

Fingerprint management information system to improve quality of lecturing services in teacher training and education faculty of Syiah Kuala University

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Abstract: Management is an important key for every organization. Management has many definitions depending on the person who defined it. This study aims to see fingerprint management information systems related to the improvement of the quality of lecturing services in Teacher Training and Education Faculty of Syiah Kuala University. To achieve the objective of this study, the researchers use a qualitative approach with descriptive methods. Data are collected through documents, observations, and interviews. The subjects of this study were lecturers, heads of education sub-departments, employees and students. The results of this study showed that there are three main factors help improve lecturing quality: first is the lecturer information system; second is criteria of workload lecturers information; and last is the fingerprint information system. These three factors influence the productivity and efficiency of the lecturers' performance.

1. Introduction

Management is very important. In general, management consists of a plan, procedures for implementation, and supervision in organizational resources to achieve goals effectively and efficiently. Management is only a tool to achieve the desired goals. Good management will facilitate the realization of corporate, employee and community goals. Management is a tool to manage the resources owned effectively and efficiently to achieve goals that must be truly understood by the principle [1]. Management is an important key for every organization to achieve effective goals. At present day, in higher education level, universities have grown and developed as an industry and keep changing along with the process of globalization. Therefore the goal is marketed and oriented to students as one of the customers of the institution.

Syiah Kuala University (Unsyiah) is the oldest public university in Aceh which is founded on September 2, 1961. The Unsyiah establishment was confirmed by the Decree of the President of the Republic of Indonesia, Number 161 of 1962, April 24, 1962, in Kopelma Darussalam, Banda Aceh. Unsyiah is located in the capital city of the Province of Aceh with the main campus located in Student City (Kopelma) Darussalam, Banda Aceh. At present, Unsyiah has more than 30,000 students studying at 12 Faculties and



Postgraduate Programs. As one of the higher education institutions, Unsyiah has a function to improve the quality of human resources, both for local, national and global needs. One of the faculties that becomes the focus of this research is the Teacher Training and Education Faculty (FKIP) which is one of the Faculties at Syiah Kuala University. This faculty was founded in 1961.

Teacher Training and Education Faculty of Syiah Kuala University is one of the educational institutions in Aceh Province where lecture scheduling uses online-based information systems. "Information System is a system in an organization that brings daily transaction processing needs, supports operations, provides managerial and strategic activities of an organization and provides certain outside parties based on the need" [2]. Some relevant research in this research is also conducted by several researchers. Men's research results showed that the fingerprint management system that is integrated with the teaching schedule and lecturer status in real-time has assisted in the leadership to obtain lecture attendance information quickly and accurately [3]. The second, Jaman shows that the attendance system is used as the first step in disciplining employees which starts from the discipline of work and return to work and this attendance system avoids attendance manipulation as a measure of employee discipline performance [4]. The third, Gandhi also examines the application of Fingerprint machines which are very easy to use and Fingerprint is very good in disciplining employees and can reduce fraud that often occurs in manual attendance. The fourth, Arifianto showed that the use of the artificial system of fingerprint as a data recording presence trainees and the system has been created to replace the manual attending list. The system can also prevent fraud in attendance trainees and also the system can simplify schedule management and presence trainees and the last. The latter, Ahfas showed that employee performance in SMK Negeri 3 Banda Aceh is quite nice and professional; the indicator of the seven components of the administration of the schools have been implemented by administrative staff. However, in the management of the archives section, some administrative staff tend to work without demands/commands from the principal so that administrative staff work on their own beliefs and do not comply with the proper archival procedures.

Based on the Background of the Problem, the problem formulation in this research is How does the Fingerprint Management Information System improve the Quality of Lecture Services by Lecturers at the Teacher Training and Education Faculty of Syiah Kuala University?

2. Research method

2.1. Research design

The research approach used in this study is qualitative descriptive research. Sukmadinata says that: "Qualitative research is a study aimed at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, thoughts of individuals individually or in groups" [5]. The type of qualitative descriptive research used in this study is intended to obtain information about lecturer lecture management in increasing student satisfaction at the FKIP Syiah Kuala University. Also, a qualitative approach is expected to reveal the situation and problems faced in learning activities at the FKIP Syiah Kuala University.

2.2. Research participants

The participants of this study were lecturers, employees and students of the Faculty of Teacher Training and Education of Syiah Kuala University year of 2018/2019. The lecturers interviewed were chosen randomly, while the selected employees were employees under academic. Specifically, Students who were the main research subjects were those who enrolled in 2017. They came from several study programs at FKIP Unsyiah.

2.3. Research instrument

The data in this study were obtained by using interviews, documentation, and observation to, get accurate and maximum research results so that it can produce valid research data in research writing.

2.4. Research data analysis

According to Gumilang, a qualitative approach is multiple methods in focus, which involves an interpretive and mandatory approach to each subject matter. Analysis of data in qualitative research is done by collecting data obtained from various sources using various data collection techniques and carried out continuously [6]. At the time of the interview, the researchers had analyzed the answers of the interviewees. If the answers of the interviews, after being analyzed, are not satisfactory, the researchers would continue the question again, to a certain extent, to obtain data that is considered credible.

3. Results and discussion

3.1. Lecture information system at FKIP Syiah Kuala University

The results of the study indicate that the Lecture Information System in FKIP Unsyiah is under the education sub-section. The information available in lecture information systems of FKIP has several components of convenience for both lecturers and students who will carry out lecture activities. The information includes: first, lecturers who have performed attendance using a fingerprint machine, in about first (one) minute the name will appear on the TV screen, short message service and also the lecturer email. The TV screen Pavilion also displayed the time, lecturer name, hours, courses, percentage of lectures and space related to the lecturer who did Fingerprint. The log of fingerprint attendance is very useful for the lecturer. But if the electricity goes out or the internet network does not connect, then everything will be in vain because the fingerprint log will not appear on the screen as well as short message service and e-mail are also not received at that time.

Second, teaching per class (study group) recapitulation each lecturer is generated automatically based on the fingerprint results of each lecturer. Staff will print out it at the end of the semester in which the recapitulation will be signed by the Vice Dean. The teaching recapitulation per study program will be used for the needs of the lecturer. Effective teaching per class is very useful for the lecturer. But if the condition of the lecturer recapitulation is not following what is in the field this will be a problem. So in the future, there must be CCTV, so there are lecturers who forget the fingerprint, please see the CCTV. At the same time, the CCTV will synchronize with the absence of students.

Third, the teaching recapitulation for each study program is generated automatically based on the fingerprint results of each lecturer. The study program staff will print out at the end of the semester. The teaching recapitulation per study program will be used to pay lecturer fees. Based on the data that has been attempted by the (Information Service Center) PLI and study program staff through this simulator application, it has produced a teaching recap where the recap function can also be used to pay the semester lecturer fees.

The last, the information on teaching schedule and attendance recapitulation can be seen by each lecturer through the college or mobile website. Then all lecturers are required to be able to see the teaching schedule information and if it will change the teaching schedule can adjust to these changes, this is so that all lecturers set the teaching schedule well and the teaching results are following established procedures.

From the research, it is in line with that expressed by Viana, Information System is a system in an organization that meets the needs of the processing of daily transactions, supports the operation, managerial and strategic activities of an organization and provides certain outside reports that are needed [2]. Being agree with the above system Utami argues that "Information system with procedures is a combination of work, information, people and information technology organized to achieve goals in an organization" [7].

3.2. Lecturer performance criteria in FKIP Syiah Kuala University has been fulfilled following existing SOPs

The lecturer's performance criteria in FKIP Syiah Kuala University has been fulfilled following the existing SOP. The following are data and the information obtained by the researchers about efforts to meet performance criteria according to the SOP. First, lecturers in FKIP Unsyiah have met the attendance $\geq 75\%$ of the total 16 weeks face to face and can make the final exams for the semester. Final exam for a course is not carried out if the lecturer teaches less than 16 weeks of face-to-face. Second, the main task of the lecturer is to implement the Tridharma of Higher Education which has been fulfilled with a workload of at least commensurate with 12 (twelve) credits and a maximum of 16 (sixteen) credits in each semester according to their academic qualifications. Third, the process of combining class groups cannot be met because the lecturer could not teach at the same time on a different class, there will be a team teaching to be able to replace them.

Suprianto says that "An educational service has an important role for educational institutions as service providers to be able to compete in today's global era" [8]. The demands expected from customers are guaranteed in quality both academically and administratively. Quality Assurance Unit (SJMF) FKIP Chairman said that: "The problem now is no more lecturers complain, the problem is only at the beginning of it. This condition usually happens when changing schedules and now students are also involved". So that to deal with changes in the administrative system, the lecturers and students must see the schedule correctly so that the same schedule does not occur with the same lecturer.

According to Julhar "Performance is a work that has been achieved by someone in carrying out the tasks assigned to him based on skills, experience, and sincerity and can complete the work according to the time given" [9]. In other words, performance is the result of work achieved by someone in carrying out every work that has been given to him following predetermined criteria".

3.3. The fingerprint information system can be a reference in improving the service of FKIP at Syiah Kuala University

The results of the study show that the fingerprint Information System can be a reference in improving the service of FKIP Syiah Kuala University following regulated procedures. This part describes the results of this research on the application of information systems fingerprint applied at the FKIP Syiah Kuala University based on the assessment of the Lecturer and the Faculty Guarantee Unit. Lecturer and vocational assessments were achieved from the interviews. Attendance is a very important problem because attendance is proof of the presence of a lecturer in teaching in class. The fingerprint attendance includes filling in the curriculum, filling in the class schedule and Basic Course Outline (BCO), application of absenteeism, supporting facilities, and appropriateness of absence by entering college. Absence is an important thing and refers to honesty, responsibility, discipline, incentives, attitudes, and feeling better in conducting academic activities.

Rinala said that: "The steps that need to be taken by educational institutions to improve services are to optimize their human resource capabilities and improve facilities and infrastructure that support the smooth running of education services" [10]. Filling in the absentee referred to here is the respondent's statement about each lecturer having to fill in the attendance hours for attending college by applying fingerprint attendance. For filling out the absentee, the statements of the informant are based on the applicable academic regulations. The answers from the lecturers showed that it was very agreeable and a small number of people disagreed. Thus, it means that in general the educators in the FKIP Syiah Kuala University environment agree to fill in the absences with fingerprint attendance. Thus, the lecturers felt justice with electronic attendance together. This helps lecturers who work diligently so that their motivation and quality of work are maintained.

Academic services provided by universities are one measurement of the success of higher education institutions in managing educational institutions to provide educational services products". This resulted in educational institutions needing to improve service and academic quality continuously. On the other hand, some lecturers are neutral or disagree with the implementation of *fingerprint* attendance. This could be caused by lecturers who used to rarely attend lectures on time or lack the entry into lectures by the procedure of "combining with other units". With the implementation of this *fingerprint* attendance system, the lecturers can no longer enter and combine classes, so that those concerned must come in time to fill in the absences by putting a finger on the electronic attendance.

The lecturer was asked how the supporting facilities and facilities exist in the implementation of attendance with the fingerprint. The supporting facilities and facilities referred to here are a system for fingerprint support equipment and absent recapitulation. Most respondents stated that the supporting facilities and existing facilities are appropriate with the needs and in fact, FKIP had provided various facilities to support the implementation of the attendance system.

The lecturer stated that the supporting facilities and facilities available were not following the needs. This neutral statement was caused by the lecturers not feeling too much benefit from the existence of supporting facilities and facilities. Sometimes it also happens if the condition is abnormal, for example, the electricity goes out, the internet network is cut off and the bridge screen does not appear.

Regarding the question of how the fingerprint information system can be a reference in improving services, it can be seen that most education personnel state that the application of fingerprint attendance is appropriate in the implementation and needs of work. Conformity between the fingerprint attendance systems that are applied with what is expected is associated with indicators of benefits, convenience, and accuracy.

The educator's answer to the question about the method of attendance with the fingerprint system is good and easy to apply to work, they stated that the implementation of fingerprint attendance was very easy to implement, because the lecturers only put finger on the fingerprint machine. The process does not take a long time. Also, the implementation of attendance does not require a large amount of energy because this attendance system works automatically. Furthermore, the lecturers said that the importance of filling out the attendance was very diverse. Most of the respondents consider filling in the absences on campus is very important. However, on the other hand, some are neutral and some consider filling in absences not so important on campus. This might be due to habits and distance of residence far from the campus.

The researchers found that the fingerprint information system can be a reference in improving service, in its implementation, the fingerprint attendance method is indeed not much different from the previous absence method, namely the manual/write system. The difference is that the fingerprint attendance system cannot be represented by other people. This causes educators to feel this attendance method affects performance. After the fingerprint attendance was applied, the lecturers had to come along to fill in the attendance. Thus, the lecturers must present on time in teaching, so filling out the attendance is quite significant with the improved performance. So the performance of teaching staff is very influential by carrying out fingerprint attendance.

To improve the performance of teaching staff in FKIP Unsyiah is by improving the management of human resources they have. FKIP Unsyiah applies fingerprint attendance so that the lecturers come and teach on time and complete work according to time and change attitudes that like to delegate/attend absences to the assistant so that the lecturers are expected to improve their performance. The accuracy of the application of absenteeism at this time has a real influence on the increase in the performance of teaching staff. This is indicated by the results of the satisfying teaching workforce and increasing professionalism. It

means that the implementation of fingerprint attendance can increase productivity and efficiency as well as the performance of educational staff.

Honesty and responsibility in working also have a significant effect on improving performance. Therefore, with honesty and great responsibility, a worker will positively correlate to the improvement in the performance of the lecturer. The employees are very happy with the implementation of fingerprint attendance and they feel justice because they must be together in implementing this attendance. There is no more cheating and feel dissatisfied with this attendance system because fingerprint attendance works automatically and is assisted by sophisticated computer equipment. Education staff also feels better in doing their jobs, so that the performance of employees will automatically increase according to campus expectations.

Fingerprint attendance (fingerprint) is a tool used to record the presence of a lecturer in teaching in the classroom where the results of the fingerprint attendance recapitulation are authentic that is undoubtedly true because it directly records the fingerprint of each user. The results of the research in FKIP Unsyiah found that the level of application of fingerprint attendance was in a very good category and work motivation was in the high category. This shows that there is a reciprocal relationship between the application of fingerprint attendance where the function of this tool is to record the presence of a lecturer in teaching quickly, precisely and accurately which will increase the work motivation of lecturers to be more passionate and enthusiastic in carrying out their duties because they are supported by facilities that can support the passion/smoothness of work so that lecturers are eager to work.

The results of this study also found that there is a direct and positive influence on the performance of lecturers and there are indirect effects through work motivation. This shows that performance is the ability to carry out tasks that can improve motivation functions continuously. Based on the results of the analysis, it can be seen that the fingerprint information system can be a reference in improving the service of teaching staff in the Unsyiah FKIP.

4. Conclusion

Based on the results of research and discussion of fingerprint management information systems and the quality of lecture services, the researchers can conclude that the Lecture Information System at FKIP Unsyiah is under the Academic section. The information available in the lecture information system includes good management of the use of learning spaces which certainly has an impact on teaching and learning activities. The presence of the fingerprint log is very useful for lecturers, but if the electricity goes out or the internet network is not connected, then everything will be in vain. Recapitulation of teaching per class is very useful for lecturers. But if the recapitulation of lecturers is not following what is in the field, this will be a problem. Efforts made by PLI and study program staff through the application of this stimulation have resulted in a teaching recapitulation in which the recapitulation function can also be used to pay fees for semester lecturers and the use of fingerprints in managing the presence of lecturers in teaching is still experiencing problems, especially in recording attendance data. The need to know the whereabouts of lecturers in each teaching time is very necessary to make decisions for the Chair of each study program.

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