

Changing Entrepreneurial Leadership Knowledge Competency in Higher Education: A Way to Move Forward

Anis Amira Ab Rahman¹, Mohd Ikhwan Aziz^{1,*}, Satishwaran A/L Uthamaputhran¹, Nur Izzati Mohamad Anuar¹, Yusrinadini Zahirah Md. Isa@Yusuff¹ and Nik Maheran Nik Muhammad²

¹Faculty of Entrepreneurship, Universiti Malaysia, Malaysia

²Global Entrepreneurship Research and Innovation Centre, Universiti Malaysia Kelantan, Malaysia

Abstract: University Leaders should have the entrepreneurial capacity to strengthen the Malaysia higher education sector. The role of higher education in economically improving Malaysia is undeniable. One of the functions of higher education is to build graduate entrepreneurs capable of creating jobs. Therefore, those talents should be led by leaders who have an entrepreneurial mindset. Unfortunately, less effective informal entrepreneurship education that relates to entrepreneurial leadership has been executed to inculcate the knowledge and skills of entrepreneurial leadership. Hence previous research that indicated the effective entrepreneurial leadership training which regards to entrepreneurship body of knowledge is scarce. Therefore, this study will also disclose the findings that relate to effective entrepreneurial leadership training that can change the knowledge of university leaders and fill in the gaps in the entrepreneurship body of knowledge. This study employs a Quantitative method that utilizes the Kirkpatrick Training Effectiveness Analysis Model. The descriptive and mean score analysis is used to indicate the changes in entrepreneurial leadership knowledge. It is found that the awareness of entrepreneurial leadership has increased, and they believe that entrepreneurship skills and behaviors can be carried out accordingly. Future research should enhance this study by utilizing Kirkpatrick Training Effectiveness Analysis Level Three.

Keywords: Entrepreneurial leadership, entrepreneurship education, informal training, Higher Education.

1. INTRODUCTION

It is generally recognized that entrepreneurs are key drivers of economic growth and job creation, in particular, by promoting an entrepreneurial mindset and innovation. Entrepreneurship education has been a key tool that enhances the entrepreneurial orientation of young people, especially students. The quality of teaching and learning at the university level across the world has been one of the increasing attention (Devlin, 2007), leading to educators' pressure to ensure teaching effectiveness and demonstrate the effectiveness in universities' management (Devlin & Samarawickrema, 2010). Becker (1993) claimed that education and training are important in order to increase one's own level of earnings and productivity, which eventually increases one's income. Noe (2010) supported that the previously developed training model has improved the participants' financial performance compared to those who have not participated in the training.

Hence, Devlin and Samarawickrema (2010) suggested that training should be designed to meet the expected outcomes. Thus, the entrepreneurship training program is proposed to provide professional development for the academic workforce to face the

early mentioned challenges. The previous entrepreneurship training programmes are measured based on Kirkpatrick's (1996) Training Effectiveness Model, which emphasizes the four levels of evaluation, reaction, behaviour and learning (e.g.: Ab Rahman *et al.*, 2019). Therefore, it is expected that at the end of this programmes, the participants will be able to improve their skills, create new ideas, and provide excellent service to their institution. Apart from that, this programme aims to provide training to the university leaders to improve and accelerate their entrepreneurial skills and knowledge level of contribution towards institutional productivity.

Hence, University Malaysia Kelantan initiated the program for University Leaders called University Leader's Entrepreneurial Educators Bootcamp (UniLEEB). This boot camp was created with specific and comprehensive series of modules. The program's content is design to train and accelerate the university leaders to be professional Intrapreneur with knowledge and skills development. This programme will give an opportunity to interact with influential policymakers, leading vice-chancellors and experts in the field of entrepreneurship university education. This will give participants valuable insight and strategies to positively respond to vast economic and academic changes.

Apart from that, this program provides a comprehensive curriculum toward the development of

*Address correspondence to this author at the Faculty of Entrepreneurship, Universiti Malaysia, Malaysia; E-mail: a.researcher40@yahoo.com

entrepreneurs' holistic skills and knowledge from entry level of social entrepreneurship start-up enterprises to Certified Social Entrepreneurial Innovator Coach. Focus on developing entrepreneurial leadership skills and introducing strategies to support entrepreneurship, innovation and implement change at the university. The programme designed for middle-level administrative/senior academic leaders who: Wish to identify entrepreneurial approaches, especially in resource-constrained environments. Seek further understanding of the higher education sector and the policy environment. Keen to extend their networks and learn more about higher education entrepreneurial approaches. Attendance and contribution to the programme lead to Entrepreneurial Leaders Certification.

Comparing decades ago, Universities are operating in a more competitive environment around the globe. Malaysia's proposal to become a developed country by 2020 brings the need to create a competitive national higher education environment. This notion is reflected in Malaysian universities by creating international profiles through academic and leadership contributions of dean. One of the strategies in this action plan is to transform Malaysian Higher Education into a regional hub for education in Asia (Ministry of Higher Education, 2007). Part of the action plan to transform universities by applying entrepreneurial style into an academic context. This means that a Malaysian university function goes beyond academic services by applying the entrepreneurial style.

The list of challenges rises considerably as the university's core business increases in difficulty. Academicians, for the first time, are discussing the necessity of a new kind of leadership to direct institutions facing these new challenges. The recommended new entrepreneurial leader is desired in the turbulent and competitive atmosphere that organisations face today. There is also a suggestion that HEIs transform and invigorate themselves by becoming more entrepreneurial in the management's behaviours, characteristics, and attitudes.

A growing number of programs and curricula on entrepreneurship have been registered in many education institutes to help the educator cultivate the entrepreneurship mindset. Despite growing interest and attention to entrepreneurship, the field related to entrepreneurship education research remains under-investigated to our best knowledge. The educator's competence and the entrepreneurship program

effectiveness still less covered in the research. There is still a lack of agreement about the key objectives of entrepreneurship at university level, contents, delivery approaches, and the characteristics of the educator that facilitate the entrepreneurship education program.

This UniLEEB program aims to close the gap by researching the effectiveness of training program through a quantitative approach utilising the educator's knowledge and competence, related to entrepreneurship and university programs. In particular, this study would like to know what extent the program related to entrepreneurship supports the educator knowledge and offers a new contribution to the entrepreneurship education path.

In general objective, UniLeeb Programme helps University Leader to develop and strengthen their Entrepreneurial Leadership capacity. In specific of the objectives are 1) to understand the right mindset for entrepreneur. 2) to assess university leader's entrepreneurial capabilities. 3) to analyse the training effectiveness of an entrepreneurial leader.

2. LITERATURE REVIEW

Entrepreneurship education can be broadly regarded as being concerned with 1) the culture and/or the state of mind, 2) the development of entrepreneurial behaviour and 3) the variety of situations such as new venture creation, corporate venture or acquisition (Fayolle and Klandt, 2006). Fayolle (2018) suggested two major revolutions that are required for entrepreneurship education. First, entrepreneurship programs and courses need to be supported by vigorous theoretical and conceptual foundations which are drawn from the fields of entrepreneurship and education (Fayolle, 2018). Second, there is a need to reflected on the practices (Fayolle, 2018). Ultimately, the biggest obstacle to the successful teaching of entrepreneurship and the realization of entrepreneurship education is the attitudes of educators (Gustafsson-Pesonen & Remes, 2012). The teaching of entrepreneurship requires the use of a learning concept consistent with the phenomenon of entrepreneurship (Gustafsson-Pesonen & Remes, 2012).

Kirkpatrick (1976) model has been described as the most popular approach to the evaluation of training in organizations (Bates, 2004). The popularity is due to several factors that include the potential of this model to simplify the complex process of training evaluation,

its great emphasis on information of training outcome, and its understandable information on training outcome and objective achievement. This model comprises of four levels which include 1) reaction, 2) learning, 3) behaviour and 4) results, in which hierarchical relationship is established (Byrne and Alain, 2009). The first level of this model measures the learner's perception (reaction) of the course (Rajeev, Madan, Jayarajan, 2009). It is often measured with attitude questionnaires which are distributed after the training (Rajeev, Madan, Jayarajan, 2009). It gauges participants' interest, motivation, and attention levels (Smidt, Balandin, Sigafos, & Reed, 2009). The second level assesses whether the objectives of learning are met (Rajeev, Madan, Jayarajan, 2009). Pre-test and post-test can be combined to see differences between what the learners already knew prior to the training and what the learners actually learned during the program (Rajeev, Madan, Jayarajan, 2009). Learning evaluation can also include written assessment or role-plays to demonstrate specific knowledge within the training (Smidt, Balandin, Sigafos, & Reed, 2009). The third level assesses the result of training through job performance changes (Rajeev, Madan, Jayarajan, 2009). This indicates learners' ability to apply what they have learned during the training and involves the evaluation on the capabilities of learners to perform learned skills while on the job rather than in the classroom (Rajeev, Madan, Jayarajan, 2009). The fourth level assesses the benefits gain by the learners against the cost to conduct the training (Rajeev, Madan, Jayarajan, 2009). Therefore, it measures the impact including monetary efficiency, moral, teamwork and other measurable impacts (Rajeev, Madan, Jayarajan, 2009). This level is time-consuming and costly as compared to the other levels (Rajeev, Madan, Jayarajan, 2009).

The field of entrepreneurship education has received considerable attention academically (Nasr and Boujelbene, 2014). Many researchers, practitioners and policy makers proposed that entrepreneurship education produces measurable outcomes (Nasr and Boujelbene, 2014). However, there is a lack in measuring the impact of training program which consider the long-term perspective (Nasr and Boujelbene, 2014). Several researchers suggested Kirkpatrick (1976) model as the foundations for evaluating entrepreneurship training (Fayolle, 2008; Nasr and Boujelbene, 2014). Some factors can be considered vital for assessing entrepreneurship education training (Oyebola Irefin, & Olaposi, 2015). This includes the presence of skills which are relevant for venture creation (Oyebola Irefin, & Olaposi, 2015).

The birth literature in entrepreneurial leadership was from Peck (1983), he stated that entrepreneurial leadership success can instigate within university. Peck's theory is still used to explicate entrepreneurial leadership. On the other hand, scholars in entrepreneurial leadership literature strongly believe that educational leadership in education institutions can enhance their efficiency of operation, encourage atmosphere for change, and innovative behaviour (Berglund & Holmgren, 2006; Kempster & Cope, 2010). Furthermore, Tarabishy *et al.* (2005) stated that plenty of things should be done to make comprehensible the characteristics or functions of tomorrow's leaders, new reasoning patterns, and new institutional designs that must involve new leadership styles. They also proposed 'entrepreneurial leadership' to embrace the entrepreneurship in any education institution and among community.

The word entrepreneurial university firstly initiated Etzkowitz (1998), it describes any kind of universities that have proven themselves to develop the economic up to regional area significantly. Even though, seems to be no consensus on the fixed definition of entrepreneurial university term. Yet, some similar characteristics identified in the literature review reveal a polar that supports some educational institutions' entrepreneurial activities. Some of these definitions are that entrepreneurial activity at the university level impacts regional areas (Jundi, Ghazalat, & Yahya, 2019). Apart from that, entrepreneur university can also be defined as implicit and explicit into two major compositions. The definition of entrepreneur university is to express the process and actions within university settings that lead to new venture creation, alternative source of income, technology transfer, commercialization, and commoditization through triple helix collaboration (university – industry – government) external funding acquisition.

3. METHODOLOGY

The main objective of this study is to determine the main objective mentioned in chapter 1. For that purpose, this study used a quantitative method strategy in conducting the study by inquiring the involved associates. This study consists of exploration, descriptive, and explanatory characteristics.

The quantitative approach, convenience sampling is used by using questionnaire with 5 points Likert scale (Sekaran & Bougie, 2016). There are 2 main sections, encompasses of Section A: Demographic Profile and

Section B: Learning, feedback of before course and after a course of the program. The data will be analysed through frequency analysis, descriptive, reliability, t-test, and correlation (Hair, 2007).

Leaders or management level from Malaysian Higher Education Institutions become respondents of the study. These respondents are chosen as the research subject based on three characteristics. Firstly, the managerial level experiencing management practice in higher education institutions. Secondly, they have gone through or underwent entrepreneurial experience in the industry or higher education institutions. Thirdly, significantly involved in higher education institution decision-making process. On the other hand, this study is limited to university leaders.

Henceforth, a convenience sampling method was used in this study as the sampling method is a suitable small group number of population with the non-probability approach.

There are 36 respondents who participate in the UniLeeb program, and the objective of the program's objective is to identify and assess the entrepreneurial leadership among respondents. Therefore, all participant has become the respondents of the study. To validate the purpose of the study which already represents the population. All the respondents were placed in a designated place or hall. They will be given a set of questionnaire to be completed for data collection purpose.

A set of questionnaire with 38 items was used for data collection. The questionnaire was systematically prepared with a set of questions deliberately designed to elicit a response from respondents. The questionnaire was researcher-developed based on extensive literature reviewed. Good questionnaires are those with standardized questions that bring similar interpretation to all respondents (Robson, 2002). This questionnaire was partly taken from previous research study, and the items used in the questionnaire were adopted from several existing questionnaires (Ab Rahman *et al.*, 2019).

In achieving the objective of the research, a questionnaire instrument was used. The questionnaires were distributed to University Leader in UniLeeb programme. The questionnaire distributions to the participants were conducted in different times in a day. The purpose of the different time was to reduce bias. This method is in line with Gerrad and Cunningham

(1997), Jamal and Nase (2002), and Asyraf *et al.* (2007) who emphasized the importance of time difference to avoid bias feedbacks from the respondents.

Descriptive statistics were used to measure the frequency, percentages, means and standard deviations, and the measured items' response score. The quantitative data analysis, used Statistical Package for the Social Science (IBM-SPSS) to analyse the data.

4. RESULTS AND DISCUSSION

The findings indicate the Level 2 of Kirkpatrick Training Effectiveness Model. An analysis of the data assembled from the questionnaire is based on learning feedback from UniLeeb program respondents. The findings presented begin with the descriptive statistics of the sample with respect to the demographic profiles of the respondents. Next, Reliability, T-Test, Compare Mean to understand the program's content and reveal the pre and post changes regarding training intervention.

There are 36 participants joint the UniLeeb Programme, the proposition is 52.8% are Male and 47.2% Female. It means Male are dominantly lead the University Leaders on entrepreneurship. 69.4% of the UniLeeb Program cover up by Public Universities and 30.6% remain for the Private Universities. Currently, most public universities currently move forward to strengthen entrepreneurship in their management and promote women leaders in its governance.

Table 1: Frequency Analysis of UniLeeb Program Respondents

Gender		
	Frequency	Percent
Male	19	52.8
Female	17	47.2
Total	36	100.0
Type of University		
Public	25	69.4
Private	11	30.6
Total	36	100.0

In general, Table 2 indicates the descriptive statistic of respondents. The items infer the entrepreneurial mindset, entrepreneurial strategy and entrepreneurial branding.

Table 2: Summary Mean of UniLeeb Program Course

Course Feedback	N	Minimum	Maximum	Mean
Before	36	1.71	4.46	3.0179
After	36	3.45	4.87	4.0099

Based on the descriptive analysis in Table 2, before the participant underwent the UniLeeb Program, the participants' mean score was 3.02. This indicated that the participants still do not have adequate knowledge about entrepreneurial leadership. They still confuse the appropriate meaning of mind set for entrepreneurial leader in higher education institutions (Mean Score: 2.92, Item 2). Furthermore, they cannot capture the right strategy capabilities for enabling entrepreneurship at the universities (Mean Score: 2.83, Item 11; Mean Score: 2.94, Item 12; Mean Score: 2.78, Item 13). The respondents also could clearly understand the internal and external environment including commercialization and university entrepreneurial ecosystem (Mean Score: 2.86, Item 31; Mean Score: 2.86, Item 22; Mean Score: 2.86, Item 33).

However, after the participants underwent the UniLeeb Program, there is an improvement in the Mean score. Those participants' overall score is aggregate at 4.01 that indicates the program can shift and equip the participant with the entrepreneurial leadership competencies. The shift score mean from 3.02 to 4.01 do explain the program has significantly contributed to the participants in inculcating entrepreneurial leadership mindset and skills.

Table 3: Reliability Before Course and After Course

Reliability Statistics		
Items	Cronbach's Alpha	N of Items
Before	0.976	38
After	0.935	38

Cronbach's alpha is the test of reliability. According to Bougie and Sekaran (2010), the minimum requirement for reliability statistics is 0.70. In this case, the value of Cronbach's alpha is 0.976 for Before Course and 0.935 for After Course. Therefore, the value is in very good reliability for internal consistency to ensure that the items produce a reliable scale (Coakes *et al.*, 2009).

Table 4 stated for Public universities aggregated at 3.09 and 4.01 for each mean score. Meanwhile, for

Private Universities, the mean score each are 2.86 and 4.01 before and after. This analysis can determine that private universities do have lower entrepreneurial practice in their universities compared to public universities. After the participant went through the program, both public and private universities indicated the same mean score towards entrepreneurial mindsets and knowledge.

Table 4: Compare Mean

Report			
Type University		Before Course	After Course
Public	Mean	3.0879	4.0100
	N	25	25
	Std. Deviation	.64993	.35319
Private	Mean	2.8589	4.0096
	N	11	11
	Std. Deviation	.52543	.49851
Total	Mean	3.0179	4.0099
	N	36	36
	Std. Deviation	.61642	.39566

Thus, from the result analysis, it can be understanding that the result is majorly impacted from public university at 69.4%. Moreover, the overall result of the compare mean showed that participants' result is low in entrepreneurial mindset, which is at only 3.02. And the result after joining the programme, the mean score went up to 4.01. An improvement among participant in entrepreneurial mindset. Apart from that, from this result also, this report has mentioned the capabilities and behaviours on entrepreneurial among the leaders. The result provides low capabilities of the universities leaders and limited entrepreneurial behaviour among the university leaders. Even though, there was an improvement of means score among the university leaders. However, those improvements still limited on the mindset, in which it does not reflect towards the capabilities and behaviour of the universities leaders. Therefore, this study has achieved all objectives including with the programme objective.

5. CONCLUSION

In conclusion, all the research objectives and questions have been achieved and answered. Based on the results displayed above, all items provided a significant value towards talent, developing an entrepreneurial leadership mindset and capabilities that

indicate the leaders' competencies. To illustrate this point, the factors listed in the dependent variables were the critical factors that reflected the mindset of University Leaders. Moreover, this result had substantiated and responsible for developing a better talent for university leaders. In order to develop a further talent for University leaders' further module of the program would take into action.

The important results of this research include 1) the implication of this programme should lead the university leaders to become knowledgeable, promote quality leadership that eventually leads all participants to internalize values and principles of continuous quality improvement in line the right mindset; 2) this programme improve university leaders' knowledge and skills also can apply the appropriate skills to enhance entrepreneurial culture; 3) plus, at the end of this programme, university leaders are able to determine the attitudes, knowledge and necessary skills as long as behaviour needed to accomplish the university vision and mission that regards to entrepreneurial activities. Future research should also focus on enhancing the model by adopting level three of Kirkpatrick Training Effectiveness Analysis.

REFERENCES

- Ab Rahman, A.A, Yaacob, M. R, Ibrahim, Ahmad Shaupi, N. S., Permarupan, P. Y., & Md Shuaib, A. S. (2019), Measuring the REMODE Entrepreneurship Training Program at Behaviour Level of Kirkpatrick Model in Aquaculture Industry, *Research in World Economy*, 10 (2). <https://doi.org/10.5430/rwe.v10n2p1>
- Bates, R. (2004). A critical analysis of evaluation practice: The Kirkpatrick model and the principle of beneficence. *Evaluation and program planning*, 27(3), 341-347. <https://doi.org/10.1016/j.evalprogplan.2004.04.011>
- Becker, G. S. (1993). Human capital: A theoretical and empirical analysis with special reference to education. Chicago, IL: The University of Chicago Press. <https://doi.org/10.7208/chicago/9780226041223.001.0001>
- Byrne, J., & Fayolle, A. (2009). Corporate entrepreneurship training evaluation: a model and a new research perspective. *Industry and Higher Education*, 23(3), 163-174. <https://doi.org/10.5367/000000009788640242>
- Devlin, M. & Samarawickrema, G. (2010) The criteria of effective teaching in a changing higher education context, *Higher Education Research & Development*, 29:2, 111-124. <https://doi.org/10.1080/07294360903244398>
- Devlin, M. (2007, August). Improving teaching in tertiary education: Institutional and individual influences. Keynote address at *Excellence in Education and Training Convention, Singapore Polytechnic, Singapore*.
- Fayolle A. (2018). (Ed.), *A Research Agenda for Entrepreneurship Education*, MA, USA; Gloucestershire, UK: Edward Elgar Publishing, 309 pp. <https://doi.org/10.4337/9781786432919>
- Fayolle, A., & Klandt, H. (Eds.). (2006). *International entrepreneurship education: Issues and newness*. Edward Elgar Publishing. <https://doi.org/10.4337/9781847201652>
- Gustafsson-Pesonon, A., & Remes, L. (2012). Evaluation of entrepreneurial development coaching: changing the Teachers' thinking and action on entrepreneurship. *Annals of Innovation & Entrepreneurship*, 3(1), 17211. <https://doi.org/10.3402/aie.v3i0.17292>
- Jundi, K., Ghazalat, A., & Yahya, S. 2019. *The Sustainable Development Practices Role and Transformational Leadership: Interaction and Impact on the Financial Performance*. Journal of Reviews on Global Economics, 8, 591-603 <https://doi.org/10.6000/1929-7092.2019.08.51>
- Kirkpatrick, D. L. (1976). Evaluation of training. In R. L. Craig (Ed.), *Training and development handbook: A guide to human resource development*. New York: McGraw Hill
- Kirkpatrick, D. L. (1996). Evaluating Training Programs: The Four Levels. San Francisco: *Berret-Koehler Publishers, Inc*
- Nasr, K. B., & Boujelbene, Y. (2014). Assessing the impact of entrepreneurship education. *Procedia-Social and Behavioral Sciences*, 109, 712-715. <https://doi.org/10.1016/j.sbspro.2013.12.534>
- Noe, R. A. (2010). Employee training and development (5th ed.). New York: McGrawhill.
- Oyebola, A. I., Irefin, I. A., & Olaposi, T. O. (2015). Evaluation of entrepreneurship education in selected Nigerian universities. *Girişimcilik ve İnovasyon Yönetimi Dergisi*, 49.
- Rajeev, P., Madan, M. S., & Jayarajan, K. (2009). Revisiting Kirkpatrick's model—an evaluation of an academic training. *Current science*, 96(2).
- Smidt, A., Balandin, S., Sigafos, J., & Reed, V. A. (2009). The Kirkpatrick model: A useful tool for evaluating training outcomes. *Journal of Intellectual and Developmental Disability*, 34(3), 266-274. <https://doi.org/10.1080/13668250903093125>

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