EFFECTIVENESS OF INNOVATION AND ENTREPRENEURSHIP EDUCATION IN UAE HIGHER EDUCATION

Beena Salim Saji, Business Division
Anupama R Nair, Business Division

ABSTRACT

Objective: The purpose of this paper is to address the attitude, self-perception, values and intentions of UAE students about the innovation and entrepreneurship. The paper delivers an imperative exploratory analysis about entrepreneurship education in UAE and attempts to provide some valuable insights on entrepreneurship education and entrepreneurship attitude and perceptions among students in UAE.

Methodology: An exploratory research design using questionnaire and interviews with students and faculty in United Arab Emirates is done.

Sample: The sample for the study comprises of 63 students and faculty members in higher education of UAE. Correlation analysis is done to establish relationship if any between variables chosen for the study. Multiple regression analysis is done to identify the most important of entrepreneurship variables that affect student perceptions and intentions towards entrepreneurship and innovation in UAE.

Findings: The study intends to identify important variables that create a relationship between entrepreneurship and innovation education and entrepreneurship attitudes, perceptions and intentions among students.

Implications of the Study: The study will add value to existing knowledge on entrepreneurship in United Arab Emirates. It will enable educators and universities to design and improve curriculum and course delivery emphasizing competencies and skills that can improve entrepreneurship education in UAE.

Originality and Relevance: United Arab Emirates is promoting entrepreneurship in their country to improve self-employment among youth. In many of the universities recently there is specific subject of entrepreneurship and innovation which is mandatory course for all streams of education. In this scenario it is important to understand the perceptions and attitudes of students towards entrepreneurship and student intentions towards entrepreneurship. New insights into pedagogical improvements can be received through this study which will be useful for curriculum developers, universities and other policy making organizations in UAE.

Keywords: Entrepreneurship Intentions, Competencies, Education, Entrepreneurship Skills.

INTRODUCTION

The concept of entrepreneurship and innovation is getting far more academic recognition in the recent years and many universities globally have started embracing academic programs and courses in this area. Is entrepreneurship education creating an impact on student attitudes and intentions to pursue self-employment? This is a question that is interesting to both the academia and researchers as well as government and policy makers in different parts of the

world engaged in entrepreneurship and innovation arena. Stevenson & Jarillo (1990) defines entrepreneurship as a process by which individuals-either on their own side or inside organizations pursues opportunities without regard to resources that they currently control.

Strategic decision makers at the government level and leadership of United Arab Emirates have made it succinctly clear about the importance of creating more entrepreneurship oriented future generation for the development and sustenance of the country and its economic growth. Globally countries try to establish an enterprise and entrepreneurial culture to keep up with the challenges that globalization brings (OECD, 2006). Drucker (1985) wrote about entrepreneurship like this

> *"It's not magic, it's not mysterious and it has nothing to do with genes. It's a discipline. And like any other discipline it can be learned".*

United Arab Emirates is promoting entrepreneurship in their country to improve self-employment among youth. In many of the universities recently there is specific subject of entrepreneurship and innovation which is mandatory course for all streams of education. In this scenario it is important to measure the effect of entrepreneurship learning and student intentions towards entrepreneurship. New insights into pedagogical improvements can be received through this study which will be useful for curriculum developers, universities and other policy making organizations in UAE. It is interesting to note the GEM (Global Entrepreneurship Monitor) data on United Arab Emirates in 2016. It states that the following scores on different aspects of entrepreneurship in UAE: perceived opportunity-25.83; perceived capabilities 55.23; fear of failure rate 54.38; entrepreneurial intentions 48.26; female to male TEA (Total early stage entrepreneurship activity)-56.06; motivational index-1.40; female to male opportunity driven-95.4; innovation-26.50 and entrepreneurship as a good career choice-75.10. The current values seem to be higher in entrepreneurship as career choice compared with countries like United States of America, Sweden and India.

Engagement of learners in innovation and entrepreneurship course is hence critical to the country and its leadership. It has been recorded and highlighted in the European conference on entrepreneurship education (2006) that entrepreneurship education must be seen as different from general business and economics education. The importance and relevance of developing personal attributes and skills and its emphasis was acknowledged in that forum. The personal attributes, creativity, sense of intuitiveness, risk taking, autonomy, self-confidence, leadership and teams spirit. At the same time knowledge related to starting a business and business skills in areas related to finance, marketing, HR etc. were also acknowledged.

LITERATURE REVIEW

Most of the studies in entrepreneurship and innovation education in the earlier years in 1970s focused on attributes related to financial and business planning skills. But in the recent years researchers have moved into other areas of entrepreneurship skill and competency requirements related to innovation and entrepreneurship education. A few other studies have focused on the antecedents that create entrepreneurial intention among students to understand the effect of such factors and existence and nonexistence on the program participants of innovation and entrepreneurship program (Fayolle & Gailly, 2015)

Entrepreneurship education should focus on creating precursors of entrepreneurial actions which is entrepreneurial intention among the students (Bird, 1988; Kolvereid, 1996; Krueger &

Brazeal, 1994; Krueger, Reilly & Carsrud, 2000). Researchers then started focusing on factors that create entrepreneurship intentions (Souitaris, Zerbinati & Al-Laham, 2007; Wilson, Kickul & Marlino, 2007; Fayolle, Gailly & Lassas-Clerc, 2006; Rotefoss & Kolvereid, 2005). Study done by Lewrick et al., (2011) on entrepreneurship education stated that challenge of transforming a company from start up into real business needs capabilities that go beyond the development of an idea and business plan which is usually the curriculum at university level entrepreneurship programs. In their study of 200 technology driven companies which have been created under a formal business plan competition of 1996 they found that knowledge sharing, understanding complexity of innovations, ability to search and network with venture capitalists and other business and social networks, learning from mistakes, overcoming fear of failure, Creativity, sense of initiativeness, self-confidence, leadership and team spirit are important in entrepreneurship education curriculum which is similar to findings of European conference of entrepreneurship experts (2008). Johannisson (1991) developed five levels of learning in entrepreneurship educations: They are why entrepreneurial act (values and motivation), what needs to be done (knowledge), how to do it (abilities and skills), who should we know (social skills and networks) and finally when to act (experience and intuition).

Some other researchers started focusing on one of these many factors which is entrepreneurial self-efficacy as an antecedent to entrepreneurial intentions among nascent entrepreneurs (Barbosa, Gerhardt & Kickul, 2007; Boyd & Vozikis, 1994; Zhao, Seibert & Hills, 2005).

Di-Masi (2006) states that the role of entrepreneur changes as a business develops and grows and hence it's not just acquiring knowledge and business skills which is important to students. The students should be able to manage the change as the business grows and hence personal attributes are very important in entrepreneurship education. Entrepreneurs should have the capabilities to obtain resources for starting a venture (Zeithaml & Rice, 1987).

In these above researches three themes related to entrepreneurship and innovation education emerges. One is related to factors content of entrepreneurship education that creates entrepreneurship intent among learners; second is importance of developing self-efficacy and other competencies that are important to entrepreneur learners and third is a focus on the importance of imparting and developing personal growth skills to manage entrepreneurial behavior.

RESEARCH QUESTIONS

Is the pedagogy used for entrepreneurial education in Universities in UAE developing entrepreneurial values, cognitive skills and intention among students?

Is there a difference in entrepreneurial intentions between students of different educational disciplines who take entrepreneurship and innovation course?

What are the main differences in pedagogy in entrepreneurship and innovation education that create differences in entrepreneurship intentions between different university students?

What are the effects of environment and other activities related to entrepreneurship on the student's entrepreneurship intentions?

METHODOLOGY

Ten institutions were randomly selected out of several institutions offering business programs in United Arab Emirates Innovation and entrepreneurship pedagogy of these

institutions was first analyzed to understand the pedagogy. Interviews were conducted with faculty teaching the course to understand the syllabus and course delivery of the course.

Data was collected using questionnaires which were distributed to the students who have completed entrepreneurship education. This is to measure the perception of students about entrepreneurship attitudes and values after they have completed entrepreneurship programs in the institutions that were included in the study. Kirkpatrick's model of evaluation (1960) include following measures: reactions of the learner at first level; second level measures the skills and techniques learned which might have influenced values, perceptions, intentions and attitude change; third is behavior intentions and the fourth is the results of these behaviors that affect the learner's performance. This study focus on understanding the second and third stage of Kirkpatrick's model where they look into values, perceptions and intentions of the students and the entrepreneurship and innovation course.

Data was collected using questionnaire with students and interviews with faculty members of the course and program. The study included 63 student participants and 10 faculty members (1 from each institution).

The questionnaire included 25 statements related to entrepreneurship perceptions, values and behavior intentions, 7 items related to program effect on values intentions, aspirations (program efficacy) and behaviors related to entrepreneurship, 11 items related to activities used in the program (program resources and activities) and finally 4 items related to external exposure (program exposure) related to entrepreneurship. Some demographical items like gender age is also included in the questionnaire with a final 1 question on whether they have intention to start a business. Data collected was analyzed using statistical analysis to understand impact of factors if any on the total score on entrepreneurial attitudes, values, skills and intention to become an entrepreneur. Multiple regression analysis was done to identify and predict variables that are most important in relation to entrepreneurship values, attitudes and intention variables. The questionnaire also included some questions related to factors related to exposure of students to external factors like family business, funding opportunities, networking with entrepreneurs etc.

RESEARCH HYPOTHESES

H_1: *Entrepreneurship program efficacy has a positive relationship with entrepreneurship self-perceptions, skills, values and intention among students.*

H_2: *Exposure to business related social interactions have a positive relationship with entrepreneurship attitudes, perceptions and values among students.*

H_3: *Program activities and resource use have a positive a positive relationship with entrepreneurship attitudes, perceptions and values among students.*

H_4: *Age, networking and intentions have a positive relationship with entrepreneurship attitudes, perceptions and values among students.*

FINDINGS

Mean score on 25 items of the attitude perceptions and values towards entrepreneurship was found to be around 3-3.68. The data showed some significant correlations between program efficacy and entrepreneurship attitude perceptions and values of the students which is 0.78, there was a low correlation between total score and exposure to business related social interactions (0.34). It is interesting to note that program activities and resource use had a high correlation

with total score of entrepreneurship attitudes and values which was 0.80. Age, networking and intentions did not show significant correlation value with total score on entrepreneurship as can be seen in the Table 1. On the whole there is a high degree of relationship which was found between program inspiration/efficacy and program activities and resource use with the entrepreneurship attitudes and values among students who have done the course of entrepreneurship. Networking with entrepreneurs which was thought to have an impact on student entrepreneurship values and attitude also did not show any correlation with entrepreneurship intention or total score of entrepreneurship attitude and values as can be seen in the Table 1.

This may be due to the fact that intentions and actual behavior require a time gap between learning and actual action.

Table 1
SHOWING CORRELATION BETWEEN VARIABLES

1	Total score and program efficacy	0.78*
2	Total score and exposure	0.34
3	Total score and Program activities and resource use	0.80*
3	Intention and Age	-0.08
4	Intention and program resource and activities	-0.11
5	intention and program efficacy	-0.01
6	intention and total score	-0.15
7	Q41 networking and total score	0.26
8	Q41 networking and intention	-0.02

*Correlation is positive and high

Table 2
CORRELATION RESULTS

	Total	26	27	28	29	30	31	32	Petotal	33	34	35	36	37	38	39	40	41	42	43
Total	1																			
26	0.465533	1																		
27	0.648365	0.364876	1																	
28	0.677528	0.466142	0.678302	1																
29	0.554528	0.559844	0.420872	0.525585	1															
30	0.562317	0.330183	0.394515	0.31068	0.465224	1														
31	0.572989	0.403804	0.451975	0.542193	0.463418	0.417992	1													
32	0.383203	0.102535	0.09289	0.32035	0.201885	0.306496	0.519185	1												
Petotal	0.781789	0.711199	0.741141	0.786962	0.783145	0.647298	0.754041	0.350862	1											
33	0.435817	0.244571	0.277633	0.459764	0.340692	0.265465	0.429468	0.526227	0.455691	1										
34	0.383752	0.210825	0.170472	0.387131	0.172651	0.081793	0.557349	0.673	0.364149	0.625307	1									
35	0.548456	0.340536	0.25751	0.459131	0.369949	0.458384	0.449244	0.5406	0.524093	0.517179	0.429244	1								
36	0.621684	0.385573	0.56241	0.497693	0.406756	0.580839	0.578103	0.392559	0.677427	0.434932	0.376553	0.477774	1							
37	0.55447	0.331673	0.319523	0.361461	0.274889	0.216423	0.413082	0.302159	0.435881	0.360742	0.316964	0.452954	0.32665	1						
38	0.551323	0.25355	0.377157	0.487728	0.40527	0.461419	0.343076	0.36105	0.518823	0.138669	0.221977	0.242034	0.460757	0.35209	1					
39	0.667975	0.345303	0.521973	0.495822	0.386514	0.510379	0.437113	0.467205	0.603613	0.198522	0.355302	0.356997	0.449507	0.363165	0.486113	1				
40	0.478618	0.206195	0.288249	0.455375	0.405983	0.416344	0.312469	0.330245	0.464707	0.336931	0.191005	0.285092	0.284721	0.194529	0.459084	0.407457	1			
41	0.258816	-0.01011	0.299881	0.180041	0.174922	0.20969	0.170709	0.00681	0.229142	-0.07352	-0.08485	0.164492	0.162395	0.297554	0.253982	0.264179	-0.00171	1		
42	0.131006	-0.0557	0.095925	0.132509	0.383775	0.055162	-0.00305	0.057044	0.138622	0.045079	-0.12698	-0.07546	0.058829	0.077732	0.248164	0.027499	0.159508	0.038962	1	
43	0.153842	0.055743	0.128936	0.096566	0.225849	0.268161	0.233274	0.08981	0.229309	-0.11333	0.010823	0.130682	0.208033	0.289433	0.150801	0.288985	0.180605	0.147605	0.160573	1
Resource	0.804257	0.416986	0.539105	0.677576	0.522713	0.563417	0.663564	0.656972	0.761419	0.649153	0.635137	0.707978	0.698152	0.657633	0.628099	0.696336	0.586772	0.314567	0.07452	0.231819

See Appendix to see variables from 26-44. Table 2, above shows correlation between each variable from item 26-44 with total score of first 25 items in questionnaire which measures

perceptions, attitudes and values related to entrepreneurship. Total score of entrepreneurship values, behaviors and intentions correlated highly with total score of program efficacy (program inspiration and impact) which is 0.78; then item number 36 (advice and group meetings with team)-correlation value of 0.62; item number 39 which is competition and cases-value -0.66; and finally with total score on resources and tools used in program -0.80. The above results validate the hypothesis Entrepreneurship programs have a positive relationship with entrepreneurship self-perceptions, skills, values and intention among students. Program efficacy total and program activities and resource use hence showed a higher relationship with the total score.

Multiple regression analysis was conducted on the data to see if independent variables like program efficacy, program activities and resources used family and friends in business, age and networking had any effect on the dependent variable-total score of entrepreneurship perception, attitudes and values among students. The independent variables included in the regression model were effect of family and friends in business, age, networking, program efficacy, program activities and resources use and program exposure. When the regression was done the first time it was found that P-value for networking and age was insignificantly high. In the next regression iteration, age and networking was removed from the data. A second regression with the remaining items revealed the following results given in Tables 3, 4 and 5.

Table 3
REGRESSION RESULTS WITH TOTAL SCORE AS DEPENDENT VARIABLE

Regression Statistics	
Multiple R	0.838482
R Square	0.703052
Adjusted R Square	0.682573
Standard Error	6.57782
Observations	63

Table 3 shows a high multiple R which is 0.8 and R square value of 0.70, which show that there is a statistically significant relationship between dependent and independent variables. R square value (0.70) explain that there is a 70% of variance explained by the independent variables of the study on the dependent variable which is total score on entrepreneurship perception attitudes and values of students. Adjusted R square value of 0.68 is also quite high. Standard error of 6.57 predicts the deviation of the actual y values from the predicted y values which is similar to standard deviation.

Table 4
ANOVA RESULTS

ANOVA					
	df	**SS**	**MS**	**F**	**Significance F**
Regression	3	6344.206	2114.735	59.22016	0.00
Residual	59	2106.873	35.70972		
Total	62	8451.079			

ANOVA test (Table 4) shows a significant F value, 0.00, which is less than 0.05 with degrees of freedom 3. This shows the significance of regression is quite high.

Table 5
REGRESSION SUMMARY TABLE

	Coefficients	Standard Error	t-Stat	P-value
Intercept	33.86011	4.257406	7.953226	0.00
Program efficacy	0.896971	0.262487	3.417199	0.00
Program activities and resource use	0.86141	0.203679	4.229256	0.00
Family friends	2.825581	0.973841	2.90148	0.01

Predictors: (Constant; Program efficacy; activities and resource use, family and friends); Dependent variable-Total score of entrepreneurship perceptions, attitudes and values

To understand how much of variance in the results explains a model summary Table 5 given above is evaluated. β coefficient of the intercept is 33.86 with a $P<0.05$, β coefficient value for independent variables are also significant at $P<0.05$, with program efficiency having a value of 0.89 which is significant and program resource and activities being significant with a value of 0.861 and role of family and friends have a significant beta value of 2.82. The result shows that these variables have high predictive effect on the dependent variable entrepreneurship perception attitudes and values of students.

At the same time when regression was done in the first instance with variables exposure (-0.31, $P>0.05$) and networking score (-0.27, $P>0.05$), with the dependent variable it yielded a negative β coefficient in both cases which was not significant. Age when included in the equation got a similar result of non-significance (-0.29, $P>0.05$). In all these instances the F tests were significant for the regression and P-values for program efficacy, program activities and resource use, family and friends continued to be strong predictors of dependent variable variance.

CONCLUSION

The study thus concludes that entrepreneurship and innovation perceptions of students are affected by the program activities and resources and program efficacy. Family and friends having a business also is an important predictor of having more positive perceptions and values related to entrepreneurship. The study did add value to the existing knowledge related to entrepreneurship values, perceptions and entrepreneurship education in United Arab Emirates which is part of gulf region. Program efficacy in entrepreneurship course in the region hence has a positive effect on the student self-perceptions about entrepreneurship values and attitudes.

LIMITATIONS AND FUTURE DIRECTIONS OF THE STUDY

This study is done on a small sample and a larger sample with more refined questionnaire may elicit much more know how about entrepreneurship perceptions and values among students. Qualitative method using interviews and focus groups along with questionnaires can enhance the validity and reliability of the data and can provide future directions to improve entrepreneurship behavior in the region.

APPENDIX

Entrepreneurship and Innovation Questionnaire

Thank you for agreeing to take part in this survey and be assured that all answers you provide will be kept in the strictest confidentiality and will be used exclusively for research purpose only.

Dr. Beena Salim

Participant Consent

I, ----------voluntarily agree to participate in this research program and do trust that my responses will be kept confidential and will be used for research purpose of this study only.

Thanks

Signature----------

Name of the participant of the study: ----------

Rate yourself from 1 to 5 on the Following: (1=Strongly Disagree, 5=Strongly Agree)

1. I can endure high levels of vagueness/ambiguity and uncertainty about situations.
   Strongly disagree 1 2 3 4 5 strongly agree
2. I'm usually optimistic. I see difficulties as temporary and anticipate overcoming them.
   Strongly disagree 1 2 3 4 5 strongly agree
3. I think difficult experiences can make me stronger and better.
   Strongly disagree 1 2 3 4 5 strongly agree
4. Mostly, I am capable of encouraging people in getting things done.
   Strongly disagree 1 2 3 4 5 strongly agree
5. I'm good at making things work well and I'm often asked to lead groups and projects.
   Strongly disagree 1 2 3 4 5 strongly agree
6. I can determine resource requirements for a start-up and know ways to mobilize them.
   Strongly disagree 1 2 3 4 5 strongly agree
7. I'm good at analyzing and resolving problems. (Be creative or being practical).
   Strongly disagree 1 2 3 4 5 strongly agree
8. I view problems, complaints and bottlenecks as opportunities.
   Strongly disagree 1 2 3 4 5 strongly agree
9. I'm confident that I can develop creative ideas to solve problems.
   Strongly disagree 1 2 3 4 5 strongly agree
10. I look for things in my environment to inspire me to find new interpretations of problems.
    Strongly disagree 1 2 3 4 5 strongly agree
11. I do think that I am capable of making business and personal deals and networking.
    Strongly disagree 1 2 3 4 5 strongly agree
12. The best part of owning a business is that I get to be my own boss and live life on my own terms.

Strongly disagree 1 2 3 4 5 strongly agree

13. I can think clearly and stay focused on the task at hand under pressure.
Strongly disagree 1 2 3 4 5 strongly agree
14. I would like to explore the possibilities and envision a desired product or service solution.
Strongly disagree 1 2 3 4 5 strongly agree
15. I am good at explaining my ideas and make it a visualized experience to those who listen to me.
Strongly disagree 1 2 3 4 5 strongly agree
16. I do get anxious and upset when things do not go as I expected.
Strongly disagree 1 2 3 4 5 strongly agree
17. I think I am good at managing conflict and doing negotiations.
Strongly disagree 1 2 3 4 5 strongly agree
18. I'm results-oriented, with a strong drive to meet my objectives.
Strongly disagree 1 2 3 4 5 strongly agree
19. I am good at looking for patterns and solutions in a confusing situation.
Strongly disagree 1 2 3 4 5 strongly agree
20. I like to take calculated risks to reach them.
Strongly disagree 1 2 3 4 5 strongly agree
21. I like to take innovative and new paths if it is not risky.
Strongly disagree 1 2 3 4 5 strongly agree
22. The anticipation of changes in the business environment makes me anxious, I expect the worst.
Strongly disagree 1 2 3 4 5 strongly agree
23. When making investments, I prefer to put my money into low risk programs.
Strongly disagree 1 2 3 4 5 strongly agree
24. I do get inspiration from family and friends who have a business.
Strongly disagree 1 2 3 4 5 strongly agree
25. I try to understand the needs of others while designing new and innovative solutions.
Strongly disagree 1 2 3 4 5 strongly agree

Entrepreneurship Course Efficacy

To What Extent the Entrepreneurship Program Rate from 1-Strongly Disagree to 5-Strongly Agree

1. Increased your understanding of attitudes, values and motivation of entrepreneurs.
Strongly disagree 1 2 3 4 5 strongly agree
2. Increase your understanding of actions that someone had to take in order to start a business.
Strongly disagree 1 2 3 4 5 strongly agree
3. Enhance your confidence in practical management skills to start a business or venture.
Strongly disagree 1 2 3 4 5 strongly agree
4. Enhance your ability to develop networks.
Strongly disagree 1 2 3 4 5 strongly agree
5. Enhance your ability to identify an opportunity.
Strongly disagree 1 2 3 4 5 strongly agree
6. Triggered your interest drastically in your heart or mind to become an entrepreneur.
Strongly disagree 1 2 3 4 5 strongly agree

7. Increased your understanding of yourself, your strengths and weaknesses, opportunities and threats.
   Strongly disagree 1 2 3 4 5 strongly agree

Activities and Resource Use

Have you used any of the Following Resources to Enhance your Interest in Becoming an Entrepreneur during Your Course Period (1 Least used to Maximum used 5)

1. Pool of classmates in a team activity.
   Strongly disagree 1 2 3 4 5 strongly agree
2. University technology that helps in entrepreneurship.
   Strongly disagree 1 2 3 4 5 strongly agree
3. Advice from the faculty.
   Strongly disagree 1 2 3 4 5 strongly agree
4. Advice and group meetings with team.
   Strongly disagree 1 2 3 4 5 strongly agree
5. Library hours.
   Strongly disagree 1 2 3 4 5 strongly agree
6. Number of networking events.
   Strongly disagree 1 2 3 4 5 strongly agree
7. Competitions and cases.
   Strongly disagree 1 2 3 4 5 strongly agree
8. Physical space for meetings.
   Strongly disagree 1 2 3 4 5 strongly agree
9. Networking with entrepreneurs.
   Strongly disagree 1 2 3 4 5 strongly agree
10. Seed funding from local government and other organizations.
    Strongly disagree 1 2 3 4 5 strongly agree
11. Referrals to investors.
    Strongly disagree 1 2 3 4 5 strongly agree

Exposure

Were you given Enough Exposure to Support a New Firm Creation during your Course in the Following Areas? Indicate your Detailed Knowledge Acquired from 1 (Absolute Ignorance) to 5 (Complete Knowledge)

1. Specific training for young entrepreneurs.
   Absolute ignorance 1 2 3 4 5 Complete Knowledge
2. Loans in especially favorable terms.
   Absolute ignorance 1 2 3 4 5 Complete Knowledge
3. Technical aid to start a business.
   Absolute ignorance 1 2 3 4 5 Complete Knowledge
4. Business centers, Consulting services in favorable terms.
   Absolute ignorance 1 2 3 4 5 Complete Knowledge

Gender: Male Female
Age: _____
Are you currently employed: Yes/No
Job title: ……..

Do you have any business?

If yes when did you start the same?

Do you think that your intentions to start business went up after taking the course on entrepreneurship and innovation?

1. No.
2. To some extent.
3. To a great extent.
4. Have interest only in employment in an organization.

REFERENCES

Saulo, D.B., Gerhaedt, M.W. & Kickul, J.R. (2007). The role of cognitive style and risk preference on entrepreneurial self-efficacy and entrepreneurial intentions. *Journal of Leadership & Organizational Studies*, *13*(4), 86-104.

Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, *13*(3), 442-453.

Boyd, G.N. & Vozikis, G.S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship: Theory & Practice*, *18*(4), 63-77.

Carter, N.M., Gartner, W.B. & Greene, P.G. (2002). *The career reasons of minority entrepreneurs*. Academy of Management Proceedings; Entrepreneurship Division.

Di-Masi, P. (2006). *Defining entrepreneurship*. Found on the internet.

Drucker, P. (1999). *Innovation and entrepreneurship*. Harper Business Publishing, London.

Drucker, P. (1985). *Innovation and entrepreneurship*. Harper & Row, New York.

European commission (2006). *Delivering on the modernization agenda for universities; Education, research and innovation COM 208*. European Commission, Brussels.

Fayolle, A., Gailly, B. & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: A new methodology. *Journal of European Industrial Training*, *30*(9), 701-720.

Fayolle, A. & B. Gailly (2015). Impact of entrepreneurial education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, *53*(1), 75-93.

Johannisson, B. (1991). University training for entrepreneurship: A Swedish approach. *Entrepreneurship and Regional Development*, *3*(1), 67-82.

Kolvereid, L. (1996). Organizational employment versus self-employment: Reasons for career choice intentions. *Entrepreneurship Theory and Practice*, *20*(3), 23-31.

Krueger, N.F. & D.V. Brazeal (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice*, *18*(3), 91-104.

Krueger, N.F., Reilly, M.D & Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, *15*(5-6), 411-432.

Kirkpatrick, D.L. (1960). Techniques for evaluating training programs: Part 1-reaction. *Journal of American Society for Training and Developing*, *13*, 3-9.

Lewrick, M., M. Omar, R. Raeside & K. Sailer (2011). Education for entrepreneurship and innovation: Management capabilities for sustainable growth and success. *World Journal of Entrepreneurship, Management and Sustainable Development*, *6*(1/2), 1-18.

Liñán, F., Rodríguez-Cohard, J.C. & Rueda-Cantuche, J.M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, *7*(2), 195-218.

OECD (2006). *Economic surveys*.

Rotefoss, B. & Kolvereid, L. (2005). Aspiring, nascent and fledgling entrepreneurs: An investigation of the business start-up process. *Entrepreneurship & Regional Development*, *17*(2), 109-127.

Souitaris, V., Zerbinati, S. & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, *22*(4), 566-591.

Stevenson, H.H. & Jarillo, J.C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*, *11*(Special Issue), 17-27.

Wilson, F., Kickul, J.R. & Marlino, D. (2007). Gender, entrepreneurial self-efficacy and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, *31*(3), 387-406.

Zeithaml, C.P. & Rice, G.H. (1987). Entrepreneurship/small business education in American universities. *Journal of Small Business Management*, *25*(1), 44-50.

Zhao, H., Seibert, S.E. & Hills, G.E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*(6), 1265-1272.