ACEIVE 2017

PROCEEDING

Faculty of Engineering
State University of Medan - Indonesia

The 1st Annual Conference on Engineering, ICT and Vocation

Emprowering ACEIVE in 21st Century Learning Environment

Grand Mercure Medan Angkasa
November 26th 2017

The 1st Annual Conference on Engineering, ICT and Vocational Education

"Empowering ACEIVE in 21st Century Learning Environment"

The 1st Annual Conference on Engineering, ICT and Vocational Education (ACEIVE) is a scientific forum for scholars to disseminate their research and share ideas. This conference taking place at the Universitas Negeri Medan on 25 November 2017, with theme *Empowering ACEIVE in 21st century learning environment.*

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Hindrance factors of Students Thesis Completion on Electrical Engineering Education At FT Unimed

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Abstract : The main purpose of this study was to find the factors that hampered the progress of completion of student thesis. The research method used descriptive approach. The factors to be analyzed are: (1) quality of service (covering the quality of administrative services and the quality of thesis supervision services); (2) support of research subjects; (3) student ability on scientific article writing; (4) peer environmental support; and (5) searchability and availability of resources. The factors analyzed as a whole are expected to assist students in completion of the thesis, so that the length of the study can be shortened. The results showed that the factors that are still a barrier to the completion of student thesis include: (1) the existence of weaknesses in the field of administrative services, (2) low quality of guidance service to students, (3) lack of support of research methodology, (4) low ability of students in writing scientific articles, and (5) low ability of students in tracing relevant sources.

Keyword : The hindrance factors, student thesis completion

Introduction

One of the main suggestions of learning activities at universities is to produce qualified and timely graduates. To achieve the intended target of college must have good organization and good governance. Universitas Negeri Medan (UNIMED) is one of the higher education institutions that strives to realize the goals of national education, as embodied in its vision of "Being a leading university in education, industrial engineering and culture". According to Ibnu and Yoga (2013), the indicators of achievement of vision in the first strategy include improvement of graduation grade index, decreasing length of study, and increasing the speed of getting a job. However, in the implementation, the achievement of UNIMED vision on the decreasing aspect of the study period is still experiencing problems. This is because there are still many UNIMED students who have difficulty in completing the final thesis task. Quite a lot found the learning difficulties experienced by students in the learning process as in the completion of the final thesis task so that the results of learning in this case the target has not been achieved optimal pass. It can not be denied that in the course of learning is certainly influenced by many factors. Irham and Novan (2014: 264) which states that factors that can cause learning difficulties in students can be grouped into internal factors and external factors. Internal factors that can cause learning difficulties for students include; intellectual ability, feelings and confidence, motivation, maturity to learn, age, gender, learning habits, recall ability, and sensory skills such as seeing, listening, smell and feeling. While External factors, which can cause learning difficulties for students can be teachers, learning quality, instruments and learning facilities (hardware and software), as well as social and natural environment. This is in line with the description of Ngalim Purwanto (2007: 106 - 107) which revealed that the factors that affect the process and learning outcomes are (1) external factors, including: a. The environment is natural and social. b. Instumental is curriculum / lesson material, teacher/ teacher, facilities and facilities and administration / management; (2) Factors in, including: a. Physiology is the physical condition and condition of the five senses. b. Psychology is talent, interest, intelligence, motivation, and cognitive ability. Factually, one of the problems faced in the management of Electrical Engineering Education Study Study Program is the study time of students that reaches an average of 5.2 years. If traced, it turns out that the main cause of the length of student study occurs due to the length of completion of the final task in the form of thesis and peraktek industrial work. Based on this condition it is considered very necessary to identify the factors that inhibit the completion of student thesis. The main purpose of this study is to find recommendations that can be followed up in order to assist students in completion of the

thesis, so that the length of the study can be shortened. Thesis is a scientific work compiled by the students of each study program based on the research results of a problem done thoroughly with the guidance of supervisors. According to Dalman (2014: 200) thesis is a scientific work that presents the facts and review a more detailed and in-depth topic which is a requirement to complete the undergraduate program (undergraduate / S1). Thesis is a compulsory course for UNIMED students who take the S1 degree and is one of the graduation requirements of students. Writing a thesis that can be submitted as one of the requirements to obtain a degree of undergraduate must meet several criteria, among others: (1) It is the original work of scientific research which follows the correct procedure (high quality); (2) Demonstrate the capability and independence of the student concerned in the discovery, application and / or development of theory in his field; (3) Has a high value for the development of the theory or practice of implementation of education in a particular field. Another aspect that affects the thesis process is the procedure of thesis work. Thesis work procedure is a series of activities / steps that involve several people / institutions and must be passed in order to complete the final thesis (Ibnu and Yoga, 2013). Procedures in thesis final work can be grouped in three parts. These sections are the submission of title, process of work, and thesis examination. Each section has requirements, length of time required to complete, and number of people / institutions involved. The fewer requirements, the length of time required, and the people / institutions involved will be better as long as the goal of final thesis work can still be achieved. As in the case of filing a thesis title, if there are rules that are quite detailed and rigit like spefisikasi and the title that could be a barrier for students in completing the final task of the script because of the limitations of students and their desire in determining what things will be examined.

Research and Methodology

This research uses descriptive approach. The object of research involves the student's thesis control team at the department level (consisting of the Chief of the Department, the Secretary of the Department, the verification team, and the administrative personnel); supervisor; as well as Electrical Engineering Education students. Data was collected by questionnaires, interviews and documentation. The data to be encompassed includes all aspects related to inhibiting factors, either from internal sources or from external students. The indicators used to track student barriers are searched from: (1) administrative services, (2) mentoring services, (3) research execution process, (4) support of learning resources, (5) support of research courses, and (5) self-imposed barriers. Data analysis technique used is descriptive analysis method.

Result and Discussion

Data obtained from instruments related to the quality of administrative services show that in general the average value obtained 2.39 with the less good category. Based on the results of identification data obtained from the respondents, it can be seen that there are 43% of respondents who responded with good category, and there are 57% which belonged to less good category. Search results on the administrative service aspects are grouped into two parts: services related to services provided by the parties concerned, and services related to the service devices provided to the students. The results of the search for related party services indicate that of the five indicators evaluated, four of them are among the less favorable categories (Figure 1). Based on the data it can be seen that tangibles aspect shows an average of 2.40 which only fall into bad category, it means that service display aspect such as physical facility, equipment, or device used, and service and tidiness standard in administration service still lack well according to student.The condition of this administrative service is factually still many weaknesses, because the administrative service activities associated with the writing of the thesis is still manual, so the error of the correspondence form and other administrative needs are still often found kekeluruan. The result of observation on this administrative activity, indeed shows that the format of correspondence done by students is still done manually starting from the submission, observation permit, to the administration of the completeness of the seminar and the thesis examination as a whole is done manually. This condition is certainly not support the smooth activities of students, so this aspect includes aspects that hinder the completion of student thesis.

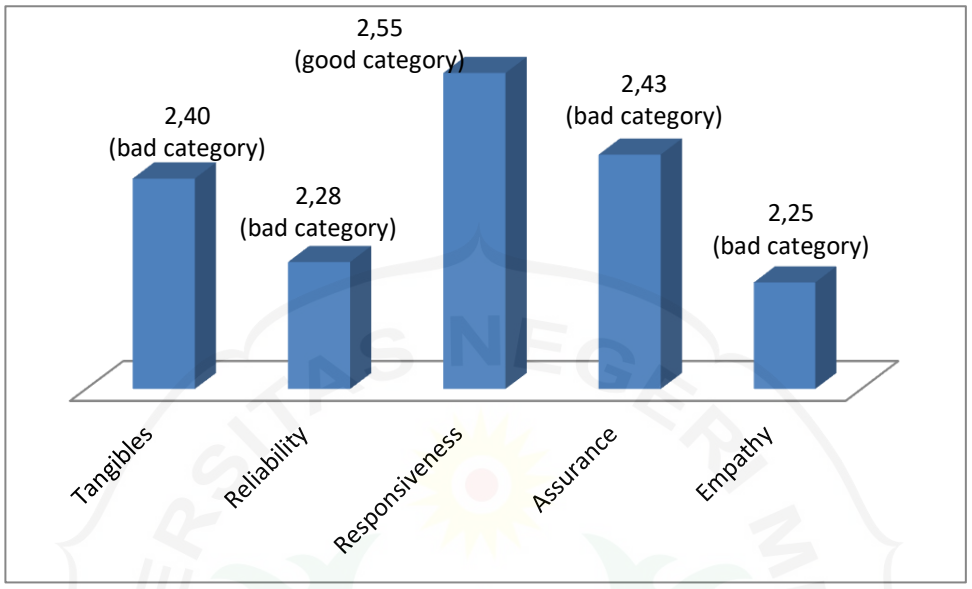

Figure 1. Aspects of Quality of Administration Services

The reliability aspect also shows an unfavorable response (2.28), which indicates that the reliability of administrative services provided is also low. This aspect is an aspect assessed by the student towards the knowledge of the servant, the ability of the servant, the method employed by the servant, and the standard of service used. This result proves that there is still a need for coaching and upgrading of servants, as well as the existence of agreed service standards. Furthermore, responsiveness aspect seems to have entered the good category (2.55), but of course still need improvement. These results indicate that service repons have started well, in the sense that the services provided to the students have already begun to be felt by students of the efforts of the servants to help or help sincerely. The assurance aspect also shows an unfavorable response (2.43), which indicates that the knowledge of servants, courtesy in service, and the maturity of servants to provide confidence or guarantee of service to students is still low. This result also proves that there is still a need for coaching and upgrading of servants, through training of good service delivery standards. Furthermore, emphaty aspect also shows a poor response (2,25), which indicates that the level of concern of the waiter to the student is still considered low by the students. This proves that the ability of servants to understand the needs of services that must be given to students, the ability to listen to complaints or difficulties faced by students, as well as the ability to care about the needs of students is still low. This result also proves that there is still a need for coaching and upgrading of servants, through training of good service delivery standards. Data obtained from instruments related to guidance service quality indicate that the average score of 3.21 with good category. Based on the results of the identification of data obtained from the respondents, it can be seen that there are 46% of respondents who responded with very good category, and 54% which only belong to good category. The results of the search on the assessment of the implementation process of thesis guidance by the lecturer shows that most of the students have given a good response, and assume that the guidance process conducted by the lecturers has been very helpful to the students in the completion of the thesis. From the search results to students also proved that the progress of thesis writing is strongly influenced by the guidance process provided by the lecturer. This happens because students feel that their provisions and skills in writing thesis is very lacking, so the guidance by the lecturers is very helpful to them in understanding what to do. Based on the results of the students' assessment of the guidance process conducted by the lecturers showed that of the 24 items / items of questions given, there are only two items that get the less good response that is the question of questions related to the profession of the lecturer with the students, and the time provided by the lecturer in doing guidance. The results of research shows that there are still students who consider that there are still lecturers who are less familiar with the students in the sense that the lecturers only focus and even very focused on the problem of student thesis, while the students hope in addition to guidance that focuses on student research, social problems faced by students, including the limitations experienced. The results of research shows that the quality of thesis guidance service in electrical engineering education is good enough at this time, so

the guidance process for students is considered quite conducive and not be a barrier in solving the student's thesis. One of the inhibiting aspects found is the availability of time provided by the supervisor to the students has not been comparable with the needs of the students. This happens because students take longer time to guidance to lecturers due to the limited ability of students in the writing of scientific papers. Thesis guidance service is a level or good level of bad process of giving assistance thesis aids by lecturers to the students to avoid the difficulty in the completion of final thesis. Guidance Quality Indicators The thesis used includes: (1) the supervisor performs his duties in accordance with his / her education, experience and abilities, (2) the quantity and continuity of guidance performed, (3) the appropriate guidance program, (4) the current situation and condition guidance, (5) guidance methods and techniques, and (6) tools and guidance equipment. The results of data analysis gives an illustration that the quality of guidance services given to the students give a good influence on the progress of completion of student thesis, so the better the quality of thesis tutoring services, the better the achievement of final student thesis completion and vice versa the lower the quality of guidance services thesis, the lower the achievement of final student thesis completion. This means that the data obtained shows that the quality of thesis supervision services has a positive contribution to the progress of completion of student thesis. The results of this study are in accordance with the opinion expressed by Muhammad Irham and Novan Ardy Wiyani (2014: 364) which states that factors that can cause learning difficulties in students include teachers, learning quality, instruments, and learning facilities. In Final Task Settlement Thesis fourth thing is reflected in the quality of thesis guidance. The results of this study are also reinforced by research conducted by Febrianto Kusnendar, Suwachid, and Danar Susilo Wijayanto (2013) which shows that thesis guidance has an influence on completion of thesis final project. The results of this study also provides information that it turns out the quality of a good thesis guidance service is needed by students to progress the completion of the thesis can run well and on time. Based on the results of the research, it is known that the tendency of the quality of thesis guidance services in Electrical Engineering Education shows that in the category of Very good 46% and in good category as much as 54%. To finish the thesis, the students do not only need the quality of thesis guidance service in good category, but must have excellent quality of thesis guidance service so that the achievement of the progress of the completion of the thesis can run well. The quality of thesis guidance services are good of course have the quantity of thesis guidance adequate, quality, and continuity of supervisor by good lecturer. When students encounter problems in completing their final assignment, the students will certainly need explanations, directions, suggestions, and solutions from supervisor to solve the problem. Problem solving is difficult to do without help from others. Therefore, lecturers have an important role to assist students in solving thesis problems faced. Another aspect that is considered weak by the students of the thesis mentoring process is the provision of guidance time by the lecturers who are still limited. The search results indicate that this is because students are very limited in their writing, so it takes a long time to consult / supervise lecturers, while in the lecturers' position it also takes time to fulfill other tasks. This condition is also exacerbated by the presence of lecturers who must guide more students. Peers or peers is one of the external factors that can affect the progress of completion of student thesis. Peers in general have a function as a means to give and receive information, learn how to be good human beings in accordance with the image and ideals of society such as diversity and attitude of the group, teach social mobility, teach new social roles for students, and learn to obey the rules and social rules. Peers in the process of writing thesis are also very fond, because friends are a group that can help, inspire, motivate, and share (where memeberi and receive information) associated with research conducted by students.Data obtained from instruments related to peer support show that the average score of 3.13 is good. Based on the results of the identification of data obtained from the respondents, it appears that there are 32% of respondents who responded with very good category, and there are 68% which belong to good category. The results of the search on the role of colleagues in the process of completion of the student's thesis shows that the majority of students respond well, and assume that the role of peers in the process of completion of the thesis has been very helpful. From the search results to the students also proved that the progress of writing thesis is influenced by the support and assistance of colleagues, especially friends who are working on thesis at the same time. This happens because students can exchange information either from the aspect of writing, or from other aspects that tekait process of writing and completion of the thesis. Based on the results of the students' assessment of peer support in the completion of the thesis shows that of the 21 items/items of questions given, there are only two items that get the less good response that is the

questions related to the criterion of student thesis completion, and the aid of information resources in the form of books and articles from peers. Students' search results illustrate that there are still students who rely too heavily on their peers, so that progress is dependent on their peers, and even less trust in their own ability. Another aspect that is less support is the weakness of students in finding information sources, so generally less able to share information in the form of articles and textbooks. Furthermore, based on the results of research related to peer support, it is found that the better the support of colleagues of college students, the better the achievement progress of the completion of the thesis and vice versa the lower the support of colleagues, the lower the progress of completion of thesis completion. The results of this study are in accordance with the opinions expressed by Muhammad Irham and Novan Ardy Wiyani (2014: 364) which states that the factors that can cause learning difficulties in students include the social and natural environment. Examples included in the social environment are peers. The results of this study are also reinforced by research conducted by Febrianto Kusnendar, Suwachid, and Danar Susilo Wijayanto (2013) which shows that one of the factors that affect the completion of the study of undergraduate students is a social friend. The results of this study also provides information that support peers support is needed by students to progress the completion of the thesis can run optimally, well, and on time. Based on the results of research, note that the trend. The progress of the thesis can run well and on time requires the support of college students. Data obtained from the instruments related to the support of the courses on the completion of the student thesis showed that the average score of 3.45 with good category. Based on the results of the identification of data obtained from the respondents, it appears that there are only 22% of respondents who responded with good category, and there are 78% are classified as less good category. Based on the data generated gives an illustration that in general students consider research subjects such as research methods, seminars, and courses of statistics quite relevant and support the completion of student thesis. But if it is traced that the students' learning outcomes do not affect the progress of the thesis, in the sense that although the high score obtained by the students in the course of research, does not necessarily solve the student's thesis faster. The results of this search indicate that the support of subject to the completion of student thesis in general there is no obstacle, in the sense that the subjects obtained by students are enough to help students in completing the thesis. One of the obstacles that comes from the student self is related to the intellectual students, including the ability in writing scientific papers related to the completion of student thesis. Data obtained from instruments related to the students' ability in writing scientific papers show that the average value of 2.40 with the less good category. Based on the results of identification of data obtained from the respondents, it appears that there are only 22% of respondents who responded with good category, and there are 78% belonging to the category less good. Based on the data obtained shows that the ability to write students' scientific papers including low, so the aspect of the ability of writing this scientific paper is one aspect that inhibits the progress of completion of student thesis. The search results from the information given by the students showed that most of the students had never written any previous scientific papers, and even wrote theses more to the existing thesis. This makes it difficult for students to develop ideas, so the presence of supervisors become the mainstay in the process of student thesis writing. Data obtained from instruments related to resource availability and search ability indicate that the average score of 2.61 is good. Based on the results of the identification of data obtained from the respondents, it can be seen that there are 68% of respondents who responded with good category, and there are 32% belonging to less good category. Based on the data obtained seen that there are still 32% of respondents who responded that the search ability of student resources is still low. This happens because students are more likely to use the finished thesis as the main information in the completion of the script, so the ability to transmit articles or textbooks as information is very less.

Conclusion

Based on the results of research and discussion can be concluded that: (a) Factors inhibiting the completion of the study of students who are sourced from internal students, among others: the ability to write scientific papers and the ability of searching information sources are lacking. This happens because most students are not focused on understanding the process of writing the script, but the focus is only completion of the study, so as to prioritize the shortcuts to achieve the goal; (b) The factors that hamper the completion of the study of students from external students include: (a) the quality of thesis supervision services, especially related to the limited time of guidance for the students; (b) poor quality of administrative services, whether associated with the service system or related to service resources.

Acknowledgements

Acknowledgments are submitted to Medan State University, which has provided research funding so that this research activity can be done as expected.

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