

Cognitive Competency in Entrepreneurship Skill Among the Lecturers in Perak College Community Malaysia

Rafidah Mohd Basir¹, Salina Abu Bakar¹, Siti Saleha Abdul Asiz², *Yufiza Mohd Yusof³

¹ Department of Technology Information, Sungai Siput Community College (KKSS), Sungai Siput, Perak, Malaysia.

² Department of General Studies, Pasir Salak Community College (KKCP), Changkat Lada, Perak, Malaysia

³ Department of Commerce, Ungku Omar Polytechnic (PUO), Ipoh, Perak, Malaysia.

*E-mail: fairlady_iz@yahoo.com

Received: 4th October, 2022

Accepted for publication: 1st November, 2022

Published: 27th December, 2022

Abstract

Entrepreneurship Education can develop skills in a broad set of competences applicable to life, work and learning about how to run a business. Learning, teaching and training will build the entrepreneurial attitudes, knowledge and behaviours among the lecturers whether with or without a commercial objective. The purpose of this study to see the cognitive competency in the entrepreneurship skills among the lecturers in Perak Community College, Malaysia. A total of 128 respondents were involved in this study which are Sungai Siput Community College, Cenderoh Community College and Pasir Salak Community College. This study is a descriptive and questionnaire were distributed to obtain feedback. The data was analysis using SPSS v22, to find the mean score and correlation to see the significant relationship with the responded. The findings of this research show that the level of cognitive competency in entrepreneurial skills among the lectures in the Perak College Community, Malaysia show a score mean of 4.19 point with a medium high score. The research with $r=0.419$, $p=0.00<0.01$ shows that there is a no significant correlection between gender and Cognitive Competency, and no significant correlection between age and Cognitive Competency $r=0.247$, $p=0.005<0.01$ Therefore both hpyotesis is rejected. Meanwhile the significant correlation between years of teaching shows a positive correlation with a $r=0.030$, $p=0.735>0.05$. Whereas significant correlection between academic background and Cognitive Competency with $r=0.171$, $p=0.053>0.05$, shows a minor correlation between academic background and creativity. Therefore both hpyotesis are accepted. As a conclusion the researchers feel that lecturers' skills level need to be improved for them to be more committed in teaching and learning entrepreneurship module. The training should a collaboration between lecturers and industrial company as to get more knowledge and suits the industrial requirement, to build-up holistic individual with entrepreneurship characteristics.

Keywords: Entrepreneurship skills, cognitive competency, training, knowledge, holistic individual

Introduction

Yusof (2010) in his book states that entrepreneurial activity will enable us to decide and know the stages of progress that society and the nation want to do. Entrepreneurship is not a new phenomenon in the development of the nation. It is one of the disciplines of development and economic growth of a country. Today, entrepreneurship is an important activity in mobilizing and stimulating the success of individuals, communities and economic of a country. In order to enhance the understanding of students in this entrepreneurial world, lectures should change the technique of teaching. The new ideas will make the students to be more confident and surer to face the reality of life.

In the Future Learning Report by Alexandria Valerio (2014), he mention that Entrepreneurship Education can help to develop skills in a broad set of competences applicable to life, work and learning about how to run a business. Learning, teaching and training will build the entrepreneurial attitudes, knowledge and behaviors among the lecturers whether with or without a commercial objective. The 'National Education Policy Malaysia (Review, May 2013), has located a very important role in determining the direction of the national education system. It was first implemented in Malaysia since the year 1957. There are three main objectives in this national education policy. The first purpose is to create a learning system that can meet the needs of the country and promote cultural, social, economic and political development. Well manner and well-disciplined students respect the elderly align with education policies. This is to provide efficient and effective teaching and learning processes stated in the second objectives. Meanwhile the third objective it is to ensure the education policy can be implemented effectively to determining the progressive education system.

The Malaysia Teachers Standard (Malaysia K. P., 2009) as the main references and guides outlines are used to make sure the teachers / lectures qualified and meet the needs as a professional with highest level of competence. There are three main roles of a lectures. Firstly, they should communicate knowledge to their students. The second is teaching skills and the third is to apply the noble values and morals in the student. The main goal and purpose of the education system, is to ensure that Malaysian youth develop holistically and having the necessary values, knowledge and skills to succeed in an increasingly competitive and uncertain world. Lectures are building the next generation of leaders that will take Malaysia to even greater heights.

Problem Statement

Entrepreneurship lectures competency were developed with knowledge acquisition together with the ability, attitude and behavior to act as an entrepreneur. The main factor to develop entrepreneurship education is to have a culture of entrepreneurship. Teaching entrepreneurship module using the traditional method and practices would lead students to be more passive recipient. Students must to be taught in an active learning method with new pedagogies strategies (European Commission, 2011).

According to Akanwa (2014) in his research mention that lectures have some slacking in delivering lesson with technologies needed for quality teaching and learning in South-East universities of Nigeria. Whereas, Lyudmila et.al (2016) in their research mention that competency in basic knowledge and applied skills are very useful to improve the quality of the human resource potential. Wan Nooraini and Mohammed Sani (2010) in their research title measuring the Lecturer Efficacy, Professional and General Competencies of Malaysian Polytechnic Technical Lecturers Malaysia shows that there is positive relationship between lecturer efficacy beliefs and lecturer competency. Chang et.al (2013) in their research mention that lectures should have educational competency, in addition to that they should have social and technological competency which are positively related to how innovative their teaching method and performance.

Wan Fauziah and Suleiman (2017) in their research questions asked on what are the requirement of an entrepreneurial competencies should have in the lecturers in the Higher Learning Institutions Malaysia. Additional to their research questions was whether entrepreneurship can be taught or not. Their concern is how to get the most competent lecturers to handle the job effectively. Their findings shows that lecturers should develop their own competencies so that students can be inspired in doing entrepreneurship as their career. In 2015, Wan Fauziah and Suleiman again mention that entrepreneurial competencies are important for lecturers in Malaysia to teach entrepreneur. The research questions regarding what sort of entrepreneurial competencies perceived should be an important factor in teaching entrepreneurial courses and modules in Higher Learning Institutions in Malaysia. Findings from this study mention that all lecturers teaching entrepreneurship must have good attitudes towards business and properly educated. This is because the entire success of the entrepreneurship program entirely depends on their contributions.

Hessel et.al (2008) in their research finding mention that it is improtant to educate students with entrepreneurship education this is to build-up their intention to become an entrepreneur. Choi et.al (2013) show that there are determining the impact of lecturers' competencies on students' satisfaction in a private college in Malaysia lecturer's knowledge of subject contributes most to students' satisfaction. Whereas Alexanderia (2014) in his research found that the poor lecturers' subject knowledge, lecturer attendance, teaching skills and lecturer attitude attribute have a positively relationship in the low performance among the students. Arif Partono et.al (2017) examined the lecturers' professional competency on students' academic performance shows that knowledge, skills, and behaviour can help to enhance the capabilities of lectures to educate, teach, guide, direct, train, better and even can evaluate the student performance.

In Malaysia, the transformation in teaching and learning needs to be align with the spirit of 1Malaysia that emphasizes solidarity. Lectures of diverse backgrounds, religious or ethnic affiliations should engage in the process of forming unity, thus establishing strong and lasting relationships and cooperation. In achieving the expectations stated by the country, lectures need to sacrifice their time, work extra hard, always be sincere and willing to face the challenges and allegations by parents and community, including changes in the delivery system and information. (Malaysia K. P., 2012). Redecker (2014) in his writing, mention that lectures is role model to create well information students in all aspect especially science and technology. Lectures must be able to create students with creative mind in their studies and able to create innovations. Lectures should touch the inner part of the student's heart as they can produce a well behave with values in the students, living in a harmony world, having a spirit of identity and able to build entrepreneurship understanding towards self-esteem in the students. Whereas Kay (2010) wrote in her research of all the features stated by Redecker (2014), lectures are the subject matter expert, with a very skilful pedagogy techniques and methods of teaching. They as lectures must understand the cognitive psychology skills to able them to counsellor the students. Kay (2010) added that lectures must have the expertise in using the latest technology to apply and align them in teaching method.

Table 1 below shows the number of students doing and having their own business after graduating from the College Community Malaysia from various programme. This source is taken from the National Education Statistic Ministry of Higher Education from the year 2012, 2013, 2014, 2015 and 2016. Each year it shows the declining of students doing and having their own business. So, what is the problem arise from the issue. Why is it declining every year even though we know that being an entrepreneur is the main agenda of the country?

Table 1: Students Having and Doing Their Own Business

Year	Students output	Percentage (%)	Difference (%)	
2012	767	21.5	-	-
2013	765	20.3	1.5	Decline
2014	209	10.0	19.7	Decline
2015	460	6.8	3.2	Decline
2016	560	6.5	0.7	Decline

Source: National Education Statistic Ministry of Higher Education

According to Katariina Peltonen (2015), in her research problem questions mention whether entrepreneurial lectures competencies could it be developed. Meanwhile Olav Haara & Jenssen (2016), mention the reason what and why lectures need to have pedagogical entrepreneurship in teaching education. Whereas Zaidatul Lope Pihie & Bagheri (2011), in their research objective rises the questions whether lectures are qualified to teach entrepreneurship, by analysing teacher's attitude and self-efficiency in teaching entrepreneurship. With that the researcher would like to see whether the lectures in the Perak College Community Malaysia have the competency in teaching entrepreneurship module to produce entrepreneur among the students.

Research Objectives

The objectives of the study are: -

To examine the level of the cognitive competency in entrepreneurial skills among the lectures in the Perak College Community Malaysia.

To determine the significant relationship between cognitive competency in entrepreneurial skills and demography among the lectures in the Perak College Community Malaysia.

Research Questions

- i. What is the level of the cognitive competency in entrepreneurial skills among the lectures in the Perak College Community Malaysia high?
- ii. Are there any significant relationship between cognitive competency in entrepreneurial skills and demography among the lectures in the Perak College Community Malaysia?

Research Hypothesis

H1 – There is no significant relationship between cognitive competency in entrepreneurial skills teaching and demography among the lectures in the Perak College Community Malaysia

Literature Review

Entrepreneurial competencies are defined as characteristics such as generic and special knowledge, motives, traits, self-images, social roles and skills which result in the birth of venture, its survival and/or growth. Entrepreneurial competencies are the skills necessary for an entrepreneur to venture into an enterprise, organize and manage an enterprise ably and competently and realize the goal for which the enterprise is established (Xiang, 2017). In this research, the researcher will focus on the one entrepreneurial skill that is Cognitive Skills.

The cognitive category includes mastery of academic content, critical thinking and creativity, which were identified by GCEN (members and global organizations as fundamental in a transnational economy). These studies also find that lectures can generate specific, cost-effective interventions to improve these competencies for students, especially those at risk of low achievement and attainment Cohen (2013), though uncertainty remains about whether these studies generalize to a broad range of student populations. Among the many cognitive competencies, the three most used are academic mastery, critical thinking, and creativity. They are being grouped together because they incorporate either knowledge in academic subjects or the skills that relate to how one processes this knowledge.

Frank (2013), said that the Developing Entrepreneurship Skills in Higher education means entrepreneurship skill should be thought to all students. Teaching and learning process should focus more on the entrepreneurship classes and modules. In learner perspective, the most importance value creators and skills where an entrepreneur has been acknowledged come from the educational domain (Lackéus, 2015). Yufiza et. al, (2018), in their research says that Entrepreneurial skills are needed to improve the students' interest in entrepreneurship as it seeks to fulfil the nation needs to produce holistic individuals with entrepreneurship characteristics in the 21st Century.

Academic Mastery.

Learning academic content is fundamental to education, and mastery of such content serves as the basis for higher-order thinking skills as well as the impetus for improved interpersonal and intrapersonal competencies. Mastery in various content of academic is the fundamental of an education. Mastering the content servers as a basis focus in higher-order thinking skills (Abbott, 2016). Academic mastery in various matters is important, because this is an effort to improve interpersonal and intrapersonal competencies. This was mention in the World Bank (among others) stating that the importance for economic growth in general in Almeida et. al (2009) research in 21st Century Competency Report (April, 2012). Learning to learn are best accomplished within the context of academic instruction in a specific subject, John Opfer (2012) in the 21st century Competency report (2012). The 21st century competencies such as communication is an important factor to a variety of future educational and career outcomes.

To improve interpersonal and intrapersonal competencies, academic mastery is an important factor to focus on. To communication, academic mind set and learning should be accomplished within the context of academic instruction to deliver any specific matter. John Opfer (2012) in the 21st century Competency report (2012). Although 21st century competencies such as communication appear to be important to a variety of later educational and career outcomes in their own right, they do not operate independent of academic outcomes.

Critical Thinking.

Critical thinking is the most highlighter discussion and it plays as the important key competencies. According to Facione et.al (1995) in the 21st century Competency report, critical thinking includes inductive and deductive reasoning, as well as making correct analyses, inferences, and evaluations. To deeply understand the academic content, these competencies are very important. More over critical thinking relates in depth with career performance. Wagner (2010), in his research suggests that for a company to compete in the global economy, it needs workers who will think out the box and how to continuously improve its products, processes, or services.

Jim Soland (2013), stated that critical thinking includes inductive and deductive reasoning, as well as making correct analyses, inferences, and evaluations. These competencies are important for deeply understanding academic content, and they also relate to later career performance. Hilton (2013), mention that the key to 21st century competencies include the value to entrepreneurship and being creativity, this was mention by a range of organizations and scholars, including the Organisation for Economic Co-operation and Development (OECD) (2013), the National Research Council the Hewlett Foundation and the World Bank, (2011) and the 21st Century Competencies Foundation Document for Discussion, (2016).

Creativity.

Creativity is the skill and talent using our imagination to create and solve a problem. Creative thinking means thinking about new things or thinking in new ways. It is “thinking outside the box.” Creativity involves lateral thinking and the ability to perceive patterns that are not obvious. Some people are naturally more creative than others, but creative thinking can be strengthened with practice. Creative people can devise new ways perform tasks, solving problems, and meet up with challenges. They bring a fresh and a wide perspective in their work and can help departments and organizations to move in more productive directions, mention by Doyle (2017). Flexibility, finally, is based on a measure of the ability to adapt. Successful entrepreneurs react to changes they observe in their environment, such as new needs of clients or new competitors in their market.

Creativity is the ability to adopt views from different perspectives and to see and try new possibilities based on open observations of (changes in) the environment. Moreover, creativity reflects the capability to turn problems into new opportunities. It is an important ingredient for successful entrepreneurship.

Moderator.

In general terms, a moderator is a qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable. Specifically, within a correlational analysis framework, a moderator is a third variable that affects the zero-order correlation between two other variables. In the more familiar analysis of variance (ANOVA) terms, a basic moderator effect can be represented as an interaction between a focal independent variable and a factor that

specifies the appropriate conditions for its operation". Baron (1999). In this research the researcher would take the Respondent demography as the moderator. The respondent demography consists of

- i. Gender
- ii. Age
- iii. Years of teaching
- iv. Academic Background

Conceptual Framework

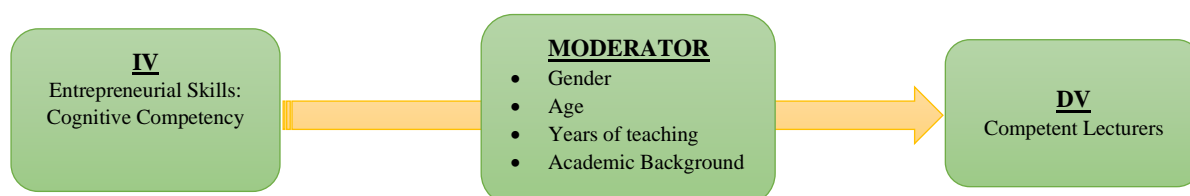


Diagram 1: Conceptual framework

The diagram 1 below shows the conceptual framework of the research. Reimers (2014) from Harvard Graduate School, explain that to educate children, they must undergo the true-life experiences and learn from other people. It is no longer a matter of thoughts but it is now an on-going process, creating ideas and gaining skills to fulfil the needs of employment in the industries. The conceptual framework is divided into the Entrepreneurial skills that is cognitive competency as the Independent Variables (ID), which include are academic mastery, critical thinking and creativity here as the Dependent Variables (DV) consist of lectures competency and respondents' demography as the moderator.

Methodology

Othman (2011), explains that the sample of the study is a subset of the study population that enables researchers to make a conclusion from the findings. There are about 13 Community Colleges in Perak, Malaysia (JPKK, 2017), but in this research only 3 community colleges where selected as a convenience sampling and 150 lecturers teaching in community college were selected. Chua (2006) describes that the sampling of the group is carried out on populations by involving a large area and a large number of subjects in populations. The population composition of this study can be seen through the table below. Estimation the same size in this research is using Krejcie and Morgan (1970), is common method. Krejcie and Morgan (1970) is using the following formula to determinain sampling size. This research is quantitative research. Questionnaires will be distributed among the lecturer teaching in the community college who have taught n still teaching entrepreneurial studies.

Methods of Hypothesis Analysis.

Dillard (2018), mention that it is commonly called *t* testing, hypothesis testing assesses if a certain premise is actually true for your data set or population. This value is used as a probability cut-off for making decisions about the null hypothesis. Huber (2017), said that the alpha value represents the probability we are willing to place on our test for making an incorrect decision in regards to rejecting the null hypothesis. The most common alpha value is 0.05 or 5%. Other popular choices are 0.01 (1%) and 0.1 (10%). In this research, the researcher will using the most common alpha value that is 0.05 or 5%.

Data Analysis

The questionnaires were distributed to three colleges, Community College Sungai Siput (KKSS), Community College Chenderoh (KKCP) and Community College Pasir Salak (KKPS). Data were analysed using Statistical Package for Social Science (SPSS) version 17.0. Davies (2014) said that low, medium and high, are based on a five-point Likert scale that is being used. In this study, the researchers put into 4 levels, ground, low, medium and high as had been done by previous researchers as Ahmad Rizal Madar, 2008. The level is based on the mean scores as shown in table 4 below.

Table 2: Determination of Level Score Mean.

Mean Score Range	Stage Size Interpretation	Effectiveness
1.00 - 2.39	Strongly disagree	Low
2.40 - 3.79	Disagree	Satisfactory
3.80 - 4.79	Agree	Medium high
4.80 - 5.00	Strongly agree	High

Source: Ahmad Rizal Madar (2008)

Demography Profile Analysis

Table 3: Respondent Demography

No	Item		Frequency	Percentage
1	Gender	Male	55	43.0
		Female	73	57.0
2	Age	Less than 30 years	12	9.4
		31 – 35 years	36	28.1
		36 – 40 years	61	47.7
		41 – 45 years	16	12.5
		Above 46 years	3	2.3
4	Years of teaching	Less than 5 years	20	15.6
		6 – 10 years	61	47.7
		11 – 15 years	28	21.9
		16 – 20 years	10	7.8
		Above 20 years	9	7.0
5	Academic Background	Diploma	15	11.7
		Degree	90	70.3
		Master	21	16.4
		Ph.D	2	1.6

Table 3 shows the frequency and percentage distribution of the respondents' demography. The findings show that the respondents' gender from KKSS consist of a man, 43.0% and 57% are female. Respondents age from 24-28 years are 9.4%, 29-33 years are 28.1%. 34-38 years are 47.7%, 39-43 years are 12.5% and above 44 years are 2.3%. Meanwhile there are 39.1% respondents from KKSS and KKPS respectively while there are 21.9% from KKCP. The findings show that respondents years of teaching less than 5 years 15.6%, in the range of 6-10 years 47.7%, 11-15 years 21.9%, 16-20 years 7.8% and more than 20 years 7.0%. Most of the respondent with Degree 70.3%, Masters 16.4%, Diploma 11.7% and Ph.D. 1.6%.

Research Objective Analysis

What are the level of the cognitive competency in entrepreneurial skills among the lectures in the College Community Perak Malaysia?

Table 4: Score Mean Interpretation

Cognitive Competency In Entrepreneurial Skills	Interpretation of score mean	Effectiveness
Academic Mastery	4.14	Medium high
Creative Thinking	4.18	Medium high
Communication	4.26	Medium high
Overall mean	4.19	Medium high

Table 4 above shows the interpretation of the score mean for each of element of the cognitive competency in entrepreneurial skills among the College Community Perak Malaysia. Mean score for Academic Mastery is at 4.14 which is

medium high, Creative Thinking is at 4.23 with a medium high score mean. Whereas for communication with the highest mean score 4.28 among the other mean score. Mean while the overall score mean ia at 4.22 piont which is also medium high. This shows that the lecturers in Perak College Community Malaysia have a medium high level of cognitive competency in tentrepreneurial skills.

Research Hypothesis Analysis

There is no significant relationship between cognitive competency in entrepreneurial skills teaching and demography among the lectures in the College Community Perak Malaysia. In this research for demography, the researcher focus only on 4 element that is gender, age, years of teaching and academic background.

Table 5: Correlation Between Cognitive Competency With Demogrphy

		Gender	Age	Years of Teaching	Academic Background
Cognitive Competency	Pearson Correlation	.419**	.247**	.030	.171
	Sig. (2-tailed)	.000	.005	.735	.053
	N	128	128	128	128

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5 above shows the correlation between cognitive competency with respondend demography. With a $r=0.419$, $p=0.00<0.01$ shows that there is a no significant correlection between gender and Cognitive Competency. Whereas the significant correlection between age and Cognitive Competency $r=0.247$, $p=0.005<0.01$ shows there is no significant correlation. Therefore the hpyotesis is rejected.

Meanwhile the significant correlation between years of teaching shows that there is a positive correlation with a $r=0.030$, $p=0.735>0.05$. Whereas significant correlection between academic background and Cognitive Competency with $r=0.171$, $p=0.053>0.05$, shows a minor correlation between academic background and creativity. Therefore the hpyotesis is accepted.

Discussion, Conclusion & Recommendation

Based on the overall study, the objective is to see the level of cognitive competency in the entrepreneurship skills among the lecturers in Perak College Community, Malaysia. This research shows an overall medium high level of score mean with 4.19 point.

The first objective of this study is the the level of the cognitive competency in entrepreneurial skills among the lectures in the Perak College Community, Malaysia. Most of the lecturers are from techincal background. They are expertise in their respective fields of teaching and learning. However, the study shows that lectures have a medium high score mean in teaching entrepreneurship module. In this situation, the lecturers should be given more courses, exercises and related entrepreneurship. The methods and technique of teaching should be able to make lecturers boosting-up students to get involved in entrepreneur world. This is to enable the lecturers to build up high commitment to produce students who are knowledgeable and have entrepreneur skills.

The second objective is to identify the significant relationship between cognitive competency in entrepreneurial skills and demography among the lectures in the Perak College Community, Malaysia. It is found that there is no significant correlation between gender and age with Cognitive Competency. This shows that gender and age is not the factor for the lecturers to teach entrepreneurship module. Entrepreneurship can be taught and lecturers can teach the module if they have good knowledge about entrepreneur. Regardless of that, it is shown that there is significant relationship between years of teaching and academic background with Cognitive Competency. This shows that years of teaching and academic background of the lecturers have an advantage in delivering the entrepreneurship module to students. The longer the lecturer teach the better class should be and the lecturers academic background seems to be another factor to get good students to be involved in entrepreneurship world.

The conclusion that can be said is that to manage teaching and learning entrepreneurship modules, the lecturers themselves should have knowledge about entrepreneur and willing to teach without barrier. The lecturers skills level needs to be improved to make them more committed in their teaching and learning entrepreneurship module. With all these efforts, the desire of the JPPKK to achieve the first strategic plan that to build-up holistic individual with entrepreneurship characteristics can be achieved. Knowledge and skills to build-up students to become more confident human in the real world can be realized.

Further Study Findings and Recommendations

Throughout this study, researchers have found a very interesting findings that need attention. On the whole, the lecturers who teaches in community college are competent in their fields. The researcher found that the Pedagogical knowledge in teaching and learning entrepreneurship module. Most of the lecturers are in the range of 29-38 years old and they are doing on-line business and generate extra incomes. However, knowledge of teaching techniques for this module are still at a moderate level. Together with that the researchers also found that the management skills of the lecturers are at high. Most of the lectures said that they are able to manage their time in doing on-line business and yet teaching entrepreneurship module is not their favourable activities. It is highly recommended that the lecturers should be given a more in-depth training. If they can generate extra income from on-line business and for sure they can teach entrepreneurship modules. The training should be held among lecturers and industrial company as to get more knowledge and suits the industrial requirement.

Conclusion

The lecturers' skills level needs to be improved to make them more committed in their teaching and learning entrepreneurship module. The training should be held among lecturers and industrial company as to get more knowledge and suits the industrial requirement. With all these efforts, the desire of the JPPKK to achieve the first strategic plan that to build-up holistic individual with entrepreneurship characteristics can be achieved. Together knowledge and skills will build-up students to become more confident human in the real world can be realized.

References

- 21st Century Competencies Foundation Document For Discussion. (2016). *Towards Defining 21st Century Competencies for Ontario*, 1 - 36.
- Abbott, S. (Thursday August, 2016). *Education Reform* . Retrieved from EDUCATION REFORM : <http://edglossary.org/21st-century-skills/>
- Ahmad Rizal Madar, M. A. (2008). Kemahiran Employability Bagi Memenuhi Keperluan Industri. *Falkulti Pendidikan Teknikal, UTHM*, 1 - 10.
- Akanwa, U. N. (2014). Evaluating Competency Enhancement Needs of Lecturers for Quality Teaching and Learning in South-East Universities of Nigeria . *IOSR Journal of Research & Method in Education (IOSR-JRME)* , 01-05 .
- Alexandria Valerio, B. P. (2014). *Entrepreneurship Education and Training Programs around the World*. Washington DC: World Bank.
- Almeida JR, Karhumaa K, Bengtsson O, Gorwa-Grauslund MF. (2009) Screening of *Saccharomyces cerevisiae* strains with respect to anaerobic growth in non-detoxified lignocellulose hydrolysate. *Bioresour Technol* 100(14):3674-7
- Arif Partono Prasetio, E. A. (2017). Lecturers' Professional Competency and Students' Academic Performance in Indonesia Higher Education . *International Journal of Bahagian Dasar*, J. (2017). *Laporan Ucapan Ketua Pengarah JPPKK*. Putrajaya: Bahagian Dasar, JPPKK.
- Baron, R. M. (1 March , 1999). *University of Wisconsin*. Retrieved from University of Wisconsin: <http://psych.wisc.edu/henriques/mediator.html>
- Chang Zhua, D. W. (2013). What core competencies are related to teachers' innovative teaching? *Asia-Pacific Journal of Teacher Education*, 1-20.
- Choi Sang Long, Z. I. (2013). An Analysis on the Relationship between Lecturers' Competencies and Students' Satisfaction. *International Education Studies*, 1-10.
- Cope, M. (2003). *Coding qualitative data (3rd Edition)*. Vermont: Qualitative research methods in human geography.
- Cronbach, L. J. (1951). *Cronbach's Educational Psychology: The Drift*. New York: Harcourt Brace Jovanovich.
- Chua Y.P. (2006). *Kaedah Dan Statistik Penyelidikan: Asas Statistik Penyelidikan*. Malaysia: Mcgraw-Hill.
- David T.Conley. (2011). Crosswalk Analysis of Deeper Learning Skills to Common Core State Standards. *Educational Policy Improvement Center (EPIC)*, 1-17.
- David Royse, B. A. (2014). *Program Evaluation: An Introduction To An Evidence-Based Approach*. USA: Cengage Learning.
- Dillard, J. (6 5, 2018). *BIGSKY*. Retrieved from 5 Most Important Methods For Statistical Data Analysis: <https://www.bigskyassociates.com/blog/bid/356764/5-Most-Important-Methods-For-Statistical-Data-Analysis>
- Doyle, A. (2 March, 2017). *Creative Thinking Definition, Skills, and Examples*. Retrieved from Job Searching: <https://www.thebalance.com/creative-thinking-definition-with-examples-2063744>
- Esther Cohen, S. R. (2013). The practicum in preservice teacher education: a review of empirical studies. *Journal Teaching Education Volume 24, 2013 - Issue 4*, 345-380.
- European Commission, D. E. (2011). *Enabling Teachers as a Critical Success Factor*. Bruxelles: Entrepreneurship Unit .
- Facione, P. S. (1995). The Disposition Toward Critical Thinking. *Journal of General Education. Volume 44, Number(1)* . , 1-25.

- Frank, A. I. (2013). Developing Entrepreneurship Skill in the Context of Higher Education. *Developing Entrepreneur Skills*, 1 - 8.
- Hessel Oosterbeek, M. v. ((2010)). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review* 54 , 442–454.
- Hilton, J. W. (2013). Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century. *National Academy of Sciences*, 242 pages.
- Jabatan Pengurusan Politeknik Dan Kolej Komuniti. (2017). JPPKK. *Jabatan Pengurusan Politeknik Dan Kolej Komuniti*. Putrajaya: KPT, Malaysia.
- Jenssen, F. O. (2016). Pedagogical entrepreneurship in teacher education – what and why?
- Jim Soland, L. S. (November 01, 2013). *Measuring 21st Century Competencies, Guidance for Educators*. USA: Global Cities Education Network Report, Nov. 2013, 68 p.
- John E. Opfer, R. H. (2012). Cognitive Foundations for Science Assessment Design: Knowing What Students Know About Evolution. *JOURNAL OF RESEARCH IN SCIENCE TEACHING VOL. 49, NO. 6,* , 744–777 .
- Kay, S. P. (2010). 21st Century Knowledge and Skill in Educator Preparation. *Partnership for 21st Century Skills. USA: Pearson.*, pp. 1-39.
- Kementerian, P. (2015). *Pelan Tindakan Keusahawanan Institusi Pendidikan Tinggi 2016-2020*. Kuala Lumpur: Kementerian Pendidikan Tinggi.
- Lackéus, M. (2015). *Entrepreneurship in Education - When, Why, What and How*. France: Centre for Entrepreneurship, SMEs, Tourism and Local Development.
- Lyudmila M. Andryukhina, S. A. (2016). Vocational Pedagogical Competencies of a Professor in the Secondary Vocational Education System: Approbation of Monitoring Model. *International Journal Of Environmental & Science Education* , 1-21.
- Malaysia, K. P. (2009). *Standard Guru Malaysia*. Kuala Lumpur: Bahagian Pendidikan Guru.
- Malaysia, K. P. (2012). *Falsafah Pendidikan Negara*. Kuala Lumpur: Kementerian Pendidikan Malaysia.
- Morgan., K. D. ((1970). *Sample Size Determination Using Krejcie And Morgan Table*. USA: Krejcie And Morgan.
- National Education Statistic Ministry of Higher Education
- OECD. (2013). Organisation for Economic Co-operation Development. *Trends shaping education 2013*. Paris: OECD. doi:10.1787/trends_edu-2013-en.
- Olav, Frode., & Jenssen, Eirik. S. (2016). Pedagogical entrepreneurship in teacher education. what and why. *Icelandic Journal of Education*, 183–196.
- Othman, N. H., Amiruddin, M. H., & Mansor, M. (2011). The Entrepreneurial Behavior Of Orang Asli Youths In South Peninsular Malaysia. *International Journal Of Education And Information Technologies*, 132-139.
- Peltonen, Katarine. (2015). "How can teachers' entrepreneurial competences be developed? A collaborative learning. *Emerald www.emeraldinsight.com*, 1 - 22.
- Redecker, C. d. (2014). The future of learning 2025: developing a vision for change. . *Future Learning of Learning 2025 Developing a vision for change*, 3-17.
- Reimers, F. M. (April 24 - 26, 2014). *Education For The 21st Century A synthesis of ideas from the Harvard University Advanced Leadership Initiative Think Tank*. Cambridge, MA: Education for the 21st Century: Executive Summary.
- Review, M. E. (May 2013). *Malaysia Education Policy Review*. Malaysia: United Nations Educational, Scientific and Cultural Organization.
- Stephanie. (8 December , 2014). *Cronbach's Alpha: Simple Definition, Use and Interpretation*. Retrieved from Statistics How To: <http://www.statisticshowto.com/cronbachs-alpha-spss/>
- Wagner, T. (2010). Overcoming The Global Achievement Gap. *Journal of Financial Intermediation Harvard University, vol. 19, issue 3*, 373-386.
- Wan Fauziah Wan Yusoff, S. M. (2017). What Would the Required Entrepreneurial Competencies for Entrepreneurship Lecturers in Higher Learning Institutions? *Saudi Journal of Business and Management Studies*, 1-8.
- Wan Nooraini Wan Kamaruddin, M. S. (2010). Lecturer Efficacy, Professional and General Competencies of Malaysian Polytechnic Technical Lecturers. *RCEE & RHED2010* , 1-8.
- World Bank. (2011). *Confli ct, Security and Development*. Washington DC: The International Bank for Reconstruction and Development / The World Bank.
- Xiang. (10 May, 2017). *Entrepreneurial Competencies*. Retrieved from Entrepreneurship Notes for CBSE Exams: <https://eshipnotes.wordpress.com/topics/class-xi/entrepreneurial-competencies/>
- Yufiza Mohd Yusof, A. S. (2018). Level of Entrepreneurial Competence among the Students in Perak Community College in The 21st Century. *CIETVET 2018. CIETVET Conference 2018*, 1-12.
- Yusof, A. A. (2010). *Pengenalan Kepada Usahawan Dan Keusahawanan*. Kuala Lumpur: Scholar Mind Publishing Bahasa Dan Pustaka.
- Zaidatul Lope Pihie and A.Bagheri. (2011). Are Teachers Qualified to Teach Entrepreneurship? Analysis of Entrepreneurial Attitude and Self-efficacy. *Journal of Applied Science*, 1 - 8.