e-ISSN: 2456-3463
International Journal of Innovations in Engineering and Science, Vol. 2, No.4, 2017
www.ijies.net

Entrepreneurship Education and Entrepreneurial Intentions among Malaysian University Students: Data Analysis using SEM to Test the Hypotheses through Mediating Effects

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Abstract – *A study is conducted to test the entrepreneurial intentions through entrepreneurship education among Malaysian university students. A theoretical framework has been developed taking into account all the major variables to test the entrepreneurial intentions of the Malaysian university students and the hypothetical model developed for the study is tested using the structural equation modelling (SEM) approach. The study investigates the independent variables of entrepreneurship curricula, teaching methodologies and universities roles and the mediating variables of attitude and stakeholder support system towards the dependent variable entrepreneurial intentions through a questionnaire survey from four of the entrepreneurial focused Malaysian universities and data was collected from 396 questionnaires and analysed. The model was tested using a two-stage SEM.*

This paper describes the second stage using CFA to evaluate the direct and indirect effects of the mediating variables on the exogenous variables towards the endogenous variable through the application of the path analysis technique. The hypotheses and research objectives are to empirically examine the variables of attitude towards goals and family roles as mediators in the relationship of the construct of entrepreneurship education to entrepreneurial intentions in this study. The results of the significance of the hypotheses have been tested and analysed.

Keywords- Entrepreneurship curricula, Teaching methodologies, Universities roles, Attitude towards goals, Family roles, Entrepreneurial intentions.

1. INTRODUCTION

Entrepreneurship education had resulted in the growth of a newly emerging knowledge-based economy in many countries, including Malaysia. The characteristics of entrepreneurship education found that the majority of programs conducted were to increase the awareness and understanding of entrepreneurship as a process (Hill, 1988) and this awareness of entrepreneurship had been seen as a career possibility (Solomon et al., 2002). Entrepreneurship intentionality had been suggested as an indicator of the effectiveness of entrepreneurship education programs. (Botha, Nieman & Vuuren, 2006; Fayolle, Gailly & Lassas-Clerc, 2005a, 2006; Cox et al., 2002). Entrepreneurial intentions were also traced to general factors (Krueger et al., 2000) e.g. a person's attitude towards behaviour (Davidsson, 1995), and socio cultural conditions (Begley et al., 1997), barriers and support which have increased the individual's intentions towards self-employment (Frank & Luthje 2004). The university environment was also found to have a great impact on entrepreneurial intent.

Taking these factors into consideration, a hypothesised model was developed for the study with the independent variable of entrepreneurship education, with components of curricula, teaching methodologies and universities roles. The mediating factors in this study are attitude and stakeholder support systems. The dependent variable is entrepreneurial intentions. Five hypotheses have been developed by the researcher to makes a prediction about the expected outcome for the population of the study

(Creswell, 2007). Structural equation modelling (SEM) was applied to analyze the sample data through the AMOS 22.0 software and construct a parsimonious model to measure the entrepreneurial intentions of Malaysian university students through entrepreneurship education. The goodness fit indices have been applied to test the hypothesized model and the re-specified model. The hypotheses empirically examine the exogenous variables with the endogenous variable through the mediators to test the significance.

II-LITERATURE REVIEW

The literature probes into concepts and conceptualizations of the theories and has proposed a theoretical framework identifying the research issues and the research gap. The research design consists of developing a hypothetical framework with entrepreneurship education as the independent variables to test the dependent variable of entrepreneurial intentions. In addition, demographic characteristics, attitude factors and stakeholder support system factors act as mediating variables (Rengiah, P and Sentosa, I, 2014).

Hypotheses formulation

Five hypotheses have been developed from the literature as shown below.

i) Entrepreneurship curricula

Many research studies has demonstrated that entrepreneurship curricula is a critical factor in providing the best learning and training models for university students (Diaz-Garcia, C et.al. 2015, Oyugi, 2014; Sheta, 2012; Roudaki, 2009; Solomon, 2007; Menzies & Tatroff, 2006; Veciana, Aponte & Urbano, 2005).

H1: Entrepreneurship curricula is positively related to entrepreneurial intentions.

ii) Teaching methodologies

Researchers have suggested that entrepreneurship 'can be taught' and many global institutions are teaching entrepreneurship programs. Individuals may be born with entrepreneurship characterisics, but the level of entrepreneurship activity will be higher if entry-level entrepreneurial skills are taught (Glen, R et. al., 2015, Laguador, 2013; Zahra et al., 2012; Fayolle, 2008; Krueger, 2007; Kuratko & Hodgetts, 2004; Bechard & Gregoire, 2005b; Morse & Mitchell 2005; Edwards & Muir 2005).

H2: Teaching methodology is positively related to entrepreneurial intentions.

iii) University roles

University roles are important in developing the students' entrepreneurial careers and inclinations. The university teaching environment is the most influential factor in students' perception of an entrepreneurial career and intentions and these students were seen to be more likely to consider starting their own businesses (Nasira' A, et. al., 2015, Zhang et al., 2014; Liṅan et al., 2011;Yar Hamidi et al., 2008; Nurmi & Paasio 2007; Kuratko, 2005; Rothaermel & Thursby, 2005; Powers & McDougall 2005).

H3: University role is positively related to entrepreneurial intentions.

iv) Attitudes

The variable attitudes has become widely in use for the prediction of the likelihood to start an enterprise (Fayolle A, & Gailly N, 2015). The attitudes are classified as: attitude towards money (Schwarz et al., 2009; Lim & Teo 2003; Douglas, 1999), attitude towards change (Schwarz et al., 2009; Shane et al., 2003; Autio et al., 1997) and attitude towards entrepreneurship (Schwarz et al., 2009; Franke & Luthje 2004; Krueger et al 2000).

H4: Attitude is positively related to entrepreneurial intentions.

v) Stakeholder Support System

Stakeholder support system influences the entrepreneurial intention of students and they are comprised of government support (Denanyeh et. al., 2015, Romani et al., 2009; Reynolds et al. 2005; Stevenson and Lundstro¨m 2005; Storey, 2005, financial support (Fehr & Hishigsuren 2006; Tan & Peng 2003, and parents support (Matlay, 2009; Reavil, 1998).

H5: Stakeholder support system is positively related to entrepreneurial intention.

Methodology

The research methodology in this study is purely quantitative, involving the hypotheses testing of the theory using Structural Equation Modelling (SEM). Structural equation modelling as the researcher is interested in studying theoretical constructs that cannot be observed. Entrepreneurial intention is the dependent variable in this study and it could be called 'latent' or 'unobservable' variable. Since latent variables are not observed directly they cannot be measured directly. As such the unobservable variable is linked to one that is observable making its measurement possible (Byrne 2013). Previous

studies relating to entrepreneurship education and entrepreneurial intentions were conducted and some researchers used factor analysis, multiple regression and Anova, but some studies were supported by Structural Equation Modelling (SEM) (Hussain A, 2015, João M. Ferreira, Mário L. Raposo, Ricardo Gouveia Rodrigues, Anabela Dinis and Arminda de Paco, 2012, Obschenka, M, Silbereisen R.K., Schmitt-Rodermand E, 2010, Zampetakis, L.A. and Moustakis V, 2006).

The hypothesized model developed for the study has to be tested through Amos version 22.0 (Rengiah P and Sentosa, I. 2014). Statistically, in an analysis of the entire system of variables, the aim is to determine the extent to which it is consistent with the data. If the model fits adequately it is found to be plausible of postulated relations among the variables. If it is inadequate, then the testability of the relation is rejected and a new model has to be generated. The unobservable or latent variable, entrepreneurial intention is linked to one that is observable making its measurement possible. It involves gathering of information from a large group of respondents. Data was collected through the administration of survey questionnaires. The researcher designed the self-administered questionnaire with the relevant questions according to the development of the hypothesis (Zikmund, 2010). The questionnaire consisted of seven sections and was designed on a 7 point Likert scale (Burns & Bush, 2000), with ten to twelve questions in each section. A total number of 600 questionnaires were distributed and a response rate of 77% was collected from the respondents which resulted in 464 completed questionnaires (Rengiah, P and Sentosa, I, 2015). In SEM the sample size must be sufficiently big to obtain a stable parameter estimates. With the multivariate assessment of outliers using Mahalanobis distance, 396 responses were found to be usable and this was found to be adequate. In SEM a normal size of 100 – 200 responses is medium and a large sample size is more than 200 (Hair et. al., 1995; Kline, 1998).

III- DATA ANALYSIS

The 396 cases were analysed in the study using Structural Equation Modelling. Statistical validity tests and analysis were conducted such as reliability test and composite reliability tests, validity tests using confirmatory factor analysis (CFA) for construct validity, descriptive analysis, correlation and structural equation modelling analysis using AMOS 22.0 (SEM). The paper discusses the hypotheses testing of the exogenous variable of entrepreneurship education with the endogenous variable of entrepreneurial intentions.

Results of Hypotheses testing

The goodness of fit indices for the 19 final items in the variables of curriculum, teaching methodology, university role, attitude towards goals, family roles, and entrepreneurial intentions to generate the re-specified model which confirmed the acceptance level (Significance > 0.5) ranging from 0.521 to 0.898 as the results of standardize regressions weight. Based on the CFA result, the present study observed that the factor loadings of all observed variables or items are adequate, ranging from 0.521 to 0.898. The factor loadings or regression estimates of latent to observed variables are above 0.50 (Hair et al., 2006). The goodness of fit indices for the five latent constructs of entrepreneurial intentions as exogenous variables and confirmed the dimensions of entrepreneurial intentions in the context.

Hypotheses testing and Path analysis (Direct and Indirect effect)

In the present study, the direct and indirect effect in the relationship between the education variables (curricula, teaching methodologies and universities roles), attitude towards goals, family roles and entrepreneurial intentions were measured by the application of path analysis technique. Path analysis is a subset of SEM (Hair et al., 2014; Ferdinand 2000), the multivariate procedure that allows examination of a set of relationship between one or more independent variables, either continuous or discrete, and one or more dependent variables, either continuous or discrete (Tabachnick & Fidell 2007). Path analysis is unique from other linear equation models and is based upon a linear equation system. It is a statistical technique used to examine causal relationships between two or more variables (Tabachnick & Fidell 2007) and is used mainly in an attempt to understand comparative strengths of direct and indirect relationships among a set of variables. In path analysis mediated pathways (those acting through a mediating variable, 'Y,' in the pathway X Y Z are examined (Hair et al., 2014).

The hypotheses and research objectives are to empirically examine the variable of attitude towards goals and family roles as mediator in the relationship of the construct of entrepreneurship education to entrepreneurial intentions. The effects of attitude towards goals and family roles as mediator in the relationship between entrepreneurship education and entrepreneurial intention were examined and it showed the direct, indirect and total effect of attitude towards goals and family roles as mediating variables. All loadings were confirmed to be at a significant level (Table 1.2).

Table 1.2 Direct Impact of the Re-specified Model: Standardized Regression Weights

Endogenous		Exogenous	Std. Reg. Weight	S.E.	C.R.	P	Remark
Attitude towards goals	<---	Curriculum	0.178	0.105	1.632	0.103	Non-significant
Family roles	<---	Curriculum	-0.329	0.196	-2.043	0.041	Significant
Attitude towards goals	<---	Teaching methodologies	0.124	0.099	1.129	0.259	Non-significant
Family roles	<---	Teaching methodologies	0.127	0.170	0.851	0.395	Non-significant
Attitude towards goals	<---	University role	0.567	0.133	4.862	0.000	Significant
Family roles	<---	University role	0.771	0.259	4.451	0.000	Significant
Entrepreneurial intentions	<---	Attitude towards goal	0.255	0.067	3.297	0.000	Significant
Entrepreneurial intentions	<---	Family role	-0.218	0.051	-2.908	0.004	Significant

Source: Amos 22.0

Analysis of Hypotheses

The standardized regression weight was used to examine the mediating effect of attitude towards goals and showed the mediating effect on the relationships of the exogenous variables of curriculum, teaching methodology, university role and entrepreneurial intentions.

The indirect effect of the exogenous variables to entrepreneurial intentions is tested through attitude towards goals. The direct effect of curricula on entrepreneurial intentions is non-significant (standard regression weight = 0.18, p = 0.103) confirming the hypothesis 1- H1 (i) as rejected. The direct effect of teaching methodologies on entrepreneurial intentions is non-significant (standard regression weight = 0.12, p = 0.259) confirming the hypothesis 2 H2 (i) as rejected. The direct effect of universities roles on entrepreneurial intentions is non-significant (standard regression weight = 0.85, p = 0.000) confirming hypothesis 3 -H3 (i) as accepted. The indirect effect of the exogenous variables to entrepreneurial intentions is tested through family roles. The direct effect of curricula on entrepreneurial intentions is non-significant (standard regression weight = 0.57, p = 0.041) confirming the hypothesis 1 H1 (ii) as accepted. The direct effect of teaching methodologies on entrepreneurial intentions is non-significant (standard regression weight = 0.84, p = 0.395) confirming the hypothesis 2 - H2 (ii) as rejected. The direct effect of universities roles on entrepreneurial intentions is non-significant (standard regression weight = 0.79, p = 0.000) confirming hypothesis 3 - H3 (ii) as accepted. The total effects of attitude towards goals on the relationship between education variables (curricula, teaching methodologies and universities roles) and entrepreneurial intentions is higher or significant compared to direct effects.

The direct effect of attitude towards goals on entrepreneurial intentions is significant (standard regression weight = 0.26, p= 0.000) confirming the hypothesis 5 (H5) as accepted. The direct effect of family roles on entrepreneurial intentions is higher or significant (standard regression weight = -0.22, p = 0.004) confirming the hypothesis 6 (H6) as accepted (refer Table 4.15). In this study, hypotheses 1(i) and 2 (i) and 2 (ii) are not asserted, but hypotheses 1 (ii), 3, 5 and 6 are asserted.

Fundamental contributions of entrepreneurship education, attitude towards goal, family roles and entrepreneurial intentions

The hypothesis testing was accomplished by examining the standardised parameter estimates, critical ratio and probability level. The two-tailed test of significance was used to determine the significance of each path coefficient. The results showed that the direct relationships and indirect relationships of the hypotheses. The findings indicate the significance of the latent constructs of the exogenous and mediating variable against the relationship of endogenous variable. Specifically all the hypotheses must be supported. The SEM indicates that all the hypothesised paths in the theoretical model are at a significant level of ($p<0.05$).
In the present study, all of the hypothesised relationships were supported based on the SEM results. The path estimates for the hypotheses were tested in the model. The 3 hypotheses curricula, teaching methodologies, universities roles were tested through the mediating variables of attitude towards goals and family roles and they were tested through direct and indirect relationships. The other 2 hypotheses of the mediating variables, attitude towards goals and family roles were tested directly against entrepreneurial intentions. To examine whether attitude towards goals and family roles are mediating variables in the relationship between entrepreneurship education and entrepreneurial intentions, the indirect effect analysis was employed. The standardised factor loadings allowed the researcher to arrange the order of entry of variables based on causal priority and it one of the most useful tools for assessing interaction effects (Byrne, 2013; Ghazali, 2003). This procedure enabled the partitioning of the unique variance explained by the interaction term above and beyond those accounted for by the main effects. A comprehensive, two-stage analysis was used. The measurement model was first confirmed using CFA, and then SEM was performed based on the measurement model to estimate the fit of the hypothesised model to the data. The 2nd order analysis of entrepreneurial intentions of the measurement model was carried out to confirm that the three dimensions (curricula, teaching methodologies, universities roles) of entrepreneurship education are significant constructs to measure the endogenous variable. The measurement model, which specifies and tests the relationship between the observed measures and their underlying constructs, provides a confirmatory assessment of construct validity (Bentler 1978). The direct causal relationship among the latent constructs as posited by the theory (Anderson & Gerbing 1988) was also conducted. The confirmatory analysis of each dimension was also carried out to confirm the items.

The next procedure was drawing the 2nd order of the five dimensions of entrepreneurial intentions, which is the fundamental contribution of the present study. The results of the path analysis, indicates a significant positive relationship between entrepreneurship education and entrepreneurial intentions (P=0.000). The indirect relationship between curricula through the mediating variable attitude towards goal and entrepreneurial intentions is P= 0.103, shows a negative relationship. The indirect relationship between curricula through the mediating variable family roles and entrepreneurial intentions is P = 0.041, (P< 0.05), shows a positive relationship. The exogenous variable of curricula is therefore partially asserted with entrepreneurial intentions through the mediating variable family roles. The indirect relationship between teaching methodologies through the mediating variable attitude towards goal and entrepreneurial intentions is P = 0.259, shows a negative relationship. The indirect relationship between teaching methodologies through the mediating variable family roles and entrepreneurial intentions is P = 0.395, shows a negative relationship. The exogenous variable of teaching methodology is therefore not asserted with entrepreneurial intentions (P >0.05). The indirect relationship between universities roles through the mediating variable attitude towards goals and entrepreneurial intentions is P = 0.000, shows a positive relationship. The indirect relationship between universities roles through the mediating variable family roles and entrepreneurial intentions is P = 0.000, shows a positive relationship. The exogenous variable of university role is therefore asserted with entrepreneurial intentions (P <0.05). The direct effect between attitude towards goals and entrepreneurial intentions is P = 0.000, shows a positive relationship. The direct effect between family roles and entrepreneurial intentions is P = 0.004, shows a positive relationship. The mediating variables of attitude towards goals and family roles are therefore asserted with entrepreneurial intentions (P <0.05).

The hypotheses that are supported in this study are shown below.

H1 (i) Curricula through attitude towards goal has a **negative relationship** with entrepreneurial intentions.

H1 (ii) Curricula through family roles has a **positive relationship** with entrepreneurial intentions.

H2 (i) Teaching methodologies through attitude towards goal has a **negative relationship** with entrepreneurial intentions.

H2 (ii) Teaching methodologies through family roles has a **negative relationship** with entrepreneurial intentions.

H3 (i) Universities roles through attitude towards goal has a **positive relationship** with entrepreneurial intentions.

H3 (ii) Universities roles through family roles has a **positive relationship** with entrepreneurial intentions.

H4 Attitude towards goals has a **positive relationship** with entrepreneurial intentions.

H5 Family roles have a **positive relationship** with entrepreneurial intentions.

The square multiple correlations (SMC) show the level of contribution (adjusted R^2) of each dimension to the entrepreneurship education variable. The square multiple correlations (SMC) show the level of contribution (adjusted R^2) of each dimension to the mediating variables, attitude towards goals (β=0.694), family roles (β=0.39) and entrepreneurial intentions (β=0.059). The mediating variable has contributed 69.4% variance of attitude towards goals indicating that attitude towards goals has medium level of contribution to the structural model The mediating variable has contributed 39% variance of family roles indicating that family roles have a medium level of contribution to the structural model. The endogenous variable of entrepreneurial intentions has contributed 5.9% variance indicating that entrepreneurial intentions have a very low level of contribution to the structural model. (Hair et al., 2014; Cohen & Cohen 1983).

The interaction effect using re-specified model was conducted to confirm the significant relationships between attitude towards goals, family roles and entrepreneurial intentions. The significant level of factor loadings interaction between variables confirmed the mediating effect of attitude towards goals and family roles in the relationship between entrepreneurship education and entrepreneurial intentions. It shows the mediating effect of the variables attitude towards goals and family roles in the structural model. Square multiple correlations (SMC) show 5.9% of entrepreneurial intentions with the entrepreneurial intentions could be explained through the mediating effect of attitude towards goals and family roles. According to Cohen and Cohen (1983), if the influence predicts more than 40%, the study has confirmed the indication is able and significant to figure the phenomena. In this the result of SMC which shows 5.9% of entrepreneurial intentions is not significant to the study.

IV- CONCLUSION

The paper discusses the data analysis of testing the hypotheses using structural equation modeling (SEM). Firstly the goodness-of-fit indices have been developed and through the testing of the hypothesized model, which resulted in the re-specified model and finally the competing model. The independent variables which consist of entrepreneurship curricula, teaching methodologies and university roles and the mediating variables of attitude and stakeholder support systems are tested towards the dependent variable of entrepreneurial intentions. The direct and indirect effects of the mediating variables on the exogenous variables towards the endogenous variable through the application of the path analysis have been used. The factor loadings of the nineteen items in the study have been analysed with the standard regression weights to calculate the square multiple correlations. The five hypotheses developed for the study have been tested. The exogenous variables of curricula, teaching methodologies and university roles have been tested through the mediating effects of attitude towards goals and family roles and the results showed that three of the hypotheses H3, H4 and H5 are positively significant, whereas H1 is partially significant and H2 as negatively significant. The square multiple correlations the (adjusted R^2) of each dimension of the entrepreneurship education variable to the mediating variables shows the results as attitude towards goals (β=0.694), family roles (β=0.39) and entrepreneurial intentions (β=0.059). The mediating variable has contributed 69.4% variance of attitude towards goals indicating that it has a medium level of contribution to the structural model. The mediating variable has contributed 39% variance of family roles indicating that family roles have a medium level of contribution to the structural model. The endogenous variable of entrepreneurial intentions has contributed 5.95% variance indicating that entrepreneurial intentions have a low level of contribution to the structural model and that it is not significant to the study. There are some limitations to the study for testing the dependent variable of entrepreneurial intentions against the independent variable of entrepreneurship educcation, and mediating variables of attitude and stakeholder support systems. The study was limited to these variables only. It also included only four entrepreneurship-focused universities in Malaysia. The methodology used was a survey questionnaire method and the research attempted to predict their entrepreneurial intentions based on the questions in the survey questionnaire, therefore the study is limited to only the survey research method only. The sample might have been underrepresented as there were foreign students pursuing the entrepreneurship courses in the universities. The students surveyed were only from business and information technology students pursuing entrepreneurship courses and the study did not take into account of students pursuing other courses but with entrepreneurial intentions. It is a cross-sectional study and not a longitudinal study. Student's intentions may vary from time to time, so a longitudinal study is suggested for further research.

REFERENCES

1. *Hills, G. E. (1988). 'Variations in university entrepreneurship education: an empirical study of an evolving field', Journal of Business Venturing, vol. 3, Pp. 109-22.*
2. *Solomon, G. T., Duffy, S. & Tarabishy, A. (2002). 'The state of entrepreneurship education in the United States: a*

nationwide survey and analysis', International Journal of Entrepreneurship Education, vol.1 (1), Pp. 65-86.

3. *Botha, M., Nieman, G. & Vuuren, J. (2006). 'Measuring the effectiveness of the Women Entrepreneurship Programme as a training intervention'. Paper presented at the 2nd Ent 2006 Conference, Fundação Getulio Vargas, São Paulo, Brazil.*
4. *Fayolle, A., Gailly, B. & Lassas-Clerc, N. (2005a), 'Effect and Counter-effect of Entrepreneurship Education and Social Context on Student's Intentions'. Paper presented at the IntEnt2005 Conference, School of Management, University of Surrey.*
5. *Fayolle, A., Gailly, B. & Lassas-Clerc, N. (2006). 'Assessing the impact of entrepreneurship education programmes: A new methodology', Journal of European Industrial Training, vol. 30 (9), Pp. 701-720.*
6. *Cox, L., Mueller, S. & Moss, S. (2002). 'The impact of entrepreneurship education on entrepreneurial self-efficacy'. International Journal of Entrepreneurship Education, vol. 1 (2), Pp. 229–245.*
7. *Krueger, N. F., Reilly, M. D. & Carsrud, A. L. (2000). 'Competing models of entrepreneurial intentions,' Journal of Business Venturing, 15, Pp. 411- 432.*
8. *Davidsson, P. (1995). 'Culture, structure and regional levels of entrepreneurship'. Entrepreneurship and Regional Development, 7, Pp. 41-62.*
9. *Begley, T., Tan, W. L., Larasai, A., Rab, A., Zamora, A. & Nanayakkara, G. (1997). 'The relationship between socio-cultural dimensions and interest in starting a business-a multi country study'. Frontiers of Entrepreneurship Research, Babson College, Wellesley, MA*
10. *Franke, N. and Luthje, C. (2004). 'Entrepreneurship intentions of business students: A benchmarking study', viewed October 23 2003, www2.wuwien.ac.at./entrepren/ modules? Updownload/store_folder/Publikationen/ Nikolaus/Franke/entrepreneurialspirit.pdf..*
11. *Cresswell J. W. (2007). 'Research Design Quanlitative, Quantitative, and Mixed Methods Approaches', 3rd edition, Sage Publications Inc. USA.*
12. *Rengiah, P., Sentosa, I. 2014. 'A Conceptual Development of Entrepreneurship Education and Entrepreneurial Intentions among Malaysian University Students', Journal of Business and Management (IOSR), 16(11), Pp. 68-74.*
13. *Diaz-Garcia, C, Såez-Marinez, F & Jiménez-Moreno, J. 2015, 'Assessing the impact of the entrepreneurs' education programme on participants' entrepreneurial intentions,' RUSC, Universities & Knowledge Society Journal 12(3), Pp. 17-31.*
14. *Oyugi, J. L. 2004. 'Effectiveness of the methods of teaching entrepreneurship courses to developing self-efficacy and intention among university students in Uganda', International Journal of Social Sciences and Entrepreneurship, 1(11), 2014, Pp. 491-513.*
15. *Sheta, A. 2012. Developing an Entrepreneurship Curriculum in Egypt: The Road Ahead, Journal of Higher Education Theory and Practice, vol.12(4), 2012, Pp. 51–65.*
16. *Roudaki, J. (2009). 'University Students Perceptions on Entrepreneurship: Commerce Students Attitudes at Lincoln University,' Journal of Accounting – Business & Management, Vol. 16(2), Pp.36-53.*
17. *Solomon, G. T. (2007). 'An examination of entrepreneurship education in the United States', Journal of Small Business and Enterprise Development, Vol 14(2), Pp.168-82.*
18. *Menzies, T. & Tatroff, H. (2006). 'The propensity of male vs. female students to take courses and degree concentrations in entrepreneurship', Journal of Small Business and Entrepreneurship, vol. 19(2), Pp.203-23.*
19. *Veciana, J. M., Aponte, M. and Urbano, D. (2005). 'University student's attitudes towards entrepreneurship: A two countries comparison'. The International Entrepreneurship and Management Journal, vol. 1(2), Pp. 165–182.*
20. *Glen, R, Sucin, C, Christopher Baugher, C, Anson, R. 2015, 'Teaching design thinking in business school,' The International Journal of Management Education, vol 13(2), Pp. 182-192.*
21. *Laguador, J. M. (2013).' A Correlation Study of Personal Entrepreneurial Competency and the Academic Performance in Operations Management of Business Administration Students', International Journal of Academic Research in Business and Social Sciences, vol. 3(5),Pp. 61-70..*
22. *Zahra, A., Manasoreh K. F., & Narges, I. 2012. 'A Study of Teaching Methods in Entrepreneurship Education for Graduate Students', Higher Education Studies, vol 2(1), University of Tehran.*
23. *Fayolle, A. (2008). 'Entrepreneurship education at a crossroads: Towards a more mature teaching field', Journal of Enterprising Culture, vol. 16 (4), Pp. 325- 337.*
24. *Krueger, Jr. N. F. (2007). 'What lies beneath? The experiential essence of entrepreneurial thinking', Entrepreneurship Theory and Practice, vol. 31(1), Pp.123-138.*
25. *Kuratko, D. F. & Hodgetts R. M. (2004). 'Entrepreneurship' 5th edition, published by Thompson, U.S.A., Pp. 28–30.*
26. *Bechard, J.P. & Gregoire, D. (2005 b). 'Understanding teaching models in entrepreneurship for higher education', in Kyro, P., Carrier, C. (Eds). The Dynamics of Learning Entrepreneurship in a Cross-cultural University context, Faculty of Education, University of Tam*
27. *Morse E. A., & Mitchell, R. K. (2005). 'Cases in entrepreneurship: The venture creation process', SAGE Publications, Inc, Thousand Oaks, CA.*
28. *Edwards, L. J. and Muir, E. J. (2005). 'Promoting entrepreneurship at the University of Glamorgan through formal and informal learning', Journal of Small Business and Enterprise Development, vol. 12(4), Pp. 613-626.*
29. *Nasira', A. Yeng Keat, O, Awais Bhatti, M. 2015, 'Influence of Perceived University Support, Perceived effective entrepreneurial education, Perceived creativity*

disposition, Entrepreneurial passion for inventing and founding on entrepreneurial intention, Mediterranean Journal of Social Science, vol. 6(3), Pp. 88-95.

30. *Zhang, Y. Duysters, G. & Cloodt, M. 2014. 'The role of entrepreneurship education as a predictor of university Students' entrepreneurial intention', International Entrepreneurship and Management Journal, vol. 10(3), Pp. 623-641*
31. *Liňan, F., Rodriguez-Cohard, J. C. & Rueda-Centuche, J. M. 2011. 'Factors affecting entrepreneurial intention levels: a role for education', International Entrepreneurship and Management Journal, vol. 7(2), Pp. 195- 218.*
32. *Yar Hamidi, D., Wennberg, K., & Berglund, H. (2008). 'Creativity in entrepreneurship education', Journal of Small Business and Enterprise Development, vol. 15(2), Pp. 304-320.*
33. *Nurmi, P., & Paasio, K. (2007). 'Entrepreneurship in Finnish Universities', Education +Training, vol. 49 (1), Pp. 56-65.*
34. *Kuratko, D. F. (2005). 'The emergence of entrepreneurship education: development, trends and challenges', Entrepreneurship Theory and Practice, vol. 29(5), Pp. 577-597.*
35. *Rothaermel, F. T. & Thursby, M. (2005). 'Incubator firm failure or graduation? The role of university linkages'. Research Policy, vol. 34, Pp. 1076 –1090*
36. *Powers, J. & McDougall, P. (2005). 'University start-up formation and technology licensing with firms that go public: a resource based view of academic entrepreneurship'. Journal of Business Venturing, vol 20(3), Pp. 291-311.*
37. *Fayolle, A & Gailly, B. 2015, 'The impact of Entrepreneurship Education and Entrepreneurial Attitudes and Intention: Hysteresis & Persistence, Journal of Small Business Management, vol 53(1), Pp. 75-93.*
38. *Schwarz E. J., Wdowiak M. A, Almer-Jarz D. A. & Breitenecker R. J. (2009). 'The effects of attitudes and perceived environment conditions on students' entrepreneurial intent,' Journal of Education and Training, vol. 51 (4), Pp. 272-291.*
39. *Lim, V. & Teo, T. (2003). 'Sex, money and financial hardship: an empirical study of attitudes towards money among undergraduates in Singapore', Journal of Economic Psychology, vol. 18, Pp. 369-86.*
40. *Douglas, E.J. (1999). 'Entrepreneurship as a career choice: attitudes, entrepreneurial intentions, and utility maximisation', Frontiers of Entrepreneurship Research, Babson College, Wellesley, M.A*
41. *Shane, S. Locke, E. A. & Collins, C. J. (2003). 'Entrepreneurial motivation', Human Resources Management Review, vol. 13(2), Pp. 257-79.*
42. *Autio, E, Keeley, R.H. & Klofsten, M. (1997). 'Entrepreneurial intent among students: testing an intent model in Asia, Scandinavia, and USA'. Frontiers of Entrepreneurship Research, Babson College, Wellesley, M.A.*
43. *Denanyeh, R, Adjei, K. Effah Nuemekye, G. 2015, 'Factor that Impact on Entrepreneurial Intention of Tertiary Students in Ghana,' International Journal of Business and Social Research,vol. 5(3), Pp. 19-29.*
44. *Romani, G., Atienza, M. & Amoros, J. E. (2009). 'Financing entrepreneurial activity in Chile: scale and scope of public support programs', vol. 11(1), Pp. 55-70. Routledge.*
45. *Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., Lo´ pez-Garcı´a, P. & Chin, N. (2005). 'Global Entrepreneurship Monitor: Data collection design and implementation 1998–2003'. Small Business Economics, vol. 24, Pp. 205–31.*
46. *Stevenson, L. & A. Lundstro¨m. (2005). Entrepreneurship policy for the future: Best practice components. In 'Keystones of entrepreneurship knowledge', ed. R. Van Der Horst, S. Kingkauanui, and S. Duffy, 177–94. Oxford: Blackwell Publishing.*
47. *Storey J., 2005, 'Human Resource Management', 3rd edition, published by Thompson learning.*
48. *Fehr, D. and Hishigsuren, G. (2006). 'Raising capital for microfinance: sources of funding and opportunities for equity financing', Journal of Development Entrepreneurship, vol. 11(2), Pp. 133-143.*
49. *Tan, J. & Peng, M. (2003). 'Organizational slack and firm performance during economic transitions: Two studies from an emerging economy'. Strategic Management Journal, vol. 24(13), Pp. 1249–1263.*
50. *Matlay, H. (2009). 'Entrepreneurship education in the U.K.', Journal of Small Business and Enterprise Development, vol. 16(2), Pp. 355-368.*
51. *Reavil, L. R. (1998). 'Quality assessment, total quality management and the stakeholders in the UK higher education system, 'Managing Service Quality, vol. 8(1), Pp. 55-63.*
52. *Byrne, B. M. (2013). 'Structural Equation Modelling, Basic Concepts, Applications and Programming with AMOS.' published by Lawrence Erlbaum Associates, Inc.*
53. *Hussain, A. 2015, 'Impact of entreprenerial education on entrepreneurial intentions of Pakistani students,' Journal of Enterprise and Business Innovation, vol. 2 (1), Pp. 43-53.*
54. *Joåo M. Ferreira, Mårio L. Raposo, Ricardo Gouveia Rodrigues, Anabela Dinis and Arminda de Paco, 2012, 'Entrepreneurial intentions: is education enough? International Entrepreneurship Management Journal, vol. 11 (1), Pp. 57-75.*
55. *Obschenka, M., Silbereisen, R. K., Schmitt-Rodermand E. 2010, 'Entrepreneurial intention as developmental outcomes,' Journal of Vocational Behaviour, vol. 77(1), Pp. 63-72.*
56. *Zampetakis L. A. & Moustakis, V. (2006). 'Linking creativity with entrepreneurial intentions: A structural approach,' Entrepreneurship Management, vol. 2, Pp. 413-428.*
57. *Rengiah, P., Sentosa, I. 2014. 'A Structural Equation Modelling of Entrepreneurial Education and Entrepreneurial Intensions Among Malaysian University*

Students', International Journal of Business and Management Invention (IJBMI), vol. 3(11), Pp. 20-25.

58. *Zikmund, W. G. 2010. 'Business Research Methods', published by Thompson South Western Publication, 9 th edition.*
59. *Burns, A. C. & Bush, R. F. 2000, 'Marketing Research', Prentice-Hall International, Englewood Cliffs.*
60. *Rengiah, P., Sentosa, I. 2015. 'Entrepreneurship Education Entrepreneurial Intentions among Malaysian University students: Developing a Hypothesised Model through SEM', (Australian Journal of Business and Management), vol. 9 (7), Pp. 703-710.*
61. *Hair, J. F., Anderson, R.E., Tatham, R.L. and Black, W. C. (1995). 'Multivariate data analysis with readings', 4th edn. Prentice-Hall International, Englewood Cliffs, pp. 274.*
62. *Kline, Rex B. (1998) 'Principles and practice of structural equation modeling', New York: Guilford Press.*
63. *Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2014), Multivariate Data Analysis, 7th edition, Pearson Prentice Hall, Upper Saddle River, New Jersey.*
64. *Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2006). 'Multivariate Data Analysis', 6th edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.*
65. *Ferdinand, A 2000, 'Struktural Equation Modeling (SEM) dalam Penelitian Manajemen'. Universitas Diponegoro, Semarang.*
66. *Tabachnick, B. G. & Fidell, L. S. (2007). 'Using Multivariate Statistics', 5th ed. Boston: Allyn and Bacon..*
67. *Ghazali, I. (2003). 'Model Persamaan Struktural - Konsep dan Aplikasi dengan Program Ver. 5.0. Semarang, Indonesia: Badan Penerbit Universitas Dipenogoro'.*
68. *Bentler, L. R. (1978). 'Service quality, customer satisfaction, and customer loyalty in consumer electronics e-tailers: A structural equation modeling approach'. Lynn University.*
69. *Anderson, J.C. & Gerbing, D.W. (1988). 'Structural equation modeling in practice: A review and recommended two-step approach'. Psychological Bulletin, vol. 102, Pp. 411-423.*
70. *Cohen, J. & Cohen, P. (1983). 'Multiple Regression/Correlation for the Behavioral Sciences', 2nd ed.: Hillsdale, NJ: Erlbaum Associates, Pp. 67-69, 490-497.*