

# Attitudes of Civil Engineering Students Program Study of Building Technique Education to the ASEAN Economic Community

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**Abstract**—This study aims to express the attitude of students of Civil Engineering Program of Building Engineering Education Studies toward AEC. This research was conducted at Civil Engineering Department of State University of Padang with quantitative descriptive research type. Sampling technique used Total sampling. The research procedure was carried out by distributing questionnaires to 84 active students of Civil Engineering Department of Building Engineering Education Study Program. The results showed that the attitude of Civil Engineering students of Building Engineering Education Program to AEC was 77.6% or included in either category. The highest score of this research is on sub threat indicator, which means the average student feels the concern in facing AEC. But behind these concerns, students want to improve the quality of self to easily face the AEC.

**Keywords**—AEC; threats; students; attitudes; challenges; opportunities

## I. INTRODUCTION

The development of global economic system makes all countries in the world trying to improve the ability and competitiveness in all fields. This condition is responded by Southeast Asia or Association of Southeast Asian Nations (ASEAN). ASEAN has officially implemented a new economic system by the end of 2015 to address the global economic challenges of the ASEAN Economic Community (AEC). AEC is ASEAN economic integration in the face of free market among ASEAN countries. AEC is a free market covering goods, services, investment, and skilled labor that freely moves between countries within the ASEAN region. The AEC is expected to create a competitive area of the economy and be able to interact fully with the global economy. Together with AEC employment opportunities will be wide open, this condition will be an opportunity as well as a challenge for the people of Indonesia. One for an educated and skilled Indonesian workforce will have the opportunity to work in Indonesia as well as in ASEAN countries such as Malaysia, Singapore and other ASEAN countries. On the other hand, the AEC poses a threat to Indonesia, as Indonesia is not yet ready to face the AEC. According to Yermia revealed, "In general,

Indonesia is not ready to face the AEC, only the tourism sector that has been clean and ready to face the AEC" [1].

Indonesia's unpreparedness in facing the AEC is also indicated by the low educated working population in Indonesia. Central Bureau of Statistics (BPS) noted that Indonesia's working population is still dominated by elementary school graduates down by 45.19%, while the population working undergraduate education is only 8.29%. Efforts to be made so that people working with a Bachelor's degree and above can compete in their own country or in another country's country is to improve the quality of their resources / competence. Education in colleges has an important role in creating competent graduates, because learners in colleges are trained on the basis of their respective areas of expertise. Especially with this AEC, college must work harder than before [2].

Padang State University (UNP) as one of the universities located in Padang West Sumatra Indonesia always try to do the best in creating the competent graduates. One of them is Department of Civil Engineering Faculty of Engineering (FT) in UNP. Civil Engineering FT UNP has 2 Study Programs (Prodi), namely Prodi D3 Civil & Building Engineering (TSB) and Prodi S1 Building Engineering Education (PTB). Prodi TSB is a leading study program to produce professionals in Civil Engineering, while PTB Prodi is a master program in producing teachers/ instructors in Building Engineering and/ or Civil Engineering. Professionals generated from TSB Prodi certainly are expected to complete in the AEC, as well as PTB Prodi in producing teachers/professional instructors. Teacher/professional instructors will help educate and give birth to prospective professionals. For example, teachers in Vocational High School (SMK), a vocational teacher should have extensive knowledge in educating students so that later SMK graduates can become professionals in their field. This becomes a challenge and threat for them, especially the students of PTB study program, besides trying to become an educated person who master their field must also be a teacher/ instructors who are professional in giving birth to highly educated workers.

But what happened in the field is not in accordance with the expectations, based on the results of interviews with students of

Civil Engineering Program PTB FT UNP who participated in the National Seminar on "The role of engineering students facing AEC" held by the Civil Engineering Student Association UNP on December 1, 2015. Where in National Seminar activities are still there who do not know about the AEC well, until there is a show less prepared. While some students who already know about the AEC, there are reacting with anxious, because they feel not yet able to compete.

This situation shows the diversity in facing the AEC by Civil Engineering students FT UNP especially PTB Prodi. Diversity The attitude is reasonable but also a concern, because the attitude in responding to something will produce positive and negative things. In Saifuddin Berkowitz says, one's attitude towards an object is a feeling of Favorable (Good) as well as feeling unfavorable (not good) on the object [3]. Lapierre in Saifuddin defines attitude as an anticipatory pattern of behavior, tendency or readiness, predisposition to adapt in social situations, or simply, attitude is a response to conditioned social stimulation [3].

Attitude is an important component in the human psyche, influencing decisions to be taken and influencing one's behavior. For example, attitudes will affect who a chosen life partner, favorite outfit, and hobbies will be occupied. In Olson, if you could control your attitude, then you would be able to control your action. In short the attitude affects human life everyday [4]. If connected between AEC situations that must be accepted with the attitude of students, especially students of Civil Engineering Prodi PTB projected as a prospective educator, hence attitude less matter/ impartial is an unexpected matter of concern.

Based on theory, attitude is closely related to the level of knowledge. This is explained Mann in Saifuddin, that attitude consists of three structures namely; knowledge, feelings, and behavior [3]. When this theory is associated with AEC, it can be interpreted that the level of knowledge about AEC will affect the attitude of facing the AEC. So in order to influence attitudes towards the AEC, it is necessary to increase knowledge of the AEC to the community, such as providing information from the government or related institutions. On the other hand, universities also do the same to the students. Do not let the lack of knowledge about the AEC become one of the causes of the attitude that will cause harm to the Nation and the State. such as the low quality of educated workers and Indonesian educators, thus losing to the educated and educated people of other ASEAN countries. Anticipatory steps for educated workers and educators Indonesia is not inferior to foreign workers in the face of the AEC is to find out/reveal their knowledge of AEC and how attitudes of educated personnel and Indonesian educators face AEC. because attitudes are the most important component, it can be interpreted that the attitude here is like a projector projecting a situation of acceptance or rejection of the AEC. The situation will affect the success or failure in dealing with it. Efforts to uncover the attitude of educated personnel and Indonesian educators on AEC are with doing research on their attitudes toward the AEC itself.

Research on attitudes toward the AEC could be done to prospective educated and prospective educators. Particularly

the attitude of prospective educators (students Prodi Kependidikan) is the thing that must be disclosed at this time, because the attitude of students Prodi Kependidikan will be a benchmark to make early improvements so that Indonesian educators can compete in the AEC. In relation to the problem then the topic of research is about "The Attitudes of Civil Engineering Students Prodi PTB FT UNP Against AEC Year 2016".

#### A. Attitude

Attitudes will always be related to all human activities, individually or in the social sphere. In Saifuddin, Secord defines attitude as a certain regularity in terms of feelings, thoughts, and predisposes one's actions to an aspect in the surrounding environment [3]. While Mar'at in Umar says attitude is the result of learning gained through experience and interaction with the environment constantly [5]. From the above opinion, it can be interpreted that attitude is a person's readiness to react to an object in a certain way. Attitude can be AECsured directly or indirectly. In Dewi, attitudes can be AECsured in three ways, namely interviews, observation, and questionnaires [6].

#### B. The ASEAN Economic Community

AEC is ASEAN's economic integration in the face of free market among ASEAN countries. In the Asean Economic attitudes can be AECsured in three ways, namely interviews, observation, and questionnaires Community Blueprint, the AEC is a sole market of goods, services, investment and skilled labor that freely moves from one country to another within the ASEAN region [6]. AEC also prioritizes the establishment of equitable economic, economic equity, and preparing ASEAN to be able to be incorporated into the global economy. In The ASEAN Economic Community Blueprint there are four characteristics of AEC, namely [6]; 1) The AEC is the realization of the ultimate goal of economic integration, based on the interests of the Member States of ASEA, 2) the AEC as a single market and production base; 3) At the same time, the AEC will address the development gap, 4) as follows: (a) single markets and production bases, (b) highly competitive economic regions, (c) fair economic development areas, and (d) integrated regions into the global economy. These characteristics are interrelated and mutually reinforcing. Based on some of the above characteristics, the main characteristics as a single market and production center are the parts that should be the main center of Indonesia, because in the single market element there is focus on goods, services, capital, investment and skilled manpower, besides the other three elements are still implemented. Therefore, the researcher will focus on the part of the free market, especially the skilled labor (educated staff and educators) in accordance with what will be studied.

## II. RESEARCH METHOD

This research is a quantitative descriptive research conducted in Civil Engineering Department of FT UNP. The population of this research is the students of Civil Engineering Program of PTB incoming year 2013 who are enrolled in Civil Engineering Department of FT UNP in the semester of January

to June of 2016 as many as 84 people who have been following the information about AEC, the National Seminar with the theme of AEC which was appointed by the Association Student of Civil Engineering on December 1, 2015. The sample in this study was taken using the technique Total sampling, the number of samples is the number of population. The research was conducted by distributing questionnaires to the samples, scoring on the questionnaire using Likert scale. From the study of the theory then formulated the grating of the instrument based on the translation of the attitude structure that is; knowledge, feelings.

#### A. The Test of the Instrument

The test of the instrument was performed on the students who were included in the sample, which were 30 respondents. The test of the instrument was performed with Statistical Product and Survive Solution (SPSS) application for windows version 17.0.

1) *Test validity*: Instrument validity test is done through Statistical Product and Survive Solution (SPSS) application version 17.0. A valid instrument is performed by comparing values rcount with rtable, with a significant level 5%. The statement will be valid if the value is obtained rcount > rtable.

After the instrument test found some invalid instrument it is necessary to make improvements for the perfection of the instrument. However, due to population limitations, the researcher validates by asking expert opinion (expert judgment).

2) *Expert judgment*: After correcting some invalid instruments in the first trial, then the instrument is consulted to the experts. In accordance with the change of validation method of this instrument, the researcher immediately conduct research after testing of the experts completed.

3) *Test reliability*: Instrument reliability testing is done through Statistical Product and Survive Solution (SPSS) application version 17.0. Instruments are said to be reliable if each statement item has an alpha value greater than 0.36.

### III. RESULTS AND DISCUSSION

#### A. Results

After the questionnaire was distributed, the frequency distribution of student respondents was obtained based on sub indicators, as in the following table 1.

TABLE I. THE FREQUENCY DISTRIBUTION OF STUDENT RESPONDENTS

No	Sub Indicator	Mean %	Category
1	Knowledge of AEC	76,6%	good
2	Threats in AEC	82,3%	Very good
3	Opportunities in AEC	76,6%	good
4	Challenges in the AEC	77,6%	good
5	Behavior against AEC	75,1%	good

From the above frequency distribution table 1, the students' attitudes about the knowledge sub-indicator toward AEC are as big as 76.6% or including either category. Students' attitudes toward sub threat indicators in AEC are as large 82,3or including either category. Students' attitudes toward sub threat indicators in AEC are as large 76,6%. For sub-indicators of challenges in AEC, student attitudes are as big as 77,6% or categorized well. Likewise, the behavior toward AEC is as big 75,1% or can be categorized well.

#### B. Discussion

1) *Knowledge of AEC*: From the result of research, got the average of student knowledge toward AEC is 76,6% or categorized well. This explains that most of Civil Engineering students Prodi PTB force 2013 already know the existence of AEC.

2) *Understanding of threats In AEC*: From the result of the research, it can be seen the understanding of Civil Engineering students of PTB on the threat in AEC 82,3% or categorized very well. This shows that more than average students have understood the existence of threats of AEC. These results indicate almost the majority of students choose the highest score or choose the answer to avoid threats in the AEC. On the other hand, if the higher score is chosen by the respondent, then this would indicate that the greater the students' concerns against the threat of AEC. The concern is that the items on the instrument contain clear statements, such as the efforts that must be taken to avoid the threat of AEC. If reson dents choose more solutions to avoid threats, it is clear there is a concern about the threat posed.

3) *Understanding Against Opportunities In AEC*: From the result of the research, it can be seen that the students' understanding for the opportunity sub indicators in AEC is 76,6% or categorized well. This shows that more than average Civil Engineering students of PTB Study Program have understood the opportunity behind the presence of AEC as ASEAN economic integration.

4) *Understanding of challenges in AEC*: From the result of the research, it can be seen that students' understanding of the challenge in AEC is 77,6% or good. Students already understand the challenges that must be faced behind the presence of AEC.

5) *Behavior against AEC*: From the result of research, the result of the average of student choice for sub indicator of behavior toward AEC is 75,1% or including either category. From this research found there have been efforts from students to behave anticipatively towards AEC. Based on the data, researchers found there were some students who have not behaved anticipatively against AEC, but researchers see the desire of students to improve behavior in the future such as the desire to follow a foreign language course to the desire to train softskill. This is the attitude of the students after the students are informed about the AEC through the formal National Seminar on AEC on December 1, 2015.

From the discussion of sub indicators above, got the attitude of students of Civil Engineering Prodi PTB for each

sub indicator is not much different. Although there are some students who have not really understood, but in general their understanding of the AEC is good. The average result of the 5 sub indicators above is 77,6%, which AECns the attitude of students towards the AEC is good.

Specifically, the results of this study indicate that sub threat indicators in the AEC have the highest score compared to other sub indicators 82,3%. This indicates the level of student concern about the threat of AEC. So in an effort to answer these concerns, students are eager to require themselves to improve the quality of self by mastering certain things, such as the average student desiring to master the international language. The need for students to master the international language is their attempt to address the threats in the AEC.

The same is true of more than the average student wishing to have a skill in a particular field, requiring self-qualified softskill and hardskill, and attempting to expand relationships, to seek high education. All the wishes of the student is certainly an effort to protect themselves from the threat of AEC.

The results of this study are similar to the results of research ever conducted by Jose about students' perceptions of AEC enforcement, where students who already know about AEC have started preparing to face it [7]. However, the results of this study differ slightly from the results of research conducted by Yermia on the readiness of Indonesia to face AEC, where the results reveal that in general Indonesia is not ready to face the AEC [1].

#### IV. CONCLUSION

Based on the results of the study, it can be concluded that the attitude of Civil Engineering students Prodi PTB FT UNP to the AEC including good category, it is described as follows:

- The knowledge of the students of Civil Engineering Program of PTB toward AEC is good, that is the percentage obtained by 76,6%. This shows that students already know about AEC.
- Understanding of Civil Engineering students of PTB Program against threat in AEC is very good, that is the

percentage obtained by 82.3%. This shows that students feel the fear of threat in the AEC.

- Understanding of Civil Engineering students of PTB to the opportunities in AEC is good, that is the percentage obtained 76.6%. These results indicate that students understand the existence of opportunities in the AEC.
- Understanding of Civil Engineering students of PTB to challenge in AEC is good, that is 77.6% percentage earned. This shows that students understand the challenges in the AEC.
- Anticipatory Behavior of Civil Engineering students of PTB Study Program against AEC is good, that is average result obtained 75.1%. This indicates that the student has tried to behave anticipatively in the AEC.

The high percentage of responses in the threat sub-indicators in the AEC show that most of the students are concerned about the threats of the AEC, so that students try to improve the quality of self in order to be easy to face the AEC such as requiring them to master the international languages, have expertise in certain fields, have a qualified softskill and hardskill, and multiply the relation.

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