



SCIENCE AND TECHNOLOGICAL DEVELOPMENT MODEL to START UP BUSINESS ON STUDENT ENTREPRENEURSHIP PROGRAM

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ABSTRACT

Science & Technological Development for Students Entrepreneurship Program, (IbK) is one of Ministry of national Education Directorate of Higher Education program, with the aim to build a culture of entrepreneurship and creation of job opportunities for college graduates through the development and creation of new entrepreneurs both for students and for graduation's student of universities. Target program is to create five new entrepreneurs independent, which every year supervised as many as 20 entrepreneurs. Incubation process is done by the method of training, internships, mentoring and coaching that are expected the knowledge and skills transfer in developing entrepreneurial character. In addition, to the above method is also facilitated by marketing activities, access to legal and financing and to form community among entrepreneurial students. The result of incubation produces 3 new independent entrepreneurs among others, organic fertilizer, doll-making business and Information Technology Services, which is assessed on the basis of instruments such as clarity of vision / mission and goals; access marketing, sales growth, investment and cash flow growth as well as the legality of the business. During the process of incubation showed that the character of the behavior (behavioral skills) determine the success of entrepreneurial than technical skills (technical skills). For all of this needed incubation model approach which is more oriented on the balance between behavioral skills and technical skills and also managerial skills. Therefore, the soft skill is to the factor that determines more for entrepreneurial success than hard skills. In academia, entrepreneurial learning model requires a balance between cognitive ability, psychomotor and affective.

Key words : *New Entrepreneur, Personality Entrepreneur Skill, Social Influence, Entrepreneur and Managerial skill*

I. INTRODUCTION

The science and technology program for entrepreneurship (P-IbK) is one of the National Education Ministry of Higher Education Directorate program that set the goal to develop entrepreneurship culture and the creation of job opportunities for college graduation by developing and creating the new entrepreneurs both for the students and graduation of college. The entrepreneurship development program is one of endorsement of national issue for economic growth acceleration and global competitiveness too. To develop entrepreneur character isn't easy and require long process relatively which through the phase of mindset change, behavior change, action change and how to keep it sustainable. This process included in model which is presented by A.J. Schumpeter (1942) as entrepreneurship process, "*creative destruction*" to process learning and innovation. Kindleberger is legendary author in his book "*Economic Development*" (1958), explains about the role of technology and entrepreneurship in technology development. This school of thought certainly follows Schumpeterian flow, can be explained by the flow of neoclassic of marginal efficiency theory, through the formation of input factors such as land, resource, labor skills, capital, technology and entrepreneurship. For the last factor, technology and entrepreneurship are the basis of Schumpeter's thinking as crucial factors in economic development with limited resource, even more the change in entrepreneurship and technology change can explain the productivity increasing for the same human resources or same productivity for reduced resources, that known as *Isoquant curve* (Schumpeter 1949, J. F. Dewhurst 1955). The implication is that entrepreneurship and technology will change the *isoquant curve* higher, or change the formation between labor and capital or the change of formation between labor and capital that impact on *Labor-Saving Innovation* and *Capital-Saving Innovation*. The next Schumpeter theory used to explain *economies of scale* and *economies of scope* in business evolution story. Therefore, entrepreneurship is sufficient factor has role in economic development which implies the improvement of the society welfare. The entrepreneurship gives the role in economic development, as has been described in literature review that the relationship between the entrepreneurship with economic development and economic growth is complex relationship (Spencer and Gomez 2006).

Audresth (2002) uses different indicator in empirical studies to measure the entrepreneurship, such as self-employment rate, business ownership rate, the company has just started, and other measurements such as turnover rate on industry level, reflecting industry in demography. The general measurement on entrepreneurship performance is the survival rate, profitability, exports, foreign direct investment, labor compensation rate, innovation and productivity. But for these measurements are sometimes faced with the limitations of data. It's often used for entrepreneurial activity measurement namely the business ownership rate that's defined as number of business ownership divided by the total labor force (Audretsch et al.2002; Carree et al.2001). Another approach is the growth of creativity as an alternative the entrepreneurial activity (Birch 1999).

Some countries entrepreneurship indicator for a region in the ration of new business (entry rate of new firm) to total labor force (15 years until 64 years). For example (World Bank Entrepreneurship Group Database, 2007) shows the average entrepreneurship developing countries rate is between 7 – 9%. The highest rate of the entry level found in Western European Countries (as industrial country) and New Zealand is over 15%. The lowest entrepreneurship level is in the countries like Africa, Southeast Asia, and Latin America about 0.5%. In Indonesia the entrepreneurship level is only 0.18% of the population. At least a minimum number of the



entrepreneurs are as much as 20%, to grow the nation's economy (Speech of National Education Minister, 2011, in Indonesian Rectors convention Forum). While in Palembang City, the level of entrepreneurship is 0.4% of total labor force (Sulastri, 2010). If the entrepreneurship will be increased to 5% of total labor force, it means Indonesia will print the new entrepreneurs (new firm) by more than 10 million people. This figure is quite fantastic to be reached and require not easy job.

As stated by Kuznets (1955), that the physical resources is an important factor in economic growth, including climate and temperature conditions of a country is a crucial factor (Huntington 1915), at the time. But this has always been a debate, as exemplified in European countries, which explains the evolution of economic growth in the UK, Germany, and France showing the social structure, including family structure, an important factor in economic growth. This debate which underlies that economic growth is the interaction of natural resources, social structure and technology. This is exemplified by Switzerland and Japan, with limited resources, but with strong social structures, making the technology as the tool of economic grow.

Some of the literature described above that the role of entrepreneur is increasingly important in economic growth. This paper will express the entrepreneurial development process in Entrepreneurial Science and Technology Development Program. The IbK program aims to create new entrepreneurs who come from students by providing services to new prospective entrepreneurs program through training programs, mentoring, and supervision to create and develop business through science and technology diffusion. The understanding of science and technology diffusion, in this activity is defined broadly in the form of technological knowledge transfer, managerial knowledge and soft skill.

The target of IbK is (1) 20 new prospective entrepreneurs to be accompanied and supervised in aspects of technological development and innovation, marketing and human resource capacity that can be applied in real (2) Produce at least 5 people in a new entrepreneurial year (3) The other target is the increasing number of tenants built, the widespread commercialization of products, increasing the competitiveness of tenants, enhance creativity and innovation, and increasing employment. In addition to some of targets which hoped the expected output program is the implementation of services to new tenants entrepreneurs (b) Establishment of new prospective entrepreneurs through the process of technology transfer and innovation creatively and commercially (c) The implementation of continuous assistance process (d) The creation of new independent entrepreneurship based-knowledge.

LITERATURE STUDY

1. Definition of Entrepreneur

The term entrepreneur is variously defined as: (1) "A person who organizes, operates, and assumes the risk for a business venture." (*The American Heritage® Dictionary of the English language, Fourth Edition*) (2) "One who creates a product on his own account; whoever undertakes on his own account an industrial enterprise in which workmen are employed." (*Webster's Revised Unabridged Dictionary*) (3) "A person who undertakes the risks of starting a new business. Most often involves a new product or new service. Usually carries the connotation of creativity, vision, self-starting or venturesome. The founder of a business." (*Dictionary of small business*) (4) "One who undertakes an enterprise; one who owns and manages a business; a person who takes the risk of profit or loss." (*Oxford English Dictionary* –



Political, Economical). These definitions, crudely, yield characteristics of risk assumer, creator, employer of others, innovator, self-starter, one able to generate a profit (or loss).

2. Entrepreneur as social process.

There have been many explanations about the entrepreneurship, some figures also give contribution to the entrepreneurship learning A.J. Schumpeter (1942), which suppress entrepreneurship as form new companies that use innovation to enter into the existing market or to grow creating the demand and new market. This is referred to as process “creative destruction” that are relevant to the global economy which contributed to the human brain. As the value to increase the competitiveness. Stevenson (1983;1985) provided a different definition of entrepreneurship : The pursuit of opportunity through innovative leverage of resources that for the most part are not controlled internally. Ansoff (1990) and Specifically in Peter Drucker’s writing in his book *Innovation and Entrepreneurship* (1985), explains that entrepreneurship potential has experienced a shift from large firms as creators of employment opportunities to small companies and medium enterprises as creators of employment opportunities. Entrepreneurship doesn’t only focus on economic and business aspects, but it has grown to control every aspect of social aspect, which is now developing social entrepreneurship, to emphasis more on the creation of group goals. In Indonesia for example joint group efforts (KUBE), PNPM Mandiri which facilitated and collaborate between government, business, university and community.

3. Entrepreneur Persepectives

The other terms, there are three key perspectives from which the entrepreneur has been viewed (a) Economic perspective – which considers the role of the entrepreneur in the economic development of a nation, region or locality.(b) Sociological perspective – which sees the entrepreneur as a member of a social system and who both is influenced by and, through their entrepreneurial activities influences, the social environment and the personality traits that the sociological system engenders. The sociological perspective is taken to include the spectrum of society from the family unit outwards. (c) Idiosyncratic perspective – which focuses on the entrepreneur as an individual with a unique combination of personal characteristics and beliefs.

Economic perspective, Schumpeter’s (1934) definition of the entrepreneur included one who ‘carries out new combinations’ only whilst they are actually performing the action of enterprise, thus clearly focussing on the action rather than the person as the more important. Knight (1942) sees the entrepreneur as the calculated risk taker where reward ensues from bearing uncertainty. Knights’ contribution is interesting from the integrated model point of view because it introduces the distinction between risk and uncertainty. For the purposes of the model, risk is the quantifiable probability that an adverse event will occur. This risk can generally be passed on to another through some form of insurance premium. Uncertainty is that part which cannot be quantified or determined and hence cannot be passed on. Arguably the entrepreneur is one who is prepared to accept uncertainty. Cole (1955), has suggested that entrepreneurs themselves change with the course od development, who classified various stages of entrepreneurship into “rule-of-thumb”, “informed” and “sophisticated” as business leaders became less intuitive and empirical and more highly rationalized. In the early stages of development, according this scheme, entrepreneurs are community-oriented-aware, that is only of their impact on local markets for labor, and goods. At some still higher stage, the enterpreneur is nationed-oriented. Kindleberger who his book “*Economic Development*” (1958), proposed



that the technological and entrepreneurship interacted on economic development, the entrepreneur has been the disseminator of technological change. Technological change is a prime mover in the course of economic development through invention and innovation, and devising new goods and new ways of producing existing goods and services. All of these impact on economies of scale and economies of scope. .

Cole (1959) adopts the economic historian perspective with a focus on the role of the actors and their behaviours to change and economic growth through history. He offers a definition of entrepreneurship as “*The purposeful activity (including an integrated sequence of decisions) of an individual or group of associated individuals, undertaken to initiate, maintain or aggrandise a profit-orientated business unit for the production or distribution of economic goods and services.*” (Cole, 1959). Kirzner (1973), through “one alert to profitable opportunities for exchange” added breadth to the definition by introducing a competitive environment boundary scanning dimension, open to opportunities but also possessing the skills to identify suppliers and customers whom they could act as intermediary. The entrepreneur, according to Kirzner is the person who possesses information that is unknown to other parties and thereby adds value to the intermediary role. Clearly to achieve this the entrepreneur must be creative and often uses or exploits new technological opportunities as they arise.

Casson (2003) recognised the importance of judgement in resource deployment and hence the need for the entrepreneur to have control over the immediate society around the venture. Casson noted that the economy impacts how well entrepreneurs flourish, not only at the National level but at the regional and sub-regional levels. A particular point he noted was that availability of personal equity is important.

Sociological perspective, the sociological perspective focuses on the role society plays in shaping entrepreneurs and on the impact entrepreneurs have on society. Collins (1964): “Craftsman” entrepreneurs: Individuals who follow in the foot steps of family relations or role models who gave them early exposure to the craft they decide to follow as an entrepreneur. “Like father like son” entrepreneurs: Closely aligned to the craftsman entrepreneur, this type of entrepreneur enters a business with father/mother as role model. “Off the farm” entrepreneurs: Individuals who have a fundamental dislike for, or disagreement with their upbringing or some aspect of it. This engenders a strong desire to break away from the mould and be different. “Opportunistic” entrepreneurs: The opportunistic entrepreneur is one who seizes opportunities as and when they arise. The opportunities need not necessarily fit any predetermined strategy and can be diverse and disconnected in nature. The parallel with the conglomerate management model is possibly a useful one here. “Trained” entrepreneurs: Individuals who have undergone training in the component skills of enterprise. A second, simpler typology is offered by Hornaday (1990): The “craftsman”: which includes those individuals who provide a product or service directly to customers and who generally enjoy doing so. The “promoter”: this archetype includes the ‘go-between’ or ‘wheeler-dealer’ whose primary objective is to increase their personal wealth.

The other concept of entrepreneurship, long hallowed in the context of business and economic ventures, has been increasingly applied to the context of social problem-solving (e.g., Dees, 1998a; 1998b; Thake & Zadek, 1997; Emerson & Twersky, 1986). As applied more recently to social concerns, the concept has taken on a variety of meanings. Some, for example, have focused on social entrepreneurship as *combining commercial enterprises with social impacts*. In this perspective, entrepreneurs have used business skills and knowledge to create enterprises that accomplish social purposes, in addition to being commercially viable (Emerson & Twersky, 1996). Not-for-profit organizations may create commercial subsidiaries and use

them to generate employment or revenue that serves their social purposes; for-profit organizations may donate some of their profits or organize their activities to serve social goals. These initiatives use resources generated from successful commercial activities to advance and sustain their social activities. The challenges of finding effective and sustainable solutions to many social problems are substantial, and solutions may require many of the ingredients associated with successful innovation in business creation. Others have emphasized social entrepreneurship as *innovating for social impact*. In this perspective, attention is focused on innovations and social arrangements that have consequences for social problems, often with relatively little attention to economic viability by ordinary business criteria (e.g., Dees, 1998b). They create innovative initiatives, build new social arrangements, and mobilize resources in response to those problems, rather than in response to the dictates of the market or commercial criteria. Still others see social entrepreneurship as a way to *catalyze social transformation* well beyond the solutions of the social problems that are the initial focus of concern. From this perspective, social entrepreneurship at its best produces small changes in the short term that reverberate through existing systems to catalyze large changes in the longer term (Ashoka Foundation, 2000).

Ideosyncratic perspective, McClelland (1967) proposes that proactivity, initiative, assertiveness, a strong achievement orientation and commitment to others are competencies of successful entrepreneurs. Further he found that parental influences significantly contribute to the development of need for achievement although not specifically in any role model sense. Parental influence was also found to influence “risk taking, confidence in success, desire for independence, energy in pursuing goals and measurement of success by wealth” (McClelland, 1967). Shackle (1970) sees the entrepreneur as the creative, innovative person able to imagine opportunities from the competitive environment. In a summary of the personal characteristics of entrepreneurs, Deakins (1999) suggests they need to be achievement orientated, calculated risk takers, seekers of high internal locus of control, innovative, tolerant of ambiguity and visionary. Given Knight’s (1942) view on risk and uncertainty risk taker is divided into risk taker and acceptor/seeker of uncertainty. Others have added to this list with self-confidence, flexibility, desire for independence and high energy, emotional stability, conceptual ability and the capacity to inspire (Timmons, 1978).

4. Entrepreneurship Model : *start up business*

The White Rose Centre for Enterprise (WRCE) (2009), has presented the model with quite comprehensive and integrated as a new entrepreneurial model of development (start-up business). This model is not only used in the learning of entrepreneurs, but also as a model to apply to the creation of new entrepreneurs.

Figure 1 shows the integrated model which is, in form, a process orientated model, an approach also used by Cunningham and Lischeron (1991) in their definition of entrepreneurship. The representational centre of the model is the act of ‘x’trapreneurship. This can be, as shown, either an entrepreneurial action leading to the establishment and management of an enterprise or an intrapreneurial action leading to innovation within an existing firm. Solid line arrows are used to show the process style sequence, although, as is commented on below, there is no intended inference that this is the only or correct flow path. Dotted arrows are used to show influencing or component factors. The overall model starts with some form of creative action resulting from a situation in the competitive market place. This can be uncertainty or a change in market conditions.



Creative ability is required to identify this opportunity which needs to be balanced against available resources and facilities in the local environment. This later can include the technological state as to whether the opportunity can be technically exploited as well as whether there is the financial or human resources available to take the opportunity forward. Creative ability is shown as a component competence on the assumption that creative ability can be developed in individuals. Given the imagination of an entrepreneurial opportunity the model enters the more personal, or 'nascent process' (Deakins, 1999) which is shown divided into the disposition to act and the decision to act. The disposition to act is a 'gate' through which an individual must pass before they will take an opportunity forward towards reality. What influences any individual to pass through this gate are the societal and personality influences previously discussed. If the individual has the 'disposition to act' the process moves on the 'decision to act' gate. This gate is more practically orientated in that it requires the individual to form an association with others (if necessary) and to gain sufficient control over finance, resources and facilities in their local environment to enable them to convert the opportunity with their intent to a practicable business proposition. The output of this gate is the act of 'x'trapreneurship. The lower half of the model is divided into actions that are entrepreneurially orientated, with the technical and behavioural skills shown for each. The intrapreneurial act is recognised to be available in terms of a process as well as product innovation.

Social influences, is the factors that can influence the actions and decisions of an entrepreneur emotionally, because the relationship among other. The aspect of social influences are Dependency culture, Role model culture, Tradition culture, Failure / Success culture, Societal safety net. The personality characteristics of the entrepreneur are a) Risk tolerance b) Uncertainty tolerance c) Vision d) Capacity to inspire e) Creativity & Innovation f) High internal locus of control g) Emotional stability h) Resilience & Tenacity i) Self awareness j) Self confidence k) High energy l) Achievement, m) orientation, n) Proactive o) Desire for autonomy p) Flexibility q) Initiative r) Assertiveness s) Commitment to others. The entrepreneur and management skills *Entrepreneurial tasks typically involve building or generating new exchange relationships where none existed before and maintaining or consolidating existing relationships.* Drucker's (1985) definition of an entrepreneur as one who '*always searches for change, responds to it, and exploits it as an opportunity*' focuses in the main on aspects of attitude. Webb and Webb (2001) start with the establishment of a mission and company and individual goals, from this the business plan is constructed. Practical issues of business forms, insurances, premises and associated decision making, financial, marketing and human resource management matters follow. The handbook then turns to controlling the business and includes sales and marketing, employment and financial management. Support for the business in the form of legal and accounting, e-commerce and personal welfare (time and stress management) are also included. This handbook follows a common pattern in small business management texts and allow an extraction of the technical skills required. The technical skills required of the entrepreneur, i.e. the skills required to establish and manage the business, excluding the skills of the technical domain within which the business operations exist are a) Understanding of small business forms b) Intellectual Property Rights and protection c) Finance d) Marketing e) Business planning f) Strategic planning g) Legal issues including insurance h) Logistics management i) **Ongoing operation of the business:** a) Marketing b) Financial management c) Strategic management d) Human resource management e) Production or service provision management f) Logistics management g) Quality management h) Customer / Supplier relationship management. The overall model shown at figure 1.

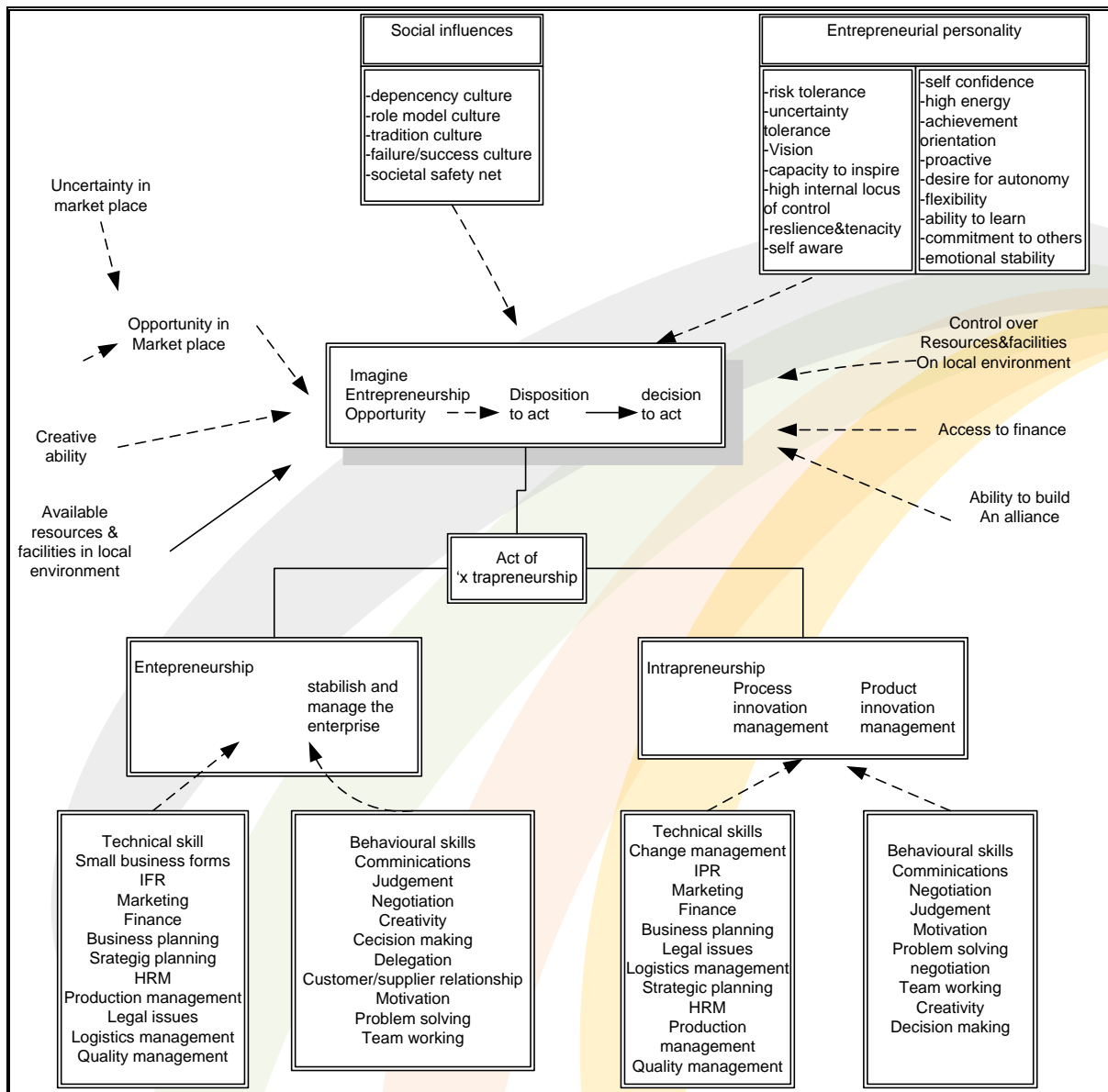


Figure : 1. “The Integrative Model To Build A New Entrepreneur
 “ Adopt by The White Rose Centre for Enterprise (WRCE) (2009)”

II. METHOD OF ACTIVITIES

Method of activities carried out in stages (1) socialization and registration (2) selection (3) apprenticeship (4) training and coaching (5) and diffuse of science and technology entrepreneurship. (6) Rollout Entrepreneurship. The activity method of illustrated Model in Figure: 2.



Figure: 2. Methods of Science and Technology for Entrepreneurship Student Activities

1. Socialization, Registration and Selection

The socialization is the initial activity in independent entrepreneurship development program. Socialization is done through announcements distributed through the Assistant Dean III, who conveyed throughout the faculty at the University of Sriwijaya. Of the business plan that enter selected plan administratively the businesses that chosen those businesses have the potential to be developed. In addition, the efforts to get funds from the program PKM. Of the 30 types of business done mapping the possibility of new business student become an independent business and have commercial value. Selection of activities carried out in several stages, to assess the seriousness of students to entrepreneurship professional and independently. Selection of the first phase, conducted to assess the feasibility of the business development proposal which has the prospect of continuity for students. Of some 30 business students who meet the criteria for further development and commitment of students to incubation. The second stage of selection was performed to assess the feasibility of the business. In this selection focused on the cash flow business plan that is estimated expenditures and cash income for one year. Of some 30 business students who meet the assessment criteria to be accompanied by as many as 16 independent entrepreneurial businesses. Selection of the third phase, conducted to assess the seriousness of students in science and technology entrepreneurship program students, through the presentation / exposure of a business plan business students.





Figure : 3 Indepth Interview For Selection and Exploitation Motivation Of Student

Selection of the fourth stage is the final selection, to meet administrative requirements, proposal format proposal and willingness within the business development efforts through training, and coaching. Selection of activities carried out by using in-depth interview format (in depth interview) and questions that structured.



Figure : 4. Student presented their business plan

Selection is done with the intent to explore the entrepreneurial potential of students, among others, (a) The identity of participants (b) Participant Motivation (c) Willingness to Coaching (d) Commitment (e) Sustainability / Work Plan (f) Potential Entrepreneurship from the participants. From the selection of 16 candidates selected entrepreneurs will be incubated. Tenant Patronage, which will follow the science and technology entrepreneurship program, will be developed into an independent entrepreneur. The student entrepreneurs were asked to declare him self the target tenant business incubator. Here are the efforts of students who were brought tenant built a business incubator center. Tenant Patronage of the results obtained by the selection of 16 business students who will follow the science and technology entrepreneurship program, which will be developed into an independent entrepreneur. The student entrepreneurs were asked to declare himself the target tenant business incubator. Here are the efforts of students who were brought tenan built a business incubator center. Business students include: (1) Agro shop The Green sold farm equipment for agriculture students (2) Bethel Ice Cream sells ice cream (3) Tutoring Sigma (4) Finger Puppet (5) Dental Accessories (6) D'Cost of business creative dolls (7) Banderx IT Specialist (8) Organic Fertilizers (9) Laundry (10) BAM Cafe (11) Nol-Namht Studio (12) Book Store (13) Biological Organic Fertilizer (14) Business Books Self (15) Mini Market (16) Engineering Corner



2. Mapping tenant candidate

For business development towards independent entrepreneurs, the various support programs being developed, such as business planning training, soft skills training and Techno-entrepreneurship, business coach, gathering and filed trips, internships, provision of books, etc. entrepreneurship. Tenant Candidates are selected and expressed willingness to be fostered and accompanied by new entrepreneurs to become independent.

Initial instrument for prospective tenant done to look at the factors that can influence decision-making entrepreneur, who explored through questionnaires and interview instruments. These factors include the identity and origins, motivation and commitment as entrepreneurs, as well as potential tenants-creativity. The purpose of mapping candidate is for tenant to see how much imagination to the opportunities (imagined entrepreneurship opportunity), which will have an impact on the desire to act (Disposition to act) and the decision to act as an entrepreneur (decision to act).

3. Assistance Activities And Directions

The process of mentoring and coaching starts from a given training on entrepreneurship not only on all prospective participants tenant built, but on all students who already have a business. Entrepreneurship training activities provided in an effort to increase the spirit of entrepreneurship, entrepreneurship ways professionally and to give full explanation of the rules and conditions of student entrepreneurship development programs. Student entrepreneurship program is continuing the program through training activities are also expected as a means to interact and intensive communication between the students in the business group training activities provided by experts with relevant materials with the goal of developing students' entrepreneurial knowledge. The purpose of mentoring (1) Improve the ability of students to develop student entrepreneurial technology-based applications. (2) Developing the spirit and attitude of independence and the ability to interact with each other in group dynamics. (3) To develop the entrepreneurial spirit of students to prepare themselves for the challenges of employment. (4) Students are able to develop the business independently. Indicators of success of this activity is the implementation of these activities are (1) Establishment of a business plan business more professionally and responsibly (2) better administrative management (3) The students had engaged in marketing (4) Increased investment (5) Increased revenue

4. Method of Training Activities

Training activities conducted by the tutorial method, discussion and practical exercises for preparing a business plan and field practice. Material Events and Training Activities Schedule carried out within 5 (five) days. The subject of training activities are (a) Building the Dream to be An Entrepreneur (b) Preparation of Business Plan (c) Marketing Strategy (d) Preparation of Cash Flow and Balance Sheet (e) Taxation (f) Explanation Practice Field (g) One Day on the Market (Market Survey) (h) One Day on Business "Learning by Doing" (i) Exposure Activities Participants "Business Plan"



Figure : 5. Facilitator demonstrated “IbK” Program

Activities Discussion Group

Activities Discussion in a structured group is accompanied by the instructor to discuss the business plan. One of documentation of student entrepreneurship training activities can be seen in Figure :6.



Figure : 6. Activities “Group Discussion” active learning for entrepreneur

Activity of entrepreneurial practice

Activity of entrepreneurial practice carried out by market surveys, identification of the business environment, a survey of sources of procurement / equipment / raw materials and investment plan that will be done. Student discussion activities for the market survey plan guided by one of his assistant lecturers. Documentation of group discussions, student group with lecturers assistant that will plan the market survey can be seen in Figure 7.



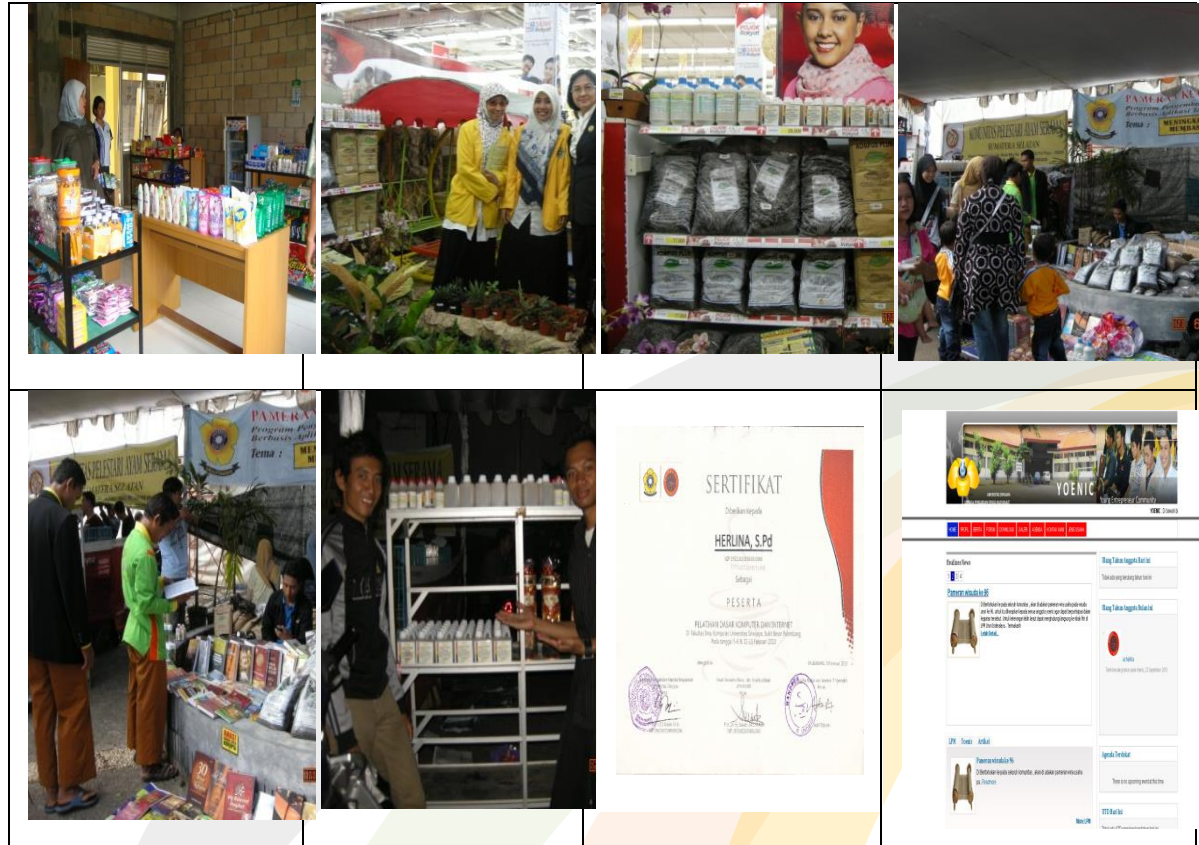


Figure : 7. Entrepreneur Activities of Tenant

Diffusion Of Science And Technology Development For The Entrepreneurship

To make the new entrepreneurs are independent is not an instant, but we need a process, where prospective tenant get different experiences, knowledge and various skills, ranging from ways to solve problems, think creatively, and dare to take risks and have a future orientation more clearly. These things are always delivered to the prospective new independent tenants entrepreneur. Therefore, facilitation method is a method of problem solving performed on cases faced tenant candidates, and candidates tenant find a solution themselves. Change mindset entrepreneurship is rare early in the process of mentoring. At the beginning of the exploration potential of self-accompaniment performed tenant candidates who use a more professional instrument. The process of coaching is done by the method of coaching which is a combination of methods of teaching, mentoring, training and consulting. Diffusion method for business coaches who are interested lecturers as assistant and executive lecturer at the Business Incubator Center and Entrepreneurship.

Forming of Business Plan

From the initial mapping for the results of tenant target is not to have clarity of purpose in running the business. For example, they do not make a written business plan, structured, has no clear direction of purpose. Forming of Business Plan is the most basic things for an entrepreneur as a source of inspiration and motivation to achieve goals. Therefore the Business Plan Forming model more professional need to be taught to students, because not all students get the same



materials during their lectures. The calculation of the cost of production and preparation of Cash Flow. Entrepreneurial ignorance in ways basic price calculation for this product make it difficult for students to determine a competitive price. Determining the competitive price of selling is the key factor to excel in competition. Therefore the ways of calculating the cost of goods, forming of cash flow is one of the diffusion of science and technology should be given to entrepreneurial students, because not all students come from the economics faculty. Platform of Business Plan are (1) Brief Description Of Business, (2). Vision / Mission / Purpose Of Business To Be Developed (3) Strategy For Achieving Goals (4) Business Plan : (a) Long Term (3 Years) : (b) Short Term (1 Year) (5) Aspect Business Plan : (a). Marketing Plan (Based on Type of Product) (b) Location (c) Segmentation (d) Sales Plan (Based on Type of Product) (e) Capacity / Unit (f) sales Value (g) Cash Flow Plan (h) Cash Entry (i) Cash Out (j) Cash Balance

III. RESULT AND DISCUSSION

1. Personality Entrepreneurial Skill

To make the new entrepreneurs are independent is not an instant, but we need a process, where tenant prospective get different experiences, knowledge and various skills, ranging from ways to solve problems, think creatively, and dare to take risks and have a future orientation more clearly. As has been noted previously that an entrepreneur has at least the views or perceptions of risk, a vision that can inspire, creativity and innovation, stable emotions, confident, energetic, goal oriented, proactive, have the autonomy and freedom and a commitment to get activities . Explore your own potential for the factors mentioned above, which is done through the interview process in cross section, it was realized not fully give an accurate value to the prospective entrepreneurs. But at least as an initial picture, to understand the individual tenant characteristic, in the process of incubation. Results in-depth interviews and observations during the incubation period showed:

1) Clarity of Vision / Mission and Objectives

At first tenants candidate (95%) did not have a vision / mission and clear objectives, part of tenants have declared its vision / mission and goals but not according to what they should be declared to be the vision and mission and clarity of purpose. After incubation, only 70% who have declared vision and mission and objectives are clear, but the understanding of the vision / mission and goals as inspiration and motivation is still very far from expectations. To change tenants behavior in terms of "inspiring of vision" is still very difficult, due to many factors, among others because they are not used in the attachment, discipline, goal orientation, an environment conducive to this, they are more like "free style" . Avoidance of doubt against the objectives still include part of tenants, it still marked the difficulty, they set goals to be achieved in the form of numbers or values, such as the income they expect turnover to be achieved, the labor that will be developed. It is also accompanied by their inability in terms of analyzing the conditions to the future.

2) Perceptions of risk

Courage in the face of risk is the main characteristic of an entrepreneur, Deakins (1999), Suggests They need to be achievement orientated, calculated risk takers, seekers of high internal locus of control, innovative, tolerant of ambiguity and visionary. Given Knight's (1942) view on



risk and uncertainty risk taker is divided into risk takers and acceptor / seeker of uncertainty. The incubation results show about the tenant perceptions with business risk, in the first big part of tenants stated boldly in taking risks (80%). However, during the incubation period of observation and mentoring showed 60% tenant not dare to take risks. This is demonstrated by their actions not to respond to opportunity, because of the fear to lose, besides that it looks no desire to make additional investments of their own capital, they have a "safe way", or a low tolerance for risk. The nature of the lack of courage in taking risks, causing tenant's effort appears to be merely as a sideline and slow growing, that business should be developed in uncertainty, where an entrepreneur can be sure the spirit of motivation, creativity and innovation, that's business.

3) Creativity and innovation

As Mc McClelland (1967) stated proposes that proactive, initiative, assertiveness, achievement orientation and a strong commitment to others are competencies of successful entrepreneurs. In terms of creativity and innovation show that about 40% tenants show things quite creative in providing products and run their business, while still others are followers. The products produced are still a generic product that is similar to market competitors. But as a beginner, at least tenants have experience to entrepreneurship, starting from the introduction of market, competitors and the environment. In the face of conditions that consumers want and handle competition will usually appear creativity and innovation to maintain its business. Innovation is not only in terms of products, but also in terms of ensuring the market, through marketing techniques are more precise. Desire to do more on creativity and innovation intrinsic factors that possessed by students. As obtained from the observations and the incubation process, there are differences in students who have the creativity and who have no creativity, it turns out students who have the creativity and innovative are students who have experience and have the talent for it and have a better ability in doing the analysis and synthesis. This indicates that the element of creativity and ability to innovate that arises from yourself is not an instant thing, but of a long process. Therefore, to bring up the custom of thinking for creativity and innovative thinking, requires a process that starts from the things encountered in their daily lives with the proper functioning of the role of the right brain. The right to modify this behavior change requires a facilitator or to use role models, but this is not in the short term, unless embryo of element of creativity already exists within each individual student.

4) Confidence

Confidence, an endorsement for creativity element and courage to take risks. If seen from the confidence of students, 50% tenants have sufficient confidence, it looks at when they promote their products, but still there are also tenants who have the attitude reluctant to promote their products. In addition, the confidence, needed also to build trust among tenants.

5) Proactive

Proactive action in line with the emergence of creativity and motivation element to grow. Only a small part of (20%) tenants have a proactive element, it is seen from tenant action conducting promotional activities, such as through electronic media (TV), for example, doll-making business, media, information technology (IT business) and marketing by using agents , for example, book sales business. The rest, tenants market the product on a regular basis and if



facilitated by a central exhibition incubator. Lack of proactive action can also be seen from the slow development of tenant business.

6) Motivation

A part of large (80%) tenants state to join this program, to develop entrepreneurship intentions, but during the incubation period was great part of tenants showed no strong motivation for entrepreneurship. It is visible from, a decline in enthusiasm for running and developing businesses. Besides the busy reasons to attend college, a part of tenant is still visible still expect to work as corporate employees or civil servants.

2. Social influence

Environment's effect is crucial in shaping the character of tenant's entrepreneurship. Environmental influences can come from family, friends nearby or surrounding environment. Perceptions of success or failure can be influenced by the experience or the values that serve as a tenant model. These values can come from a family condition, or the surrounding environment. Generally they claimed had experienced failure or success, but still in the things that are engaged in the learning process, only 10% of states have failed in terms of doing business, and 60% tenants stated that the perception of failure is a common and as motivation to bounce back. Perceptions of failure or success, is influenced by their views on their families about the meaning of failure or success. Some still make family as models role, which motivates them to entrepreneurship. As many (80%) of tenants had relationship with entrepreneurial characteristics, such as parents, siblings or their immediate family.

Furthermore, their views on values such as values if they become successful entrepreneurs, the values that they expect as the owner and is expected of teamwork have not been seen clearly illustrated in the tenants themselves.

3. Entrepreneur and Managerial Skill

If the entrepreneur's personality characteristics, more on character's value which is hold intrinsically such as talent, heredity and experience gained from the closest people as a model role. So the entrepreneur's skill is a skill that can be obtained from external factors and can be studied to develop entrepreneurial skills. Therefore, in the incubation program provided knowledge and skills to develop the entrepreneurial potential through training, apprenticeship and practice of entrepreneurship through mentoring and coaching programs. Entrepreneurship's skill are given that included in the technical skills such as forming business plan, learning about marketing strategies, entrepreneurial practices such as market surveys, production innovation, and facilitation of various activities of the exhibition. Facilitate the entrepreneurial incubator center to market their products through both exhibitions organized by the university and outside Sriwijaya, such as Sriwijaya Expo exhibition, Folk Bazaar, Unsri Expo, etc.

While the skills in behavioral skills that included such as skills in communication, negotiation, creativity, decision making, teamwork and leadership. During incubation, approximately 30% which only applies business skills are approached with what was expected, namely a business plan, cash flow preparation and conduct of marketing practices, and innovate. While the ability to communicate in terms of 60%, has the ability in terms of communicating well, by the time they do an exposition of the business plan, and by the time they follow the exhibition which is facilitated by incubator. But for the things like negotiating only 10% have



been conducting negotiations in a professional manner with customers. For skills in working together in a teamwork show a very weak ability, only 30% who can maintain their business in a sustainable form of cooperation, most of them are not in a relationship of cooperation and the last only managed by a half part of entrepreneurial member.

4. Program Output

After followed the incubation for 6 months by a variety of activities ranging from training, field trips, internships, access to marketing, financing and legality, which valued the business prospects as an independent entrepreneur only 3 entrepreneurs who really roll out the buffer in the organic fertilizer business, business IT specialist and business cost D'gallery making dolls. While other entrepreneurs still need further development. Incubation results obtained include the occurrence of product innovation in terms of improved packaging, market access, increased sales, legality and form a community and a means of marketing through the website.

IV. CONCLUSIONS AND RECOMMENDATIONS

From the results of science and technology incubation program for Entrepreneurship, the first year has shown the result of three independent entrepreneurs developed, and the rest are still in the process of incubation, which is expected to continue for years to come. Incubation process still requires a method and more intensive ways and specific to the potential entrepreneurs. It turned out more on entrepreneurship development approach to change behavior (behavioral skills) than technical approaches (technical skill. It is recognized that there are still weaknesses in the incubation process is more dominant in terms of technical development skills, and is also a weakness if the orientation of academics always emphasize on the cognitive school of thought or psychomotor skills, whereas effective skills are needed in the development of entrepreneurship. So, we need the balance of those three. In addition, to develop the entrepreneurial tenant's character should be done with a model approach that combines technical skills and behavioral skills.

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