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Establishing Biopreneurship: A new Challenge

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ABSTRACT

Entrepreneurship is nowadays becoming a new spirit for many Indonesian universities perhaps in other countries as well. Although there are many definitions related to entrepreneurship, it is not easy to get understanding of the real meaning. In a simple practical meaning, entrepreneurship is a "business" mindset and action. Therefore, educating entrepreneurship is actually developing mindset and action of business to students. There are many terms derived from entrepreneurship such as Tecnopreneurship, Sociopreneurship, etc. Regardless what is the meaning and the differences of those terms they both have similarity because they adopt the spirit of entrepreneurship. Therefore, this paper intends to discuss the same spirit of entrepreneurship with a difference focus. This paper elaborates a new term of "Biopreneurship" that is perhaps not familiar yet to most Indonesian universities. Biopreneurship is generally, but not always, an entrepreneurship of for instance biotechnology. The objective of establishing "Biopreneurship" is to exploit any knowledge related to "Bio-" into a business mindset. The case study of "Biopreneurship" is taken from author experience in establishing it at the university recently. The case study is taken from the university because the university vision is related to entrepreneurship spirit. However, as it is a new startup of center of "Biopreneurship" therefore the knowledge on this subject is also limited

INTRODUCTION

Nowadays term of entrepreneurship getting more familiar to our life, moreover universities are also moving toward entrepreneurial universities concept. One reason is that universities trying to move out from the old paradigm of teaching, or research only. Universities are trying to move to other progressive concept that can drive the improvement further. There are derivative terms of entrepreneurship that familiar to us such as Technopreneurship, and Socio-preneurship. These terms indicate specific aim of the area of entrepreneurship to be focused. For example Technopreneurship is a technology based of entre-prencurship. That is why this concept mostly adopted by university/institute of technology. Among those terms of entrepreneuship this paper will introduce an unfamiliar term of Biopreneurship. The next chapter will elaborates further on this term.

WHY BIOPRENEURSHIP?

The author years of experience in innovation and technology management field inspire that innovation should be a sustainable process of creating a new ideas, realize, and introduce them to market. However, theoretically, generating (new) ideas can be sourced from many ways. In fact, it is actually a difficult task especially for fresh new idea of innovation.

Inspiring from innovation, we realize that nowadays people are trying to come back and preserve nature. That is why we are now familiar with products that nature/environment friendly. Among other some example that we can notice are bio-fertilizer, bio-food, bio-pharma etc. These products are actually "bio-" related products that specifically developed for reasons of nature friendly. Considering the above idea of "bio-" related field, author develops a center that is called "Biopreneurship" (Figure 1.).

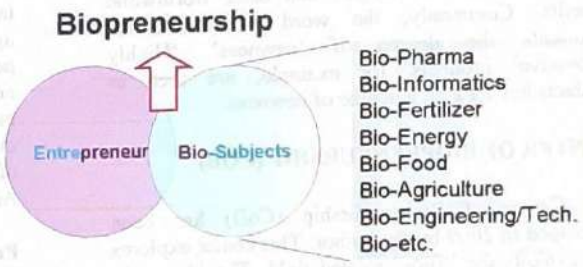

FIGURE 1. Concept of Biopreneurship

INNOVATION in BIO RELATED FIELD

Baskoro (2006) stated that Innovation is widely known because we believe that innovation can make our life better. There are also some reasons of innovation from the view point of manufacturer that Innovation is done to sustain the profit. Innovation is also done to increase product superiority with the criteria of unique feature(s), more functionality, meeting customer requirements, and acceptable price/performance [9]. The simple illustration of

innovation is about making things differently (different product or different technology). Example of this illustration can be named "bio-fertilizer" that replaced chemical into bio with the same goal but different impact especially for environment.

Even though innovation commonly requires high spending in R&D, innovation also gives promising rewards to the manufacturers. For this reasoning, the potential rewards, therefore Biopharma manufacturers invest resources and knowledge to study and research in this direction although the spending and time-to-market is very long.

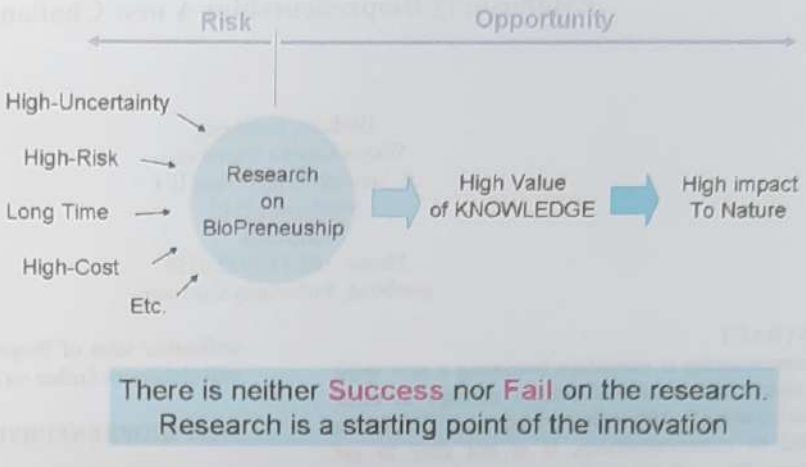

FIGURE 2. Biopreneurship Research

Many researchers argued on the terminology of innovation that leads to several ways to say the similar thing. Often innovation is defined as "radical", "really-new", and "discontinuous", also innovation is defined as "breakthrough", "revolutionary", "game changing", and "boundary expanding" [6]. Therefore, Garcia and Calantone (2002) defined innovation as an iterative process initiated by the perception of a new market and/or new service opportunity for a technology-based invention, which leads to development, manufacturing, and marketing tasks striving for the commercial success of the invention [6]. McDermott and O'Connor in Baskoro (2006) defined innovation as a new technology or combination of technologies that offer worthwhile benefits. Commonly, the word 'innovativeness' represents the degree of 'newness'. 'Highly innovative' products, for example, are seen as products having a high degree of newness.

CENTER OF BIOPRENEURSHIP (COB)

The Center of Biopreneurship (CoB) has been developed in 2009 by the author. This center explores and exploits the "Bio-" related field. The idea is to marriage between entrepreneurship and "Bio-" related disciplines. In CoB, entrepreneurial activities as well as research activities related to "Bio-" will be explored.

In the beginning there is no reference related to CoB, nobody knows what this center will form next. The reason of center establishment is that there is some products of bio already in the market, there is also (high technology) research going on in the field of bio. However, there is no center established to organize these "Bio-" related disciplines. This gap is therefore filled by establishing Center of Biopreneurship.

Center of Biopreneurship established a concept related to "bio" research. In this concept (Figure 2), as in general research, there is risk and opportunities involved in. There are always many considerations for a research to be commenced. Not always a research is commenced only with one or two considerations. It is not surprisingly that the considerations usually multi factors. In research, there is no full (hundreds percent) guarantee of success. Author experience in this research is that there is always struggle. However, research on this direction always gives hope for a better life in the future.

CASE STUDY

Case studies of Biopreneurship research was done for two cases. The cases were related to bio- research[1] taken in 2009 and 2010. Each case requires approximately two weeks of research. During the period of research, researchers perform activities as in normal research. There are always logbook, note, picture, film, and other methods to record data and evidences. This research follows three simple phases of (1) Pre-, (2) Action, and (3) Post research activities. Activities in these phases are as follows:

Pre-Research

In this phase, normally researcher prepares for activities for action research. The activities in this phase including but not limited to prepare administrative, planning, security, finance, logistic, and etc.

Action-Research

In this phase, the activities merely on technical as planned earlier. Focus of activities in this phase is data mining. This phase is critical to the success of the research because data taken rarely difficult to replicate

[1] Although the information is available by the author, the complete information is disclosed in this paper.

at the same time and location. Usually data taken is one spot only.

Post-Research

In this phase there are activities regarding settlement of the research. Activities include preparing report, presentation, draw conclusion and give prediction, etc. based on data from previous activities.

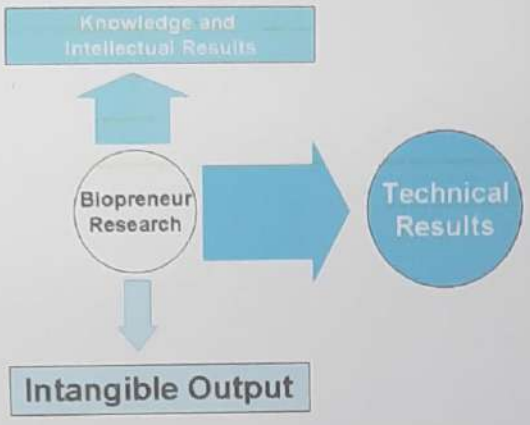

FIGURE 3 Biopreneurship Research Output

DISCUSSION

As stated in the title of this paper, this research is actually new challenge for the author. Research on this direction is considered in early phases, so that no such conclusion can be drawn. The cases gathered from this research are only two cases, as a result no pattern can be seen so far. However, as this is a new research stream the enthusiasm of the research team is very high. Moreover, the team (mostly young lecturers) learns so many things during the research process that they never experienced before. From the author viewpoint, the experience by the team is the ultimate outcome from this research. Having this experience enables them to have courage to face a new challenge of innovative research in the future.

Finally, in addition to bundles of data, this research has given intangible output at the moment to the team who joint in this research stream (Figure 3).

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