers need to apply innovative teaching methods, cope with various challenges of teaching entrepreneurship, and engage students in the process and challenges of entrepreneurship learning ([Adedoyin, 2010](#Adedoyin O. O., 2010); [Heinonen and Poikkijoki, 2006](#Heinonen, J., and S.A. Poikkijoki, 2006.); [Smith *et al.,* 2006](#Smith, A.J., L.A. Collins, and P.D. Hannon, 2006)). Previous research findings indicate that self-efficacy help teachers to apply innovative teaching methods, engage students in challenging learning opportunities, persevere in the face of obstacles, and improve students’ persistence to deal with the complexities and difficulties of learning process ([Adedoyin, 2010](#Adedoyin O. O., 2010); [Deemer, 2004](#Deemer, S.A., 2004.); [Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). Furthermore, entrepreneurship teachers should have strong motivation to teach and maintain their motivation in the process of instructional delivery ([Fiet, 2000](#Fiet, J.O., 2000.)). Self-efficacy highly improves teachers’ motivation and abilities to teach ([Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)).

Entrepreneurship learning is an experiential process which highly requires students to practice real roles and tasks of an entrepreneur and deal with the challenges associated with managing a new venture ([Richardson and Hynes, 2008](#Richardson, I., and B. Hynes, 2008); [Heinonen, 2007](#Heinonen, J., 2007.); [Heinonen and Poikkijoki, 2006](#Heinonen, J., and S.A. Poikkijoki, 2006.)). Students should also be involved in participatory and collaborative activities in which students, academics, and entrepreneurs incorporate in the process of entrepreneurship learning ([Pittaway and Cope, 2007](#Pittaway, L., and J. Cope, 2007.); [Heinonen and Poikkijoki, 2006](#Heinonen, J., and S.A. Poikkijoki, 2006.); [Smith *et al.,* 2006](#Smith, A.J., L.A. Collins, and P.D. Hannon, 2006); [Gibbs, 2002](#Gibbs, C., 2002)). Teachers play critical roles in creating such a pragmatic and social interactive environment which improves students’ entrepreneurial self-efficacy through mastery experiences, vicarious experiences, verbal persuasion, and social support ([Deemer, 2004](#Deemer, S.A., 2004.), [Gibbs, 2002](#Gibbs, C., 2002); [Bandura, 1997](#Bandura, A., 1997.)).

**Method**

This study aims to develop a questionnaire for entrepreneurial self-efficacy among secondary school teachers within Malaysian Technical and Vocational education based on the assumption that teachers’ perceptions toward entrepreneurship education and their self-efficacy in teaching entrepreneurship vary in different school levels ([Gibbs, 2002](#Gibbs, C., 2002)). It also intends to specify the sources that shape the teachers’ self-efficacy based on the questionnaire developed by McGee et al. (2009). According to the authors, entrepreneurial self-efficacy is a multidimensional construct encompassing four aspects. The first aspect is searching for the idea or opportunity which highly depends on creativity and innovativeness of individuals. The second aspect is planning which reflects individuals’ competency in writing a business plan. The third dimension is marshaling which refers to individuals’ perceived ability in gathering required resources to create a new business. The fourth aspect is implementing the business plan and leading the new business to success and growth. A sample of secondary school teachers in Vocational and Technical education in Malaysia will participate in this study. Data will be collected in March to Jun, 2012. Permission to conduct the survey will be obtained from the Educational Planning and Research Division, the Ministry of Education and the Directors of Education of the selected states. The school principals will be contacted to fix the date of data collection and to make the necessary preparations with teachers of form four vocational and technical classes. Data will be collected by the researchers.

To measure teachers’ entrepreneurial self-efficacy a pool of questions will be selected from previous studies in entrepreneurial self-efficacy (McGee et al., 2009) and teacher self-efficacy ([Tschannen-Moran *et al.,* 1998](#Tschannen-Moran, M., A. Woolfolk Hoy, and W.K. Hoy, 1998.)). The questions will be submitted to 3 entrepreneurship education experts to determine the content validity of the items. Then, the questionnaire will be refined and administered to a group of 30 student teachers in one of Malaysian universities which offers teacher education programs. Based on the Confirmatory factory analysis which will be performed, the items with less than .45 will be removed. The factor analysis also indicates teacher entrepreneurial self-efficacy consists of which factors and the degree that each factors loads the overall teachers’ entrepreneurial self-efficacy. Then, the questionnaire will be given to the determined sample. The teachers will be asked to state their agreement to the items based on a 5-point Likert scale, with 1 indicating “strongly disagree” and 5 indicating “strongly agree”. Statistical techniques such as mean and standard deviation were utilized to analyze the data.

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