

BUILDING TECHNOPRENEURSHIP FOR NEXT GENERATION: HOW THE BENEFITS OF TECHNO-ENTREPRENEURSHIP EDUCATION AFFECT CAREER INTENTIONS OF COLLEGE STUDENTS

ALEXANDER HARSONO

Program Studi Sistem Informasi,
Sekolah Tinggi Manajemen Informatika dan Komputer Pontianak
Jl. Merdeka Barat No. 372 Pontianak 78111, Kalimantan Barat
alex189@vmail.com, alex@stmikpontianak.ac.id

Abstrak: Techno-entrepreneurship education; theory, concept, creativity and innovation memainkan peran penting dalam membentuk sikap-perilaku, keahlian, kultur; awareness-motivation, mindset shift dan yang paling penting adalah menuntun career intentions mahasiswa untuk menjadi seorang teknosaha atau wirausaha. Para mahasiswa, khususnya yang telah menyelesaikan studi SI, tidak boleh bergantung pada bursa tenaga kerja yang tidak menentu. Menjadi technopreneur dan entrepreneur merupakan cara yang efektif untuk mengatasi pengangguran yang semakin meningkat dari tahun ke tahun dan sekaligus penciptaan lapangan kerja baru. Yang menjadi pertanyaan penelitian ini adalah “apakah manfaat edukasi tekno-kewirausahaan secara signifikan berdampak pada intensi karir mahasiswa?” Penelitian ini dilakukan melalui kuesionir untuk 85 mahasiswa STMIK Pontianak; 63 responden jurusan SI dan 22 responden jurusan TI. Data yang telah dikumpulkan kemudian dianalisis dengan metode frequency accounts, percentages dan discrete probability distributions. Karena penelitian ini menitik beratkan pada intensi karir mahasiswa, maka diperlukan penelitian lanjutan untuk mengukur realitas responden yang benar-benar menjadi teknosaha.

Keywords: Techno-entrepreneurship education, career intention. technology, technopreneurs, entrepreneurs, creativity, innovation

1. INTRODUCTION

Colleges have initiated entrepreneurship education programs in attempt to reverse graduate unemployment trend by providing entrepreneurial theory and concept, creativity, innovation as well as the needed training in entrepreneurial skills to students for setting up new businesses as a viable career option. Can entrepreneurship be taught or more importantly, learned? This is an age-old debate. It is clear that education plays an essential role in shaping attitudes, skills, behaviors, and cultures. Prof. Drucker (1985) says: “Most of what you hear about entrepreneurship is all wrong. It’s not magic; it’s not mysterious; and it has nothing to do with genes. It’s a discipline and, like any discipline, it can be learned.” Entrepreneurial skills, attitudes and behaviors can be learned, and that exposure to entrepreneurship education through an individual’s lifelong learning path, starting from youth and continuing through adulthood into higher education, such as colleges and universities (WFE, 2009). The objective of

entrepreneurship education is critical for developing entrepreneurial skills, attitudes and behaviors that are the basic for economic growth as well as programs targeted coping with unemployment.

Entrepreneurship education is needed to build entrepreneurial human capital for college students of the future. Entrepreneurship is not only about creating business plans and starting new ventures. It is also about creativity, innovation and growth, a way of thinking and acting relevant to all parts of the economy and society as well as the whole surrounding ecosystem. Any college has its own entrepreneurship programs and modules that may be different from those of others, as well as teaching methods to raise and motivate its students in terms of career intentions, but they have the same goals. Colleges should need to encourage a more entrepreneurial culture and develop the necessary skills, creativities, innovations, motivations, attitudes and behaviors to prepare college students to pursue techno-entrepreneurial opportunities. According to World Economic Forum (2009), Entrepreneurship education programs, modules and course materials aim at: Enhancing entrepreneurial behaviors and mindsets; building self-confidence, self-efficacy and leadership; creativity, innovation and ability to think “out of the box” to solve problems; managing complexity and unpredictability; basic business and financial skills: “business literacy”; opportunity identification; how to build, finance and grow ventures; developing negotiation skills; building relationships, networks, and social capital.

World Economic Forum has set up the entrepreneurial programs and modules as guidelines, such as: Interactive and learning centered pedagogies; multi-disciplinary programs and projects case studies, games, simulation, business plan, competitions, etc.; intensive use of visuals, digital tools and multimedia; learning by doing/hands-on, assignments; experiential learning/labs (trial and error); compiling journal, research papers for seminars; projects, internship with start-ups; mentoring and coaching; interaction with entrepreneurs

Most colleges and universities in Indonesia have initiated the curriculum, programs and modules for a semester’s entrepreneurship course and have been carrying out these programs and modules for years. In addition, literature has been suggesting that the most suitable indicator to assess and evaluate the results of techno-entrepreneurship is the rate of new business creation. However, some studies indicate that the results of such programs and modules are not immediate. Therefore, research on *how the benefits of techno-entrepreneurship education significantly affect students’ career intention* is still need to be further scrutinized and investigated.

2. THEORETICAL BACKGROUND

2.1. The Entrepreneurship Education and Entrepreneur

Today, much confusion exists about the proper definition of entrepreneurship. Some observers use the term to refer to all small businesses, others, to all new businesses. In practice, however, a great many well-established businesses engage in highly successful entrepreneurship. The term then, refers not to an enterprise’s size or age but to a certain kind of activity. At the heart of that activity is innovation (Harvard Business School, 2002). In this paper, the term “techno-entrepreneurship” simply refers to both technopreneurship and entrepreneurship or one of them interchangeably. Entrepreneurship is a process that results in creativity, innovation, and growth. Innovative entrepreneurs come in all shapes and forms; the benefits are not limited to start-ups, innovative ventures or new jobs. Entrepreneurship refers to an individual’s ability to turn ideas into action and is therefore a key competence for all, helping young

people or college students to be more creative and self-confident in whatever they undertake (European Commission, 2008). In fact, entrepreneurship and small business management are both processes, not isolated incidents. Entrepreneurship is the process of identifying opportunities for which marketable needs exist and assuming the risk of creating an organization to satisfy them (Hatten, 2012).

Education is the clearest path to individual opportunity and societal growth, and entrepreneurship education is especially vital to fuelling a more robust innovation, creativity and desire to build something of lasting value. Therefore, we must continually foster educational cultures within our companies, governments and communities to keep the entrepreneurship education pipeline filled for generation to come (Dick Meyer, President and CEO, AMD; cited by WEF: 2009). With education, entrepreneurs will know better than their uneducated counterparts: They will know when-how-where to start their company, they will know how to manage the company and how to maximize their returns (Ronstadt, 1985). Sekolah Tinggi Manajemen Informatika dan Komputer (STMIK) Pontianak has set up its own techno-entrepreneurship education curriculum and module for one-semester-course of entrepreneurship.

Entrepreneurship education is the process of providing individuals with the concepts and skills to recognize opportunities that others have overlooked, and to have the insight, self-esteem and knowledge to act where others have hesitated (the Center for Entrepreneurial Leadership clearinghouse on Entrepreneurship Education: www.celcee.edu). In developing entrepreneurial graduates, entrepreneurship education has a crucial role to play. For effective entrepreneurship education, a college should need to develop and adopt appropriate entrepreneurship programs, modules, and teaching technique. These entrepreneurship programs and modules can have various objectives, such as: developing entrepreneurial drive among students and raise awareness and motivation; developing the entrepreneurial ability to identify and exploit opportunities; training students in the skills they need to set up a business and manage its growth (WEF, EC, 2008). In all these contexts, it is important to encourage college students to think and act entrepreneurially as well as ethically and socially responsibility, such as friendly environmental products and practices. Successful firms had more college-educated owner-managers than did firms that failed. An entrepreneur is someone who perceives an opportunity and creates an organization to pursue it (Bygrave et al., 2011). People who own, operate, and take risk of a business venture are called entrepreneurs. They engaged in entrepreneurship, the process of running a business of one's own (Greene, 2011).

2.2. Creativity and Innovation

Creativity is an act, an idea, or product that changes an existing domain, or that transforms an existing domain into a new one, and creative person is whose thoughts or actions bring these changes. Innovation is the specific instrument of entrepreneurship. The act endows resources with a new capacity to create wealth. Innovation, indeed, creates a resource, creative in identifying the gap in the market and think up a product, and creative in figuring out a way to work in a joint venture. Innovation is the successful exploitation of new idea; it is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced (Drucker, 1985). Companies achieve competitive advantage through acts of

innovation. They approach innovation in its broadest sense including both new technologies and new ways of doing things (Porter, 1990)

Innovation is a process of creating, experimenting, transforming not only what is offered but also the way in which it is offered. Successful innovators are not focus on risk, but on the potential for exploiting an opportunity. Creativity leads to innovation. Thus, Entrepreneurship is all about innovation as delineates in figure 1.

In his book titled “Innovation and Entrepreneurship”, Drucker (1985) describes an entrepreneur as not just someone who starts his own, new and small business: You can be a corporate employee and still be entrepreneurial. He further states that not every new small business is entrepreneurial because entrepreneurship is the practice of consistently converting good ideas into profitable commercial; ventures. In the same book, Prof. Drucker challenges common knowledge by showing through real-world examples, that Innovation does not have to be technical, and does not have to be a “thing altogether”; innovation as the systematic act of turning “something” (product, idea, information, etc.) into a resource that is of high value to its target market.

An entrepreneur is a person who is willing and able to convert a new idea or invention into a successful innovation, simultaneously creating new products and business models largely responsible for the dynamism and industries and long-run economic growth, (Joseph A. Schumpeter, cited by Lowe et al, 2006). Creativity, innovation and entrepreneurial people are essential for the creation of wealth and economic growth. Innovative entrepreneurs come in all shapes and forms. They start and growth ventures; they spin out ventures from colleges and other organizations; they restructure companies in the need of refocusing; they innovate within larger organizations.

Entrepreneurs are creative and innovative. Creativity and innovation are the distinguishing marks of the entrepreneur. This is why they disturb markets and can challenge the large established business. Creativity is a continuous activity for the entrepreneur, always seeing new ways of doing things with little concern of how difficult they might be or whether the resources are available. But creativity in entrepreneurs is combined with the ability to innovate, to take the idea and make it work in practice. This, seeing something through to the end and not being satisfied until all is accomplished, is a central motivation for entrepreneurs. But once one project is accomplished, entrepreneurs seek another ‘mountain to climb’ because for them creativity and innovation are habitual, something that they just have to keep on doing.

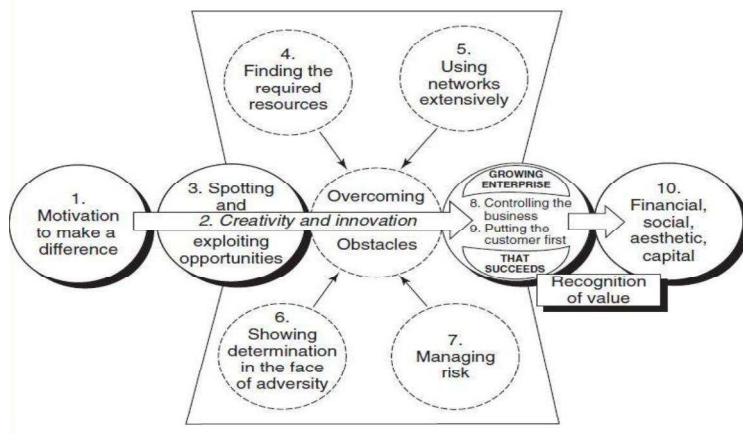


Figure 1. The action factors and entrepreneur process

The starting point of the process is the motivation to *make a difference* (action factor 1). There are other motivators for the entrepreneur but this we believe to be the most important. The ability to *create and innovate* (2) is the lifeblood of the process, without this vital blood flow the process would not happen. The first step in the process is to *spot and exploit an opportunity* (3) and then as things move forward obstacles appear. The next four action factors around the way in which entrepreneurs deal with these obstacles. They find *the required resources* (4), *use networks extensively* (5), are *determined in the face of adversity* (6) and *manage risk* (7). Using their creativity and innovation talent they turn the obstacles into opportunities. All these contribute to a growing enterprise that succeeds because entrepreneurs know how to *control the business* (8) and are consistent in *putting the customer first* (9). The outcome of the *entrepreneur process* is the *creation of capital* (10). Entrepreneurs seek recognition that they have created this outcome and really added value in line with their motivation to *make a difference* (1), which began the process.

Entrepreneurs achieve success by creating value in the marketplace when they combine resources in new and different ways to gain a competitive edge over rivals. Entrepreneurs can create value in a number of ways—inventing new products and services, developing new technology, discovering new knowledge, improving existing products or services, finding different ways of providing more goods and services with fewer resources, and many others (Scarborough : 2012). Indeed, finding new ways of satisfying customers' needs, inventing new products and services, putting together existing ideas in new and different ways, and creating new twists on existing products and services are hallmarks of the entrepreneur.

What is the entrepreneurial “secret” for creating value in the marketplace? In reality, the “secret” is no secret at all: it is applying creativity and innovation to solve problems and to capitalize on opportunities that people face every day. Creativity is the ability to develop new ideas and to discover new ways of looking at problems and opportunities. Innovation is the ability to apply creative solutions to those problems and opportunities to enhance or to enrich people's lives (Scarborough: 2012). Harvard's Ted Levitt says that creativity is thinking new things, and innovation is doing new things (Levitt cited by Scarborough: 2012). In short, entrepreneurs succeed by thinking and doing new things or old things in new ways. Simply having a great new idea is not enough; turning the idea into a tangible product, service, or business venture is the essential next step.

2.3. Technology: Technopreneurship and Technopreneurs

According to Prof. Peter F. Drucker, Technology is not necessarily “hi-tech,” indeed does not always have to be technical. Technology is simply defined as applications of knowledge to human work. Accounting and its software application modules, operations research technique software applications, ERP software applications and most of all the subjects offered by STMIK Pontianak either in “information system” or “information technology” can be regarded “technology.” Therefore, the appropriate term for an IT-based student majoring either in IS or IT at STMIK Pontianak can be regarded a “technopreneur” when he or she deals in IT software and hardware products and services after his or her graduation, and NOT an “entrepreneur.” What is technopreneurship then?

According to Prof. Drucker (1994), technopreneurship is, by a large part, still entrepreneurship. The difference is that technopreneurship is either involved in

delivering an innovative hi-tech product (e.g. intel) or makes use of hi-tech in an innovative way to deliver its product to the consumer (e.g. ebay), or both. So technopreneurship is not a product but a process of synthesis in engineering the future of a student or person and an organization. Technopreneurs are who into the core business involving technology-based industries. Still referring to Drucker's definition, the conclusion is that technopreneurs are entrepreneurs who engage both in IT and software-hardware products. Technopreneurs deal in IT-based products and services as their main business lines. They make use of technology to come out with new or innovative products through a process of commercialization.

2.4. Why Techno-entrepreneurship Education?

In the emerging competitive business and an increasingly complex business world which calls for cross-functional management and marketing skills, the benefits that a techno-entrepreneurship education offers can be considered from three perspectives (see GEM reports : 2001-2004): a) *Industry*, Students looking for skills which will help them to succeed in today's dynamic and divergent business world; the realization that corporate positions no longer offer job security due to an increasing trend of downsizing and outsourcing; Employers looking for workers who are able to think like entrepreneurs, and who can facilitate corporate entrepreneurship to address global competition and technological changes. b) *Academic*, Acceptance that entrepreneurship can be learned and taught; and that business success is not exclusive to "born" entrepreneurs; Increasing recognition and academic legitimacy of entrepreneurship as an important education innovation and discipline; Growing demand from seasoned business people interested in attaining skills to help them further expand their business; and c) *Public Policy*, Consistent finding in the Global Entrepreneurship Monitor (GEM), an international entrepreneurship research project currently into its sixth year of study, illustrate that: Education and training is one of the most significant factors in influencing the entrepreneurial sector; and A high correlation exists between educational attainment, particularly entrepreneurship education, and an individual's confidence to participate in high potential growth of entrepreneurial ventures.

Although the entrepreneurship education is only a semester's course, yet it plays an essential role in shaping attitudes, skills, behaviors, and cultures to become a technopreneurs after their graduation. Techno-entrepreneurship education provides a mix of experiential learning, skill building and most importantly, mindset shift. These concepts are parallel with that one of STMIK's own vision "Building Technopreneurship for Next Generation." Hopefully, These undergraduate students gain IT-based skills and knowledge during their studies at STMIK Pontianak, such as the skills and knowledge of e-Business, e-Commerce, Internet-Web technology, Web site design & development, and programming that can be applied and implemented in business practices. Those skills and knowledge which they had attained during studies would be useful to start their own businesses. Furthermore, they should also be able to market themselves by simply selling IT service providers to markets (market niche) that almost need zero capital for their first technopreneurial activities, or they can engage and jump direct to both IT-based products and services at the same time.

3. METHODOLOGY OF RESEARCH

STMIK Pontianak has initiated the curriculum, programs and modules for a semester's entrepreneurship courses and has been carrying out these programs and modules for years. Literature has been suggesting that the most suitable indicator to assess and evaluate the results of techno-entrepreneurship is the rate of new business

creation. However, some studies indicate that the results of such programs and modules are not immediate until after technopreneurship graduations. How do the students perceive attractiveness and respond to techno-entrepreneurship education? Does entrepreneurship education significantly affect students' career intentions? Therefore, this research purpose is to investigate all these questions.

A research method carried out by direct distributing a structured questionnaire to 85 students majoring in IS (Information System) and IT (Information Technology); 63 and 22 students respectively on June 2012. The questionnaire is composed of four parts with different focus and should be answered by ticking on the available empty boxes: Section 1 exploring students' career intentions after graduation (table 1) through 5 questions – *further study, technopreneur, employee, further study & part time business, and employee & part time business*; section 2 exploring the levels of skills acquired by students to Start-up a business (table 2) through 3 questions - *high skills, middle skills, and low skills*; section 3 exploring course materials and teaching methods preferred by students (table 3) through 2 questions – *intensive learning and thoroughly, and non-intensive learning*; and section 4 and 5 measuring significant level of technopreneurship education affect career intentions of students through 10 questions using Likert scale (1 point = strongly disagree to 5 points = strongly agree) as shown in table 4 (IS major) and 5 (IT major) – *creating awareness of business opportunities, developing creativities and innovations, building mindset shift and self-confidence, giving exposure to technopreneurship process, developing resourcefulness, enhancing planning skills, making an technopreneur-oriented, building skills needed for technopreneurs, raising self-motivated to startup, raising financial management skills*. The data gathered were analyzed using frequency counts, percentages and discrete probability distributions.

4. ANALYSIS AND RESULTS

Table 1: Career Intentions of STMIK Students

Students' Career Intentions	IS		IT		Cumulative	
	n	%	n	%	n	%
Pursue further study	3	4.49	2	11.11	5	5.88
Being a technopreneur	21	33.33	13	59.09	34	40.00
Being an intrapreneur/employee	9	13.43	2	11.11	11	12.94
Further study & part time business	13	19.40	2	11.11	15	17.65
Intrapreneur & part time business	17	25.37	3	16.67	20	23.53
Total	63	100	22	100	85	100

Table 1 indicates that upon completing entrepreneurship education, students' career intentions fall on being technopreneurs. 40% of the students prefer being technopreneurs to being employees (12.94%). This figure can be broken down to 59.09% of IT students prefer being technopreneurs to being employees (11.11%). This figure is bigger than IS students who prefer being technopreneurs (33.33%) to being employees (13.43%).

Table 2: Levels of Skills Acquired by Students to Start-up a business

Response Percentages	IS		IT		Accumulative	
	n	%	n	%	n	%
Advanced/High Skills	28	44.44	14	63.64	42	49.41
Middle Skills	29	46.03	8	36.36	37	43.53
Low Skills	6	9.53	0	0	6	7.06
Total	63	100	22	100	85	100

Table 2 unveils the levels of skills acquired by students to start-up new ventures. The students prefer high skills (49.41%) to middle skills (43.53%). Surprisingly, IT students prefer advanced skills (63.64%) to middle skills (36.36%) while IS students prefer advanced skills (44.44%) to middle skills (46.03%).

Table 3: Course Materials and Teaching Methods preferred by STMIK Students

Teaching Materials & Methods preferred by Students	IS		IT		Total	
	n	%	n	%	n	%
Intensive learning and research-based studies of concepts of techno-entrepreneurship, creativity and Innovation, Interactive, Multi-discipline, hands-on/assignments, case studies and business plan (based on WEF's guidelines)	56	88.89	20	90.91	76	89.41
Learning Theory & Concepts of Techno Entrepreneurship – Creativity and Innovation, Interactive, hands-on and assignments	7	11.11	2	9.09	9	10.59
Total	63	100	22	100	85	100

The students unveil (in table 3) course materials and teaching methods which they preferred much; 88.89% for IS; and 90.91% for IT – cumulative 89.41%. Both of the two majors preferred intensive teaching and learning including researches and journals for seminars. This information related with the information given by the respondents in table 2 which they preferred high/advanced skills of technopreneurship in order to pursue their future career intentions.

Table 4: Significant Level of Technopreneurship Education Affects Career Intentions of IS Students

Likert Scale Rating	x	$f(x)$	$xf(x)$	$x - \mu$	$(x - \mu)^2$	$(x - \mu)2f(x)$
Strongly disagree - very Insignificant (1)	1	0.01	0.01	-3.51	12.32	0.12
Disagree - insignificant (2)	2	0.01	0.02	-2.51	6.30	0.06
Neutral - average (3)	3	0.03	0.09	-1.51	2.28	0.07
Agree - significant (4)	4	0.41	1.64	-0.51	0.26	0.11
Strongly agree - very Significant (5)	5	0.55	2.75	0.49	0.24	0.13
Expected value or $E(x) = \mu = \sum xf(x)$; variance = 0.49			4.51			0.49
Standard Deviation (σ)						0.7

Source: data analyzed

The findings of this research show that the benefits of techno-entrepreneurship education significantly affect career intention of college students both majoring in IT and IS which are indicated in table 4 and 5. IS major students have average score $\mu = 4.51$ and standard deviation $\sigma = 0.49$ (table 4a) versus $\mu = 4.63$ and $\sigma = 0.47$ (table 4b) for the IT major students, and those scores much higher than reference score 4 (significant). It means that the benefits of techno-entrepreneurship education much more significantly affect career intentions of IT major students ($\mu = 4.63$ with $\sigma = 0.47$) than IS major students ($\mu = 4.51$ and $\sigma = 0.49$).

Table 5: Significant Level of Entrepreneurship Education Affects Career Intentions of IT Students

Likert Scale Rating	x	$f(x)$	$xf(x)$	$x - \mu$	$(x - \mu)^2$	$(x - \mu)2f(x)$
Strongly disagree - very Insignificant (1)	1	0.01	0.01	-3.63	13.18	0.13
Disagree - insignificant (2)	2	0.02	0.04	-2.63	6.92	0.14
Neutral - average (3)	3	0.02	0.06	-0.63	0.40	0.01
Agree - significant (4)	4	0.23	0.92	-0.63	0.40	0.09
Strongly agree - very Significant (5)	5	0.72	3.60	0.37	0.14	0.10
Expected value or $E(x) = \mu = \sum xf(x)$; Variance = 0.47			4.63			0.47
Standard Deviation (σ)						0.69

Source: data analyzed

5. CONCLUSIONS

5.1. Conclusions

- a. The findings of this research show that the benefits of techno-entrepreneurship education significantly affect the students' career intentions to be technopreneurial generally and it helps students determine how well suited they are for technopreneurship
- b. The impact and effects of entrepreneurship education has not kept pace with the growth of teaching capacity while there is a positive impact of technopreneurship education courses at college on perceived attractiveness and perceived feasibility of new venture initiation.
- c. Techno-entrepreneurship education produces self-sufficient enterprising individuals, successful business, industry leaders, enhances a graduate's ability to create wealth, produces champions of innovation, and leads to greater opportunities with advancing technologies.
- d. The educational system influences the knowledge base, the achievement of skills, competences, motivation, creativity, innovation, and attitudes on which future career intentions are based.
- e. The literature review done had provided some indications about significant and positive link between technopreneurship education and subsequent technopreneurial activities.

5.2. Recommendations

- a. The duration and intensity of technopreneurship education should need to be increased beyond one-semester-course to achieve a maximum impact on college students, otherwise an extra course of technopreneurship education needs to be considered, particularly in research-based studies, journals, and seminars.
- b. Improving lecturers' competences, making sure that lecturers possess the necessary pedagogical skills to teach their own subjects and the transversal key competences, including in heterogeneous classes and making the best use of ICT.
- c. Improving the quality of Initial Teacher Education which should provide a Higher Education qualification and should balance research-based studies and teaching practice.
- d. The correct teaching methodology and the right learning process will certainly be crucial to the success of the technopreneurship education programs
- e. Techno-entrepreneurial activities engage in Small and Medium-sized enterprises (SMEs) or UKM need financial supports from both government and financial institutions.

5.3. Research Limitations and Directions for Future Research

In future, the methodologies pertaining to the technopreneurship education could be an interesting topic to be studied. It is important to understand and investigate what is being done in several pilot colleges in order to analyze the best practices.

REFERENCES

- Bygrave, William, D., and Zacharakis, Andrew, 2011, *Entrepreneurship*, 2nd edition, John Wiley & Sons Inc., New York
- Basu, Anuradha, 2010, Comparing Entrepreneurial Intentions among Students: The Role of Education and Ethnic Origin, *AIMS International Journal of Management*, Volume 4, Number, 3, September 2010, San Jose State University, CA, USA

- Brown, C., 1999, teaching new dogs new tricks: The rise of entrepreneurship education in graduate schools of business, in CELCE Digest Number 99-2, Kansas City, USA. *Center for Entrepreneurial Leadership Clearinghouse on Entrepreneurship Education (CELCEE) website, <http://www.celcee.edu>*
- Drucker, Peter, F., 1985/1994, *Innovation and Entrepreneurship: Practice and principles*, 2nd edition, Oxford: Butterworth-Heinemann
- , The Discipline of Innovation, *Harvard Business review*, 2002
- Daniel, Y., Hamidi, Wennberg, K., Berglind, H., Creativity in entrepreneurship education, *Journal of Small Business and Enterprise Development*, Vol. 15 No. 2, 2008 pp. 304-320, Emerald Group Publishing Limited
- Hatten, Timothy, S., 2012, *Small Business Management: Entrepreneurship and Beyond*, 5th edition, South-Western, Cengage
- Kuratko, F., D., 2009, *Entrepreneurship, Theory, Process, and Practice*, 8 edition, South-Western, Cengage Learning.
- Kaplan, Jack, M, Warren, Anthony, C., 2013, *Patterns of Entrepreneurship Management*, 4th edition, John Wiley & Sons
- Lowe, R., and Sue, M., 2006, *Enterprise: Entrepreneurship and Innovation, Concepts, Contexts and Commercialization*, 1 edition, Elsevier Inc., UK.
- Longenecker, Justin, G., Moore, Carlos, W., Petty, J., William, Palich, Leslie, E., 2010, *Small Business Management: Launching and Growing Entrepreneurial Ventures*, 14th edition, Cengage Learning
- Owusu, Ansah, W., A., 2004, *The impact of entrepreneurship education on career intentions and aspiration of tertiary students in Ghana*, A paper presented at the 49th World Conference of International Council for Small Business, June 2004, South Africa
- Porter, Michael, E, The Five Competitive Forces that Shape Strategy, *Harvard Business Review*, January, 2008
- , Strategy and the Internet, *Harvard Business Review*, 63-78. March, 2001
- Strauss, J., and Frost, R., 2012/2009, *E-Marketing*, 6th/5th edition, Pearson International Edition.
- Scarborough, Norman, M., 2012, *Effective Small Business Management: An Entrepreneurial Approach*, 10th edition, Pearson International.
- Reynolds, P.D, Camp, S.M, Bygrave, W.D. Autio, E. & Hay, M, 2002, *Global Entrepreneurship Monitor (GEM) 2001 Summary Report*, London Business School & Babson College.
- Reynolds, P.D.; Bygrave, W.D.; Autio, E et al., 2004, *Global Entrepreneurship Monitor (GEM) 2003 Global Report*, coordinated by Babson College and London Business School, sponsored by Kauffman Foundation.
- Ronstadt, R., 1985, The Educated Entrepreneurs: A New Era of Entrepreneurial Education, *American Journal of Small Business*.
- Thomas, N., D., Robert, Hisrich, and Lechter, M., 2010, *Technology Entrepreneurship, Creating, Capturing and Protecting Value*, Elsevier
- World Economic Forum, 2009, *Educating the Next Wave of Entrepreneurship: Unlocking entrepreneurial capabilities to meet the global challenges of the 21st century*