

Improving the Active Role of Employees and Quality of Academic Service to Achieve Implementation of Department Accreditation

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Abstract—The goal of this research is to explore the important role of educational staff involvement in the achievement of department accreditation in institutions of higher education. Perception data was obtained from questionnaires from 263 respondents who work as educational staff in various departments with an accreditation level of A or B in a number of different institutions of higher education in Indonesia. The research model is derived from the concept of total quality management and involves five important factors in the department accreditation process. These are involvement intensity, functional progressive interaction, integrated academic documentation, academic service quality, and department accreditation implementation. The data processing with SEM-AMOS proves that educational staff involvement plays an important role in the planning, executing, and monitoring process of accreditation implementation activities. This model offers a new perspective on the interrelationships between the dimensions of total quality management and the primary activities in department accreditation as stipulated by the Director General of Higher Education.

Keywords: *staff involvement, service quality, total quality management, higher education, department accreditation*

I. INTRODUCTION

Academics and practitioners agree on the importance of employees playing an active role in improving organizational performance. It is proven that the involvement of core employees and support staff affects the level of organizational performance [1]. Researchers have also shown that the vision, mission, and goals of an organization can be achieved more quickly if all elements of the organization are empowered [2]. Establishing a solid work team improves coordination between the functions of different sections of an organization so that the complex process of achieving a particular standard of quality can be undertaken and completed in stages [2],[3]. The enthusiasm of a work team can be maintained if its members understand the role of their work, and are consciously, independently, and actively involved in every stage of the quality improvement process [4].

Opinions vary about the extent of the role of support staff in the process of organizational quality achievement. Experts agree that an organization's core employees play an important role in planning, executing, monitoring, and

evaluating activities for quality improvement [5]. However, there is still a difference in perception about the role of support staff. Some say that support staff are part of the process of change and for this reason they should be involved right from the start of the planning process until the evaluation of activities [6],[7]. Encouraging the involvement of support staff is the key to quality improvement because they spearhead the service of consumers [8]. Other researchers, meanwhile, believe that it is sufficient for support staff to be involved in the execution process of activities and not in the planning stage [7]. This second opinion is based on the belief that strategic planning is the job of executive directors and management, and does not require the involvement of support staff [4].

The current research model modifies the primary elements of TQM to become operational factors which suit the context of institutions of higher education. The variables used in the research model include involvement intensity, functional progressive interaction, integrated academic documentation, and academic service quality, which are derived from the primary elements of TQM such as employee involvement, teamwork, obsession with quality, and continuous improvement [8], [9]. These four factors are all interconnected parts of the process of quality improvement and can be described as a stage of activities [10].

Heads of departments at institutions of higher education in Indonesia are required to increase the accreditation level of the organization in accordance with the stipulations of the National Accreditation Agency of Higher Education (BAN-PT). Currently, only 42,7% of departments in Indonesian institutions of higher education are in the A or B category of accreditation, far below the ideal target of 75% [11]. The Indonesian government policy to allow the establishment of foreign institutions of higher education in Indonesia should be a wake-up call for university leaders to improve their management system so that they are able to compete with other institutions. In addition, improving accreditation opens up the opportunity for institutions of higher education to accept the enrolment of foreign students, which in turn will of course improve their international reputation.

Involvement of educational staff in department accreditation process is a main problem. Based on a study in 2018 which identify on 101 departments in Indonesia's

higher education, it's find out that 18% of them can't improve level of accreditation because they couldn't prove completeness and validity of documentation which assessor BAN-PT presuppose at visitation time in the department [12]. One of the causes of this condition is the educational staff was not involved at the beginning of the accreditation, especially in planning process which the head of department usually initiate. The complexity of the documents required in accreditation cannot be fulfilled only in a relatively short time by the education staff. The issues of educational staff limitation to involve in the department accreditation is interesting to be revealed

The goal of this research is to identify and confirm the important role of educational staff involvement in the accreditation process of institutions of higher education. The achievement of this goal begins with the construction and testing of a model for the process of quality improvement which is derived from the concept of TQM. Based on the statistical testing of this model, the research presents managerial recommendations for improving the effectiveness of each element in the accreditation activities of institutions of higher education. The final section of the research discusses existing limitations and provides input for the development of further research.

II. LITERATURE STUDY AND HYPOTHESIS DEVELOPMENT

A. Total Quality Management in Institutions of Higher Education

Total quality management has a series of main elements in the quality improvement of institutions of higher education. The elements of TQM have been developed to become 10 main dimensions: customer focus, obsession with quality, scientific approach, long-term commitment, teamwork, continual system improvement, education and training, controlled freedom, unity of purpose, and employee involvement and empowerment [8], [9], [13](figure 1). Initially, the mechanical and systematic elements of TQM were more easily applied to goods-producing industries rather than service industries [1]. However, as a result of the increasing need for quality improvement guidelines, TQM can now also be applied to service industries, including institutions of higher education, which have a more flexible structure of human resources [4], [8].

The implementation of TQM in institutions of higher education requires certain adjustments because of the differences in scope and influencing elements. Institutions of higher education, which prioritize ethics and academic freedom, pay attention not only to cognitive aspects but also to affective aspects [9]. The goal of institutions of higher education, namely to produce intellectual human beings, requires a professional approach and at the same time an emotional humanistic approach [14]. Therefore, the improvement of competence of all the elements of institutions of higher education is not only directed towards core employees such as lecturers, but also towards support staff such as educational staff [10].

Some of the dimensions of TQM can be evolved to become activities that have a more operational function in the framework of an empirical model. The difference

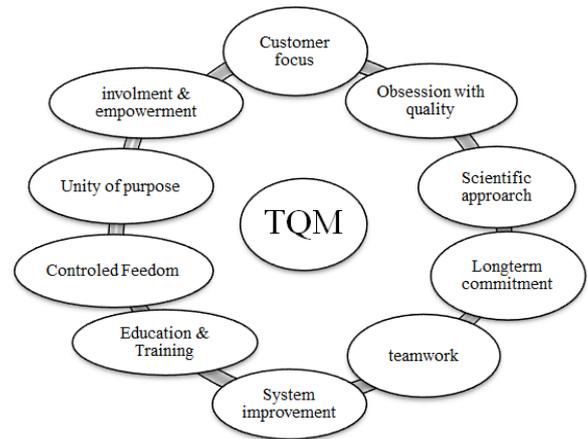


Figure 1 Dimensions of TQM

between the scope and elements of institutions of higher education and service industries or manufacturing industries prompts research on TQM to adapt the antecedent and mediation factor of quality performance [9]. By paying attention to contextual and theoretical reasons, this model explores four main variables: involvement intensity, functional progressive interaction, integrated academic documentation, and academic service quality.

B. Department accreditation implementation

Department accreditation, like the performance of non-profit service organizations in general, pays attention to the organization's ability to achieve the vision, mission, and goals of the institution of higher education [8]. At the beginning of each new period, the head of an organization specifies a number of targets for each department, which are usually higher than the targets of the previous period. The characteristics of these targets follows the performance references of the association or government department which supports the organization so that there is a similarity in performance standards.

Department accreditation refers to the performance of an institution of higher education and is obtained from the results of a verification process carried out by the National Accreditation Agency of Higher Education, based on the activities of employees to improve the quality of input, process, and output of the organization [15]. According to the director general for higher education, accreditation has four levels of qualification, which from lowest to highest are: accredited, accreditation C, accreditation B, and accreditation A. Every institution of higher education should maintain its existing level of accreditation or endeavour to achieve a higher level of accreditation as a sign of continued progress.

Department accreditation reflects an organization's reputation and creates opportunities to work together with partners. Institutions of higher education accredited at level A or B have the potential to carry out innovative activities through joint ventures with foreign institutions which have better resources [11], [14]. These institutions are also more flexible in managing their funding to improve the quality of lecturers, skills of educational staff, and campus infrastructure. Graduates of institutions of higher education with a high level of accreditation have a better chance of finding employment. They also have more confidence to

continue their studies at top ranked universities. There are numerous elements verified in department accreditation. With regard to the developing challenges and opportunities faced by institutions of higher education today, 9 accreditation forms have been developed, which evaluate: 1) Vision, Mission, Goals, and Objectives, 2) Governance, Management, and Cooperation, 3) Students, 4) Human Resources, 5) Finances, Facilities, and Infrastructure, 6) Education, 7) Research, 8) Community Service, and 9) Outcomes and Achievements of the Three Responsibilities of Institutions of Higher Education (research, teaching, and community service). All of these forms are related to one another, which means that the strategies to improve one particular element should take into consideration the effect on other elements. This complexity of elements demonstrates the need for commitment and close cooperation between all elements in the institution of higher education, including lecturers, educational staff, and students.

C. Involvement intensity

Involvement intensity is the frequency with which employees or members of an organization play an active role in completing an activity through various kinds of communication and interaction with other members who are supporting the same activity. An activity that is interesting gains people's attention so that they are willing to spend more time and energy to ensure that the activity is successful [5]. The involvement of members of an organization in a particular activity indicates their willingness to support, participate in, and bear some of the risk of the activity [2].

The involvement intensity of employees from various divisions in a particular activity indicates the importance of the activity. Employees who are actively involved in an activity exert all their skills and experience so that the activity achieves the common goal [2]. They are even willing to exploit their own integrity and reputation if an activity encounters pressure and obstacles from inside or outside the organization [16]. Employee involvement in various activities related to department accreditation encourages them to work together actively. Accreditation requires the exchange of information between different departments in institutions of higher education regarding data about physical infrastructure, lecture activities, research, student affairs, and collaborations with outside partners [4]. These data connections can be established if all parties are willing and able to work together.

The involvement of employees in various activities related to department accreditation encourages them to gain the competence to improve the quality of academic service. Through work offers and assignments from the head of organization, employees are encouraged to make the organization's goals a success [17]. The perception of employees who are positioned as an important part of the organization helps promote a positive atmosphere so that they are willing to devote all their skills and potential to ensure the success of the organization. Employees with strong motivation have the ability to work in a team that is ready to overcome obstacles, create various breakthrough solutions, and face challenges.

Employee involvement in accreditation activities is determined by both internal and external factors. Internal factors include employee attendance at meetings and level of motivation to participate in activities and support the achievement of the organization's goals [5]. External factors include employee participation in a leader's policy which assigns an equal role to all employees [6] In addition, the democratic attitude of a leader who allows all employees to help complete assigned tasks also contributes towards increasing employee involvement [2]. Based on these theoretical and empirical considerations, the following two hypotheses are proposed:

H1 : There is a close connection between involvement intensity and functional progressive interaction with positive causality.

H2 : There is a strong connection between involvement intensity and academic service quality, in which the greater the employee involvement in an organization, the better the quality of academic service.

D. Functional progressive interaction

Functional progressive interaction is defined as employee cooperation which strives to become more intensive through the various roles, skills, and experiences of individual employees that are combined to complete the main tasks of the team. Progressive interaction should begin with conditions in which all the employees have a personal and functional understanding of each other [13]. They should also be aware that there is no better method than good cooperation between departments.

Institutions of higher education that achieve a high level of cooperation between departments find it much easier to encourage employees to serve students in an optimal manner [4]. Academic activities need the support of the different departments that are responsible for timetabling, taking care of room facilities, and providing academic information [10]. These three departments need to be integrated so that the lecture process can run smoothly.

The job of employees to document academic activities will run smoothly if there is good cooperation between departments. Each department in an institution of higher education is responsible for specific tasks that can be divided into four main areas: education, finance, general affairs and supplies, and student affairs [5]. Integration of data and proof of activities of all four departments requires transparency and good coordination [2]. If the majority of data match, the documentation process is judged to be valid and consistent [2],[7]. Taking into consideration this argumentation, the following hypotheses are developed:

H3 : The greater the functional progressive interaction of educational staff, the higher the quality of academic service.

H4 : Educational staff who demonstrate behaviour that supports functional progressive interaction tend to have the ability to perform activities that encompass integrated academic documentation.

E. Integrated academic documentation

Integrated academic documentation is the availability of facts or data that are compiled systematically and

substantiate each other, and which prove that a series of department activities has gone well [8]. Data that is stored in an orderly manner makes it easier for the user to access quickly and without technical difficulties [4]. Additionally, data that contains instructions about related information reinforces its benefit and validity [7].

The comprehensiveness and interrelatedness of academic data is a requirement for institutions of higher education when applying for accreditation. Institutions that are able to document academic data comprehensively have a greater chance of obtaining a high accreditation score [7]. The problems of managing an institution of higher education are not only concerned with carrying out activities that are innovative and beneficial but also how these activities are well planned, neatly documented, and truly support the achievement of the vision, mission, and goals of the institution.

Educational staff must have the ability to store academic data including portfolios of resources, institutional achievements, collaborative networks, activity certificates, and supporting photos [1],[3]. These documentation activities are not only a means of mapping the excellence of the organization but also provide input for improving study programs in the future [4]. The exploration of these facts can be developed into the following hypotheses:

H5 : Employees who are better at documenting academic information and data have a higher academic service quality.

H6 : Employees who are better at documenting academic information and data are more able to help with department accreditation implementation.

F. Academic service quality

Academic service quality is defined as a series of department activities that take place inside and outside an institution of higher education to meet the requirements of teaching and learning activities which support the process of achieving accreditation. The quality of teaching and learning, which is the primary competency of institutions of higher education, determines the level of an institution's reputation [2], [5]. Institutions of higher education are able to compete and excel if they manage to take care of the main components of the learning process, including the quality of lecturers, up-to-date curriculum, comprehensiveness of learning media, and specificity of graduates' competence [2] 11]. Besides ensuring the availability of these key factors, institutions of higher education must be able to gather and document the educational, research, and community service activities of lecturers and students.

The ability of an institution of higher education to implement the teaching and learning process properly affects the achievement of the accreditation level. The service of employees in administrative affairs and procuring

academic equipment supports the students in completing their studies on time [18]. The optimal support of employees for lecturers in the process of transferring knowledge and skills makes graduates of an institution of higher education better prepared to adapt to the working world. Employees can evaluate the efficiency and conditions of supporting equipment for lectures, and have the equipment repaired or replaced if damaged [9]. They are also required to improve their technological skills to support various innovations by lecturers in the teaching process.

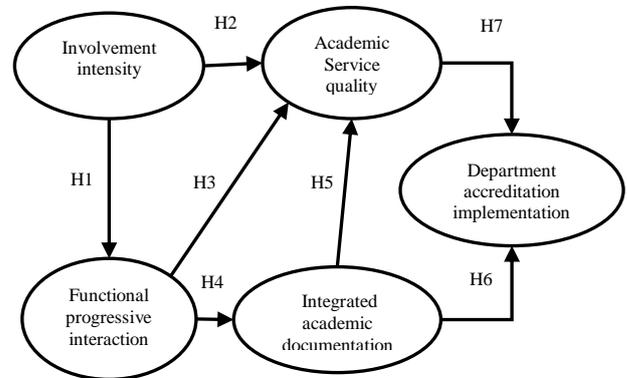


Figure 2. Conceptual Framework

The application of digital technology in academic administration encourages students to monitor the development of lecture results through their own technological devices. This does not ignore the need for a more conservative service which demands direct contact between employees and students [2], [9]. Students can select their subjects independently and endeavour to accelerate their studies without being inhibited by any technical difficulties. Facing this condition, it can be proposed the following hypotheses :

H7 : Employees who are able to improve the academic service quality for lecturers and students have a greater will and ability to support the department accreditation system.

Based on the theoretical and contextual argumentation, this research develop the conceptual framework in figure 2.

III. RESEARCH METHODOLOGY

A. Respondents

The research population for this study was 546 heads of academic affairs departments or educational staff coordinators in various departments of institutions of higher education in Indonesia already holding an accreditation level of A or B, according to the National Accreditation Agency for Higher Education under the Ministry of Research, Technology, and Higher Education for the

TABLE 1. INDICATOR VALIDITY

Variable Indicators	Skewness	Cr skewness	Kurtosis	Cr kurtosis	Factor Loading	α -Cronbach
Involvement intensity						0.758
• Clarity of work role	-0.074	-0.320	0.053	0.168	0.790	0.734
• Presence in coordination	-0.124	-0.614	-0.328	-0.776	0.812	
• Involvement in activity design	-0.216	-1.183	-0.342	-0.769	0.725	
Functional progressive interaction						0.863
• Understanding of work team principles	0.151	0.764	0.821	2.436	0.738	
• Commitment to completing team tasks	-0.149	-0.923	0.817	2.437	0.768	
• Proactive communication between sections	-0.060	-0.320	0.431	1.196	0.731	0.796
Academic service quality						
• Fluency in compiling lecture timetables	-0.092	-0.516	0.502	1.126	0.789	
• Speed of lecture service	-0.187	-0.957	0.834	2.325	0.783	0.889
• Resolution of academic complaints	-0.434	-1.940	0.564	1.347	0.816	
Integrated academic documentation						
• Comprehensiveness of activity documentation	0.073	0.361	0.812	2.312	0.732	0.796
• Regularity of document classification	0.211	1.211	0.495	1.433	0.745	
• Ease of finding documents	0.018	0.141	0.734	1.914	0.745	
Department accreditation implementation						0.889
• Increase in accreditation score	-0.381	-2.173	0.471	1.325	0.734	
• Promptness of accreditation implementation	-0.451	-2.517	0.473	1.322	0.701	
• Increase in accreditation level	-0.426	-2.512	0.421	1.156	0.834	
Multivariate normality			-0.979	-0.351		

Republic of Indonesia. The main area of the institutions of higher education in this research was the regions of Yogyakarta and Surakarta, both of which are recognized cities of higher education. Every department covered in the research was represented by two people, both of whom completed the questionnaires so that the validity could be verified. One of the two people from each department was either head of academic affairs or educational staff coordinator. If the questionnaires were completed in full by both respondents, the final score taken was the average of the two. Every item or question had two sections, namely an open question and a closed question. The closed questions had a scale of 1 to 10, which aimed to discover the perception of educational staff about the different variables in the accreditation activities. The purpose of the open questions was to confirm the respondents' answers to the closed questions and to obtain an additional explanation of the relationships between the variables, as outlined in the conclusion and managerial implications below.

B. Sample and Data Normality

Initially, 300 questionnaires were distributed to respondents who were selected using a purposive sampling technique in the first quarter of 2019. The chosen sample was educational staff coordinators or heads of academic affairs in departments already holding A or B accreditation. In the case that two or more departments were supported by a single head of academic affairs or educational staff coordinator, these departments were represented by a single respondent.

Data normality was required so that the data processing with AMOS was able to produce goodness of fit parameters that could be interpreted as feasible [19]. Data normality was obtained by eliminating outliers and data with a high mahalanobis value. Through this intervention, 37 respondents were forced to be eliminated, thus leaving only 263 respondents to be processed. The value of data normality could be categorized as good if the skewness and kurtosis aspects reached the required value (within the control range of -2.54 to +2.54).

Meanwhile, the factor loading and α -Cronbach values of each indicator were required to be above the value of 0.7.

This showed that each indicator was able to explain the surrounding variables and each item of the questionnaire was properly understood by the respondents (table 1).

C. Indicator Development

The indicators assigned to each variable are based on theoretical and empirical studies (table 1). The indicators of involvement intensity are determined by the clarity of the work role, presence in coordination, and involvement in activity planning [2], [5], [10]. Functional progressive interaction is measured by three indicators, namely understanding of work team principles, commitment to completing team tasks, and proactive communication between sections [5], [6], [13], [20].

Integrated academic documentation is deployed to three indicators, namely comprehensiveness of activity documentation, regularity of document classification and ease of finding documents [9]–[11]. Academic service quality is determined by fluency in compiling lecture timetables, speed of lecture service, and handling and resolution of academic complaints [4], [7], [10], [11]. While department accreditation implementation is explored to three indicators contextually, namely increase in accreditation score, promptness of accreditation implementation, increase in accreditation level [3], [11], [15], [17].

IV. DATA ANALYSIS

A. Descriptive Analysis

The respondents analyzed can be differentiated according to a number of characteristics, based on position in department, status of institution, accreditation level obtained, and accreditation achievement at the time of the research. The majority of respondents, or 83%, were educational staff coordinators who were directly accountable to the head of department. The other 17% were heads of academic affairs whose job was to help with the academic activities of several departments. The heads of academic affairs were directly accountable to the dean of the relevant faculty.

Most of the respondents, or 64%, were working in private institutions of higher education. The other 36% were working in state institutions. The composition of respondents from departments with level A accreditation was 54%, or slightly more than those from departments with level B accreditation (46%). Departments that had already made a concerted effort to improve their accreditation status numbered 72%, as opposed to only 18% of departments that were in a state of stagnation (table 2).

TABLE 2 RESPONDENT CHARACTERISTICS

Respondent characteristics/ Department	Conditions	Number	
Position	Head of academic affairs	50	17%
	Educational staff coordinator	251	83%
Status of institution	Private institution of higher education	169	64%
	State institution of higher education	94	36%
Department accreditation	Level A	142	54%
	Level B	121	46%
Accreditation achievement at the time of research	Increase in accreditation from the previous year	189	72%
	No increase in accreditation from the previous year	74	18%

B. SEM analysis

The data processing with SEM-AMOS exhibits a number of good compliance values for the model. The significance level value of the model with $p=0.025$ and chi-square =109.046 exceeds the required value of p above 0.005. Likewise, the other goodness of fit parameters of the model also exhibit positive figures with AGFI=0.920, GFI=0.943, TLI=0.980, CFI=0.985, and RMSEA= 0.035. The Hoelter value of 276 also indicates data sufficiency, being above the number of respondents which is 263.

The SEM-AMOS results show that by using the value $p=10\%$ to evaluate the validity of regression weight results for each relationship between the different variables, it is possible to distinguish which hypotheses are proven to be true. Of the eight hypotheses proposed, seven are supported and one is disqualified.

The relationship between involvement intensity and functional progressive interaction has a regression weight of 0.708 and $p=0.000$. This result shows that H1 is proven, meaning that the involvement intensity of educational staff has a positive significant effect on the cooperative interaction between educational staff. Their involvement in various aspects of preparation and planning of accreditation activities encourages them to work together to complete the various team tasks [2], [5]. The relationship between involvement intensity and academic service quality shows a regression weight of 0.225 and $p=0.000$. These conditions confirm the proof of H2. The involvement of educational staff in various preparations for department accreditation has a positive significant effect on the academic service quality [2], [7]. Educational staff understand their role in supporting lecturers to improve the quality of teaching.

The relationship between functional progressive interaction and academic service quality gives a regression weight of 0.260 at $p=0.260$. Unlike the conclusion of the previous two hypotheses, H3 does not gain sufficient support. Hence, the cooperation of educational staff does not have any effect on the quality of academic service [9]. The teaching and learning process is already managed by special employees and information about lecture timetables is provided online for lecturers and employees so cooperation between employees is not evident in the lecture practice [6].

Output of Amos can confirm the test of hypotheses H4 and H5 clearly. The relationship between functional progressive interaction and integrated academic documentation has a regression weight of 0.767 and $p=0.021$. These results support the acceptance of H4 and confirm that cooperation between educational staff is an essential requirement for the proper implementation of documentation activities which need coordination between different departments in an institution of higher education [3]. The relationship between integrated academic documentation and academic service quality is very strong because the regression weight is shown to be 0.296 and $p=0.002$. The facts that support H5 confirm that the teaching and learning process will run smoothly if the department has integrated information that is ready to be referenced for determining academic policy [9].

Integrated academic documentation and department accreditation implementation have a strong relationship, as shown by the acceptance of H6 with a regression weight of 0.481 and $p=0.000$. Department accreditation will achieve a satisfactory level if educational staff are properly trained and have the necessary skills for documenting academic activities [9], [18]. Similarly, the relationship between department accreditation implementation and the antecedent academic service quality, is also verified strongly with the acceptance of H7. This relationship has a regression weight of 0.385 with $p=0.00$. The teaching and learning process, which is the core activity of a department in an institution of higher education, strongly determines the success of achieving accreditation from the National Accreditation Agency [11], [13], [15].

V. CONCLUSION AND MANAGERIAL IMPLICATION

The research model is able to describe the real conditions of the role of educational staff in achieving

TABLE 3 OUTPUT OF STRUCTURAL MODEL

No	Structural Relationship	Regression weight	p	Consequence
1	Involvement intensity → Functional progressive interaction	0.709	0.000	H ₁ supported
2	Involvement intensity → Academic service quality	0.225	0.000	H ₂ supported
3	Functional progressive interaction → Academic service quality	0.260	0.159	H ₃ not supported
4	Functional progressive interaction → Integrated academic documentation	0.767	0.021	H ₄ supported
5	Integrated academic documentation → Academic service quality	0.296	0.002	H ₅ supported
6	Integrated academic documentation → Department accreditation implementation	0.481	0.000	H ₆ supported
7	Academic service quality → Department accreditation implementation	0.385	0.000	H ₇ supported

department accreditation implementation. Involving educational staff in the early stages of the accreditation planning and preparation process encourages greater awareness in the implementation of serious academic steps such as team cooperation, academic service, and documentation of accreditation data. They are also involved in the monitoring process and evaluation of development of accreditation activities in order to anticipate any necessary improvements if the accreditation plans are not running optimally.

Accreditation involves cooperation of several departments in an institution of higher education, which makes the guidance and direction of a leader very important. The head of an institution can form an accreditation team which comprises individuals with professional enthusiasm and the ability to work together. The head of an institution can also carry out periodic coordination to check how well-prepared the accreditation team is and to anticipate the any potential lack of preparation. The accreditation process is a routine activity that requires groundwork over a long period of time, which means the head of institution should direct a team to work in stages without any pressing deadlines.

Integrated documentation of academic data can be achieved by improving the quality of software and hardware. Software can be improved by developing better discipline and a habit of storing proof of activities. Hardware can be improved by using up-to-date information technology and providing a special room for storing

accreditation data. A special room or facility for storing documents is vital because the department accreditation process takes place periodically (every four years). In addition, this room can potentially be shared with other departments in the same faculty. This will have a strong impact on reducing the operational costs of the department or the faculty.

Academic service quality, which is the core activity of an institution of higher education, can be improved through regular training, use of better technology, and procuring new teaching and learning equipment. Educational staff can be taught how to prepare documents to support lectures on a regular basis, how to manage technological devices or equipment used in lectures so that they are always up-to-date, and how to prepare lecture timetables systematically. Heads of departments should also improve equipment and infrastructure for lectures by making classrooms more comfortable, using better technology for teaching, and creating a special concentrations laboratory to anticipate additional accreditation stipulations from the National Accreditation Agency.

VI. LIMITATIONS AND FUTURE RESEARCH

This research endeavours to guarantee the validity of answers by asking the same questions to two respondents who assist with academic administration in a particular department, and are either head of the academic affairs department or educational staff coordinator. During the data collection, it was extremely difficult to obtain answers from both respondents, so in many cases the answers of one of the respondents were used to represent the department in question. Future research can ensure greater validity of answers by working together with faculty heads so that they can urge the head of academic affairs and educational staff coordinator to complete the questionnaire.

The length of time respondents have been working in a particular department is not taken into consideration in this research, which may mean a lack of understanding about teamwork. It may also be a reason why the functional progressive interaction variable does not affect academic service quality. To avoid this kind of biased perception, further research on this topic should stipulate the level of experience required by respondents in a particular position.

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Appendix

Questionnaire list

Involvement intensity

1. Educational staff are aware of their important role in the accreditation process
2. Educational staff always attend meetings about accreditation coordination
3. Educational staff involve themselves fully in the planning of accreditation activities.

Academic service quality

1. Educational staff compile lecture timetables systematically
2. Educational staff provide a fast lecture service
3. Every time a complaint is made by lecturers or students about the teaching and learning process, educational staff resolve the complaint properly

Functional progressive interaction

1. Educational staff have a good understanding and implementation of professional principles in a work team
2. Educational staff are committed to completing team tasks in the accreditation process
3. Educational staff communicate proactively with other departments

Integrated academic documentation

1. Educational staff make a complete and disciplined documentation of academic activities
2. Educational staff classify supporting accreditation documents in an orderly and systematic manner

3. Educational staff are able to present the documents needed for accreditation easily and quickly

Department accreditation implementation

1. The latest department accreditation score is better than previous accreditation scores
2. The time of implementation of department accreditation matches the designed plan.
3. Department accreditation in the past year has experienced an increase in level compared with previous accreditation