

## Kids Entrepreneurship for Learning and Assessment Systems (KELAS) For Early Childhood Institution: Critical Success Factor Analysis and Decision Making Systems

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### Abstract

The aim of this study is to investigate the Critical Success Factors (CSFs) of kid entrepreneurship and develop Kid Entrepreneurship (play based learning) for Learning and Assessment Systems (KELAS) for Malaysian early childhood institution. In this study, sampling method by using structured questionnaire. The population of this study comprised in Permata Negara institution. Exploratory Factor Analysis (EFA), reliability analysis and Confirmatory Factor Analysis (CFA) to test for construct validity, reliability, and measurements loading will be performed. Finding of this study may indicate the reliable measurement of critical success factors for kid's entrepreneurship practices for Malaysian early childhood institution. This study will provide good material as guideline and references to Malaysian Childhood Institution especially to acts as a self-assessment system in evaluating kid entrepreneur performance for PERMATA Negara or for the whole institution, to easily identify critical weaknesses that should be upgraded and it also assists in determining the critical training needed or selecting consultants.

**Keywords:** Critical Success Factors; Kid Entrepreneurship; Learning and Assessment Systems; play based learning

## **1.0 Introduction**

The entrepreneurship programs in early childhood institution require developing kid entrepreneurship activity to increase student participation. One of the basic strategic that has been listed by the Ministry of Education is to strengthening the entrepreneurship competency in higher education institution. In effort to implement this, first thing need to be considered is to improve the lectures and entrepreneurship generators' competency. Currently, the development and number of entrepreneurs programs has been increasing over the years. Hence, PERMATA Nasional is the place to sharpen and polish someone potential. But of late, to improve entrepreneurship competency amongst the lectures and the entrepreneurship generators that handling the entrepreneurship programs in higher education institution is very low. PERMATA Nasional Curriculum (PERMATA, 2013) adheres to the following principles:

- i. Each child has a unique potential to be respected, developed, and acclaimed.
- ii. The first three years of a child's life is very critical (according to the study neuroscience), especially in the formation of character, build sensor motor skills and intellect.
- iii. Child naturally love to explore, experiment, and create, the best way to nurture and educate children is through play, in a cheerful environment, comfortable and encouraging, empowering, and loving.
- iv. Practice and learning lessons is compatible with the development of child by using the materials in their environment, in accordance with the local culture, technology, and integrated global network.
- v. Learning environment should be cheerful, friendly, empowering, and stimulating to the child.
- vi. Respect for human rights, religion, culture, child, normal, and special needs.

Critical Success Factors (CSFs) or entrepreneurship competency identified is initiative, sees and acts on opportunities, persistence, information seeking, knowing, concern for high quality of work, commitment to work contract, efficiency orientation, systematic planning, problem solving, self-confidence, assertiveness, persuasion, use of influence strategies, monitoring, and concern for employee welfare.

Although the education system in Malaysia trend to good examination and improve quality sistem management, it has received criticism, complaints, and various suggested approaches to improve their education quality. In the meantime, in the effort to improve the quality of the education institutions, the Malaysian government has always been an assistance and support to various agendas of development in higher education institution.

Recently, it has been recognized by a number of educator and researcher that play based learning contributes to child's development. Research has shown strong links between entrepreneurship play and language, physical, and sosial development of children. Entrepreneurship play allows children to use their creativity while developing their imagination, dexterity, and physical, cognitive, and emotional strength. Entrepreneurship play based learning is important to healthy brain development. This is because play is found

to be directly linked to wealth of skills that are essential for academic success, better verbalization, richer vocabulary, better problem-solving strategies, higher intellectual competence, more curiosity, greater empathy, better emotional and social adjustment, more innovation, and more imaginative (Wei et al., 2008).

In the world of information technology, education process requires a decision making tool that is effective and systematic in measuring and assessing the current performance of the organization and enhance its competitive edge. In literature, it appears very difficult to find studies that have developed tools based on the integration between improve knowledge, experiences and lecturers and the entrepreneurship generators' qualification for the education institution. These efforts are expected to contribute for education entrepreneurship in Malaysia.

Based on literature support and gap of this study, the aim of this study is to develop a five selected attributes on entrepreneurship competency (see and seize opportunity, successful orientation, initiative, risk taking and creative and innovative) between the improve knowledge, experiences and lecturers and the entrepreneurship generators' qualification for which the expected results of this study will benefit the education institutions to be more strategically focus on operational excellence to continually seek better improvement from the perspective of improve knowledge, experiences and lecturers and the entrepreneurship generators' qualification. Next, apart from developing models, this study instrument is also used to develop a tool based on the quality of entrepreneurship competency for higher education institution in Malaysia.

#### 1.1 Purpose of the study

The aim of this study is to investigate the CSFs of kid entrepreneurship and develop Kid Entrepreneurship (play based learning) for Learning and Assessment Systems (KELAS) for Malaysian early childhood institution. From that objective, increase new start-ups and value added through creating an enabling business environment and boosting entrepreneurship.

#### 1.2 The objectives of the research are:

[1] To identify the Critical Success Factors (CSFs) of kid entrepreneurship measures (successful orientation, see and seize opportunity, risk taking, initiatives and creative and innovation) for Malaysian early childhood institution.

[2] To develop and validate Kids Entrepreneurship (play based learning) for Learning and Assessment Systems (KELAS) for Malaysian early childhood institution.

### 2.0 Literature Review

#### 2.1 Entrepreneurship Overview

Entrepreneurship is a branch being encouraged by the government to dominate as it is one of the financial resources that can provide an advantage. In order to achieve a balance as well as focus on strengthening Bumiputera entrepreneurship to assist create a competitive business in high-impact sectors, some methods need to consider seriously by the

government. Among the measures to make quality entrepreneurs are born, it must be trained from the earlier. Permata

Negara is the place to sharpen and polish potential. Therefore, lecturers or potential entrepreneurs should embrace the right approach and make a difference to the development of entrepreneurship so that they can assist in developing the country's economy in the future.

Entrepreneurship is a broad field and a few people know that entrepreneurship should be mainly concerned with creativity, risk-taking and innovation through a quick process. This is because, entrepreneurship involves small enterprises, and there are many entrepreneurs in a group which came in stronger competition with each other (Brown, 2000). This means that the features such as creativity, innovation and risk-taking should be applied to potential entrepreneurs through the nature of the lecturers or potential entrepreneurs realize that they are better prepared when they are in a real situation.

Meanwhile, entrepreneurship education is a process or implementation of activities that enable a person get various advantages such as knowledge, skills, values and understanding that is not only limited to a small field, but it also involves exposure to a variety of problems to be identified, analyzed and solved (Garavan et al., 1995).

In addition, according to Jones and English (2004), entrepreneurship education involves a guide to seize the opportunity, the appropriate application of the concepts and use of resources in dealing with risk. Entrepreneurship education may assist individuals to develop their knowledge and enhance skills to be in the field of entrepreneurship.

The government's effort in order to further developing entrepreneurship learning is a smart move. This is because education is a method that trains the students or potential entrepreneur to have basic entrepreneurial skills and capabilities. Among the advantages that can be obtained when entrepreneurship are included in the agenda of education, it can assist students in enhancing motivation and creating a competitive spirit to overcome it which is an important foundation the development of enterprises. In addition, entrepreneurship is not just require one skilled in the system or business technique, but an entrepreneur's success can be measured based on their own experiences or shared equally by the teacher or potential entrepreneurship (Hynes, 1996).

Since education is a basic training in order to promote and strengthen the skills and capabilities, then it becomes an important and effective method to make it truly successful entrepreneurs. The characteristics of successful entrepreneurs need to be exposed or highlighted by the trainers themselves once the lecturer or driving entrepreneurship became a role model to aspiring entrepreneurs or students. Through entrepreneurship education, can ensure that student able for a business getting a strategic position, resources utilization, capabilities and competencies within the company as well as the ability to meet the requirements of key stakeholders are the factors driving success. Due to this situation, it can be said that it has a direct correlation with the balance and priority by the interested parties

Entrepreneurship education programs organized to expose the students in which through planned training, it can provide several advantages including risk-taking strategies, implementation of new business and development organizations (Brown, 2003). Therefore, organizations need to achieve their objectives and looking for the relevant concepts to achieve and maintain this objective. In this way, they should have the ability to create opportunities and strategic way to deal with challenges. This is a risk that must be taken by the organization in managing the crisis that exists in the face of unexpected things in the future. Therefore, entrepreneurial behavior should exist in every organization regardless of size and type. According to Shane (2003), the entrepreneur has to go through a number of important processes. First, the result of entrepreneurial activities of uncertainty is a factor contributing to the increased risk to be borne by the entrepreneur. Second, entrepreneurs should grab the opportunity to produce new inventions. Finally, the production of new products has to be more innovative than existing products.

## 2.2 The Attributes of Entrepreneurship Competencies

### 2.2.1 Observe and Seize Opportunity

There was broadly defines of entrepreneurship. However, mostly understand that entrepreneurship mean a person who sets up a business, taking on financial risks in hope of profit. In general understanding, opportunity is a chance to do something, or a condition favorable for attainment of a goal which is the advancement of success. Otherwise, in simplify the term of opportunity could refer as the potential of change, improvement or advantage arising from action. However, McMullen (2007) found that the opportunity is actually a concept from the context of human action which is how the people actually react towards the chance offer.

The opportunities is somewhat seeing as the important aspect in entrepreneurship because as according to Ventakaraman, (1997) stated that the opportunities is a key part of entrepreneurship. From Stevenson et al. (1985) agreed to said that opportunities is important in entrepreneurship which is identifying and selecting right opportunities for new business are among the most important abilities of a successful entrepreneur. From the side of entrepreneurship, the opportunity is the situation in which new goods; services, raw material, and organizing methods can be introduced and sold at greater than the production cost (Venkataraman, 1997).

Moreover, the opportunity is something positive that occur in entrepreneurial activities. Meaning that, the effectiveness of entrepreneurship activities is help by the opportunities. However, the opportunity itself did not come by as wanted, but together with efforts likes seeking, looking for it, create them, developing new idea and finding the differences. Instead Hisrich et al. (2005) also suggested that most good business opportunity does not suddenly appear, but result from the entrepreneur alertness on the possibilities.

Goswani et al. (2008) had listed 3 characteristics entrepreneur are: (1) risk taking, (2) innovative and (3) exploring new ideas of business to turn into wealth. Furthermore, these

characteristics are the determination for the entrepreneur to compete with others in the business market in grab the opportunities occur. Audretsch et al. (2005) stated that the entrepreneur is characterized by discovers and exploits opportunities and as a creator who initiates and motivates the process of change. He also suggested that the types of entrepreneurship behavior such as accept risk, use intuition to alert and explores new business, leadership which initiates new ways of acting, identify business opportunities and creation of new entrepreneurship.

According to McMullen (2007) had listed four essential qualities of the opportunities which attractive, timely, durable and anchored in a product, services, or business that creates or add value for its buyer or end user. Meaning here, in order to grab the opportunities of entrepreneurship, one must have those kinds of qualities because it will make the entrepreneur differ from others. Millers (1983) agreed with this statement because he believe that the entrepreneur must engages in product-market innovation, undertakes risky ventures, be the first to come up with proactive innovation, and beating the competitiveness. That was meaning the entrepreneur should apply those kind of attitude for running in seeking the best opportunities in entrepreneurship.

In effort to look for opportunities in entrepreneurship is by first determine about these two which are clarify something happen in the environment or refer as the resource, and classify what need to do with the individuals for example the creation, believes and recombination (Aidemark, 2009). Opportunities could be identifying by first, observing the trends in the market; next is to solving the problem; and then, is finding the gaps in the marketplace. Alvarev and Busenitz (2001) believed that the entrepreneurial opportunities occurs when there are different agents have difference idea regarding managing the value of resources or when as input changed into output. This mean by when the opportunities of entrepreneurship comes when the combining or differentiation of others create chance for others to improve of produce better.

In relation, entrepreneurial opportunity is important in education especially in early childhood education because the concept of entrepreneurship should be learning from early age to create friendly entrepreneurship experience and environment. Therefore, education in entrepreneurship are operates along a continuum of learning that extends from the operational to the amateur.

### 2.2.2 Successful Orientation

Entrepreneurship is important in developing knowledge based economy in Malaysia as the objective was to move away from production based economy (Cheng et al., 2009). The Tenth Malaysia Plan clearly states that the knowledge based economy could lead the nation in becoming a high income status nation (10th Malaysia Plan 2011-2015). Higher education is responsible in shifting Malaysia from middle to high income economy by producing entrepreneurial graduate. The launched of Higher Education Entrepreneurship Developmen

Policy in 2010 aimed to provide a quality human capital and have entrepreneur characteristic and attribute. This policy also aims to generate entrepreneur academics as the drive force to nation economic transformation in line with the Vision 2020 (Higher Education Entrepreneurship Development Policy, 2010).

The successful orientation in simple understanding refers as future expectation of success in something. However, in entrepreneurship perspective, it is regard on aiming on growth as well as stability and generates more profits in future undertaking. This is because as entrepreneurship is the profitable matter which does involve in monetary terms. In fact, according to Lussier and Pfeifer (2001) found that the orientation of success for entrepreneurship is the ability to survive and sustain in business. Which mean that the firm who stayed longer in business would consider as implement better oriented to success.

Other researcher from their previous study may have their own opinion and in different view of the term successful orientation in entrepreneurship. Masuo et al. (2001) from their study found that successful orientation are in aspects of financial and non-financial. In economic or financial is the return on assets, sales profit and survival rates. However, for non-financial measures such as personal development or employees, the firm's achievement and customer satisfaction. Moreover, Praag (2005) had stated that the successful orientation of entrepreneurship is depending on high return of sales and profit.

Other than that, successful orientation is refers as less face of failure since failure is a complex dynamic and problematic issue (Jennings and Beaver, 1997). In addition, Larson (1987) previously had mentioned that in order to be better in successful orientation, it must consider these aspects namely as service and quality, dedication and hard work, growth potential, innovation, emphasis on quality and efficiency. All these aspects lead to successful orientation which will affect the entrepreneurship competency. According to Abdullah (2013), a quality academic entrepreneur have a pure characteristic. These characteristics include innovation, creativity and oriented towards success. A students with this pure values are able to react in any kind of situation in the entrepreneurship world (Abdullah, 2013). Innovation, creativity and orientation toward success is similar to the element contain in entrepreneurial orientation (EO). The EO can be seen as the product of innovativeness, pro-activeness and risk taking (Garcia- Villaverde et al., 2013).

Innovativeness aspect in EO can be seen as the innovativeness dimension of EO reflects a trend to received new concept, originality, trial and error, creativity and ready to perform based on organized practice and technologies (Lumpkin and Dess, 1996). Thus, a new opportunity arises from the innovation aspect as new product and technology generated. Pro-activeness refers to a posture of anticipating and acting on future wants and needs in the marketplace, thereby creating a first-mover advantage among competitors (Lumpkin and Dess, 2013). With such a forward-looking perspective, proactive firms have the desire to be pioneers, thereby capitalizing on emerging opportunities. Creativity in the context of pro-activeness ca

be seen toward the entrepreneur ability in creating a move towards becoming a first mover advantage among competitors. The creation of the idea to achieve the advantage and the steps entrepreneur take to achieve the advantage.

### 2.2.3 Initiative

In order to become a successful entrepreneur, one person should have an initiative. Initiative is the ability of one person to identify problems or opportunities and able to take real action to solve problems or to catch opportunity. For instance, even a person has an impulse to identify problems and opportunity, they are classify to have an initiative but in low rates. Initiative can be differentiated from the level of initiative, either high or low. Being an individual with initiative means that have moved further ahead in the process to improve the performance and level of success in lives.

Regarding to Latif et al. (2011), one of the characteristics of a successful entrepreneur is initiative. This showed how initiative is important for an entrepreneur. Entrepreneur that has initiative will do things without being command. The entrepreneur needs to do work before been forced or compelled or ordered to. It can be in the form of taking action which require entrepreneur just not to sit and watch. An entrepreneur should take initiative to become more competitive with another entrepreneur. As a result, they will not be threaten by any threat from competitors and can lessen the risk of uncertainty event. They also can cover their weakness when they able to compete with another competitor.

Initiative should be taken by entrepreneur and he should be able to take any risk in order to succeed. There is no zero-risk in doing anything. Positive attitude towards risk will enable a successful entrepreneur and be able to last long in the business. Regarding to Johnson (2001), one of the characteristic of entrepreneur is to be creative and flexible thinking. The person who is initiatives will be more creative and able to find solutions for the problem occur. As said, they will be able to compete and stand high among other entrepreneurs.

There are several factors that influence someone to choose entrepreneur as a career which are individual or psychological components, social, and economic features. One of the important characters is to have an initiative. Initiative can be developed by oneself when he determines to success. In early childhood education institution, teacher and potential entrepreneurs should take action and become active in order to initiate new ideas. They can make more money or profit if they know how to make use of their knowledge and have initiative to develop any product or services to public. They might sell any academic related products or any services that might related to their expertise.

The initiative is one of the important elements in entrepreneur competency. Entrepreneur can widen their marketing if they know how to compete in the business world. Initiatives take can be in the form of products, services or even resources. An entrepreneur should increase his effort in order to expand the business in the area, either products or ne

services (Othman et al., 2008). An enterprise which comes with unique products or services might help them to achieve high profit and differentiate themselves with other enterprise. Apart from that, they will be able to fulfill the need and demand from consumer. Whilst when demand is higher, entrepreneur can raise the price of their product or service. Consequently, they might maximize the profit and assist the growth of economy in our country.

It is hard for an enterprise to survive and compete if they do not highly competitive. This can be achieved if an entrepreneur works hard and makes a wise decision before actions are taken. However, entrepreneurs need to be educated and trained in order to reduce business failure (Ibrahim and Soufani, 2002). They also suggest that entrepreneurship education and training are important to improve managerial skills. Managerial skills will help entrepreneurs to have better and effective management systems.

Full utilization of all resources is one of the benefits if the entrepreneur has initiative to come out with new ideas. With the full utilization of resources, it will reduce wastage. Therefore, the initiative is very important to develop and produce successful and high quality entrepreneurs. The entrepreneur with initiative is able to be competitive and innovative. It is important to strengthen and prevent entrepreneurs from giving up. This attitude will be supported with self-confidence and willingness to take risks after considering the good and the bad of an action to be taken. Education and training also help entrepreneurs to become more competitive and encourage creative thinking.

Kid entrepreneurship education for early childhood might help potential entrepreneurs to build the characteristics of successful entrepreneurs. Latif et al. (2011) stated that anyone from any organization can learn and be trained to become an entrepreneur. They just need to have initiative and ability to change the bad attitude to the good one. There are two types of entrepreneurs which are passive entrepreneurs and responsive entrepreneurs. The successful entrepreneur is an entrepreneur that is driven by motivation, desire and willingness to continue to be involved in a business or enterprise. Parallel to government recognition of the importance of entrepreneurship in generating economic growth in Malaysia, teachers and entrepreneurs should take advantages over it. There are a lot of mechanisms and policies instituted by the government to support entrepreneur activities (Othman et al., 2008). Through all the tools and facilities provided, it will ease entrepreneur steps to start the business or thinking of new ideas in doing business.

#### 2.2.4 Risk Taking

Before we go further to examine the risk-taking by the teachers and potential entrepreneurs in the implementation of programs to enhance entrepreneurial competencies, the meaning of risk taking should be more clearly defined. There are several definitions set out to support the purpose of risk taking for lecturers and potential entrepreneurs to face the challenges in the future. According to Mars and Rios-Aguilar (2010), entrepreneurship can be defined as something that encompasses social value and commercial value. It is a process for creating an

maintaining social and economic value through the implementation of strategies and solving problem by using creative and unique methods, risk taking and reduction in the use of resources. In other words, the activities in the value includes the value of innovative entrepreneurship in traditional academic, involving time, academic reputation and increase financial risk in terms of research funding.

There are some similarities between the field of entrepreneurship and education. Entrepreneurs are based on the present and future. In addition, it also assists entrepreneurs expect the existence of a problem and create creative problem solving. A situation can be understood through a series of experiences than through the learning process (Ryle, 1983). Whereas, when we refer to the risk-taking propensity perspective, it shows the individual reactions when dealing with risk. Whether it will take that risk or seek to avoid it. As described in the previous definition of entrepreneurship, risk-taking is much related to entrepreneurship. Things that differentiate between entrepreneurs and managers are risk-taking in terms of profit or loss. However, it is not limited to just financial, in fact involves risk-taking social relationships, emotional and career opportunities (Erdem, 2001). Thus, in terms of delivery of entrepreneurial knowledge in academia, the instructor himself must be wise in managing risk. This is because, these features should be highlighted by teacher and potential entrepreneurs to potential entrepreneurs are more willing and able to plan strategies for managing risk. Due to feature successfully controlled, it is possible they will be a successful entrepreneur. As noted by Gurol and Atsan (2006), entrepreneurs are more likely to take risks than other areas.

There is some interest when necessary risk taking in learning entrepreneurship. However, the emphasis on the recruitment and management of this risk should be placed in the appropriate place. Hynes (1996) has charted a model describing the process of entrepreneurship education. As can be seen in figure 1, risk-taking has been inserted under the knowledge along with entrepreneurship, initiative, self-employment, business, management and market skills, analytical, problem solving, decision making, communication and presentation. It is also supported by Fairlie and Holleran (2011), most individuals who are interested in entrepreneurship failed to start due to lack of skills and lack of knowledge. So, it is important for potential entrepreneurs and trainers to deepen knowledge in the field of entrepreneurship.

In addition, entrepreneurship training can be beneficial to the individual in whom it could enhance the motivation for starting a business, especially in early stage formation (Benus and Michaelides, 2008). The same thing can be seen through the perspective of trainers when they are able to provide motivation, training and moral support to potential entrepreneurs to start a business. Basically, the entrepreneurship training is able to reduce risk-taking when the individual wisely choose opportunities. Therefore, teachers and potential entrepreneurs itself should have the skills to identify opportunities and lists the problems or risks that lie ahead

According to McMullan and Long (1987), to make the complete entrepreneurship education as a whole and give effect to the students, teacher or potential entrepreneurship should emphasize measures or methods that need to be taken to overcome the common problems faced by entrepreneurs in the real situation. They also need to be exposed to the risks inherent in space entrepreneurship and creative solutions need to be taken so that the ins and outs of entrepreneurship is easy to understand and become more attractive to be explored by students in institutions of early childhood.

Thus, planning and control are two of the most important tasks to be handled by teacher and potential entrepreneurs learning and able to anticipate and measure the potential risks encountered in determining yield or return decision has been made. The successful of teacher and potential entrepreneurship creating effective communication system raise efficiency and smoothness programs or activities.

#### 2.2.5 Creative and Innovative

Recently, innovation has emerged as a headline in the field of business management. Kuratko (2009) determines the magic words to describe innovation are dream, create, explore, invent, pioneer, and imagine. The roots term of innovation is catch from the Latin word called innovare that defines as to do something new (Gruberova, 2009). Most of the innovation definition has been focusing on similar points with different perspectives. The key common points imply changes and renewal for a better situation.

Early childhood institution needs creativity and innovation in order to implement entrepreneurship program. Creative thinking, creativity, and innovation with elements of leadership, motivation, communication, relationship, decision making and problem solving skills will increase the management creativity so that the goal of entrepreneurship program can be achieve effectively and efficiently. Creative academicians that involve in entrepreneur field are able to produce new ideas while the technological creative entrepreneurs are able to produce more creative and innovative creations. Creativity and innovation can be considered as a bridge to achieve Malaysia as a developed nation. Countries that cultivate creativity and innovation in general will get boost the economy to a higher level and with the objective of Malaysia as a developed nation will be achieved.

Therefore, viewed from the perspective need for creativity and innovation, there is no doubt that Malaysia is also cannot be left behind in the development of creative and innovative society. Hence, the government of Malaysia has taken this analysis of 2010 as Year of Creativity and Innovation (Othman et al., 2008). The benefits of entrepreneurship creative and innovation are contributed in leadership, motivation, communication, and problem solving or solution. In entrepreneurship competency, the attributes of creative innovation is related to these four because it does directly connected to it

The driving force of innovation is depending on the leadership style. In a research title Innovative Behavior in The Workplace stated that there is significant relationship between leadership towards innovative encouragement (Subramaniam, 2007). In that research also stated that leadership is one of the factor which motivate employees continue to serve and innovate. Research by Kanter (1988) has found leadership to be critical in the innovation process. Amabile (1988) has suggested a list of activities that leaders should be engaged in to allow creativity to emerge. Therefore, leadership plays an important role to create a positive behavior and implement a good practice of creative and innovation.

According to Garcia-Morales et al. (2007), people with high personal mastery (individual development) have the capacity to observe the distance between current reality and their personal vision and to transform this creative tension into an innovative impulse that can bring reality closer to their vision by means of innovation. In contrast, people with a low level of personal mastery resolve creative tension by reducing the creative tension pole under their command (vision) to bring their vision closer to reality. This eliminates the innovative spirit and generates emotional tension (tension caused by the negative emotions that appear when they are faced with critical situations) or structural tension.

Finally, the management of the firm, whether large firm or SME, must be involved in creating a climate that enables members to feel committed to their firm and to their personal mastery (Larsen et al., 2002). This is how the individual achieves continuous improvement of his or her knowledge, abilities and competencies, also fostering organizational learning and innovation and improving organizational performance (Hodge et al., 1998).

In communication benefits, the Information and Communication Technology (ICT) is one of the important parts to encourage innovation in an organization. This is because, ICT are able to stimulate the new changes in order to develop an organization. Other than that, the ways of handling task can be more efficient and effective through ICT development.

For the aspect of problem solving and from the economic perspective, the innovative creativity is also needed in daily life. Most importantly, both these elements are essential to help people cope with a variety of things in everyday life. For example, to solve problems, plan a variety of daily activities and achieve their life goals. If there are no elements of creativity and innovation; a great possibility that people will always rely towards others in this life and unable to solve problems on their own.

### 2.3 Play based Learning

Kid Entrepreneurship concept based on play assists in the development of problem solving skills. One type of problem-solving skills is called convergent problem solving. Where there is one solution to a problem. Another type is divergent problem solving, where there are many possible ways to solve a problem. It has been found that a school generally teaches children to answer question correctly, but play teaches them to think outside the box and helps them cop

with divergent problem solving. If one wants children to grow up with creative capacities, then play is essential (Hirsch-Pasek and Golinkoff, 2003).

Meanwhile, empirical study by Der Spiegel (1997) compare 50 play oriented kindergarten with 50 academically-oriented ones in Germany and showed that children from the play oriented kindergartens excelled over the others in every aspect such as physical, emotion, social and intelektual development.

### **3.0 Research Methodology**

The overall structure of the research methodology can be best demonstrated using a flow chart. This study can be divided into three phases as illustrated in Figure 1. Each phase describes the research activities which have been conducted and the flowchart acts as a roadmap throughout the research activities.

#### **3.1 Population and Sampling of the Study**

In this study, sampling method by using structured questionnaire. The population of this study comprised in Permata Negara institution. Questionnaires will distribute to respondents (teachers and parent). To analyze the data, two statistical techniques were adopted. A questionnaire with majority of the questions being of the close-ended type was developed to collect data for this research. The process of developing the questionnaire included a pilot survey, which was used to modify and eliminate a number of variables, until the final questionnaire was designed.

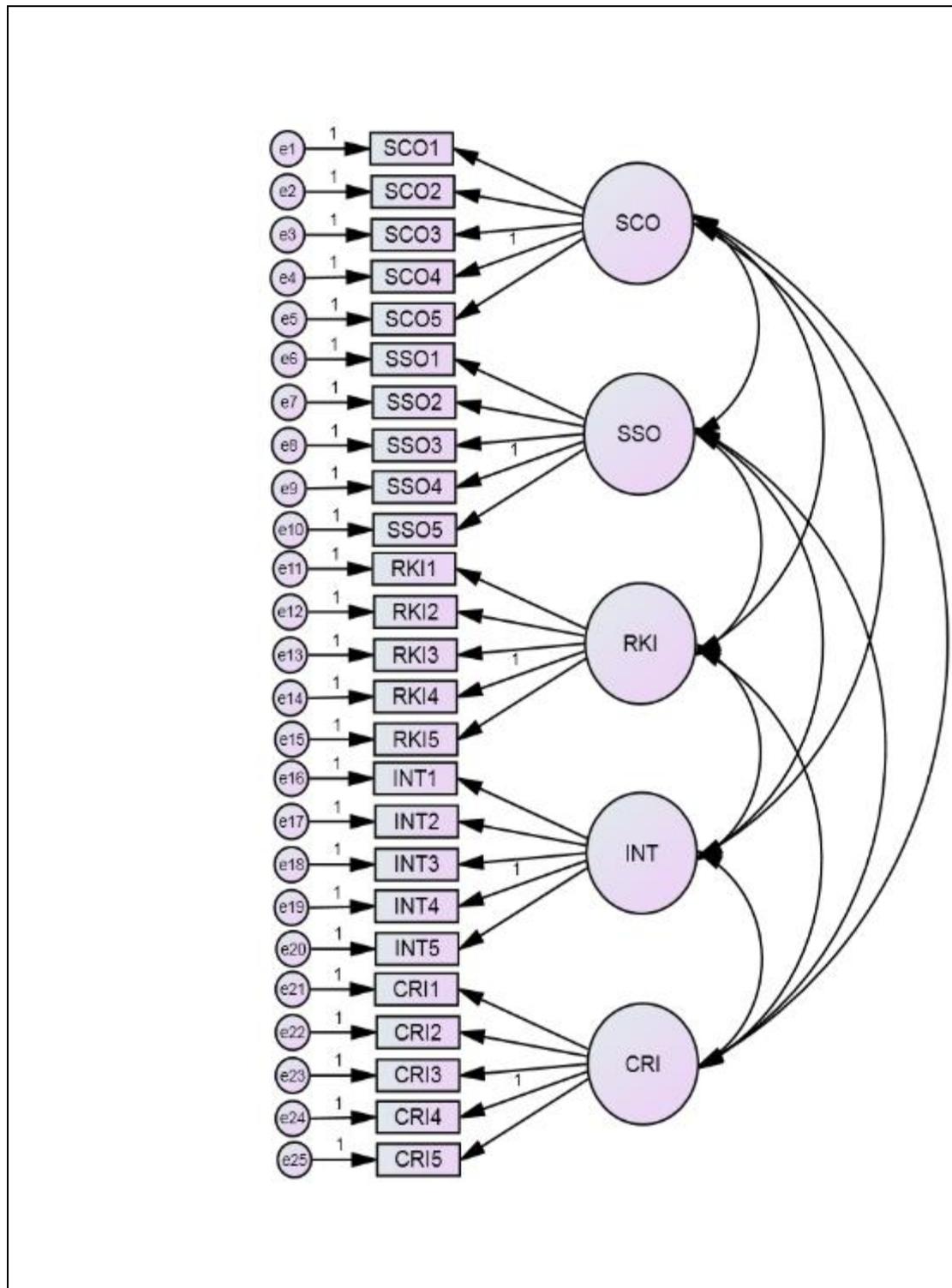
Planning for sample size is essential for empirical studies. For example SEM requires large sample sizes due to the large number of estimations that take place (Hair et al., 1998). Thus, empirical studies require having enough data so that important differences or relationships can be observed (Bacon, 1997). According to Bentler (1990) and Hoelter (1983) recommendation for reasonable sample size is about 150 to 300. SEM application typically uses sample size between 100-200, but not more than 400 (Hair, et al., 1998). In the context of this study, the total sample of 400 (unit analysis: parent and teacher) was determined by taking into account the possibility of lost data and uncompleted questionnaires. Sample size can impact the statistical test that the increase in the size of the sample chosen would result in an increase in power while, a decrease in the size of the sample selected would result in a decrease in power.

#### **3.2 Statistical Analysis**

Exploratory Factor Analysis (EFA), reliability analysis and Confirmatory Factor Analysis (CFA) to test for construct validity, reliability, and measurements loading were performed. Having analyzed the measurement model, the structural model was then tested and confirmed. The statistical Package for the Social Sciences (SPSS) version 17 was used to analyze the preliminary data and provide descriptive analyses about thesis sample such as means, standard deviations, and frequencies. CFA Structural Equation Modeling (SEM) by using AMOS 6.0 will use to test the measurement model. Relating Outcome from EFA, CFA statistical analysis based on the reliable and validated instruments. Refer figure 2: proposed Confirmatory KELAS Model.

According to Blunch (2008) the early statistical software packages that adopt the SEM approach is Linear Structural Relationship (LISREL) developed by Joreskog (1973), followed by other similar program such as model of EQuations (EQS) (Bentler, 1985), Reticular Action Model (RAM) (McArdle and McDonald, 1984) that is included in the SYSTAT program under the name of Reticular Action Model or Near Approximation (RAMONA), and recently AMOS (Arbuckle, 1989). In this study, AMOS Version 6.0 has been selected to perform the SEM analysis. AMOS uses the basic overall goodness-of-fit measures to assess the compatibility of the proposed model with the observable data. The general model of goodness-of-fit is assessed using the following six criteria: Chi-square over degrees of freedom ( $\chi^2/df$ ), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Indexes (CFI), Tucker Lewis Index (TLI) and Root Mean Square Error Approximation (RMSEA).

Accordingly, these procedures are implemented based on a structured framework through six stages in SEM as recommended by the Hair et al., (1998), namely (1) develop a theoretically based model, (2) construct a structural model, (3) choose the input matrix type, (4) assess the identification of the model, (5) evaluate model estimates and Goodness-of Fit, and (6) model interpretation and modification. Table 1 lists the summary of the six step process, method, analysis and rule of thumb for SEM.



\*Note: SCO = Successful Orientation, SSO = See and Seize Opportunity, RKI = Risk Taking, INT = Initiative,  
CRI= Creative and Innovation

Figure 1: Proposed Confirmation model of Critical Success Factors of Kids Entrepreneurship for Early Childhood Institution

This study proposed the development of Kids Entrepreneurship for Learning and Assessment Systems (KELAS) for the Malaysian Early Childhood Institutions. This systems was developed by using the effective decision making technique based on Multi-Criteria Decision Making Methodology (MCDM) by Analytic Hierarchy Process (AHP) methodology, which involves building a hierarchy of KELAS, calculating the relative weights of KELAS by pair-wise comparison, rating the KELAS measures, calculating the performance scores, and ranking the companies based on their scores.

Early Childhood institution is in need of an effective decision making technique based on Multi-Criteria Decision Making Methodology (MCDM) for performance improvement and competitive advantage of selection. According to Ki (2004) there are several multi-decision making approaches such as the AHP process, the categorical method, the weighted-point methods, the cost-based method, Data Envelopment Analysis (DEA), Multi-Objective Programming (MOP), Interpretive Structural Modeling (ISM), and Multi-Attribute Utility approach (MAUT).

In addressing the problem of MCDM in the real case scenario, Saaty introduced AHP in 1971, which has become one of the most widely used methods for MCDM. There was also a decision approach designed to help in problem solving for different MCDM (Saaty 2008; Ansarinejad et al., 2011). AHP is a problem solving and flexible framework, a structured and systematic method used to represent elements of a complex problem, in which both qualitative and quantitative aspects should be considered (Saaty, 1980; Tam and Tummala, 2001; Nataraj, 2005; Chan et al., 2006; Hai and Esichaikul, 2008; Lee et al., 2008).

Decision-makers often face difficulties to decide situations of various measurement factors and difficulty in determining the weight of various factors and ratings. Accordingly, the AHP can be used. A structured AHP model decomposes the problem of hierarchy elements such as goals, strategic factors, criteria and sub-criteria and alternatives (Tam and Tummala, 2001).

Further to that, an Excel-based tool was developed for automating the calculation of KELAS for Malaysian early childhood Institutions. By developing an KELAS with Excel based system, it is in line with the current decision support system because all company computers are equipped with licensed Microsoft Excel software, most employees are experts in dealing

with excel, and most of the administration and operations management are using excel in facilitating current job such as reporting for problem or quality issues, weekly performance analysis, and administrative work. In order to validate this systems, early childhood experts were asked to confirm and comment in terms of their strengths, weaknesses and suggestions for improvement to enhance effectiveness in the implementation of KELAS for Malaysian early childhood institution.

This KELAS does not only bring benefit to early childhood institution for kid entrepreneurship initiatives, evaluation and measurement, but it also helps in rewarding the best student, acts as a self-assessment system in evaluating kid entrepreneur performance for PERMATA Negara or for the whole institution, to easily identify critical weaknesses that should be upgraded and it also assists in determining the critical training needed or selecting consultants. These advantages are indirectly hoped to reduce company costs from the aspects of research as well as investments on ineffective training, increase the added value in teacher development, act as a simple decision making, cost effective, friendly, and systematic implementation. This is because most of automotive companies aim to minimize the waste of time and cost, save in human resources, and at the same time improve the quality management.

**4.0 Expected Findings**

Finding of this study may indicate the reliable measurement of critical success factors for kid’s entrepreneurship practices for Malaysian early childhood institution. In addition, this study also develops KELAS to assess and measure of entrepreneur (student) performance. Finally, this study also provide good material as guideline and references to Malaysian Childhood Institution especially to PERMATA Negara, PERMATA Pintar, PERMATA Insan, PERMATA Seni, KEMAS, public and private university, and to local and international academic.

**Table 1**

Strategic Roadmapping: How Kids Entrepreneurship (play based learning) for Learning and Assessment Systems (KELAS) assist to countermeasure for current issues and strategic align in the implementation of the PERMATA National program for Early Childhood

No.	Statement of issues	Characteristics of PERMATA NEGARA	Solution (KELAS)
1	Education pay less attention on the three key learning principles in early childhood education, namely: (1) Exploration, (2) direct experience, (3) trial.	Noble and Patriotic Attitude Good manners and behavior	Kid Entrepreneur: Successful Orientation (SCO)
2	Learning through playing is the concept of PERMATA’s learning curriculum. However, educator does not understand the	Able to control emotions, cheerful, friendly, caring,	

No.	Statement of issues	Characteristics of PERMATA NEGARA	Solution (KELAS)
	concept of learning through playing. Consequently, the activities carried out by children did not give value to the learning process.	empathetic Religious Respect the culture and identity of the nation Love country	
3	Holistic development of Children. For that purpose there must be integration between the areas of learning activities. Yet, these learning area are segmented and not implemented in a holistic manner.	Competency in Learning Ability to focus and pay attention Inquisitive and motivated Know how to build a network	Kid Entrepreneur: See and Seize Opportunity (SSO)
4	Even though, Pre-school is supplied with adequate equipment's toys, but the level of using it is still low.	Resilient	
5	Playing water, sand and nature walk: These three activities are less used due to certain problems.	Confident, Self-Reliance, and Self-Esteem Positive self-concept Ability to manage themselves Risk taking	Kid Entrepreneur: Risk Taking (RKT)
6	Parental involvement: There are problem of parents commitment in the implementation of PERMATA program.	Ability to Communicate Able to communicate in various situations	
7	Cheerful, friendly, happy and affectionate Pre-school atmosphere is important to foster the child's emotional stability. However, education pays less attention on these aspects.	Proficient in verbal expression and receptive language Indicate the improvement of earlier literacy skill	
8	Circle Time, reflection dan free activities: Implementation of these three elements is not emphasized in daily schedule.	Ability to communicate in polite and good manner	Kid Entrepreneur: Initiative (INT)
9	The ability to manage themselves and help themselves according to the level of child development is less emphasized.	Ability to converse in simple English	
10	Planning for children's learning space and corner are given less attention.	Creative and Innovative Design and imagination	Kid Entrepreneur: Creative and Innovative (CRI)
11	There is still teacher-centered teaching and structured culture in education. How to reduce it so that the learning process can focus on children.	Creative to solve the problem Appreciate the value of	

No.	Statement of issues	Characteristics of PERMATA NEGARA	Solution (KELAS)
12	PERMATA program focus on children art literacy skill. How education can design and implement early; literacy skill in daily scheduled activities.		

“Children’s Week of Entrepreneurship”

-Simulation and games entrepreneur, presentation results of activity, Selling exhibition, creative and innovation competition, Best idea/concept of business, Best presenter and Kids Entrepreneur press conference

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