

## Development of FM entrepreneurial assessment model to examine effect of entrepreneurship education on the real estate management students

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### Abstract

The article focuses on the critical analysis and development of a facilities management entrepreneurial assessment model to examine the effect of the entrepreneurship education on the students of Real Estate Management. Definitely, the development of entrepreneurship is not newest to the academic circles and practitioners in the real estate management profession. Subsequently, the shift from the production based economy to innovative knowledge based economy both academia and practitioners demand proactive diversity by way of blending entrepreneurship into the professional practice. In respect of this development, entrepreneurship education is now of more research interest in the academic setting. Nevertheless, most institutions are yet to develop appropriate evaluation standard for their entrepreneurship programmes. Therefore, assessing the entrepreneurial experience and understanding of the trainee as regard to their preparation for the competitive world after graduation is paramount.

From the critical literature review, facilities management assessment model (FMAM) formulated with the essential intangible variables: Facilitator; Change management; Business reality; value creation; competitiveness and sustainability. The outcome of the impact assessment of entrepreneurship teaching on the Real Estate Management undergraduate program identified valuable strengths and weakness. While, quantitative research strategic survey instrument of data collection employed, with the respondent target focused on the Real Estate Management graduating students in the noteworthy four public universities, in Malaysia.

The Originality and value of the article centred on the wide range applicability of the proposed (FMAM) assessment model for the evaluation of entrepreneurship education impact on the students' entrepreneurial knowledge and value creation.

**Keywords:** *Entrepreneurship education, FM assessment model, value creation*

## Introduction

In the recent time, entrepreneurship is the agent of innovation-driven in the economy of many nations. In the same light, the present competitive knowledge-based economy demand more creative and dynamic entrepreneurial minded graduates in every nation (Drucker, 1985; Youtie & Shapira, 2008; Chew & Chew, 2003). The attractions on to the proliferation of enterprise education in various tertiary institutions indeed are for the advancement of business start-up and upward overall economic transformation (Hall, Daneke, & Lenox, 2010). Though, many of such educational institutions lack the appropriate assessment standard for the evaluation of their program fineness (Li & Liu, 2011; Liu, 2010a; Souitaris, Zerbinati & Al-lahan, 2007). In addition, program diversity across the institution of learning also significantly hinder development of universally acceptable assessment model (Mwasalwiba, 2010; Jones, & Matlay, 2011). Besides, Li and Dai (2011), Yasin, et al., (2011) and Gerba, (2012), asserted that the government policy maker, public and the trainee are placing inquisitive demands on the higher institution of education to demonstrate how impressive the program performance is? Consequently, this study tested the formulated FM assessment model for the enterprise education. The research motivation is in accordance to the calling of the renowned entrepreneurship research scholars for the formulation of didactic broad-based assessment model (Fayolle, Gailly & Lassas-Clerc, 2006; Mahmood, Cheng, & Chan, 2009; Matlay, 2006).

The principal goal of this article focuses on applying the FMAM to a case sample and to evaluate the impact of enterprise education on the trainees' entrepreneurial know-how and value creation. Furthermore, the philosophical foundation is to connect and ascertain entrepreneurial understanding as relate to the facilities management principles: facilitator; business reality; change management; value creation; competitiveness and sustainability. Although, scholars have made a considerable attempt on the development of general assessment framework to measure diverse aspect of enterprise education imbibed on the management students (Ahmed, et al., 2010; Chen, et al., 1998; Kirby, 2004; Fayolle & Lassas-Clerc, 2006). Hence, this research is paramount as result of the current challenges facing the estate surveyors in the current highly competitive economy. Real estate profession noted to be the most invaded discipline by other professions and quack in the built environment (Oladokun, 2012; Ashen & Gambo, 2012). In this regard, the research is first of its kind in the real estate management. Therefore, the administered questionnaire data collected underline essential components require for the trainer towards evaluating the impact of the entrepreneurship program on their trainees.

## Theoretical overview of entrepreneurship education

The intellectual assertion of the impressive social, economic and educational benefits of the entrepreneurship in every nation is far reaching and beyond (Ismail, et al., 2010). The domain of entrepreneurship has also been acknowledged empirically and theoretically to have contributed to the economic development of both developing and the developed nations worldwide. Entrepreneurship has also been extensively proven to be associated with the creation of new business enterprises and development of innovation and adoption and replication of wealth (Gibb, 2011; Bjornali & Storen, 2012; Kickul, et al, 2010).

The unprecedented myth about entrepreneurs are born and can entrepreneurship be taught? is now set to stand. Several scholars have disputed the myth with empirically demonstrated and analyzed research findings (Henry, et al., 2005; Fayolle, et al., 2006). There is a need to validate development of the entrepreneurs by learning entrepreneurship activities and impact on the participant of such programmes (Muff, 2012; Matlay, 2008; Hytti, et al., 2010; Ismail, et al., 2010). The claims of the teachability of the EE may be contributing a factor for the propagation of the enterprise education in the global arena (Kuratko, 2005; Fayolle, 2010). Though, few scholars are still of the opinion that entrepreneur qualities are inbuilt of birth (Jones, Matlay & Maritz, 2012), the positive declaration of the teachability of the entrepreneurship education are far greater than the negative assertion.

Regardless of the growing number of different versions of the entrepreneurship education program, the graduating student employment opportunities and business start up does not agree with this impulsive growing rate of the program (Galloway & Brown, 2002; Galloway, et al., 2006). The raise in the quantity of EE program offered in the HEIs are commendable but the quality of such program are uncertain (Gerba, 2012; Matlay, 2008; Hytti, et al., 2010). In regard of this, there is growing concerned to establish an assessment platform for the appraisal of the performance of the growing trends of EE in the HEIs.

### **The assessment of entrepreneurship education program**

The flourishing of enterprise education in the HEIs and effectiveness of such programs performance remain the core issue of controversy and disagreement among the major stakeholder of education policy maker (Matlay, 2006). The intellectual need to assess the efficiency and effectiveness of EE programs is inevitable as noted by several scholars (Carey & Matlay, 2012; Mahmood, et al., 2009). However, the measurement of the performance of EE programs has not been given much critical research enquiry (Alberti, et al., 2004; Fayolle & Gailly, 2008; Fayolle, 2000b). In addition to the multi-directional assessment model developed by few past researchers, there is a critical demand in the academic program designer on the need to development an appropriate assessment research methodological approach for determining entrepreneurship education performance on the entrepreneurship learning among the graduates of higher institution. Jani and Zubairi, (2009); Brijlal, (2008) and Gibb, (2011) outlined the challenges involved in the EE program evaluation such as financial implication and human resource capacity.

In order to advance the impact of EE within the academic circles, many scholars have proposed several intellectual alternative models to evaluate impact assessment of the EE programs in HEIs. Fayolle et al., (2006) noted that, most past attempt to evaluate entrepreneurship education revolves around the difficulty of developing appropriates entrepreneurial assessment model that takes into consideration all the relevant variables and time lag factor. Bridge, et al., (2010) identified the importance in the performance measurement of the EE, eighteen points (18) appraisal criteria was far established by Vesper and Gartner (1997).

The time lag (space of time between when student participated and the actual business start-up) noted as a critical factor in the enterprise education program assessment (Block and Stumpf, 1992). Van der Veen & Wakkee (2004) emphasized on the number business created (value creation) by the participant as the best assessment approach for EE program. On the contrary, all the previous assessment models have been theoretical and empirically measured to have their strengths and weaknesses (Fayolle, et al., 2006). However, the development of a common entrepreneurial assessment framework to validate the impact of the EE program for graduates of the HEIs has been a critical challenge in the academic communities. The lack of formidable researches on EE outcomes and formulating a comprehensive assessment methodological process acknowledged as critical factors affecting the influence of the program on the entrepreneurial graduates of HEIs (Henry, et al., 2005; Karimi et al., 2011; Matlay, 2008).

On the value of the assessment of EE, Henry, et al., (2005) stressed EE program objectives as the determinant of the entrepreneurial judgment of the participant outcomes. The challenge to establish a common assessment framework may be as a result of different objectives of the EE program in HEIs. Low and MacMillan, (1988), Jones and Matlay, (2011) supported assertion; one of the contributing factor to the diverse entrepreneurship program offered in HEIs may be as a result of the different interest of the program set objectives and regional diversity influences.

### **The proposed facilities management assessment scale for the entrepreneurship education**

Facilities management is a process that facilitates efficiency, effectiveness and productivity of an organization by way of coordinating the operational and strategic direction between employees, employers, and customer towards organization corporate objectives via the physical workplace (Alexander, 2003; Chotipanich & Lertariyanun 2011; Tay & Ooi, 2001). In the same light, contribution of the EE as a process that facilitate the entrepreneurial development for graduate employability and efficiency for professional sustainability (Yusof, et al., 2010), through using modern creative and innovative teaching methodology to transform both science and business components of entrepreneurial initiative could be seen in the context of FM thinking.

The process nature of the two bodies of knowledge (FM and EE) postulates a number of establishes linkages. Firstly, management of change in the working environment in an organization and academic environment are both primarily an interaction ground for social and team work collaboration for socioeconomic development of every nation. Secondly, the tangible infrastructural facilities of work within the organization is a facsimile of the edifying infrastructure facilities within the academic setting which are value enhancer for facilitating an added value on the graduates and workers for optimum social interaction. Thirdly, service provided by FM focused on motivation and productivity of workers in parallel perspective of EE focused on motivational enhancement of graduates employability and productivity for a sustainable future. Lastly, FM positive contribution to human fulfilment and self-esteem by

promoting a physical environment that stimulates creativity and innovation in an organization. In the nut shell, the main purpose of EE is to encourage and motivate graduating students toward self-realization and self-fulfilment in their future endeavours.

Conclusively, we establish the basic interdependence of the EE as a sub-sector within the regional conferment of FM thinking. The epitome of the ideology is that both are humanist in approach and could be refer to as facilitator, enabler, value creation, change management and business reality to enhance the future competitiveness and sustainability of the graduating students in the turbulent economic climates. Van der Veen & Wakkee (2004) model of opportunity pursuit provided a supportive argument on the EE as a process in nature (Fayolle, (2007a). In the same direction, Arbaugh, Cox and Camp (2005) emphasised that assessment of entrepreneurship training should be fulcrum on value creation in the context of participants' business creation productivity after the program. For this reason, the philosophical mind set of the researcher is to measure the level of value created on the participant of the enterprise education. The section outlined the development process of the research assessment model.

However, assessment could be define as a justifiable engagement and what one chooses to assess only shows the significant value attached to it. So not assessing a transferable skill simply means promoting such skilfulness is not necessary. The need to assessment the success of entrepreneurship program on the students' entrepreneurial intention is a momentous decision as to ascertain the contribution of the entrepreneurship to Malaysian economic development (Jani, 2009; Mahmood, et al., 2009; Othman, et al., 2012). There is the need to measure the appreciable level of impact entrepreneurship education has on the students' entrepreneurial intention toward venture creation, desirability for business start-up and perceived self-employment entrepreneurial desirability as supported by scholars (Jones, et al., 2012; Mahmood, et al., 2009; Kureger, 1993; Oosterbeek, et al., 2010).

The concept of assessment of any programs revolves around an input, process and output. The input component as students of HEIs, central box denotes the entrepreneurship education program as an intellectual process to inculcate entrepreneurial culture on the graduating students, and, entrepreneurial outcome is the state of intention after participation in the enterprise program as the output (see fig. 1). The dynamism of the model is the connectivity of EE within the FM as a production function process in nature. The student (inputs) passes through an entrepreneurship educational (process) transformation to entrepreneurial graduates (outputs) who can contribute creatively in the economically challenged nation.

In the nutshell, EE program objective is the paramount determinant benchmark of the program performance success (Pittaway & Edwards, 2012; Alberti et al., 2004) and effectiveness of such a program could be established by entrepreneurial participant output in term of impacted:

- a. Business knowledge (business reality),
- b. Positive or negative attitudinal shift toward entrepreneurial intention (facilitator),
- c. Creativity and innovation in business creation (value creation),

- d. Management skills and technical skills (change management),
- e. Willingness to creative and take business risk (competitiveness and sustainability).

On the whole, purpose of EE program is a depiction of the intangible core value of facilities management doctrine while the tangible component reflects the physical educational facilities that support the operation of the program. In addition, Botha, et al., (2006) supported the schools of thought that EE program evaluation should be based on the program objectives versus program product (business established by the participant of the program - Rauch, Wiklund, Lumpkin and Frese, (2004). In fact, some scholars are of the contrary opinion that, the case of entrepreneurship program in HEIs, not all the graduating students are likely to choose a business as a career option.

The comprehensive review contribution of the commentators outlined as a recurring impact evaluation appraisal of the EE program teaching: Entrepreneurial awareness; Motivation and attitudinal capacity; Teaching strategic approaches and assessment methods; Entrepreneurial value creation (creativity, innovation, financial independence and career choice disposition). All are central to the probability intention shift toward self-employment as a career choice. In this article, assessing of the EE program prepare in the direction of this proposition: Feedback opinion patterns are employs to find out traineesø satisfaction with the training programme. This assessment carried out on the completion of the programme by the use of a series of structure questions. Therefore, satisfactions of the program participants establish.

In spite of aforementioned benefits of the EE program assessment. There is the need to identify the statistical relationships that exist within all the different variables that constitute an entrepreneurship training program, which assisted in determining the correct variables to be measurable. Conclusively, Fayolle (2000b) stressed that EE is a way of managing students with complex background orientation, diverged personality traits for a common goal of building entrepreneurial inspiration for their future entrepreneurial competitive advantage. This could be achieved in the course of synergistic and coordinated efforts within a predefined time with the correct quantity of human and financial resources (Gerba, 2012; American & Ireland, 2011). The relevant variables identified within the extensive literature review and as relates to the essential components that shape the formation of the FM assessment model are graphically illustrated below (fig. 1).

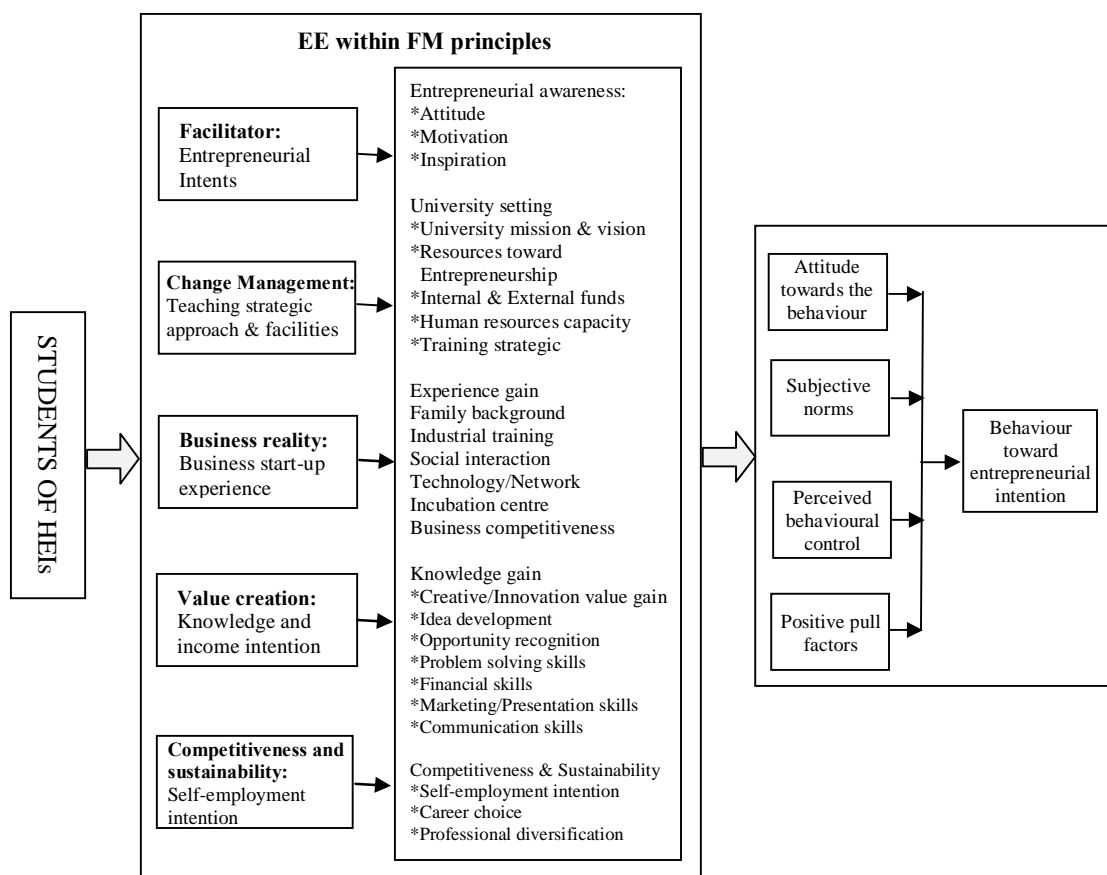


Figure 1: Proposed FM assessment model for entrepreneurship education in HEIs.

### Research methodology

The research employed quantitative research strategic survey instrument to assess the impact of the entrepreneurship education program on the students' entrepreneurial outcome toward self-employment. The data collection instrument used is questionnaire, to have an in-depth knowledge of the value created on the student business reality capacity. The four of the public universities in Malaysia that offer real estate management course were the target respondent population:

- (i) University Malaya
- (ii) University Technology, Mara
- (iii) University Technology Malaysia
- (iv) University Tun Hussein Onn Malaysia

The sample technique was purposive as the research was targeted at a specific group of population. This research is paramount as result of the current challenges facing the estate surveyors in the current highly competitive economy. Real estate profession noted to be the most invaded discipline by other professions and quack in the built environment (Oladokun, 2012; Ashen & Gambo, 2012). The third year student opinions were collected with self-administered questionnaire. On the position of it is high response rate, authenticity of the primary data and for

onward generalisation of the research findings. All the set of the questions in the questionnaire used were adopted from already validated questionnaires of renowned researchers (Kolvereid & Isakson, 2006; Souitaris et al., 2007; Mahmood, et al., 2009; Oosterbeek, et al., 2010).

## Research findings and discussion

### *Respondents' background information*

The totality of the respondent surveyed was seventy-two (485) students. The female students constituted 66.7 percent while the remaining 33.3 percent were male students. The three major ethnic formed the sample population. Malay had a higher percentage of 63.91 percent over the Chinese ethnic that constituted 32.99 percent and Indian with 3.1 percent respectively. The majority of the undergraduates students survey accounted having past work experience (98.6%). The response not surprised because of the compulsory industrial attachment fixed for all the second year students (see fig. 3). The 76.4 percent accepted to have between 1-4 months experience while only 23.4 percent examined having up to a year work experience, compare to the few percentage (1.4%) that do not have any form of work experience. Almost all the respondents reported positive perception about their work experience.

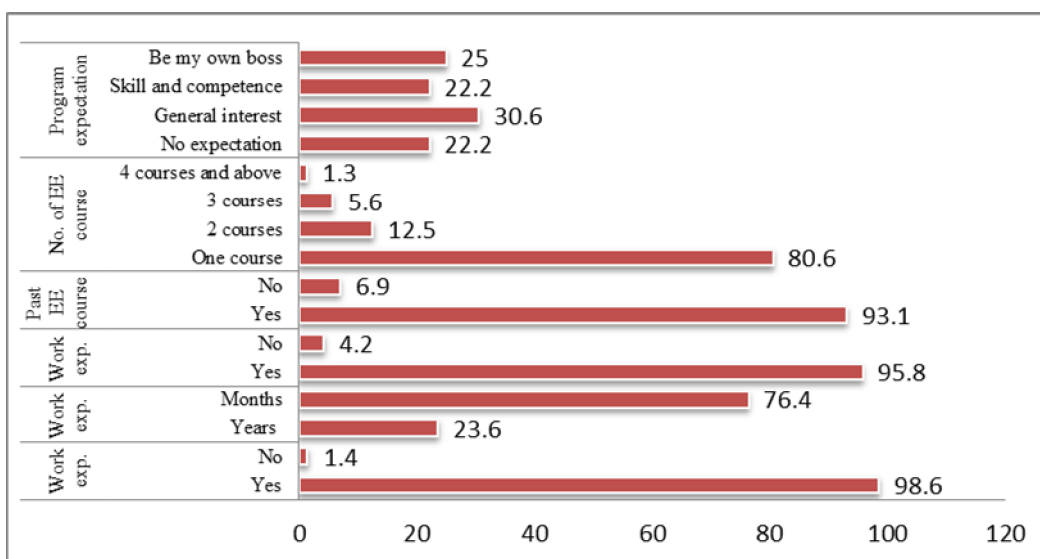


Figure. 3: Students' work experience and expectation on the entrepreneurship program

In addition, most students reported having taken entrepreneurship course program in the past (93.1%). On the contrary, most indicated that they have participated in one entrepreneurship course (80.6%), and 12.5 percent has taken two entrepreneurship program while, only 6.9 percent have participated in over three entrepreneurship courses. Against the backdrop of low



past entrepreneurship courses exposure, there is a mixture of response on the expectation of the current assessed entrepreneurship program. Conclusively, the report shows that the larger percentage of the group of student surveyed have an idea of business experience, noted to be necessary for entrepreneurship intention (Kureger, 1993; Kolvereid & Isaken, 2006). Thus, students' positive impression of the past work experience (industrial attachment) may not support business start-up and intention toward self-employment. Therefore, the sample thus make possible for us to evaluate the impact of entrepreneurship education on their self-employment intention.

*Facilitator: Entrepreneurial awareness and attitudinal capacity to motivation*

Considerable number of studies pronouncement of an encouraging attitude of students' institution of higher education towards venture and small business (Kureger, 1993). The findings of administered questionnaires revealed the entrepreneurial awareness and attitudinal capacity of the respondents presented (see fig. 4 & 5).

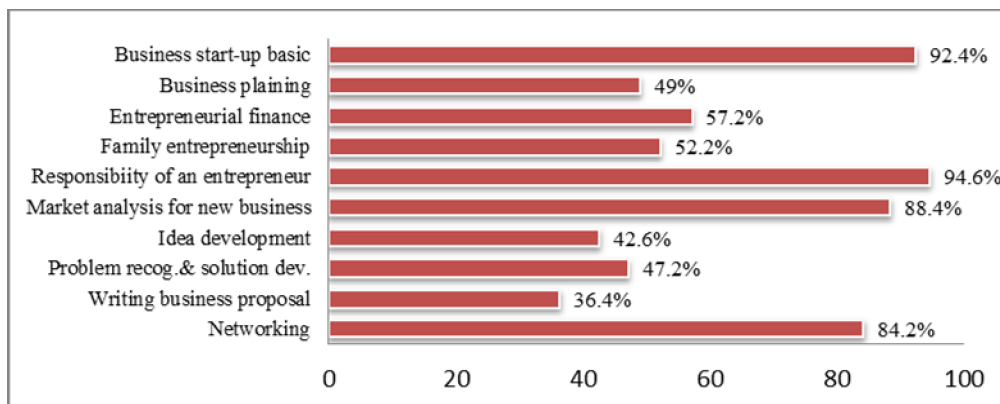


Figure. 4: Students' entrepreneurial awareness on entrepreneurship program

The leading areas of entrepreneurial awareness and capacity were: Basic business start-up (92.4%), understanding of entrepreneurs responsibilities (94.6%), management and market capacities (88.4%), and networking (84.2%).

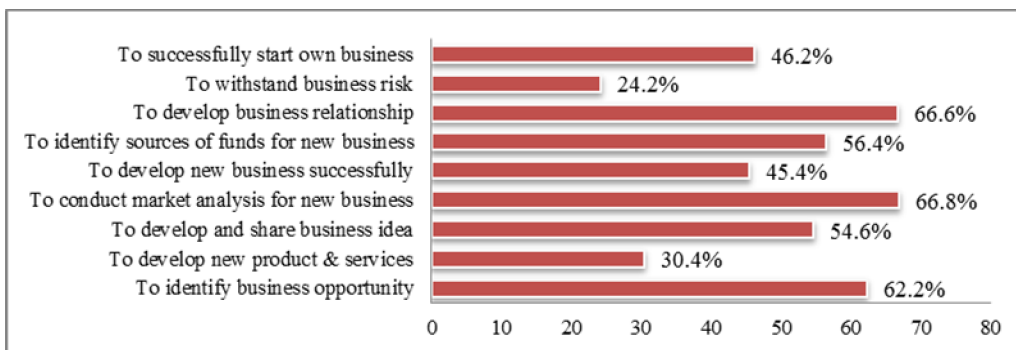


Figure. 5: Students' entrepreneurial attitudinal capacity to motivation on entrepreneurship program

The fundamental entrepreneurial capacity needed for students in venture creation were relatively below average of 50% grading (idea development, problem recognition, solution development, business planning and proposal writing). Finally, quantitatively analysis of the surveyed results of the entrepreneurial capacity in terms of attitudinal capacity of the students is somewhat not strong in the core areas paramount for entrepreneurial development.

*Change management strategic approach: Entrepreneurial course contents and course delivery approach assessment*

Consequently, students' report on the major entrepreneurship course contents, teaching methods employed as strategic tools for change management by the educators in their entrepreneurship course delivery process were presented. On one hand, analysis of course content performance, basic concept, benefits of entrepreneurship and simple business start-up constituted the predominant measured index. On the other hand, the analysis which constituted measure of students' business reality indicator: problem recognition, idea development, creativity and innovation evident less rating on the percentage mean on the students' response (fig. 6).

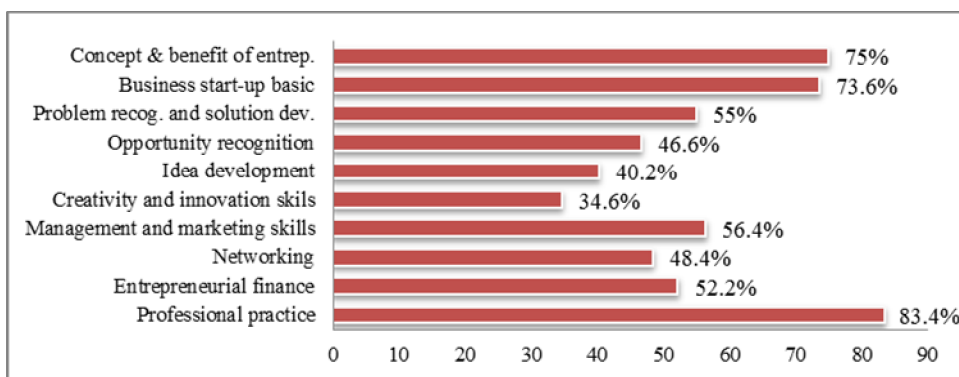


Figure. 6: Entrepreneurship course contents

On the issue of course delivery process, students' responses on the most commonly used teaching strategic approach is conventional lectures series (79.2%), case studies (52.2), role playing (50.6%), while modern active learning approach fall short of expectation as presented in figure 7.

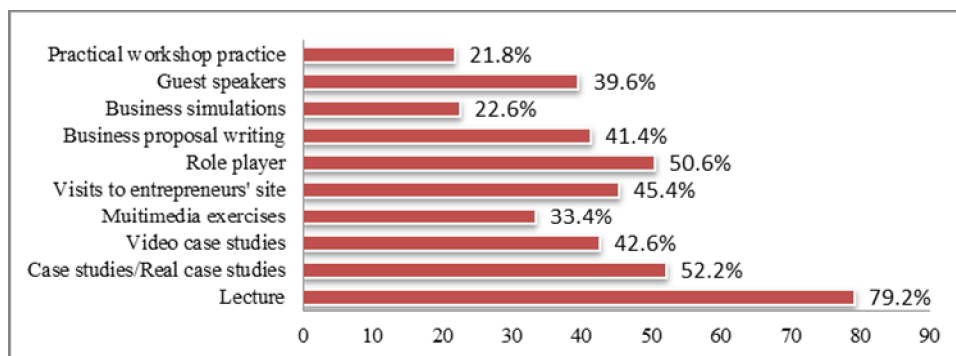


Figure. 7: Entrepreneurship course delivery approach

Regardless of a prevalent yearning to encourage and develop innovative forms of EE in the HEIs. It is quite apparent from this research finding that current educational change management strategic approach (entrepreneurial course contents and assessment) remains fairly traditional. As presented above, orthodox lecturing approach is still the predominant ways of used for course delivery system. In the same light, the course content are more of management and professional practice oriented as against the innovative idea development require for business start-up after graduation. Even though course content and assessment approach were evenly distributed, given priority to innovative business plans, business reports, presentations and in/out-class assessment.

#### *Entrepreneurial value creation and employment goal*

An assessment of the differences in pre (T1) and post (T2) of the students' mean scores evaluation demonstrated opposing result on the three key variables measured. The EE had a positive impact on the students' entrepreneurial awareness and motivation, and self-employment intention, while on the students' entrepreneurial value creation was an opposing effect (negative impact). On one hand, the increment can be attributed, nonetheless, towards the statistically significant ( $p < 0.05$ ) and ( $p < 0.001$ ) increase in attitudinal mean scores for students' awareness/motivation and self-employment goal. On the other hand, fall on attitudinal mean scores for students' entrepreneurial value creation be statistically not significant. The intention of this assessment is to establish the praiseworthiness of the EE on students of real estate management. The summary of the data analysis put into a table (see Table 3).

Table 3: Impact assessment of entrepreneurship education program on the real estate management students

Measured variables	Nos. of questions	Mean (average)	Standard deviation	
T1 measurement :				
• Studentsøawareness and motivation	15	2.45	0.713	
• Studentsøentrepreneurial value creation	20	2.01	1.239	
• Entrepreneurial self-employment goal	15	3.21	1.514	
T2 measurement:				
• Studentsøawareness and motivation	15	2.67	0.479	
• Studentsøentrepreneurial value creation	20	1.89	0.372	
• Entrepreneurial self-employment goal	15	3.85	0.981	
T2 ó T1 measurement:				
	Not applicable	Mean difference	Standard deviation	Level of sig.
• Studentsøawareness and motivation		0.22	0.213	0.035*
• Studentsøentrepreneurial value creation		- 0.12	1.301	0.214
• Entrepreneurial self-employment goal		0.65	1.426	0.001**

Notes: \*significant at the p<0.05 level, \*\*significant at p<0.001 level

The emphasis of the research was strictly concerned in observing divergence of the two stages measurement (means scores, T2 ó T2). The findings shows that the mean scores (students: awareness and motivation; interaction and networking; self-employment goal) for all the respondents at the two point measurement were significantly different and EE positively impacted. The surprising observation occurred on the impact of the entrepreneurial learning outcome value creation. The significant drop of the mean scores and negativity of the EE impact pose a weakness on the creativity, innovation, idea development and overall value creation on the student entrepreneurial capacity to business start-up dynamism.

Conversely, all enquiry vis-à-vis, how valuable was the entrepreneurial knowledge gained during and after the EE program to the studentsø idea development; problem and opportunity recognition; analytical problem solving capacity; business decision; development of new products and services; creativity and innovation skills; risk taking proficiency, all received low mean scored value response respectively. In this regard, demand a crucial need to emphasise on the aforementioned area. The weakness in these core areas could truncate the entire significant impact of the entrepreneurship program, because today ideas determine the reality of tomorrow. Subsequently, what is the possibility of sustenance of the entrepreneurial awareness, motivation, and self-employment intention by the students, when the value creation on the idea development is weak?

### **Implication of the research findings**

The indication from the subjective response of the students, in respect of the weak and trivial entrepreneurial value creation indices measured, majority of the educatees were more inclined towards starting business after graduation. This supports the previous studies of several scholars (Kolvereid & Isaken, 2006; Souitaris et al., 2007; Fayolle, et al., 2006; Oosterbeek, et al., 2010). Hence, number of studentsø result pointed out that the course did animated their existing motivation and open-up several possibilities of future line of business plans. The business minded majority, distinctively suggested that the course had positively impacted on their awareness and motivation on entrepreneurship as a appreciable career alternative. Notable reasons such as challenges of running business, business failure, lack of experience and lack of resources to start business as critical stumbling block to entrepreneurship. In the same respect, of all the factors negate self-employment intention is the fear of failure - risk taking proficiency ranked highest. This view was particularly strong among all the students. On the contrary, the majority of all the respondents (students) argued that possibility of start-up business is a very high within a range of ten years after graduation. Likewise, entrepreneurship seemed practically self-employment as a realistic option upon graduation and that it presented them with a greater opportunity for independence and wealth creation. In the nutshell, students established that the course provided a constructive understanding, interest and self-confidence possibility towards entrepreneurship. Even though, compromising their comfort zone for the business unknown success is the most challenging fact of life.

### **Conclusion and recommendation**

FMAM contributes to the assessment process in a number of degrees. The model established the basic process channels of standardizing the complexity of assessing entrepreneurship education. Also, set focuses on the matter-of-fact portray in the reality of lifeø expectation of any education program along the FM principles. Hence, position framework for operationalizing and quantifying appropriate variables as accomplishment pointer. In addition, the empirical findings of this FMAM approach provide an added contribution to bodies of knowledge in both fields of entrepreneurship and facilities management domain. Most importantly, this research outcome is a food for thought and total reflection for all the stakeholders involved in the advancement of entrepreneurship education in HEIs.

To begin with, in the entire research sample, participation in the EE program did impact studentsø entrepreneurial awareness, motivation and capacity toward self-employment intention. There were sizeable significant impacts on their perceived behavioural control; attitude toward the behaviour and subjective norms. Previous researches had give emphasis to the positive correlation between intention and self-efficacy or perceived behavioural control (Hytti, et al., 2010; Krueger, 1993; Krueger & Dickson, 1994) respectively.

In the nutshell, entrepreneurship program noted to have a considerably one-sided of the required constituent in developing factual entrepreneurial graduates. This result sustains the

works of renowned research scholars (Jones et al., 2012, Matlay, 2008; Fayolle & Gailly, 2008). Consequently, implication of this gap could be as a result of tight program duration and existing dense curriculum structure, and extra work load on the part of the educators. All this could possibly create cracks of inequality between education giver and training requires in the HEIs. Therefore, assessment of the entrepreneurship in the targeted public university revealed clearly that the program is more of developing managers for employment than creating manager to employment.

Last but not the least, the FMAM framework in Figure 1 is extensively sustained by the data and convinced learning outcomes among the participant of the EE as presented and discussed. The reality of the assessment practice is indeed to some extent more complex than the hypothetical perspective. However, limitations of the research are on the area of time duration of the study and size of the population sample used. Therefore, larger population coverage require for appropriate generalization of the assessment objective, for the educational policy recommendation and subsequent future and implementation.

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