



SCIENCE AND TECHNOLOGY FOR ENTREPRENEURSHIP (IbK) AT JEMBER STATE POLITECHNIC

Triono Bambang Irawan¹⁾; Hariyono Rakhmad²⁾; Dwi Rahmawati³⁾

1) Cultural Production Department; 2) Information Technology Department; 3)
Cultural Production Department, Politeknik Negeri Jember, Jln. Mastrip Jember PO
BOX 164 Jember

1) trionobambangirawan@gmail.com

2) hariyono_r@polije.ac.id

3) rahmawati@polije.ac.id

Abstract - Entrepreneurship is a part of activities in conducting at State Polytechnic Jember. Initially, entrepreneurship subject is included into all of study program curriculum for 4 credits and supported by staff teaching commitment through entrepreneurship integration on every taken skill subject. This condition makes state polytechnic students are motivated to develop them to be a good entrepreneur. Entrepreneurship atmosphere runs well since it is supported by institution, management commitment, staff teaching and sufficient facilities for initial entrepreneurship teaching. The objective of entrepreneurship technology program is to make students newly successful entrepreneur with technology based and have good entrepreneurship management skill. The targets and the outcomes of this program : (1) National journal publication/proceeding (draft); (2) Mass Media Publication; (3) 5 new independent entrepreneurs every years; (4) 25 % tenant from the selection become new independent entrepreneurs; (5) The exiting new entrepreneur products that have technology excellence.

Keywords : *Enterpreneurship, entrepreneur with technology based*

1. Introduction

Entrepreneurship at Jember State Polytechnic (POLIJE) has become an inseparable part of educational activities which is also the implementation of the shared vision and mission. Initiating the entrepreneurship courses is compulsory in the entire study program curriculum with 4 credits (two semesters) and supported by the teaching staff's commitment through entrepreneurial skill integration. This condition motivates POLIJE students to develop entrepreneurship initiative (fostering an entrepreneurial spirit). Various entrepreneurs emerge through facilities: Science and Technology for Entrepreneurship (IbK), State Polytechnic Business Park Jember (TAMU POLTEK), Student Business Competition (KBMI) and Technology-Based Beginner Companies (PPBT) and independent entrepreneurs. Entrepreneurship in POLIJE runs well because it is supported by institutions, commitment of managers, teaching staff and supported by sufficient facilities to initiate entrepreneurial learning

2. Target And Outcome

2.1 Target

The target of the IbK Program at Jember 2018 State Polytechnic, is shown in the table below:

No.	Outcome	Indicator
1.	Scientific publications in national journals / proceedings	draft
2.	Publications on media (print / electronic)	(Jawa Pos, Radar Jember)
3.	Publications in international journals (third year)	none
4.	The number of new independent entrepreneurs based on science and technology per year	5
5.	The percentage of tenants becomes independent new entrepreneurs	25%
6.	Forms of services or products of New Business Entrepreneurs (WUB) who have the advantages of science and technology (Art Work / Social Engineering, Services, Systems, Products / Goods).	product
7.	Intellectual Property Rights (patents, simple patents, copyrights, trademarks, industrial product designs, plant variety protection, <u>copyright</u> protection)	Draft
8.	Text Book	Draft

2.2 Outcome

The outcome of the IbK Program at Jember 2018 State Polytechnic, is shown in the table below:

1. Scientific articles published in national/international journals/proceedings.
2. Products in the form of: food and flavoring.

3. Implementation Method

3.1 IbK Tenant Participant Recruitment

Based on the above targets and outcomes, the important step is to recruit the tenant who will participate in IbK activity. Tenant participants are students who are conducting entrepreneurial activities, such as PKMK, PMW, and students who are doing new (WUB) and independent business.

3.1.1 Tenant Candidate Registration

- a. Jember State Polytechnic students who are still active.
- b. semester II students with minimum of a GPA of 2.5 and preferably has participated in the student creativity program (research, entrepreneurship, technology, copyright).
- c. For Jember State Polytechnic alumni who already have a business but do not have the legality of their business or who want to increase their business. Have a Business Plan (Business Plan).

3.1.2 Tenant Candidate Selection

Through several stages, namely:

- a. Phase I, Administration selection, check the required documents and the results are announced announcements in their respective departments and study programs. For those who pass in stage I, take part II selection. Phase II, Interview, to find out the ability or insight of entrepreneurship in general, to know the performance, communication and personality of prospective tenants. Tenant candidates who have the highest score (written test scores + test interview scores) are listed for 20 tenant candidates.
- b. Announcement of selection results is respective departments.

3.1.3 Signing the Tenant Contract

Signing the contract with the IbK Head program with a stamp of 6,000.

3.2 Approaching Methods to be Applied

3.2.1 Entrepreneurship Training

Entrepreneurship training includes: canvas model business training (BMC), marketing and e-commerce, business management, and motivation. Entrepreneurship training aims to equip tenant with business skills

such as business planning and strategy, the ability to see business opportunities and applications. The number of entrepreneurial training participants is 20 tenants.

3.2.2 Internship in Partner industry

Industrial apprenticeship activities are needed to provide tenant practical experience by participating directly in the industry. This activity will be carried out for 1 (one) month with several internship partners, including: CV. Arjuna Flora Batu Malang, Swadaya Agriculture and Rural Training Center (P4S) "BINTANG TANI SEJAHTERA", CV. *Bagas Jaya* - Tour and Travel, Mushroom House, *Lombok Kulon* Tourism Village, Mie Mien, PT. Kutai Timber Indonesia. Besides working daily in the industry, tenants are required to be involved in managing the industry (organization, production, finance and marketing), communicating with employees and industrial relations.

3.2.3 Guidance Pattern

Guidance patterns are carried out for tenants in developing new products or new innovations, business financing techniques, patterns of technology assistance, and problem solving methods to business realization. By communicating a lot and interacting between tenants and mentors, it is hoped that there will be a synergic relationship between the two. If there are problems with the tenant, a solution can be found immediately.

3.2.4 Tenant Supervision

Supervision of tenants is done by monitoring and evaluating activities carried out by tenants during the IbK program starting from training activities to the end of IbK activities. Monitoring is carried out when tenants take part in the activities of each stage starting from training activities, internships, preparation of business plans, workshops and business realization. At the end of each tenant activity, they are asked to make a self-reflection report to find out how much influence each IbK activity has on their business development. The results of the activities are expected to meet the goals and run as expected.

3.2.5 Tenant business financing techniques

Tenant business financing is carried out independently, in addition to the IbK program implementation team in collaboration with the Business and Management Consulting Services Institute to facilitate tenants to access bank/non-bank financing for tenants who need their business investment funds, through the following stages:

- a. Study tenant business plans.
- b. Determine the amount of eligible business loans to be proposed.
- c. Study various types and sources of funding from financial institutions (Banking and Non-Banking).
- d. Prepare the requirements. Accompanying tenants to propose funding to financial institutions.

3.2.6 Patterns of technology assistance

- a. Identify the appropriate technology through field observations by resourceful persons/experts.
- b. Review the value of benefits achieved due to the application of technology.
- c. Designing, training and applying technology in tenant's business premises.
- d. Conduct guidance and supervision on the implementation of technology use.

Encourage the use of information technology and online marketing training.

3.2.7 Problem solving method

- a. Analyzing entrepreneurial issues about (marketing, capital, human resources and technology) through a series of field observations.
- b. Determining the resource/employer in accordance with the issues, establishing and evaluating with tenant.
- c. Organize regular meetings, resourceful persons with tenants to determine the schedule and place for problem solving.

4. Higher Education Feasibility

4.1 Qualification of the Executing Team

The implementation team consists of 3 teaching staffs who have long been in the field of entrepreneurship on and off campus. The three often work together in entrepreneurship activities at the Jember State Polytechnic. So it is very appropriate as the implementation team of the Jember Polytechnic IbK program. The synergy of the IbK team was created and took place in scheduled activities such as the Polije Business Park which is a routine activity of the Polije Business and Entrepreneurship Incubator Center.

a. *Ir. Triono Bambang Irawan, MP*

Currently as Chairman of the Entrepreneurship Unit and Chair of the Business and Entrepreneurship Incubation Center at Jember State Polytechnic based on Director Decree Number 12390/PL17/KP/SK/2015 and Number 11096/PL17/KP/SK/2014. Involved with community empowerment activities, especially those related to appropriate technology in agriculture, both through funding from DP2M Dikti (Vucer program, Science and Technology, MKU, KBPK, UJI), Institutional Directorate (Institutional Capacity Enhancement), Kemenristek (Incentive Program). At the POLIJE campus concerned, they are lecturers of the KWU and Advanced KWU courses and implementers of the POLIJE PMW Program. With vast experience in the field of entrepreneurship, it is very appropriate to lead the IbK program at the Jember State Polytechnic.

b. *Hariyono Rakhmad, S.Pd, M.Kom*

Having experience in the field of online marketing, an independent business in the region and attended a workshop on establishing Entrepreneurship Business Clinics in West Sumatra, he is is very feasible to foster student entrepreneurship especially in business and technology consulting. In addition to teaching entrepreneurship courses, he is actively participating in the DP2M Dikti program (Vucer program, Science and Technology, and MKU), and online business people, currently serves as the coordinator of Business and Technology Consultation at the POLIJE Business and Entrepreneurship Incubator Center.

c. *Dwi Rahmawati, SP, MP*

She is the teaching staff who teach entrepreneurship courses in Seed Production Technology (TPB) and PS. Horticultural Crop Production Technology (TPH). Active in community empowerment through the 2015-2016 Technology Business Incubation program (KemenristekDikti). Thus, she is appropriate to be assigned in POLIJE Business and Entrepreneurship Incubator Center.

4.2 Team Organizational Structure and positions in Higher Education

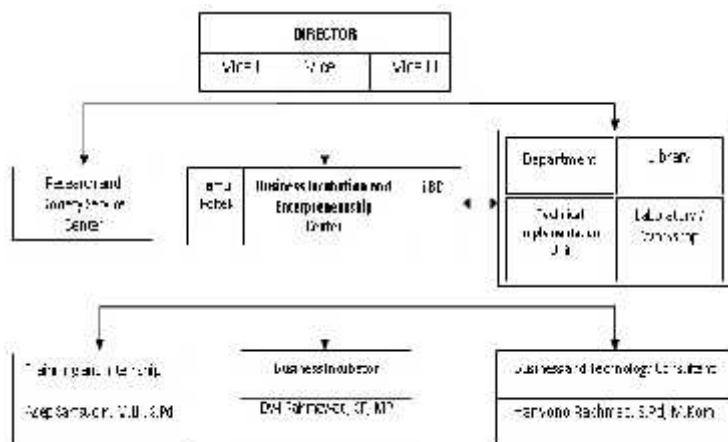


Figure 1. Organizational Structure of the Jember State Polytechnic Program

5. Results And External Objectives

5.1 Recruitment Pattern of 2018 IBK

Announcement of Tenant Candidates in the IbK Polije Program is done through:

- Delivering Tenant Registration Letter to the Chairperson of the Department, Chair of the Study Program in the Polije environment.
- Billboard for IbK Program (3 x 5 m) in Jember State Polytechnic campus (in front of the Soetrisno Wijaya Hall Building).

Banner in front of the Business and Entrepreneurship Incubator Center, Floor. 1 Postgraduate Building Polije.

Tenant Candidate Selection

- Fill out the Tenant Registration Form
 - Announcement of Tenant Candidates participating in the IbK program selection
- a. Tenant Candidate Selection through 2 stages:
 - Stage 1. Administration of Tenant Candidate Requirements.
 - Stage 2. Writing Test and Interview with Tenant Candidates

5.2 Preparation and Implementation of Entrepreneurship Apprenticeship Jember 2018 Polytechnic IbK Entrepreneurship Program Implementation

5.2.1 Agriculture and Independent Village Training Center (P4S) "BINTANG TANI SEJAHTERA"



Figure 2. Entrepreneurship Program Implementation

5.2.2 CV. Arjuna Flora Batu Malang



Figure 3. Entrepreneurship Program Implementation

5.2.3 CV. Bagas Jaya – Tour dan Travel



Figure 4. *Entrepreneurship Program Implementation*

5.3 *Entrepreneurship Workshop*

5.3.1 *The Way of Proposal Writing and Business Plan*



Figure 5. *Entrepreneurship Workshop*

5.3.2 *Start Up : Building a Beginner Tecnology Based for Company Business*



Figure 6. *Entrepreneurship Workshop*

5.4 *Tenant Business Guidance*

a. *Tenant Business Consultation*

Business consultations for tenants are conducted not only for tenants who take part in the 2018 IbK Polije Program, but also tenants (students) who are interested in going into the business world and the ones who have already run one.

b. *Guidance for Writing Entrepreneurship Proposals*

5.5 Registration Draft for the 2018 Ibk Polytechnic Program and Tenant Patent Registration



Figure 7. Design Product

5.6 Text Book

The draft of the Textbook in the form of Modules has been prepared, with the title: Entrepreneurship, Start Up: Building Business Prospects. (Entrepreneurship, Start Up : “*Membangun Prospek Bisnis*”)

5.7 Draft of National Journal Publication/proceedings

Scientific publication draft in National Journal/Proceedings

6. Conclusions And Recommendations

6.1 Conclusion

The implementation of the Ibk Program at the Jember State Polytechnic has resulted in several outcomes including:

- The realization of 5 new independent science and technology-based entrepreneurs
- forms of business for new entrepreneurial products (WUB)
- WUB brand patent draft.
- Draft of Entrepreneurship textbook
- Draft of National Journal Publication
- Proceedings

6.2 Recommendation

Jember State Polytechnic students are very enthusiastic in participating various activities organized by the Ibk Program at the Jember State Polytechnic, hence it is necessary to have an IBK Program at the Jember State Polytechnic for the following year.

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