Analysis of the Implementation of the Indonesian National Qualifications Framework Oriented Curriculum in the Mathematics Education Program of Universitas Negeri Medan

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Abstract

This study aims to describe: 1) the implementation of the curriculum oriented to the Indonesian National Qualifications Framework (KKNI), 2) student responses to the six tasks required in the KKNI curriculum, 3) the quality of student performance and achievement with the implementation of the KKNI curriculum. This research is a descriptive qualitative research which aims to describe the implementation of the curriculum oriented to the Indonesian National Qualifications Framework (KKNI). Subjek in this study were undergraduate students-1 in the first semester, three, and five mathematics education of UNIMED. The subjects who were subjected to in-depth interviews were randomly selected six students. Data obtained from the distribution of questionnaires and observations of the lecture process and in-depth interviews. The object of this research is the implementation of the KKNI curriculum, student responses, performance, and achievement oriented to the Indonesian National Qualifications Framework (KKNI). Based on data analysis, it is found that: 1) The implementation of the Indonesian National Qualifications Framework (KKNI) has not been carried out optimally or well in the mathematics education lecture process, 2) Students have a positive response to the application of the Indonesian National Qualifications Framework (KKNI), 3) Performance Quality is quite good in the application of the Indonesian National Qualifications Framework (KKNI), 4) Students' learning achievement is quite low in the application of the Indonesian National Qualifications Framework (KKNI).

I. Introduction

Demands increase towards adequate human resources requires the College Heigh should be prepared of all the good aspects of aspects of the facilities and infrastructure, aspects of stakeholder   education and especially the learning aspect. Good learning is arranged in a systematic learning design. The learning design can not be separated from the curriculum as a guide in the preparation process (Monalisa, Fatahillah, Murtikusuma, 2017: 41).

Curriculum have that effect in Indonesia today is is the curriculum of Indonesian national qualifications framework. In the KKNI document (2015) it is stated that " The Indonesian National Qualifications Framework (KKNI) is a form of embodiment of the quality and identity of the Indonesian nation related to the national education system, the national job training system and the national equality assessment system , which is owned by Indonesia to produce human resources from the learning achievements possessed by every

Indonesian worker in creating quality work and contributions in their respective fields of work ". However, a number of data are also presented in the findings of Maksum (2016) " Based on PD-Dikti data on March 26, 2015, the number of universities in Indonesia is 4,268, consisting of 365 PTNs and 3,903 PTS, with a total study program of 21,864, meanwhile the number of students by 7, 4 million, consisting of 2.8 million in state and 4.6 million in the PTS. The number of lecturers with Doctoral degrees is 22,430 (12%) and those who have professor academic positions are 4,948 (3%) of the total 184,551 lecturers. Compare this with the number of universities in America, namely 4,599 with 21 million students. In terms of quantity, it is possible that what we have is more than enough. However, in terms of quality, it still leaves a serious problem.

In an effort to qualify higher education graduates in Indonesia, the Government has issued Presidential Decree No. 8 of 2012 concerning the Indonesian National Qualifications Framework (KKNI) which is the reference in the preparation of the learning outcomes of graduates from each level of education nationally.

The basic principle developed in the IQF is to assess a person's performance in scientific aspects , expertise and skills according to learning outcomes obtained through the process of education, training or experience that has been surpassed, which is equivalent to qualification descriptors for a certain level .

Based on the Presidential Decree no. 8 of 2012 and Permendikbud RI no. 73 of 2013 which requires universities including the mathematics education program of UNIMED to redesign with the reason for the logic of globalization, and also so that the quality is the same as foreign universities, the curriculum must use a national qualification framework which in Indonesia is called the Indonesian National Qualifications Framework (Rakhmadi, 2016: 4). The KKNI-based learning process is expected to be a solution in order to develop the learning process in Indonesia towards a better direction (Thamrin, 2017: 1).

It was found that the scores for the six assignments were smaller than the scores for the middle semester and the end-semester examinations. While the process of completing the six tasks contained in the KKNI assignments takes quite a long time, namely one semester or around 16 weeks, it can even exceed the promised time so that it has an impact on the students' lack of seriousness when completing the six tasks contained in the KKNI, resulting in not maximal results of KKNI assignments, also impacting on decreased achievement.

Students experience problems when working on six assignments in certain subjects, because some lecturers provide different assignment formats. As a result, students will carry out these assignments only based on their own thoughts and opinions, especially mathematics courses whose overall concepts are abstract so that students find it difficult to formulate and complete them in the six assignments format contained in the Indonesian National Qualifications Framework (KKNI).

II. Review of Literatures

2.1 Definition of Mathematics

According Jhonson and Myklebus (Rahman, 2009: 252) mathematics is the language of symbols to express the practical function relationships of quantitative and spatial whereas theoretical function is to facilitate thinking. Mathematics is a product of human intellectual thinking. Intellectual thinking can be driven from mere thinking problems or from problems related to everyday real life. Mathematics is thus referred to as the real life of everyday people.

One of the mathematical skills that students must possess and achieve is problem solving. Problem solving is very close to mathematical characteristics. Problem solving (problem solving) is a process carried out to reach logical conclusions based on knowledge relating to facts and various relevant sources (Pohan, 2020).

2.2 Basic Curriculum Concepts

According to Good (1959) (Hidayat, 2011: 8) the curriculum is a general plan regarding the content or certain material of instruction that schools must meet qualifications or certification and can continue to be professional or vocational midwives .

2.3 Implementation of the Indonesian National Qualifications Framework (KKNI)

According to the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 73 of 2013, what is meant by KKNI in the field of Higher Education is "a qualification ranking framework that can juxtapose, equalize, and integrate learning outcomes from non-formal education, informal education, and / or work experience into types and higher education level ".

2.4 Student Response

Response or perception or response is the meanings of vision results including responses about the overall environment in which the individual is and is raised, and conditions are stimuli and perceptions. After receiving the stimulus, then there is a selection related to interpretation, and then a permanent memory response is formed called mental-epsesentation. (Sardiman, 2007: 74).

2.5 Performance

Lawer and Porter (1976) define performance as a successful achievement that a person gets from his job, while a person's performance level is a measure of how successful a person is in doing his job.

2.6 Learning Achievement

Student learning achievement is student results achieved after going through some of the learning process of acquisition of knowledge of students by subjects who typically indicated by test scores or grades given number of lecturers. According to Sitorus (2020) The success of a teacher implementing a learning strategy is very dependent on the teacher's ability to analyze the existing learning conditions, such as learning objectives, student characteristics, learning resource constraints, and characteristics of the field of study.

III. Research Methods

This research was conducted at FMIPA UNIMED. The research subjects involved three classes and lecturers in the three undergraduate mathematics education courses (S1) . The criteria for taking subjects who were subjected to interviews in this study using purposive sampling technique (Salim and Syahrum, 2016: 142). The object of this research is the analysis of the implementation of the curriculum oriented to the Indonesian National Qualifications Framework (KKNI) which is obtained from the results of observations, questionnaires, interviews, and documentation.

This study includes a descriptive study using a qualitative approach (Raco, 2010: 67) is a study which aims to provide a snapshot of a problem, symptoms, facts, events, and reality is

broad and deep in broad and deep in order to obtain a new understanding, and the type of descriptive research (Gulo, 2010: 19). Data analysis using Miles and Huberman model, namely: 1) Reduction of Data, 2) Presentation of Data, and 3) Conclusion.

IV. Discussion

Implementation of the curriculum oriented to the Indonesian National Qualifications Framework (KKNI) has not been carried out optimally because there are some professors who do not give six tasks in KKNI, so that has been prepared in RPS and SAP have not not entirely implemented, also found that the concept of the assignment of different KKNI cause understanding of the concept curriculum is not clear KKNI.

Student **responses** to the six tasks contained in the KKNI curriculum in the mathematics education program are divided into three indicators. *First,* with scores questionnaire conclude 76% of students are quite happy complete six assignments contained in the curriculum KKNI. *Second,* with a questionnaire score of 74 %, it was concluded that students were serious enough when completing the six tasks contained in the KKNI curriculum. *Third,* scores questionnaire 77 % concluded that all six tasks contained in the curriculum KKNI provide considerable benefit both, especially those in developing a writing scientific papers and thesis preparation in the next days. Overall it is concluded that students give a fairly good response in completing the six tasks contained in the KKNI curriculum in the mathematics education program with a score of 76.6%.

The quality of performance on the six tasks contained in the KKNI curriculum in the mathematics education program is divided into four indicators. *First,* with a score of 82 %, it can be concluded that the quality of student work is good in completing the six tasks contained in the KKNI curriculum . *Second,* with a score of 80 %, it is concluded that students have a good number of work results when completing the six tasks in KKNI curriculum. *Third,* with a score of 75%, it was concluded that students had sufficient time to complete the six KKNI curriculum tasks. *Fourth,* with a score of 84%, it can be concluded that student cooperation between peers, both individuals and groups of students, gets good results. And overall that the student's performance was good in completing the six tasks contained in the KKNI curriculum in the mathematics education program with a score of 82%. This is evidenced by one of the following student works:

Figure 1. *Student Work for Project Assignments*

The picture above is one of the group assignments from student project assignments that will be exhibited at the campus annual final event. This shows that the quality of student work in completing the six KKNI assignments is quite good from the seriousness of students in realizing the concept of functions and relations into a real work and can be used for practical and direct learning. The learning achievement of students is quite low due to the workload a lot with short turnaround time and also the format of the six different KKNI tasks causes more students to focus on finishing all six tasks IN KKNI than mastering course materials.

V. Conclusion

5.1 Conclusion
1. The implementation of the Indonesian National Qualifications Framework (KKNI) has not been carried out optimally in the process of mathematics education program
2. Students have a positive response to the application of the Indonesian National Qualifications Framework (KKNI)
3. The quality of student performance is quite good in applying the Indonesian National Qualifications Framework (KKNI).
4. Students' learning achievement is quite low in the application of the Indonesian National Qualifications Framework (KKNI).

5.2 Suggestion
1. For a more maximal and better implementation of the KKNI curriculum, it is necessary to discuss the concept of assignments or assignment guidelines for the six tasks contained in the KKNI in one group of subjects and in certain subjects in order to forward the draft assignment KKNI specifically readily understood by students and professors.
2. In implementing KKNI curriculum expected that professors presses and encourage students to produce a work of real and certainly would me m provide the benefits of the practice of fieldwork in each student.

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