

Perception of industry experts on technology education and entrepreneurship intention of technology university undergraduates

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Abstract: Many countries in present decade have implanted technology education in universities to develop entrepreneurship. In Sri Lanka, many universities have adapted technology education stream into university level. University of Vocational Technology, technology faculties of government universities and other technology education institutes focus to develop entrepreneurship intention of Sri Lankan university students. This research aims to find out the perception of industry experts on definition of technology education, entrepreneurship intention of technology stream undergraduates and key aspects of technology education which can influence entrepreneurship intention technology stream undergraduates. 10 industry experts are selected and interviewed using structured interviews. Based on the analysis codes and themes are developed to achieve objectives. Based on the results technology education is defined as providing technology knowledge, teaching how to apply technology in various domains and how to adapt into changes caused by technology. Industry experts believe that technology university students in Sri Lanka have higher entrepreneurship intention level. Mentoring, managerial subjects, practical and action-oriented learning system, research and innovation capabilities, skill development, technology knowledge, industrial training and experience, IT knowledge, university environment and facilities, workshops and training sessions, decision making and thinking pattern and venture knowledge are the key aspects of technology education which influence entrepreneurship intention of technology university students according to industry experts.

Keywords: Entrepreneurship intention of technology students; Factors effecting entrepreneurship intention, Technology education, Experts' opinion

I. INTRODUCTION

Technology education is rapidly increasing in current decade. Developing countries including Sri Lanka implement technology education to cultivate entrepreneurship intention among university students. University of Vocational Technology plays a leading role in technology education in Sri Lanka and technology faculties of government universities also focus on developing entrepreneurship intention of students.

Technology education is relatively new to Sri Lanka and the influence of technology education on entrepreneurship intention of technology students is unknown. No proper study has tested how significant technology education influences entrepreneurship intention of technology undergraduates in Sri Lanka.

Industry experts know the conditions and requirements of business world. Industry experts own the experience and exposure on what are the current trends in entrepreneurship. Technology requirements on industry domain is familiar with industry experts. Hence perception of industry experts on technology education, entrepreneurship intention level of current technology students and aspects of technology education which influence entrepreneurship intention is vital.

Studying what is the perception of industry experts on technology education is significant as it represents the point of view and requirements of business world. Entrepreneurship intention of technology education from the view of industry experts represent as a comparison with industry standards. Key aspects of technology education according to the industry experts' perspective represent not only the aspects but requirements of industry from technology education.

Objectives of the research

Objective one

To observe how industry experts, define technology education

Objective two

To observe the perception of industrial experts on entrepreneurship intention of technology university students

Objective three

To observe the aspects of technology education influencing entrepreneurship intention of technology undergraduates according to perception of industrial experts

II. METHODOLOGY

To observe technology education definition, entrepreneurship level and aspects of technology education influencing entrepreneurship intention of technology undergraduates according to industrial experts, structured in-depth interviews are utilized. An interview with industrial expert lasts 10-15 minutes. Industrial experts are selected through convenient sampling method and the selected industrial experts represent various industries.

Table 1: Details of participants

Interviewee	Description	Industry
Interviewee 1	Entrepreneur	IT
Interviewee 2	Entrepreneur	Media planning
Interviewee 3	Consultant and scientific specialist	Chemical and scientific products
Interviewee 4	Consultant	Agriculture.
Interviewee 5	Policy specialist and economist	National level exports development.
Interviewee 6	Entrepreneur and engineering consultant	Construction
Interviewee 7	Consultant	Big data
Interviewee 8	Entrepreneur and business analyst	Apparel
Interviewee 9	Technology specialist and consultant	Industrial product and services
Interviewee 10	Consultant	Rubber products

Interviews are converted into transcripts to analysis. Codes are identified relevant to the objectives. Later onwards themes are generated to represent identified set of codes which represent common idea. Based on the codes and themes identified objectives are achieved.

III. LITERATURE REVIEW

Technology education

Technology education is defined as ethical practice and education regarding developing performance and facilitating learning through managing, using, and creating appropriate technological resources and procedures [1]. Technology education can be defined simply as the study of technology, in which students learn about the knowledge and procedures associated with technology [2]. This technology education covers the area of human ability to change and also shapes the physical world of humans to meet requirements through manipulating tools and materials with techniques. Technology education eliminates the issues of disconnect that occur between the lack of knowledge about technical components and the wide usage of technology implementation [3]. Technology education contributes to students' overall technological literacy and scientific literacy [4]. Disregarding the utilization of instructional approaches, the main focus of technology education is to develop students to develop themselves as technologically literate people [2].

The purpose of offering technology education for students is to improve and promote technological literacy in a wide and encompassing manner [2]. To attain the above-mentioned purpose, technology education should prepare students to understand, control, and implement technology. The study has to gain an understanding of how to adopt the changes to the technology changes happening in the industry. The students further have to know how to deal with factors which impact their lives and the potential control can impact in the future [5].

The criteria for teaching technology education are changing with time. Technology education curriculum experts and teachers recommend a wide range of various instruction methods such as problem-solving to

acknowledge students' technology and its impact on society, interdisciplinary techniques, and self-paced modules. These cited instrumental methods have both advantages and disadvantages [6].

Entrepreneur intention

Entrepreneurial intention is defined as a cognitive representation of the performance to be implemented through individuals to either develop new independent experiments or develop new values within the existing organization [7]. A model presented by Bygrave [8] includes information regarding the internal place of control, patient for ambiguity, and the risk-taking propensity and requirement for achievement are defined through entrepreneurial intention. The tendency of the individual to take risk is often identified as the determinant of entrepreneurial intention [8]. Entrepreneurial intention is defined as the conscious state of mind of an individual which directs the intention of that individual and, therefore, the actions and experiences that lead toward a specific pathway or focus to attain it [9].

Entrepreneurial intention is defined as a cognitive representation of the activities which are proposed to be performed by an individual to either enter into a new independent venture or to develop new values in an existing business [10]. Entrepreneurial intention is also defined through personality and environmental factors. The personality factors which determine entrepreneurial intention are the background of the individual and their traits. The environmental factors which determine entrepreneurial intention are infrastructure development, economic, social and political factors [11].

Creativity is recognized as one of the most important dimensions in entrepreneurial characteristics that contribute to improving individuals' entrepreneurial intentions [12]. The attitude of the individual also has a significant and positive impact on entrepreneurial intention [13]. Entrepreneurial intention can be defined as a cognitive representation of the actions which are implemented by individuals focusing on creating a new one or more new organizations [14]. Entrepreneurial intention is defined as the commitment of individuals to start a new business [15].

Factors effecting entrepreneurial intention of technology university students.

A study conducted in Malaysia among Technology University students reveals that subjective norms, requirements of achievement, and locus of control are identified as factors which impact the entrepreneurship intentions of technology students [16]. Entrepreneurship is recognized as an important subject in both tertiary and secondary education systems. Technical universities identify several factors which have an impact on entrepreneurial intention, such as the environment and personality [17]. Individual personality traits can be identified as key predictors of entrepreneurship intentions among technology university students [18].

Studies reveal that technology students have a high level of attitude toward entrepreneurship compared with other factors such as locus of control, resistance and support, subjective norms, need for achievement, and instrumental readiness [19]. Research conducted with Malaysia Technology University tested several factors which impact the entrepreneurial intention of technology students. The general attitude shows a significant impact on entrepreneurial intention, and furthermore, among male students with work experience, it shows a highly significant impact on entrepreneurial intention [20]. Research conducted in the Iranian Information Technology Sector examines effective normative institutional factors which impact the entrepreneurial intention of technology students. The study identified several factors under normative institutional factors such as family context, expectations from women, social norms and belief that the technology development of the country shows a significant impact on technology sector entrepreneurial intention [21]. Research conducted at Kaunas University of Technology focuses on studying the impact of entrepreneurial education on the entrepreneurship intentions of technology students. The study reveals that developing the entrepreneurial ability of technology students through offering education programs designed with entrepreneurial knowledge and skills has a significant impact on the entrepreneurial intention of technology students [22].

IV. ANALYSIS AND FINDINGS

Definition of technology education with respect to perception of industry experts

Table 2: Analysis on technology education definition

Theme	Technology knowledge	Applications	Influencing and adapting into changes	Awareness on technology	New stream
Codes	Technology knowledge (5)	How to use technology (3)	Adapt technology changes (2)	Technology awareness (1)	New stream between science and engineering (1)

	Theoretical and practical knowledge (2)	Ability to work in different industries (1)	Move life with modern society (1)	Familiar with technology (1)	
	Skills and proficiency related to technology (1)	Ability to work in different industries (1)	Transform into next level (1)		
		Make life easy (1)			
		Teaching and learning application of science and engineering (1)			

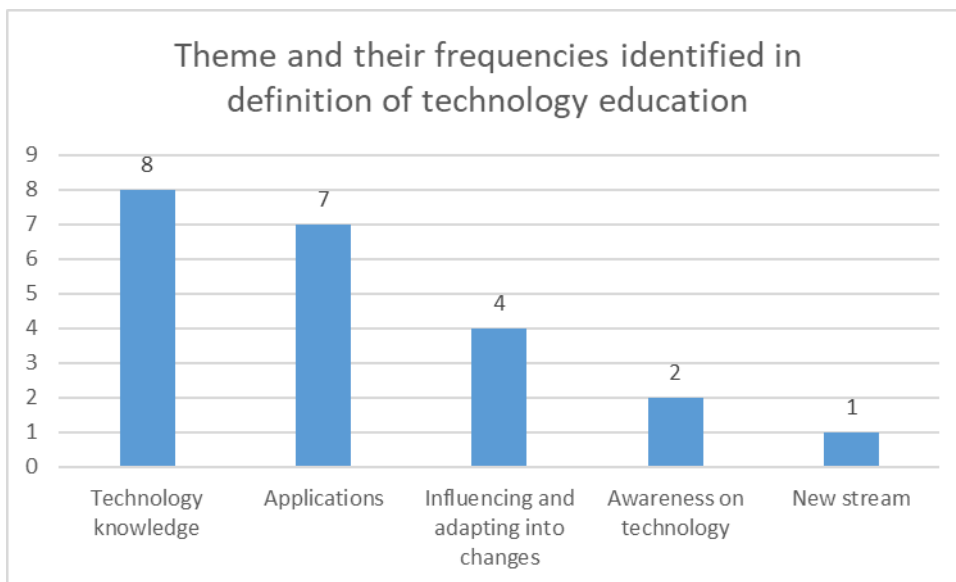


Figure 1: Themes and their frequencies identified in definition of technology education.

5 main themes are identified by the interviews conducted with industry experts on the definition of technology education. Above 5 themes identified are technology knowledge, applications, influencing and adapting into changes, awareness on technology and new stream.

Technology knowledge is the main theme identified by analysis with 8 frequencies. 3 codes have identified under the main theme and they are technology knowledge with 5 frequencies, theoretical and practical knowledge with 2 frequencies and skills and proficiency related to technology with 1 frequency. Technology knowledge provided by technology education is referred. Practical and theoretical knowledge related to technology is delivered through technology education.

Application is the second significant theme identified from the interviews. Applications theme has the frequency 7. Under the main theme there are 5 codes. How to use technology code has 3 frequencies, ability to work in different industries code has 1 frequency, ability to work in different industries code has 1 frequency, make life easy code has 1 frequency and teaching and learning application of science and engineering code has 1 frequency. Applications stands for teaching how to use technology and applications of technology in various domains such as industry domain, personal life domain and science and technology domain.

Influencing and adapting into changes is the next significant theme with 4 frequencies. Transform into next level, adapt technology changes and move life with modern society are the supporting codes with one mentioning each under the main theme influencing and adapting into changes. Influencing and adapting into changes stands for influencing student to adapt into technical changes and social changes. Even technology education allows to transform into higher statuses and levels.

Awareness on technology theme has 2 frequencies and consist of technology awareness and familiar with technology codes. The main theme stands for making the awareness on technology and familiarity. New stream theme has only one code that technology education is a new stream in-between science and technology. Total frequency for the themes, awareness on technology and new stream are 3 and it is 13.6%. Hence awareness on technology and new stream themes are less significant with respect to the other themes. Technology knowledge, applications and influencing and adapting into changes have 86.4% of the frequencies. They are the most significant themes representing the perception of industry experts on technology education definition.

Based on the analysis summary definition can be made on technology education using significant themes and their codes. Technology education is providing technology knowledge including theoretical and practical aspects. Technology education teaches students to apply technologies in real life, industries and science and engineering domains. Further technology education is the mode of molding students to adapt into technological changes and transform into next level.

Perception of industry experts on entrepreneurship intention of technology university students

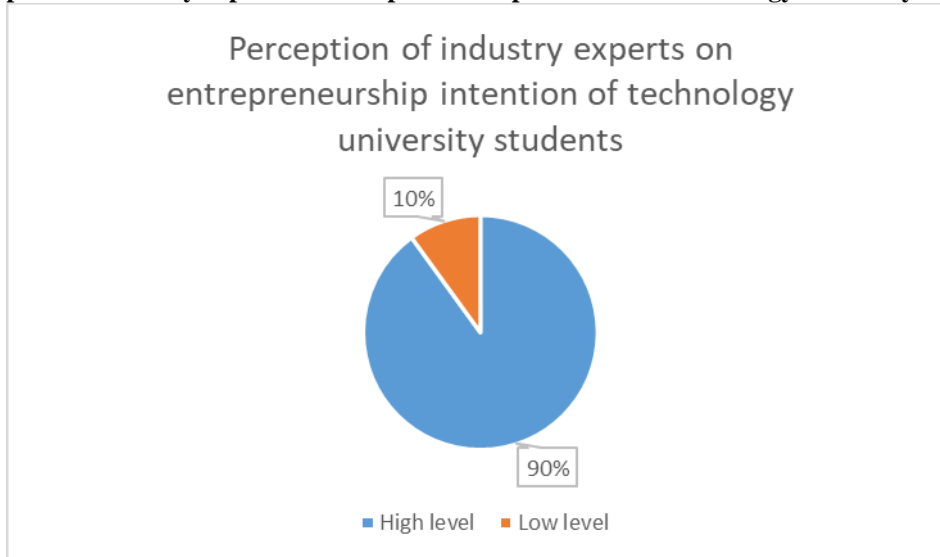


Figure 2: Perception of industry experts on entrepreneurship intention of technology university students

According to the perception of the industry experts, technology university students have high level of entrepreneurship intention. In count the percentage of high entrepreneurship intention is 90% and only 10% believes the entrepreneurship intention is low. Overall, the industry experts believe that entrepreneurship intention of technology students in a high level.

Table 3: Analysis on entrepreneurship intention of technology university undergraduates

Entrepreneurship intention of university students	Low level		High level							
	Reasons to justify/ themes	Codes/ evidences	Compared to the world entrepreneurship level (1)	Compared to the last decade (2)	Social media and online platform presence (2)	Current economic conditions (2)	Involving with businesses during university days (2)	High competition for jobs (2)	Popularity of entrepreneurship concept (1)	Influence of universities (1)
			Compared to the world entrepreneurship level (1)	Compared to the last decade (2)	Social media and online platform presence (2)	Current economic conditions (2)	Involving with businesses during university days (2)	High competition for jobs (2)	Popularity of entrepreneurship concept (1)	Influence of universities (1)
			Compared to the world entrepreneurship level (1)	Compared to the last decade (2)	Influence of social media presence	Economic uncertainties (1)	Part time working culture in universities (1)	High competition for jobs (2)	Popularity of entrepreneurship concept (1)	Influence of universities (1)

			ce (1)					
			Influence of online platforms (1)	Open economy (1)	Involve with business during university days (1)			

To claim low entrepreneurship intention one justification is provided that with comparative to world standards technology university students in Sri Lanka have low entrepreneurship intention level.

Compared to the last decade, social media and online platform presence, current economic conditions, involving with businesses during university days, high competition for jobs, popularity of entrepreneurship concept and influence of universities are the 7 themes to justify high level entrepreneurship intention of technology university students in Sri Lanka.

Compared to the last decade stands for with respect to the last decade entrepreneurship intention has increased among Sri Lankan technology university students. And it has 2 frequencies.

Social media and online platform presence theme is mentioned 2 times. Influence of social media presence and influence of online platforms are the supportive codes under Social media and online platform presence theme. Students access social media and online platforms in recent years and it increases the mind set of them to become entrepreneurs.

Current economic conditions theme has two frequencies. Under it there are two codes. Economic uncertainties and open economy are the two codes. Recent years many economic uncertainties occurred in Sri Lanka and world that leads the mind set to increase the mind set of students to gain higher level of entrepreneurship intention. Even open economy leads the way to gain world exposure related to venture creation. This also increases the entrepreneurship intention of technology university students.

Involving with businesses during university days, theme has 2 frequencies. Part time working culture in universities and involve with business during university days are the codes to back up the main theme. Many university students conduct part time jobs during university days. Based on that they gain experience on industry and venture creation knowledge. Even some of the students run their own businesses while conducting university studies. This increases the entrepreneurship intention of technology university students.

High competition for jobs theme has two frequencies. Due to high competition for finding better jobs in Sri Lanka, students see entrepreneurship as an option to make better income. High completion for finding career chances leads students to gain higher level for entrepreneurship intention as it is the one of the better option they can make.

Popularity of entrepreneurship concepts and influence of universities are the next two factors which encourage the intention of students to involve with entrepreneurship. In present situation the concept of entrepreneurship is popular that many people praise the advantages of involving with own business. Universities implement programs and project to increase the intention to become entrepreneurs. One frequency is reported for each theme. Overall percentage of cumulative percentage is 16%. With respect to the other themes popularity of entrepreneurship concepts and influence of universities are less significant.

Considering the analysis, overall perception of industry experts on entrepreneurship intention of technology university students is in a high level. Compared to the last decade entrepreneurship intention of Sri Lankan technology university students is higher. Social media and online platforms encourage students' entrepreneurship intention. Economic conditions such as economic uncertainties and exposure to the open economy increase the entrepreneurship intention of technology university students. Many university students involve with part time occupations and some run their own business. This experience increases entrepreneurship intention of technology university students. Higher competition for finding career chances leaves the technology university students to follow up entrepreneurship path rather than losing the competition.

Perspective of industry experts on key features of technology education affecting on entrepreneurship intention of technology university undergraduates

Table 4: Analysis on Key features of technology education affecting on entrepreneurship intention of technology university undergraduates

Theme	Code				
Mentoring (12)	Mentoring from entrepreneurs (5)	Academic staff mentoring (3)	Industrial professional interaction (2)	Career guidance (2)	
Managerial subjects (10)	Marketing knowledge (3)	Business management knowledge (2)	Financial management knowledge (2)	HR management (2)	Change management knowledge (1)
Practical and action-oriented learning system (8)	Practical sessions (5)	Projects based learning (2)	Action oriented learning system (1)		
Research and innovation capabilities (8)	Research component (4)	Innovation content (3)	Technology based research (1)		
Skill development (6)	Presentation skills (2)	Communication skills (1)	Personality building	Team work (1)	Technical skills (1)
Technology knowledge (6)	Technology theories (4)	Emerging technology components (2)			
Industrial training and experience (5)	Industrial training (3)	Industrial experience (2)			
IT knowledge (5)	IT knowledge (5)				
University environment and facilities (5)	Self-study environment (2)	Incubator facilities (1)	Research facilities(1)	Innovation culture(1)	
Workshops and training sessions (5)	Workshops (3)	Businesses planning sessions (1)	Training camps (1)		
Decision making and thinking pattern (4)	Decision making subjects (2)	Critical thinking (1)	Creative thinking (1)		
Venture knowledge (4)	Global venture trends (2)	Business practices(1)	Subject knowledge on venture(1)		
Entrepreneurship knowledge (3)	Entrepreneurship components (3)				
Industry knowledge (3)	Industry knowledge (3)				
Multidisciplinary approach (3)	Multidisciplinary approach (3)				
Mathematical knowledge (3)	Mathematical component (3)				
Laboratory capabilities (2)	Laboratory capabilities (2)				
Science and engineering knowledge (2)	Science and engineering concepts (2)				

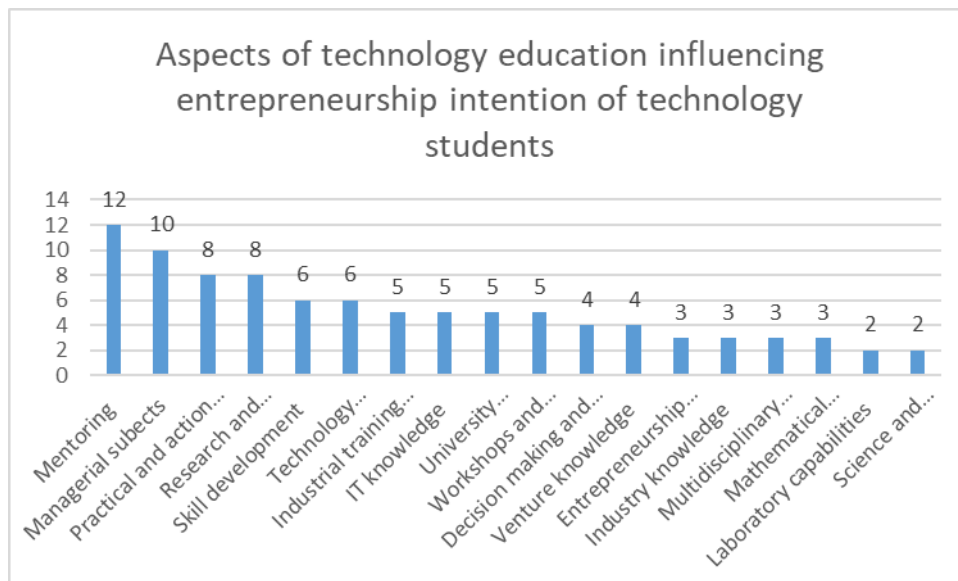


Figure 3: Aspects of technology education influencing entrepreneurship intention of technology students

18 themes are identified from the interviews conducted with industry experts. Mentoring, managerial subjects, practical and action oriented learning system, research and innovation capabilities, skill development, technology knowledge, industrial training and experience, IT knowledge, university environment and facilities, workshops and training sessions, decision making and thinking pattern, venture knowledge, entrepreneurship knowledge, industry knowledge, multidisciplinary approach, mathematical knowledge, laboratory capabilities, and science and engineering knowledge are the above mentioned aspects identified from the analysis.

Mentoring is the most significant theme mentioned. It has 12 frequencies. Under the theme mentoring 4 codes can be identified. Mentoring from entrepreneurs, academic staff mentoring, career guidance and industrial professional interaction are the codes representing mentoring theme. Mentoring stands for the guidance and advices delivered to students with persons with potential experience and knowledge. The most significant mentoring type is mentoring received from entrepreneurs as entrepreneurs have experience in entrepreneurship domain. The frequency is 5. Second significant code is academic staff mentoring with 3 frequencies. Mentoring is vital for the students from academic staff that they can deliver theoretical and practical aspects to the students. Career guidance shows the pathway to students in finding intention towards entrepreneurship and industrial professional interaction encourages the entrepreneurship intention of students. Both the codes have 2 frequencies each.

The second significant theme is managerial subjects with frequency of 10. Five codes represent the managerial subjects theme and they are marketing knowledge, HR management knowledge, financial management knowledge, business management knowledge and change management knowledge. Marketing knowledge has the frequency of 3 and it is the highest among the codes. Change management has only one mention and other codes have 2 each. Managerial subjects refer to the knowledge which is required to properly manage a venture such as conducting changes in the business, managing work force, managing assets and finding market opportunities.

Practical and action-oriented learning system theme has 8 frequencies. Three codes are under the theme and they are practical sessions, projects-based learning and action-oriented learning system. Practical sessions code has 5 frequencies, project-based learning code has 2 frequencies and action-oriented learning code has one frequency. Technology education provides practical sessions to students which encourage them to involve with entrepreneurship and encourage the intention to start own venture. Even the learning structure is based on projects. Projects provide the practice of involving with real tasks and gain experience. Action oriented learning system increases the practice and it develops the entrepreneurship intention.

Research and innovation capabilities, theme is mentioned 8 times. Research component, innovation content and technology-based research are the codes representing the main theme. Research component code has 8 frequencies, innovation content code has 3 frequencies and Technology based research code has only one frequency. Research knowledge and innovation knowledge provided through the technology education are highlighted to be influencing on the entrepreneurship intention of technology undergraduates. And specially technology-based research knowledge is mentioned to be increasing entrepreneurship intention.

Skill development is identified as a main aspect influencing entrepreneurship intention through technology education. 5 codes represent the main theme skill development. Presentation skills code has 2 frequencies and communication skills, personality building, team work and technical skills have one frequency each. Set of skills developed through technology education increases the intention of students to become entrepreneurs.

Technology knowledge aspect is mentioned 6 times. And two codes represent the main theme. Technology theories with 4 frequencies and emerging technology has 2 frequencies. Technology knowledge is one of the key components of technology education. Technology theories are essential for providing concepts of technology domain. Emerging technology competes provide the awareness of upcoming technologies to students. Students can use new technologies for venture creation.

Industrial training and experience is identified as a main feature of technology education. Industrial training is one of the codes backing the theme and stands for the training opportunities provided to students in different industries. Students can practice the industrial requirements and experience industrial requirements during training period. Industrial experience code has 2 frequencies and it refers to the experience gained by technology students with opportunities provided by technology education.

IT knowledge has 5 frequencies and IT knowledge is provided by technology education. With IT knowledge students can practice in various domains related to businesses. Operations and development get easy with IT knowledge. Even IT knowledge can be used to create ventures related to IT industry. IT knowledge further improves the intention of technology students according to the perceptions of industry experts.

University environment and facilities theme has 5 frequencies. According to industry experts, technology education system has influenced university facilities and environment to increase the entrepreneurship intention of students. Self-study environment has the highest frequency of mentioning being the leading code under the main theme with 2 frequencies and other codes are mentioned only one time each. Self-study environment has created through technology education and it will lead students to grow intentions to start own businesses. Incubator facilities are recently added into technology universities to develop ideas of students into ventures. Research facilities are provided to conduct researches of students and they can practice research and development which leads entrepreneurship intention. Innovation culture is created with the influence of technology education. Rather than learning theories, innovative culture exists in technology universities in Sri Lanka. Students are encouraged by the innovative culture to practice innovation and it becomes a common thing.

Workshops and training sessions can be identified as an aspect of technology education. Industry experts have mentioned the above theme 5 times. Technology education system launches workshops and training sessions to students to practice and develop the capabilities of students in achieving their potentials. Training sessions such as how to plan a business and training courses increase the intention of students to become entrepreneurs.

Decision making and thinking pattern encouraging the entrepreneurship intention of technology university students according to perceptions of industry experts. Decision making subjects is the key code under the main theme with 2 frequencies. Decision making component is critical to increase intention of students to become entrepreneurs. Having intention to involve with entrepreneurship needs ability of decision making. Other key codes are critical thinking and creative thinking with one frequency each. Critical and creative thinking are essential to have the intention to become entrepreneurs that above facts leads the way to form new businesses.

Venture knowledge aspect of technology education mentioned 4 times and it stands for delivering knowledge related to venture creation, venture operations and transforming ventures into global levels. Technology education allows students to learn global trends related to ventures. Opportunities in business world can be found easily with the knowledge gained. Business practices and subject knowledge on venture lead the way to cultivate entrepreneurship intention among students.

Entrepreneurship knowledge is provided through technology education. With the concepts and knowledge on entrepreneurship students get familiar on starting own businesses. Industry experts have mentioned entrepreneurship knowledge 3 times. Industry knowledge is also delivered from technology education. Industry knowledge and theories essential to make students familiar with industrial world which increases the entrepreneurship intention. Multidisciplinary approach is practiced in technology education and frequency mentioned is 3 times. Multidisciplinary approach essential in encouraging students to grow entrepreneurship intention. Mathematical subjects are delivered in technology education and it is important to teach students how to take calculate risks regarding entrepreneurship. Mathematical complements increase the entrepreneurship intention of students. Laboratory capabilities and science and engineering knowledge themes are mentioned 2 times each. Laboratory capabilities develop the abilities of students involve with laboratory related skills. Some new products and services can be stimulated through the laboratory capabilities. Science

and engineering knowledge essential for developing ventures related to science and technology. With the science and engineering knowledge provided through technology education students can start own businesses related to science and engineering.

Entrepreneurship knowledge, industry knowledge, multidisciplinary approach, mathematical knowledge, laboratory capabilities and science and engineering knowledge themes have 3 or 2 frequencies in mentioning. Cumulative frequency of above themes is 16 and percentage with respect total theme mentioning is 17%. Hence according to the perception of industry experts the significance of entrepreneurship knowledge, industry knowledge, multidisciplinary approach, mathematical knowledge, laboratory capabilities and science and engineering knowledge aspects are less significant with respect to the other aspects in contributing entrepreneurship intention of technology students. It implies that mentoring, managerial subjects, practical and action-oriented learning system, research and innovation capabilities, skill development, technology knowledge, industrial training and experience, IT knowledge, university environment and facilities, workshops and training sessions, decision making and thinking pattern and venture knowledge aspects of technology education significantly impacts on entrepreneurship intention of students.

V. CONCLUSION

The study is conducted based on interviews conducted with industry experts. 10 industry experts representing various fields are selected to observe the perspective and conduct the study. Structured interviews are conducted with selected industry experts and interview are analyzed to achieve the objectives. Codes are selected from the interviews aligning with objectives and codes are categorized under themes meaningfully.

First objective is to observe the perception of industry experts on technology education definition. 5 main themes are identified from the interviews. Technology knowledge, applications, influencing and adapting into changes, awareness on technology and new stream are the themes. Out of the themes, technology knowledge, applications and influencing and adapting into changes are significant with respect to the rest of the themes. Summary of the perception of industry experts on technology education definition is delivering technology knowledge, teaching how to apply technology in various domains such as industry and personal domains. Even technology education teaches students to adapt into rapid changes caused by rapid technology advancement.

Second objective is to study the perception of industry experts on entrepreneurship intention among technology university students. 90% of the industry experts believe that technology undergraduates have higher entrepreneurship intention. To back up the higher level of entrepreneurship intention 7 main points are provided and they are compared to the last decade, social media and online platform presence, current economic conditions, involving with businesses during university days, high competition for jobs, popularity of entrepreneurship concept and influence of universities. Out of the main themes to justify the high entrepreneurship intention compared to the last decade, social media and online platform presence, current economic conditions, involving with businesses during university days and high competition for jobs are significant.

Objective 3 is to identify key aspects of technology education influencing entrepreneurship intention of technology stream undergraduates. 18 themes have identified from the interviews to discuss aspects influencing entrepreneurship intention. Mentoring, managerial subjects, practical and action oriented learning system, research and innovation capabilities, skill development, technology knowledge, industrial training and experience, IT knowledge, university environment and facilities, workshops and training sessions, decision making and thinking pattern, venture knowledge, entrepreneurship knowledge, industry knowledge, multidisciplinary approach, mathematical knowledge, laboratory capabilities and science and engineering knowledge are the above mentioned 18 themes. But out of them mentoring, managerial subjects, practical and action-oriented learning system, research and innovation capabilities, skill development, technology knowledge, industrial training and experience, IT knowledge, university environment and facilities, workshops and training sessions, decision making and thinking pattern and venture knowledge influence entrepreneurship intention of technology stream undergraduates.

REFERENCES

- [1] Richey, R.C., 2008. Reflections on the 2008 AECT Definitions of the Field.
- [2] International Technology Education Association and Technology for All Americans Project, 1996. Technology for all Americans: A rationale and structure for the study of technology. International Technology Education Association
- [3] de Vries, M.J., Fletcher, S., Labudde, P., Lang, M., Mammes, I. and Max, C. eds., 2016. Technology education today: international perspectives. Waxmann Verlag.
- [4] Blandow, D. and Dyrenfurth, M.J. eds., 1994. Technology education in school and industry: emerging didactics for human resource development (Vol. 135). Springer Science & Business Media.

- [5] International Technology Education Association, 1985. Technology education: A perspective on implementation. International Technology Education Association
- [6] Boser, R.A. and Daugherty, M.K., 1998. Students' attitudes toward technology in selected technology education programs. Volume 10 Issue 1 (fall 1998).
- [7] Valencia-Arias, A., Montoya, I. and Montoya, A., 2018. Constructs and relationships in the study of entrepreneurial intentions in university students. *International journal of environmental & science education*, 13(1), pp.31-52.
- [8] Churchill, N. and Bygrave, W.D., 1989. The entrepreneurship paradigm (I): A philosophical look at its research methodologies. *Entrepreneurship Theory and practice*, 14(1), pp.7-26
- [9] Bird, B.J., 1989. *Entrepreneurial behavior*. Scott Foresman & Company.
- [10] Fini, R., Grimaldi, R., Marzocci, G.L. and Sobrera, M., 2009. 'The foundation of entrepreneurial intention', Paper presented at the Summer Conference on Copenhagen Business School.
- [11] Mazzarol, T., Volery, T., Doss, N. and Thein, V., 1999. Factors influencing small business start-ups: a comparison with previous research. *International Journal of Entrepreneurial Behavior & Research*.
- [12] Kusmintarti, A., Thoyib, A., Ashar, K. and Maskie, G., 2014. The relationships among entrepreneurial characteristics, entrepreneurial attitude, and entrepreneurial intention. *IOSR Journal of Business and Management*, 16(6), pp.25-32.
- [13] Lüthje, C. and Franke, N., 2003. The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&d Management*, 33(2), pp.135-147.
- [14] Kusmintarti, A., Asdani, A. and Riwijanti, N.I., 2017. The relationship between creativity, entrepreneurial attitude and entrepreneurial intention (case study on the students of State Polytechnic Malang). *International Journal of Trade and Global Markets*, 10(1), pp.28-36.
- [15] Krueger, N.F. and Carsrud, A.L., 1993. Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5(4), pp.315-330.
- [16] Mat, S.C., Maat, S.M. and Mohd, N., 2015. Identifying factors that affecting the entrepreneurial intention among engineering technology students. *Procedia-Social and Behavioral Sciences*, 211, pp.1016-1022.
- [17] Pihie, Z.A.L. and Akmaliah, Z., 2009. Entrepreneurship as a career choice: An analysis of entrepreneurial self-efficacy and intention of university students. *European journal of social sciences*, 9(2), pp.338-349.
- [18] McClelland's Theory of Needs. (1976). Retrieved June 21, 2013, from Management Study Guide, <http://www.managementstudyguide.com/mcclellands-theory-of-needs.htm>
- [19] Autio, E., Keeley, R.H., Klofsten, M. and Ulfstedt, T., 1997. Entrepreneurial intent among students: testing an intent model in Asia, Scandinavia and USA.
- [20] Rasli, A., Khan, S.U.R., Malekifar, S. and Jabeen, S., 2013. Factors affecting entrepreneurial intention among graduate students of UniversitiTeknologi Malaysia. *International Journal of Business and Social Science*, 4(2).
- [21] Arasti, Z., Pasvishe, F.A. and Motavaseli, M., 2012. Normative institutional factors affecting entrepreneurial intention in Iranian information technology sector. *Journal of management and strategy*, 3(2), p.16.
- [22] Remeikiene, R., Startiene, G. and Dumciuviene, D., 2013, June. Explaining entrepreneurial intention of university students: The role of entrepreneurial education. In *International conference* (pp. 299-307).