

## **Establishing Collaboration with Overseas Educational Institution and Industry**

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**Abstrak-** *Collaboration with overseas university is one key to achieve the expectation as an international campus. This expectation can be achieved through some things that can be done programmatically with commitment to do it continuously. In addition to collaboration with overseas university, many of collaboration with industry are also a measure of the quality of a college. Benchmark readiness for graduate work can be seen from the quality of work carried in labor supply, one of them is the industry. In the future, industries will demand high quality graduates and have a standard of competence in accordance with the required expertise. Therefore, in addition to collaboration with overseas university, there are the two forms of collaboration with industry that can realize the vision and mission of Unnes as an international conservation campus.*

**Keywords-** *collaboration with overseas university, collaboration with industry, vision, mission, Unnes.*

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### **I. INTRODUCTION**

The growing rapidly development of Semarang State University which is guided by the vision and mission is a maturing process and strengthening identity of Unnes as an education university. This development is seen from the number of interested students and the creation of a campus environment that is very supportive of quality learning. Objective conditions indicate that current university Unnes inevitably, like it or not will continue to follow the changes and trying to innovate through creative ideas to be in front of the face of all the changes itself. Unnes demands to become an international conservation campus is a challenge that must be realized through the commitment and dedication of all Unnes society in providing all the potential. It is also a determination to be able to be better and do more for Indonesian people through three pillars program, they are; 1) Conservation, 2) International, 3) Healthy, and Prosperous Outstanding. This program must be implemented in the areas of academic, student affairs, development cooperation and management of ICT. Thus, in the development of Unnes, we need to work hard to achieve independence university, one of the way is through partnerships and mutually beneficial cooperation. Development of cooperation in Unnes is a necessity. This cooperation aims to open and expand the network to achieve the Unnes as an international conservation campus. These networks include collaboration with overseas university and also with non-educational institutions such as industry.

### **II. COLLABORATION WITH OVERSEAS UNIVERSITY**

In fulfilling the need of international collaboration, Unnes created international office or department which has a responsibility in the field of collaboration or cooperation and international affairs. It aims to achieve the vision of Unnes as an international conservation university in strengthening three pillars of Unnes. The main responsibility of International Office is planning and doing the activity/ relationship with overseas institution in academic or non-academic field. The forms of the collaboration are; the role of Unnes academic civitas in International, such as conference, research, and study abroad; establishment of international network in student and lecture exchange with overseas university; maximize the Unnes international networks, and encourage the number of overseas student to study in Unnes, in the form of periodic student and lecture exchange program, for example with AUNP ( *ASEAN-EU University Network Programme*), AUN (*ASEAN University Network*), Erasmus-Mundus, etc.; prepare the service in welcoming international guest; and promote the scientific observation result of the lecturer through international journal.

To succeed the purpose of international partnership, the lecturers should have a good ability in a overseas language. Activities to support the achievement of this goal include guest lectures are held from overseas universities, international seminar, attend trainings internationally, and international discussions.

### **III. COLLABORATION WITH INDUSRTY**

Accordingly, education process has to be conducted in a limited time, as directed by government regulation. In Indonesian universities for example, the duration of undergraduate study is usually 4 years, consisting of 144-160 semester credit units, commonly close to 144. Also, the longer duration will certainly decrease the interest of new high school graduates to choose that university. This situation will result in the

decrease of the quality of the entering students. Usually, there are 4 groups of courses taught in education process, which are:

1. Basic Sciences,
2. Application Sciences,
3. Design Applications,
4. Humanities and Social Sciences.

The structure of the curriculum is commonly as shown in figure 1. Basic Sciences are usually taken at the beginning of study, followed by Application Sciences, and then Design Applications are taken at the end of study. Meanwhile, Humanities and Social Sciences are taken along the duration of study. The structure provides too little time for the student to practice in a real condition, since they usually do that in Design Application Courses. The problems discussed in Basic Sciences and Application Sciences are usually too scientific, and in the form of unique solution problems, not of open ended problems. Since the nature of design applications problems is open ended, the students do not have enough exercises to cope with real condition problems.

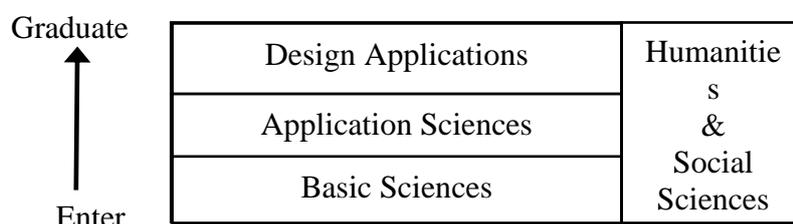


Figure 1. Common Structure of Academic Process

Furthermore, the lack of real condition available at university as well as the lack of stake holder exposure of students and teachers tends to limit the practices of problem solving skill in education process. Due to the time limitation of education process, the target of the development of quality academic needs to be wisely set. It should be feasible to be conducted and provide sufficient level of competency so that it can be naturally enhanced during professional career. Therefore, the writer is fully agreed to the structure of curriculum shown in figure 2. In that structure, design application skill development has been started at the beginning of the undergraduate study. It is not necessary that the design courses be offered at the early years, but it should be embedded in the teaching and learning of basic science and application courses. The teachers should be wisely choose and formulate design application practices that can be embedded in their courses. The practices need to be encouraging, generating interest and feasible to be done by the students. In other words, the teachers are expected to bring real condition problems into class. But the problems must be selected and formulated in such a way that suitable to the expected student’s competency level. Hence the teachers should continuously enhance their knowledge on real condition problems, such as by industrial exposure.

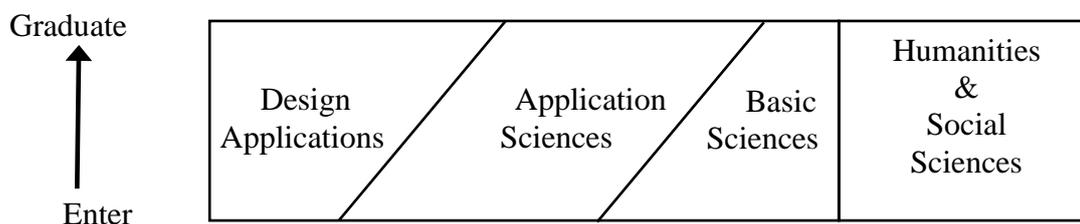


Figure 3. Suggested Structure of Chemical Engineering Curriculum

Industrial exposure is also very important for students as well as teachers. But due to the limited time of education and opportunity, the implementation is also very limited. The important thing is that it should be conducted as much as possible. Since the main foundation of graduation skill is analysis and synthesis, the education is suggested to be more shifted to deep learning, instead of surface learning. In education process, conceptual and contextual aspects should be synergized. The skill of integrating concepts learned during the study can be developed via real condition problems. It is suggested that teachers create real condition problems,

which the solutions needs integration of concepts. Again, the teachers should wisely formulate feasible level of difficulty.

#### **IV. CLOSING**

That was that I could deliever, and the speakers can give input and also share for the implementation of cooperation programs related to overseas universities and industry. Simultaneously there are some small notes on the importance of building a partnership with the industry, which is to develop the concepts of real classroom learning in real field conditions.

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