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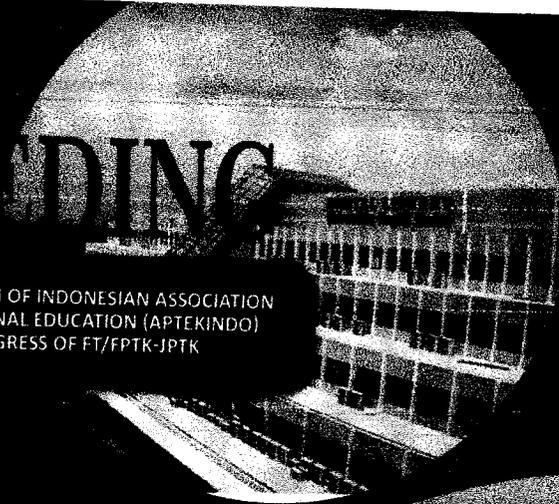
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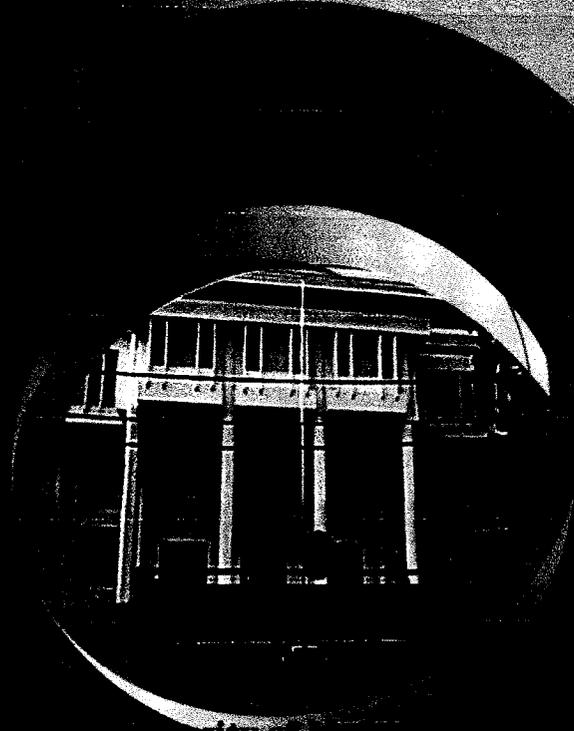




NDING

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OF TECHNOLOGICAL AND VOCATIONAL EDUCATION (APTEKINDO)
AND 19TH INDONESIAN CONGRESS OF FT/FPTK-JPTK

August, 3-6 2016
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3-6 August 2016

Auditorium State University of Medan, Medan, North Sumatera, Indonesia

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**FACULTY OF ENGINEERING
STATE UNIVERSITY OF MEDAN
NORTH SUMATERA, INDONESIA**

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Preface

We feel thankful to Allah for the blessing so that the book of proceeding of National Seminar completely compiled in relating to the 8th National Convention of Indonesian Association of Technological and Vocational Education (APTEKINDO) and 19th Indonesian Congress of FT/FPTK-JPTK 3 - 6 August 2016 in State University of Medan.

The main objectives of the seminar is to improve the capability in vocational technology in theme: **The role of educational technology and vocational in Asean Economic Community (AEC)** which is adopted from the researches in order to upgrade the graduates to be International standard so that the output of LPTK-PTK be able to compete in AEC. Therefore, the National seminar, convention and workshop of Indonesian LPTK-PTK may emerge the thoughts how to strength the role of LPTK to improve the quality of the vocational teachers in Indonesia.

Hopefully this proceeding book will be useful to develop technology, art, and culture. This book also can be as a reference to intensify the National development.

The committee would express our gratitude to all participants and stakeholders in supporting the National seminar, convention and workshop of Indonesian LPTK-PTK

Medan, 6 August 2016
Chairman,

Prof. Dr. Abdul Hamid K, M.Pd.
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EI-03-015

**GROWING UP THE ENTREPRENEURIAL POTENTIAL LIFE OF THE STUDENTS
THROUGH INTERNSHIP IN BUSINESS CENTER IN SMALL INDUSTRIES OF PUDAK,
GRESIK - EAST JAVA**

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ABSTRACT : Number of scholars in Indonesia from year to year showed a sharp increase. However, very few of them are able to create jobs, both for themselves, even more so for others. Entrepreneurial spirit may not be cultivated only through teaching alone, but must be accompanied by self-training and coaching in real working setting intensively through internship. The purpose of internship program are: 1) To equip the experience and practical skills to students participating in the internship which includes the skills to apply science and technology, as well as adopting existing skills in IKM so that after graduation can grow and develop into a reliable and independent entrepreneurs, 2) Assisting the acceleration of the realization of prospective undergraduate student who has entrepreneurial life and aware of issues around the neighborhood. Implementation of the internship program received very good response from the industry partners and students who participating in this program. Industry partners feel the enormous benefits that the problems can be resolved by the internship program. The problems are: there is no variation of the taste of Puduk, the durability of Puduk that cannot be lasting longer (only 2 days), the label and packaging of Puduk that does not exist/less attractive.

Key word : entrepreneurship, internship program, small industry, puduk.

I. INTRODUCTION

Number of Indonesian scholars from year to year showed a sharp increase. However, only very few of them who able to create jobs, both for themselves and even more for others. The willingness and the ability in becoming entrepreneur are very limited. In fact, they prefer waiting for a rollicking then jump into the arena of race, and competing in a small number of job vacations. Basically, they have good potential to develop themselves, because they understood the art of science and technology studied at college. On the one side, it's caused by the lack of their financial capital and opportunity and the other side, the entrepreneurial spirit has not appeared yet.

Entrepreneurial spirit may not be cultivated only through teaching alone, but it must be accompanied by self-training and coaching in the real working intensively through internship programs. The financial capital and the entrepreneurship opportunities will be easier to obtain if it has practical experience applying science, technology and art learned before. Therefore, the college students as an undergraduate candidate should be equipped with some practical skills such as; skills to apply science and technology, and the arts and membership marketing management as well as the adoption of innovation-technology. So, after their graduation they would not only become as a scholar



who just able to act as a human investment, but also they can grow and develop themselves into candidates of independent entrepreneurs.

The implementation of this program will be carried out in an active role in order to help small industrial group located in Sentra Small Industries "Pudak" in Kebomas village, Gresik regency, East Java to develop its existence. Pudak Gresik is one of food made of a mixture of rice flour / corn starch, sugar, eggs, and milk with a specific composition made it homogeneous. Then, the mixture is filled into packaging made of stems of the tree nut (upih). And it is one of tasty food there but, there are problems should be solved. It will expire in 2-3 days. The large size of Pudak made it looks unattractive. These obstacles need solution. In fact, Pudak is one of maintainable traditional food of Gresik, and the developing of it is possible to be done. One thing should be remembered is that the traditional food culture of the nation is one of our assets should be preserved from the extinct / lost.

That the implementation of the internship program runs successfully and achieve maximum results, the students participating in this program will be selected and prioritized for those who have high motivation to join the program and be an entrepreneur. While the lecturers who become committee of the program is carefully selected based on the problems faced by small industrial partners. So, the management program team selected as committee, are coming from the professors who have high relevance and expertise to the fields needed to address the problems faced by the group. Besides that, the priority of this mandate is given for the supervisors who have been proven to have high motivation and commitment concern to the development of the entrepreneurial world.

II. METHOD

Internship programs were performed with the following steps:

1. Enrolment

As the first step of Internship program, the researcher announced the enrolment of Internship program at the Family Prosperity Education major or Food Science major, Chemistry major, and Art and Craft major in two weeks. These three majors are relevant to the subject matter needed to overcome the problems faced by Small Industry Partner—*pudak* cannot stay longer, its taste is too sweet, there is no innovation in term of taste, and the size, shape of the package is not interesting. The selection of the applicants was done the following week.

2. Selection

The selection was conducted by an executor team which consisted of two tests; interview and written. In doing the selection, the executor team looked for applicants who had a high motivation and interest to carry out Internship program, had enough basic knowledge about entrepreneurship, were fifth semester students, and were ready to join Internship program actively for a predetermined time. From 35 applicants there were 15 applicants finally chosen to participate in Internship program. Those were 5 students of Food Science major, 5 students of Chemistry major, and 5 students of KKR major.

3. A survey to Small Industry Partner



The survey was done by Internship program participants who were selected to be more intelligent than the other participants. Those participants were accompanied by a lecturer who acted as a supervisor (DPL). The survey was aimed to obtain accurate data about; the economic conditions of the society in the industrial environment, industry characteristics, and all problems faced by each industry. The data were delivered to all Internship participants then, as the basis information in arranging Internship program.

4. Training

Training for Internship participants were done in a week. The aims of this training were: 1) to evoke entrepreneurial potency, 2) to integrate Internship participants' perception related to attitudes and characteristics of (IKM), and the strategy needed to improve (IKM), and 3) to spur the growth of (IKM) by transferring abilities and entrepreneurial skills. The training materials included knowledge about entrepreneurship, information related to (IKM), problems faced by (IKM), and strategies to improve (IKM). The training materials were delivered by the executor team.

5. Program Arranging

After having training, the participants of Internship must arrange programs implemented at (IKM) and determine a strategy to improve the (IKM). They must determine what kind of program would be implemented, who would perform the programs, which (IKM) they would cooperate with, what materials needed in these programs, and how and when the programs would be carried out. They arranged the programs by using the data taken from the third step. The data had been processed by using SWOT (*Strength, Weakness, Opportunity, and Threats*) analysis before.

6. Implementation of internship at (IKM)

The participants then carried out Internship for 3 weeks alternately. Each group consisted of 5 participants and stayed at (IKM) for a week. With the hope that Internship programs would be successful, before performing the programs the participants must; 1) adapt to the environment, 2) make introduction with village government officials and local residents, 3) legitimize Internship program to the head of the village or village officials. Any change of the program was tolerated as long as it was appropriate to the purpose of Internship. Moreover, if there was a problem hadn't been identified by the participants during the survey, the participants could make a new program in order to solve the problem. Of course, it must be adjusted to the participants' abilities, fund, equipment, and time.

The supervisor monitored Internship programs every week and gave briefing to the participants. The supervisor helped and gave suggestions for the problems faced by the participants.

7. Withdrawal

Having reached the predetermined time limit, and gained what became the targets of Internship program, the participants were withdrawn from (IKM). They then conducted an evaluation, prepared a business plan, and created a final report of the programs.

III. RESULT AND DISCUSSION

1. Evaluation and Discussion of the Benefits and the Achievement of the Objectives



The evaluation of Internship program was conducted by several people: industry supervisor, the executor supervisor (the lecturer) and the supervisor of the college (LPM UNESA). The assessment of lecturer was carried out from the training program, internships, Internship report and completion of the other tasks. Based on the observation, the Internship participants were enthusiastic during the training program. Evaluation of the internship was done by giving the participants some questions related to their programs, and asked them to practice some program such as the way to diversify the taste of *pudak*, how to use of food additives, and how to design the package of *pudak*. The explanations delivered by the participants show that they have been able to solve the problems faced by (IKM) before Internship program is done.

The evaluation of Internship program conducted by supervisor of college (LPM UNESA) was done by supervising at the location of Internship program. The supervisor observed the program of internship participants in handling the problems in (IKM). Based on the observation, it can be concluded that the implementation of Internship program is good. The participants of Internship learned many things while the industry officials were willing to give guidance to the participants

1. Benefits of Internship Program from Industry point of view

a. Economical Potency of the Product/Commodity

By conducting these internship programs, the researcher holds a hope that the problems faced by (IKM) – such as *spudak* cannot last long; *pudak* taste is too sweet; the size, shape and packaging of *pudak* are less attractive – can be overcome. The other benefits are that (IKM) can come into existence, production capacity and quality of product can be improved, and scope of product marketing can be broader. It means that the products of (IKM) can be used as commercial commodities in the market which have high competitiveness. Furthermore, by selling the products into the market, (IKM) preserves and develops traditional foods while gain a big profit.

b. Additional Value of the Products from Science and Technology Point of View

The additional values of the products that can be gained after conducting internship programs are:

- 1) The products have better quality, diverse tastes, and durable. In addition, the package becomes more attractive and leads the products into high competitiveness. These special qualities make the products easily to be published.
- 2) Losses as a result of material damage caused by lack of preservation of the product can be minimized by using food additives (BTM) in safe levels.
- 3) Internship programs give much knowledge to (IKM) officials in order to improve the quality of human resources in (IKM).

8. Social Impacts

With the improvements done by the internship participants such as creating durable products, increasing the quality of the products (taste, texture, aroma), up grading the size, shape and design of the products, and doing diversification on the taste of *pudak*, it is believed that (IKM) is able to gain many benefits. Some of the benefits are knowledge about how to make the products more durable, to



increase the quality of the products (taste, texture, aroma), to improve the size, shape and design of the products and to diversify the tastes of the products. Thus, the (IKM) can develop well. Moreover, the officials of (IKM) can deliver the knowledge to the other industry officials in their society, so that the benefits can be boarder.

2. Benefits of internship programs from the internship Participants' Point of View

After joining internship programs, the participants can hold these advantages:

- a) Internship participants can gain experience and practical capabilities including the skills to apply knowledge they have learned, skills of production and marketing, and skills to adopt innovation and technology.
- b) Internship participants can get additional knowledge about entrepreneurship.
- c) Internship HIP programs are able to encourage the participants' entrepreneurial interest, attitude, and motivation (entrepreneurial spirits)

3. Additional Value for

internship programs, the lecturers can broaden their experience in implementing the science and technology. They also have opportunities to improve their course material.

4. Additional Value for the College

Implementing internship programs can strengthen the cooperation between the college and the (IKM). It also can improve the relevance and proportionality between them.

IV. CONCLUSION AND RECOMMENDATION

A. CONCLUSION

1. In general, internship programs have been done well and appropriate to the pre-determined plans, objectives, and targets. There is no significant obstacle occurs in the implementation of internship programs.
2. internship programs can build participants' (students) skills. It also encourages entrepreneurial spirit of the students showed by their program in creating business plan especially related to food business.
3. internship programs get a good response from the officials of (IKM). Thus they welcome the college for the next programs.

B. RECOMMENDATION

The openness of (IKM) toward the college should be utilized wisely in order to undertake internship for the next students or the other forms of useful cooperation.



DAFTAR PUSTAKA

- Anonymous. 2001. *Pola Pemagangandan Rencana Pengembangannya*. Depnaker. Jakarta
- Astawan, M. 1995. *Santan Awet dalam Kemasan*. Femina. No. 30/XXXIII. Agustus. Hal: 74-76. PT. Gaya favirit Pres. Jakarta.
- Bennion, M. 1980. *The science of Food*. John Wiley and sons. New York.
- Buckle, KA, Edwards, RA, *Food Science*. Terjemah oleh Hari Purnomo dan Adiono. 1985. *Ilmu Pangan*. UI Press. Jakarta
- Hagenmier and Robert D. 1980. *Coconut, Aqueous Processing*. Sancarlos Publishing. Philipne.
- Hubeis, M. 1984 dalam Taufiq, M. 1997. *Usaha Perbaikan Teknologi Pembuatan Puduk*. Fakultas Pertanian Univ. Widyagama. Malang.
- Meridith, G. 1996. *Kewirausahaan Teori dan Praktek*. Pustaka Binaman Presindo. Jakarta
- Mabesa, RC and R.R. Rosaria. 1997. *Microbiological Quality Control of coconut Milk Processing II Microbial Contaminant*. Dept. Of Food Science Technology. Los Banos
- Nurussaidah. 1998. *Pembuatan Puduk : kajian Penambahan Kalium Alginat, Penambahan Gum Arab dan substitusi Tepung Ketan (Waxy Rice) selama Penyimpanan*. Teknologi Pertanian. Universitas Brawijaya. Malang.
- Palungkung, R. 1993. *Aneka Produk Olahan Kelapa*. Penerbit swadaya. Jakarta
- Purnama, S. 1991. *Pengaruh Bahan Pemutih terhadap Kenampakan Keripik Singkong*. Balai penelitian dan Pengembangan Industri. Surabaya
- Taufiq, M. 1997. *Usaha Perbaikan Teknologi Pembuatan Puduk*. Fakultas Pertanian Univ. Widya gama. Malang
- Tim Penyusun. 2005. *Buku Panduan Praktik Industri/Praktik Kerja Lapangan*. Unesa University Press. Surabaya
- Wahono, T. 1997. *Studi Penentuan deskriptor Mutu sensoris Kue Puduk*. Buletin habitat. Teknologi Pertanian Universitas Brawijaya. Malang Vol. VIII. No. 1000. Jal ; 420-423