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Multiple Analysis Regression In
DETERMINING LECTURER PERFORMANCE FACTORS

Emy Siswanah, M.Sc

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ISBN 978-623-96405-1-4

First published, January 2021

xii + 104 pages.; 23 cm.

Published by SeAP (Southeast Asian Publishing)
Jl. Purwoyoso Selatan B-21, Semarang, Indonesia
contact@seapublication.com
www.seapublication.com

ABSTRACT

The main problem in this research is to find out if there is an influence of work motivation, job satisfaction, perception of reward, and perception of supervision on the lecturers of UIN Walisongo Semarang in carrying out the teaching and learning process. This research is a survey research. The population in this study were all lecturers of UIN Walisongo Semarang. The instrument used in this study was a questionnaire using Likert scale. The data analysis technique used in this research was multiple linear regression analysis. Based on the results of the data analysis, it can be concluded that, there are effects of work motivation, job satisfaction, perception of reward, and perception of supervision of lecturers at UIN Walisongo Semarang in carrying out the teaching and learning process. Partially, work motivation and job satisfaction affect the performance of lecturers in implementing the teaching and learning process. Meanwhile, perception of reward and perception of supervision have no effect on lecturer performance in carrying out the teaching and learning process.

Keywords: work motivation, job satisfaction, perception of reward, perception of supervision, performance of lecturers

FOREWORDS

Praise and gratitude for the author, for the presence of Allah SWT who has bestowed His grace and guidance so that the author can complete a research book entitled "Multiple Analysis Regression in Determining Lecturer Performance Factors". Salawat and greetings from the author convey to the Great Prophet Muhammad SAW who is always followed by and is expected to be syafa'at.

It is hoped that what has been compiled can be useful for the development of science. The author realizes that there are still many weaknesses and shortcomings. For this reason, the author hopes for constructive suggestions and criticism for further improvement. That is the foreword from the author, if there are mistakes and shortcomings, I can only apologize profusely.

Semarang, January 2021

Emy Siswanah

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Chapter I

INTRODUCTION

1.1 BACKGOUND

Walisongo State Islamic Institute (IAIN Walisongo) has just transformed into Walisongo State Islamic University (UIN Walisongo). The transformation into UIN also resulted in changes to the vision, mission, and goals of the university. One of the changes is to adjust to the future demands of UIN Walisongo graduates. There is an awareness to change and build UIN Walisongo into a more credible and quality university because quality graduates are also determined by quality institutions.

One of the goals of UIN Walisongo is to produce graduates who have academic and professional capacities with nobility of applying and developing knowledge. The graduates need to be equipped with useful knowledge, how to apply the right knowledge, and have dignified morals. All these competencies refer to the quality of graduates that students must possess, so that graduates of UIN Walisongo will not be underestimated by

the community and are able to compete with graduates from other universities. Therefore, UIN Walisongo has the responsibility to prepare its students to become high-quality graduates.

To produce high quality graduates, it is necessary to be supported by qualified lecturers as well. Hence, the fitness of instructors should be improved through building up the nature of instructive organizations. One of the endeavors to improve the nature of instructive organizations is through improving the presentation of instructors in executing the educating and learning measure.

The nature of instructive establishments is emphatically affected by contributions to the training framework, including understudies, speakers, and offices and foundation to help the educating and learning measure. These three components are related and impact each other in making a fruitful educating and learning measure (Mulyasa, 2005). A lecturer is somebody who has a solid establishment on his schooling and his skill, that is designated by the advanced education foundation with the principle errand of instructing (Kemdiknas, 2001). As indicated by the Act No. 14/2005 about Teachers and Lecturers, speakers are proficient instructors of researchers with the principle errand of changing, creating, and scattering science, innovation and craftsmanship through training, examination, and local area administration.

Lecturer is one of the the fundamental segments in a training framework in advanced education. The jobs, obligations, and duties of instructors are exceptionally important in understanding the objectives of public training, such as, to educate the nation's life, improve the quality of Indonesian people, including the quality of faith and piety, noble morals, and mastery of science, technology, and arts, as well as realizing an Indonesian society that is advanced, just, prosperous, and civilized.

The main task of lecturers is as educators. As educators, lecturers carry out the task and responsibility of educating students to become individuals who have abilities and skills that are useful for their lives and to find jobs. In educating students, one way that lecturers can do is through the teaching and learning process. The teaching and learning process is a process that contains a series of actions by educators and students on a reciprocal relationship that takes place in an educational situation to achieve goals (Kemdiknas, 2001). Learning is a cycle of communication among understudies and teachers and learning assets in a learning climate (Dirjen Dikti, 2001). The ability of lecturers to teach is the most important dimension for monitoring. This assessment can be carried out by the lecturers themselves, peers and by students through their perceptions (Rohani, 1999).

Lecturer qualifications are needed to convey knowledge and skills to students. Competent and qualified lecturers will make students become professional teachers. Lecturers must also have high discipline and have a sense of responsibility for delivering knowledge to students and not give lectures carelessly. If there is no good intention to improve the quality of lecturers, fundamental changes to the curriculum, syllabus, lecture program units, laboratories, teaching methodology will be less effective in improving the quality of lecturers.

Through the teaching and learning process, the lecturers who have functions as facilitators, help students to equip themselves with knowledge and abilities to become competitive graduates. To produce qualified and competitive graduate teacher candidates, it must also go through a quality learning process. A good learning process depends on the performance of the lecturers and role of students who are well motivated. The performance of lecturers in the learning process greatly determines the quality of learning and ultimately affects the quality of graduates.

The exhibition of lecturers is estimated dependent on the remaining burden of the instructors which incorporates principle exercises, for example, exercise plan, executing the learning interaction, assessing getting the hang of, controlling and preparing, leading examination, directing local area administration and doing extra assignments. The remaining task at hand for teachers is identical to 12 semester credit units (SKS) and as numerous as 16 semester credit units (SKS) (Djohar, 2006).

According to Gybson (1996), the individual conduct of a speaker in accomplishing what he does is affected by individual, mental and hierarchical variables. The exhibition factors incorporate insight, abilities, age, sexual orientation, training, long periods of administration, obligation, work fulfillment, discernments, inspiration, initiative, prizes, management, and working conditions. These factors need to be studied to determine what factors have a significant influence on the performance of lecturers in carrying out the learning process. Factors that have a significant influence need to be maintained while those that have a less significant effect need to be improved. This needs to be done to create a quality learning process to produce quality and professional graduates. If UIN Walisongo can produce many qualified and professional graduates, it will certainly be very proud and of course it will increase the prestige of UIN Walisongo in the community. It is also expected to have result in the increasing interest of students to study at UIN Walisongo.

1.2 PROBLEM FORMULATION

The formulation of the problem in this study are:

1) Do work motivation, job satisfaction, perception of reward, and perceptions of supervision simultaneously affect the performance of lecturers at UIN Walisongo Semarang in implementing the teaching and learning process?

2) Does work motivation affect the performance of UIN Walisongo Semarang lecturers in implementing the teaching and learning process?
3) Does job satisfaction affect the performance of lecturers at UIN Walisongo Semarang in carrying out the teaching and learning process?
4) Does the perception of reward affect the performance of the lecturers of UIN Walisongo Semarang in carrying out the teaching and learning process?
5) Does the perception of supervision affect the performance of the lecturers of UIN Walisongo Semarang in carrying out the teaching and learning process?

1.3 LIMITATION OF THE PROBLEM

The factors that influence the performance of lecturers according to Gybson (1996) are grouped into individual, psychological, and organizational variables. In this study, the independent variables studied were only limited to work motivation, job satisfaction, perception of supervision, and perception of reward.

1.4 RESEARCH PURPOSES

The main purposes are:

1) To find out whether work motivation, job satisfaction, perception of reward, and perception of supervision simultaneously affect the performance of lecturers at UIN Walisongo Semarang in implementing the teaching and learning process.
2) To find out whether work motivation affects the performance of the lecturers at UIN Walisongo Semarang in implementing the teaching and learning process.
3) To find out whether job satisfaction affects the performance of the lecturers at UIN Walisongo Semarang in implementing the teaching and learning process.

4) To find out whether the perception of reward influences the performance of the lecturers at UIN Walisongo Semarang in implementing the teaching and learning process.
5) To find out whether the perception of supervision affects the performance of the lecturers at UIN Walisongo Semarang in implementing the teaching and learning process.

1.5 BENEFITS OF RESEARCH

1. For Institutions

As a matter of consideration for leaders to find out what factors have a significant influence on the exhibition of lecturers in completing the learning cycle.

2. For Lecturers

As a material for consideration for lecturers to improve the exhibition of lecturers in completing the learning cycle.

3. For Researchers

As an evaluation for researchers to continuously improve execution in actualizing the educating and learning measure.

Chapter II

LITERATURE REVIEW

2.1 PERFORMANCES OF LECTURES

Act No. 14/ 2005 about Teachers and Lecturers and *PP* (Government Decree) No 47/2009 about expert teachers and researchers with the primary assignment of changing, creating, and spreading science, innovation, and craftsmanship through schooling, examination and community service (Tridharma of College). *Depdiknas* (2004) states that lecturer performance is the capacity to do the work or errands in finishing a task. Performance can be deciphered as a work introduction, work usage, work accomplishment, work results or execution (LAN in Mulyasa, 2005). In line with that Smith in Mulyasa (2005) states, performance is "*output drive from processes, human or otherwise.*" So, performance is the result or output of a process.

According to Rogers (in Mahmudi, 2005), performance is defined as the results of work itself (outcomes of work), since work results provide a solid connect to the objectives of authoritative

technique, consumer loyalty and financial commitments. Performance is a build that is multidimensional, the estimation likewise shifts relying upon the multifaceted nature of the components that make up execution. Execution alludes to the degree of accomplishment of errands that make up a representative's work. Execution reflects how well workers satisfy a task (Suhat, 2006).

The definition of performance according to The Scribner (in Prawirosentono, 1999) is the work that can be accomplished by an individual or gathering of individuals in an association, as per their particular specialists and duties to accomplish the objectives of the association concerned lawfully, doesn't disregard the law, and is as per ethics and morals.

Porter and Lawyer (in As'ad, 2001) state that performance is a successful role achievement obtained from their actions at work. Based on the above definition, what is meant by performance is the work achieved by each employee according to the prevailing measures in achieving the predetermined targets. From this definition, it can also be concluded that basically, execution is an accomplishment accomplished by an individual in doing his obligations or occupations as per the guidelines and measures set for that work.

Performance is the level of success of an employee in completing work. Factors that determine the level of work (job performance) of an employee, including performance appraisal (Ratnawati, 2002). Performance appraisal relates to how well a person does the assigned / given job. Formal performance appraisals usually take place within a certain period once or twice a year (Simamora, 2004).

The individual behavior of a lecturer is influenced by individual, psychological, and organizational factors. The performance factors incorporate insight, abilities, age, sex, training, long periods of administration, obligation, inspiration, authority, pay, management, working conditions (Mahmudi, 2005).

Educational performance criteria according to Blazey, et al. (2009) aims to: (1) improve educational performance, capabilities, and output, (2) encourage correspondence and trade of data on best instructive practices with different sorts of instructive organizations, and (3) as an apparatus to comprehend and improve institutional execution training and direction in essential arranging.

2.1.1 Factors Affecting the Performance of Lecturers

Performance is a multidimensional develop that incorporates numerous elements that impact it. In conventional execution frameworks, execution is just connected with individual components, but performance is often caused by factors other than personal factors, such as systems, situations, leadership, or team. The individual performance appraisal process should be expanded with an assessment of the team's performance and the effectiveness of the manager. This is because individual behavior reflects the behavior of group members and leaders. Motivation plays an important role in changing workers' behavior (Robbins, 2003).

The performance of lecturers is one of the deciding components for the accomplishment of the educating and learning measure in advanced education. Prawirosentono (1999) states that there is cozy connection between singular execution and friends execution. This assertion shows that if the teachers' exhibition is acceptable, the advanced education execution will likewise be acceptable.

Factors affecting individual performance are their abilities, motivation, support, the presence of work they do and their relationship with the organization. Perception and investigation of administrators about individual conduct and execution at work requires consideration of the three variable devices that directly affect individual's behavior and the things that the employee does. The three variables are grouped into individual,

psychological, and organizational variables which are factors that influence performance. Singular factors incorporate capacities, abilities, fulfillment, foundation, attributes/socioeconomics: age, sexual orientation, conjugal status, long periods of administration and training. Mental factors incorporate insights, perspectives, character, learning and inspiration. Authoritative factors incorporate administration, rewards, working conditions, and supervision (Gybson, 1996).

1. Individual Variables

1) Ability

Ability and skill play an important role in person's conduct and execution. Capacity is a quality (inborn or discovered) that permits an individual to accomplish something mentally or physically. Intellectual ability is the ability needed to carry out mental activities. The evidence shows that tests assessing mathematical, spatial, and perceptual verbal capacities are substantial indicators of occupation execution at all specific employment levels. Along these lines, tests that measure explicit elements of insight are powerful predictors of work. Jobs place different demands on people, because of their different abilities. Therefore, employees are enhanced when there is a match between work and ability (Sastrohadiwiryo, 2005).

2) Skills

Skills are competencies related to tasks. Skills are one of the most important labor issues. Several companies need employees who have enough skills, such as: able to read and understand complex operational instructions, how to work computers, make statistical quality controls, make assessments of client requests and etc. (Gybson, 1996).

Several workers apparently did not have the skills needed by the company, so the company had to carry out intensive training and re-education of employees. Managers must be responsible for meeting the needs of skilled employees and keeping them

from moving to a competing company (Muchlas, 1999). An audit of the proof has discovered that relational abilities are reliably significant for elite of work gathering (Robbins, 2003).

3) Characteristics / demographics

a) Age

It is likely that the connection among age and execution will be an important issue for the coming decades. There is a boundless conviction that exhibition weakens with age. The more seasoned you are, the more outlandish it is to left your place of employment. The older the workers, the fewer alternative employment opportunities for them. What's more, more seasoned specialists are less inclined to stop on the grounds that their more drawn out residency will in general furnish them with higher pay rates, longer paid get-aways and more appealing retirement benefits. In general, more established workers have a lower avoidable level of absenteeism than younger employees (Robbins, 2003).

b) Gender

There is no critical distinction in work efficiency among people. Several studies have found that ladies have a higher pace of turnover (Robbins, 2003).

c) Marital status

Research shows that employees who are married are less absent, experience lower turnover and are happy with their positions than co-workers who are single. Marriage forces expanded obligations that can make a perpetual occupation more significant and important. It is likely that employees who are diligent and satisfied are bound to be hitched worker (Robbins, 2003).

d) The period of service

There has been an extensive review of the relationship between seniority and productivity. The latest proof proposes a positive connection among status and occupation efficiency (Robbins, 2003).

e) Education

Based on the research by Widiastuti (2005) with the title "the effect of workload, motivation and ability on administrative staff in the administration section of the Central Java Provincial Health Office", it is stated that the level of education is thought to have a positive relationship with employee performance (in the high school respondent group, the level of execution is moderate (60%) more than those with low execution (33.4%) and superior (6.6%), while in the S1 gathering, the level of respondents with moderate execution (44.4%) was not exactly those with elite (55.6%)).

4) Job satisfaction

Occupation fulfillment is an evaluation of laborers about how far their general occupation fulfills their requirements. Tiffin contends that work fulfillment is firmly identified with the demeanor of representatives towards the actual work, work circumstances, collaboration among pioneers and individual representatives. Blum argues that job satisfaction is a general attitude which is the result of several specific attitudes towards job factors, adjustment, and individual social relations outside of work. Employee satisfaction will encourage the growth of employees' loyalty to the organization. Furthermore, the loyalty of employees will lead to increased productivity (in As'ad, 2004).

2. Psychological variables

1) Perception

Perception is characterized as the interaction by which people sort out and decipher their impressions to give meaning to their surroundings. People utilize their five faculties to perceive the climate, through sight, hearing, taste, and smell. Perception helps individuals in choosing, organizing, storing, and interpreting stimuli into a complete and meaningful world picture. The way a worker sees a situation often means much more to understanding behavior than the situation itself. Perception plays a

role in receiving stimuli, arranging them, and translating or interpreting regular stimuli to influence behavior and shape attitudes (Muchlas, 1999).

2) Attitude

Attitudes are evaluative explanations, regardless of whether great or troublesome about articles, individuals, or occasions. Gybson defines attitude as mental readiness which is learned and coordinated through experience and affects the manner in which an individual reacts to others, objects and situations related to it. Attitude reflects how someone feels something. Attitude is not the same as value, but the two are related. Attitude is composed of three components (cognitive, affective and behavior).

The term disposition basically alludes to the emotional piece of the three segments. Work-related attitudes pave the way for positive or negative assessments that representatives hold with respect to parts of their workplace. An individual with an undeniable degree of occupation fulfillment shows an uplifting demeanor towards the work. An individual who is disappointed with his work shows a negative disposition towards that work (Gybson, 1996).

3) Personality

Personality is the whole of individual behavior (dynamic organization in an individual's psycho-physical system) which determines itself specifically in adapting to or interacting with a situation or environment. According to Gordon Allport, personality is a powerful association of mental frameworks in a person that decide his one of a kind variation to his current circumstance. A person's personality is formed from both heredity and environmental factors in situational conditions. Personality attributes influence organizational behavior. Personality assessments should be used together with other information such as skills, abilities, and experiences (Simamora, 2004).

4) Motivation

Motivation is a state in an individual that urges the person's longing to do certain exercises to accomplish an objective. Work motivation is something that makes eagerness or work inspiration. Teachers' motivation plays a role in fostering passion, pleasure, and enthusiasm for teaching. Motivation in an individual will show a conduct coordinated at the objective of achieving satisfaction goals (Gybson, 1996).

5) Learning

In organizational behavior, the learning process is characterized as a moderately lasting change in conduct that happens in light of life encounters. Learning itself involves change. Good or bad is seen from the review of organizational behavior depending on the learned behavior. Employees can learn behavior that management does not want, for example, suspicious behavior of their superiors, thereby limiting their production capacity. However, in general, employees often prefer or accept the behavior of management, even though sometimes it is an unwritten rule (Mahmudi, 2005).

3. Organizational variables

1) Leadership

Leadership is the ability that a person must influence others to achieve goals and objectives. According to Stoner, managerial leadership can be characterized as a cycle of coordinating and giving impact on the exercises of a gathering of individuals whose duties are interrelated (in Miarso, 2005).

2) Reward

Reward is a compensation received for the services to the organization (Muchlas, 1999). The problem of reward is seen as one of the challenges that must be faced by the management of an organization. The interests of workers must receive attention in the sense that the compensation for services rendered to the organization must enable them, to maintain their dignity as a

respectable human being. The strictness of the compensation allows maintaining a reasonable and decent standard of living and living independently without depending on the fulfillment of various types of needs on others.

A good reward system is a framework that can ensure the fulfillment of authoritative individuals which thus permits the association to obtain, keep up and utilize a few people with different uplifting perspectives and practices who turn out beneficially to support the association (Widiastuti, 2005). Types of rewards can be in the form of intrinsic rewards, such as people's feelings of personal competence because of doing a good job and extrinsic rewards in the form of recognition and money from superiors, promotions, luxurious offices, complementary allowances and social rewards (Widiastuti, 2005).

3) Working conditions

Working conditions are all aspects of physical work, work psychology and work regulations that can affect job satisfaction and the achievement of work productivity. Physical conditions of work include lighting (light), sound and color (Mangkunegara, 2005). Psychological conditions of work are feelings of boredom and fatigue. This is due to monotonous work and unwelcome activities. Work boredom can be caused by feeling uneasy, unhappy, lack of rest and feeling tired. To reduce the feeling of boredom at work, this can be done through occupation positions as per the specialized topics and abilities of employees as well as providing motivation and job rotation.

Psychological fatigue can be caused by work boredom, while physiological fatigue can lead to increased errors in work, absences, turnover and work accidents. Temporary working conditions are regulations, length of working hours, work break times and changes in work shifts (Mangkunegara, 2005).

4) Social values

The values embraced by a particular nation or community contain jugmental elements such as everything that is considered good, true, and desired by the local community. Value is important in studying organizational behavior because it lays the foundation for understanding attitudes and motivations and their impact on our perceptions. Social values place the highest value on their love for others (Mangkunegara, 2005).

5) Supervision

Supervision is an activity of coaching, guidance, and supervision by program managers towards executors at a lower administrative level in order to strengthen the implementation of activities in accordance with predetermined goals and objectives (Handoko, 1993). Supervision is making direct and periodic observations by superiors of the work carried out by subordinates, and if problems are found, direct instructions or assistance are given to solve them. Supervision is an exertion of direction and course to expand energy and work execution (Azwar, 2001).

2.1.2 Performance Appraisal

Performance appraisal relates to how well a person does the work assigned / given (Simamora, 2004). Performance appraisal is the way toward assessing how well representatives tackle their work when contrasted with a bunch of guidelines and their correspondence (Mathis and Jackson).

Sastrohadiwiryo (2005) suggests that performance appraisal is an activity carried out by appraisal management/supervisors to survey labor force execution by looking at execution on performance with job descriptions/descriptions in a certain period, usually at the end of each year. Formal performance appraisals usually take place over a specified period once or twice a year.

Performance appraisal can be characterized as any strategy which incorporates 1) setting execution principles, 2) assessing the worker's genuine presentation according to these norms

and 3) furnishing input to the representative with the point of spurring that individual to wipe out droop in execution or to keep working (Simon and Schuster, 1998).

1. Performance Appraisal Method

According to Simon and Schuster (1998), there are several methods that can be used to assess a person's performance, including:

1) Rating Scales

The results of the employee performance appraisal are recorded in a scale. The scale is partitioned into seven or five classifications. Because the concept is qualitative, the categories used are qualitative, from very satisfying to unsatisfying.

2) Critical Incidents

Assessors perform only at critical moment (the time when employee behavior can make how successful it is or vice versa).

3) Essay

Assessors write short stories that describe the performance of an employee. This method tends to describe the employee's extraordinary work performance rather than his daily performance.

4) Work Standards

This technique contrasts the representative's presentation and foreordained guidelines. Guidelines mirror the ordinary returns of a normal specialist in a typical business.

5) Grading chart scale

The grading scale graph allows the rater to provide a value on employee's performance on a continuous basis.

6) Alternation Ranking

Ranking the best to worst employees on one or many traits.

7) Pairwise comparison

Comparing the performance of their employees with each other. For each characteristic, each subordinate is assigned a partner and compared to each other.

8) Narrative

Give composed appraisal data. Documentation and evaluation are at the center of the basic episode strategy, paper, and field survey technique. These notes depict the worker's activities more.

9) Behaviorally Anchored Scales

An appraisal method based on the appraiser's notes, which describes the relationship between good and bad behavior of employees and work implementation.

10) Management by Objective (MBO)

In this approach, each employee and supervisor jointly determine organizational goals, individual goals, and suggestions for increasing organizational productivity.

2. Performance Measurement

Performance measurement is a cycle of evaluating the advancement of work towards the accomplishment of predetermined objectives and targets, remembering data for the proficient utilization of assets in delivering products and ventures, nature of merchandise and enterprises, examination of movement results with targets and the viability of activities in accomplishing objectives.

For this situation, it is critical to decide if the goal of the estimation is to assess performance outcomes or to assess behavior (personality). Therefore, an organization should differentiate between outcome, behavior (process) and appropriate performance measurement tools.

Performance measurement must cover in any event three significant factors that should be thought of, for example, conduct (measure), yield (direct result of a movement/program) and out came (esteem added or effect of an action/program). Behavior, results and added value are variables that cannot be separated and depend on one another (Mahmudi, 2005).

Execution estimation incorporates the movement of deciding a progression of execution measures or pointers that give data to empower public area of work units to screen their exhibition in delivering yields and results to society. Execution estimation is valuable for helping supervisors of each work unit in observing and improving execution and zeroing in on hierarchical objectives to satisfy needs for public responsibility (Mahmudi, 2005).

1) Performance measurement object

a) Input

Inputs are all types of input resources that are used in a particular process to produce an output. Inputs can be in the form of raw materials for processes, people (personnel, expertise, skills), infrastructure such as buildings, equipment, and technology. Input measurement is a measurement of the resources consumed by a process to produce output (Mahmudi, 2005).

b) Process

Measurement of process evaluation is directed at how far the activities carried out in the program. This measurement has been carried out according to plan. Stufflebeam (in Arikunto, 2004) proposes questions for the process:

(1) Is the program implementation according to the schedule?
(2) Will the staff involved in program implementation be able to handle the activities according to the schedules and the possibly if it continues?
(3) Are the facilities and infrastructure provided optimally?
(4) What obstacles were encountered during program implementation?

c) Output/ product/ result

Output is the direct result of a process. Measurement of product evaluation or results is directed at things that show changes in raw input. Output measurement is a direct output measurement of a process. Product evaluation is the final stage

of a series of program evaluations. According to Arikunto (2004), there are several questions that can be asked include:

(1) Have the set goals been achieved?
(2) Is there any possible statement formulated relating to the details of the process and the achievement of objectives?
(3) In what ways have various needs been met during the process?
(4) Is the impact obtained in a relatively long period of time?

2) Performance measurement techniques (Simon and Schuster, 1998).

Performance appraisal can be carried out by anyone who understands individual employee appraisals, including:

a) Assessment of subordinates by superiors

The traditional supervisor's assessment assumes that the immediate manager is a certified individual to assess worker execution in a realistic, objective, and fair manner.

b) Evaluation of superiors by subordinates

More companies today, allow their subordinates to anonymously assess the performance of their providers which is called bottom-up feedback. This cycle assists top administrators with diagnosing the executives style, distinguish expected individuals' issues, and make a remedial move with singular directors as the requirement.

c) Assessment of groups / colleagues

Peer appraisals are useful when the boss doesn't have the chance to notice each representative's exhibition, but co-workers of the group do. This assessment is used for development purposes.

d) Self-assessment

It is a self- improvement apparatus that powers employees to think about their strengths and weaknesses and set goals for

development. If employees work in isolation with a unique skill set, then employees can be the only ones qualified to assess their own behavior. This type of employee assessment can be a useful and credible source of appraisal information.

e) Assessment from outside

Outside experts are brought in to audit crafted by a leader. Outsiders may provide these administrators proficient help in making judgments, but there are obvious drawbacks, not knowing the overall contingency within the organization.

f) Multi-source assessment (360-degree feedback)

Many companies have extended the possibility of upward input into what they call 360-degree criticism. Execution data is here gathered around a representative from his directors, subordinates, associates and inner or outer clients. Criticism is by and large utilized for preparing and improvement instead of for expanding compensation.

2.2 WORK MOTIVATION

Gibson et al. (2003) define motivation as a power that urges workers to accomplish something that causes and coordinates conduct. Reksohadiprodjo (1990) defines motivation as a state in a person's personality that urges a person's longing to complete certain exercises to accomplish an objective. Every activity carried out by someone is driven by a power from within that person. This driving force is called motivation.

Motivation is one of the determinants of execution. Inspiration is framed from the disposition of a worker in managing work circumstances. Inspiration is a condition that moves workers to accomplish hierarchical objectives (Karjantoro, 2004). In this case, there is a positive relationship between achievement motives and the achievement of lecturer's performance. Achievement motive is an encouragement within a lecturer to complete

an action or assignment as well as could be expected to have the option to accomplish high work execution.

Peterson and Plowman (in Ratnawati, 2002) say that people want to work because:

1) The desire to live, which means having the desire to live is the main desire of everyone, by enabling them to work, to eat, and to continue their life.
2) The desire for possession, which means having a desire to have.
3) The desire for power, which means having a desire for power.
4) The desire for recognition, which means having a desire for recognition.

According to Lyman Porter and Raymon Miles (in Ratnawati, 2002), work motivation is a framework impacted by three variables (individual characteristics, job characteristics and work situation characteristics). The three motivational factors are related to one another and influence each other.

a. Individual Characteristics

Every individual is different from one another in terms of interests, attitudes and needs. This situation will also affect their motivation to work. By knowing the level of needs, attitudes, and employee interest in the company, it can be used as a basis for motivating these employees. If individual characteristics are met, it is expected that employees will be motivated to work hard so that performance will increase (Lyman Porter and Raymon Miles in Ratnawati, 2002).

b. Job Characteristics

Job characteristics are the nature and duties of employees which include the number of responsibilities, types of tasks and the level of satisfaction that a person gets from the job itself. A job that is intrinsically satisfying will be more motivating for most employees than an unsatisfactory job.

According to Frederick Herzberg, job satisfaction arises from two separate sets of factors called satisfying factors (motivating factors) and non-satisfying factors (hygienic factors). The causes of satisfaction relate to the nature of the job with rewards from the performance of job assignments. The non-satisfying factor comes from the individual's relationship with the organizational environment (work context) in which the work is carried out.

c. Characteristics of Work Situations

The characteristics of work situations fall into two categories (the immediate work environment and the actions of the organization). The closest work environment includes the mentalities and activities of associates and directors just as pioneers and the environment they make. A great many people need the fellowship, blessing and behavior of coworkers are as per the standards and estimations of the colleague gathering. Administrators and pioneers incredibly impact representative's inspiration and execution through good examples and directions, rewards and recognition and assents, salary increases and promotions, criticism, demotion, and dismissal (Lyman Porter and Raymon Miles in Ratnawati, 2002).

The intended organizational actions include the reward system and organizational culture. All organizational policies regarding the methods used to provide remuneration to employees and their culture, all manifest in organizational actions that influence and motivate employees. The reward system or organizational reward system generally has a very large impact on employee's motivation and performance. Organizational culture, norms, values, and beliefs together with its members can increase or decrease individual performance (Lyman Porter and Raymon Miles in Ratnawati, 2002).

2.3 JOB SATISFACTION

According to Hoppeck (in As'ad, 2004), job satisfaction is an appraisal of laborers, to decide how far their general occupation fulfills their necessities. Tiffin (in As'ad, 2004) argues that job satisfaction is firmly identified with the mentality of representatives towards the actual work, work circumstances, participation among pioneers and individual workers. Blum (in As'ad, 2004) suggests that job satisfaction is an overall demeanor which is the aftereffect of several explicit mentalities towards work variables, adjustment, and individual social relations outside of work.

Good Watson (in As'ad, 2004) argues that giving a sufficiently high compensation doesn't really ensure work fulfillment for representatives. In this way, compensation or wages are by all account not the only factors that can prompt fulfillment for somebody, as has been referenced by Herzberg with the Two factor hypothesis, incidentally, pay or wages are remembered for the dissatisfiers gathering. Harold E. Burt (in As'ad, 2004) suggests factors that can lead to job satisfaction:

1) Relationship factors between employees
- The relationship between managers and workers
- Physical factors and working conditions
- Social relations among workers
- Suggestions from collaborators
- Emotions from work circumstances

2) Individual factors
- Attitudes of people towards their work
- Age
- Gender
- External factors (extern)
- The condition of the employee's family
- Recreation
- Education (training, up grading)

Another opinion was expressed by Ghiselli & Brown (in As'ad, 2004), suggesting that there are five factors that lead to job satisfaction: (1) Position, (2) Rank (class), (3) Age, (4) Guarantee financial and social security, and (5) Quality of supervision.

2.4 PERCEPTION OF SUPERVISION

Supervision is an activity of coaching, guidance, and supervision by program managers towards executors at a lower administrative level in order to strengthen the implementation of activities in accordance with predetermined goals and objectives (Handoko, 1993). Supervision is conducting direct and periodic observations by superiors of the work carried out by subordinates, so that if a problem is found, direct instructions or assistance are given to solve it (Azwar, 2001)

Teaching supervision is an administrative movement pointed toward improving the states of both work force and material which empower the production of a superior instructing and learning circumstance for the accomplishment of instructive objectives (Purwanto, 2000). The purpose of educational supervision is to create conditions that enable the providers of assistance to teachers (teachers, lecturers) to be able to foster themselves so that they are more capable and having skills in running activities that support the teaching and learning process (Burhanudin, 2005).

The supervisory function according to Burhanudin (2005) is:

a. Service function (service activity), service activities for professional improvement.
b. Research function, to obtain objective and relevant data.
c. Leadership function, an effort to get supervised can solve their own problems in accordance with their professional responsibilities.

d. Management function, supervision is carried out as control or direction.
e. Evaluation function, supervision is carried out to determine the results or progress obtained.
f. Supervision function as guidance.
g. The function of supervision is as in-service education, especially for young teaching staff.

2.5 PERCEPTION OF REWARD

A decent prize framework is a framework that can ensure the fulfillment of hierarchical individuals which thusly permits the association to get, keep up and utilize various individuals with different uplifting mentalities and practices who turn out gainfully to serve the association.

If the members of the organization are overwhelmed by dissatisfaction with the remuneration, the effect on the association will be exceptionally negative. This implies that if the dissatisfaction isn't settled appropriately, it is normal for members of the organization to express a desire for rewards that are not only greater in number, but also fairer.

To achieve its goals and be based on various principles such as justice, fairness and equality, the reward system must be a powerful instrument for various interests (Simamora, 2004):

a. The reward system must have an appeal for high quality workers to join the organization.
b. The reward system must be a strong attraction to maintain the workforce who is already working in the organization.
c. The reward system contains the principle of justice, namely that internally employees who perform similar tasks receive the same reward. Of course, there are other factors that must be considered, such as years of service, number of

dependents and so on, which can result in differences in employee earnings even when carrying out similar jobs.

d. Reward positive behavior. Ideally, the compensation factor should also reflect the organization's appreciation of the positive behavior of employees which includes various things such as high work performance, experience, loyalty, willingness to assume greater responsibility, honesty, persistence, and various other positive behaviors.
e. Control financing. The reward system must also be able to function as a means of controlling costs associated with productivity.
f. Compliance with laws and regulations. This is done to ensure that the workforce gets good treatment from the organization and to ensure that workers receive their full rights when the workers fulfill their obligations properly.
g. The creation of wage and payroll administration that is efficient and effective. This means that the compensation factor must be made in such a way that it is easy to apply in practice.

The principle of justice is that the compensation received by a worker is based on the calculation of at least three things:

a. Employees who carry out similar tasks, in the sense that the critical factors are relatively the same, receive the same reward (internal justice)
b. Employees in an organization receive the same compensation as other employees in other organizations who are involved in similar activities in the same work area (external justice)
c. Benefits received by employees are at a reasonable amount and level.

2.6 PREVIOUS RESEARCH REVIEW

Writer (Year)	Title	Data collec-tion techni-que	Conclusion
Sri Trisna-ningsih (2011)	FAKTOR-FAKTOR YANG MEMPE-NGARU-HI KINERJA DOSEN AKUN-TANSI	Questio-ner	The consequences of the investigation show that motivation has the most prevailing impact on lecturer perfor-mance. This shows that motivation for lecturers is important to improve their performance. Sub-sequently, heads of ad-vanced education or-ganizations ought to give motivation to their lecturers so that lectur-ers' performance can be better and optimal.
Hary Susanto (2012)	FAKTOR-FAKTOR YANG MEMPE-NGARU-HI KINERJA GURU SEKOLAH MENE-NGAH KEJURU-AN	Questio-ner	The results showed that there were positive and significant influences: (a) teacher competence and principal leadership on work motivation of vocational school teachers in Hulu Sungai Selatan Regency, South Kalimantan, ei-ther individually or collectively with a sig-nificance level of 0.038; 0.045; and 0.001; (b) teacher's competence, principal leadership, and teacher's work

			motivation on the exhibition of educators of professional school in Hulu Sungai Selatan District, South Kalimantan, either individually or collectively, and directly or indirectly with a significance level of 0.036; 0.003; 0.036; 0,000; (0.038 and 0.036); (0.045 and 0.036).
Anung Pramudyo (2010)	ANALISIS FAKTOR-FAKTOR YANG MEMPENGARU-HI KINERJA DOSEN NEGERI DIPEKERJAKAN PADA KOPERTIS WILAYAH V YOGYAKARTA	Survey method using a questionnaire	The findings in this study indicate that performance is an important factor for public lecturers employed at *Coordination of Private Higher Education* Region V Yogyakarta. Motivation, competence, and leadership are important to consider in explaining this performance. If lecturers have high motivation and competence and are supported by good leadership, they will actually want to improve their performance. The work environment in this study has no effect on performance.

This examination is not quite the same as the three past investigations. Previous research discussed about lecturer

performance in general. In this study focused on the performance of lecturers in the teaching and learning process.

2.7 RESEARCH HYPOTHESIS

a. H_0 = Work motivation, job satisfaction, perception of reward, and perception of supervision simultaneously have no effect on the performance of lecturers in the teaching and learning process.

H_1 = Work motivation, job satisfaction, perception of rewards, and perception of supervision simultaneously have an influence on the performance of lecturers in the teaching and learning process.

b. H_0 = Motivation has no effect on the performance of lecturers in the teaching and learning process.

H_1 = Motivation has an influence on the performance of lecturers in the teaching and learning process.

c. H_0 = Job satisfaction has no influence on the performance of lecturers in the teaching and learning process.

H_1 = Job satisfaction has an influence on the performance of lecturers i1n the teaching and learning process.

d. H_0 = Perception of supervision has no effect on the performance of lecturers in the teaching and learning process

H_1 = Perception of supervision has an influence on performance of lecturers in the teaching and learning process

e. H_0 = Perception of reward has no effect on performance of lecturers in the teaching and learning process

H_1 = Perception of reward has an influence on performance of lecturers in the teaching and learning process

Chapter III

RESEARCH METHODOLOGY

3.1 TYPE OF RESEARCH

This type of research is survey research, this research takes a sample from one population and uses a questionnaire instrument as the main data collection tool. Survey research examines the population (universe) large and small by selecting and examining a selected sample of the population to determine the relative incidence, distribution, and interpretation of the variables (Kerlinegr, 1990). According to the type and data analysis, this research is a quantitative descriptive study. According to Kerlinger (1990), descriptive research is research directed on enormous or little populaces, however the information considered is an example taken from that populace. Quantitative research is an approach method for studying the object of research by trying to

explain the relationship between research variables using statistical calculations.

3.2 RESEARCH DESIGN

The research design used in this study is in the image below.

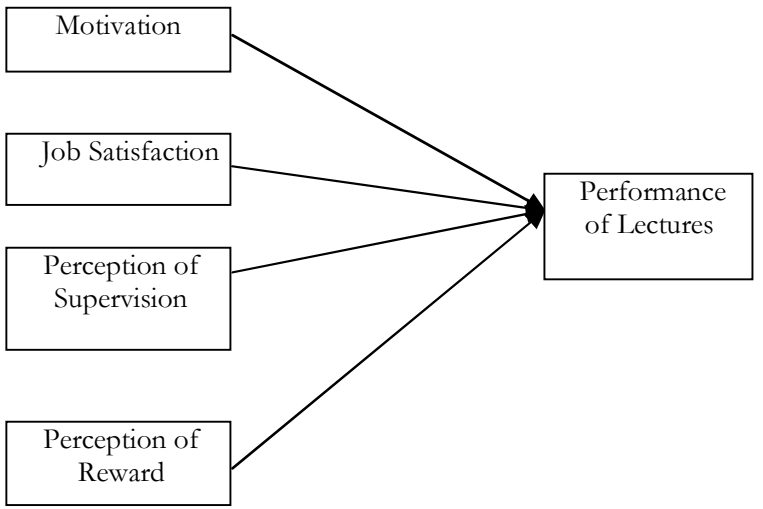

Figure 3. 1 Research Design

3.3 TIME AND PLACE OF RESEARCH

This research was conducted in July - August 2015. The research preparation was carried out in July. The questionnaire was distributed in August considering that in those two months, all faculties at UIN Walisongo Semarang held a lecturer meeting to evaluate the semester that had been running and to prepare lectures for the upcoming semester. With the meeting, it is easier for researcher to distribute questionnaires to lecturers. The place of this research is State Islamic University (*UIN*) of Walisongo Semarang.

3.4 RESEARCH POPULATION AND SAMPLES

3.4.1 Population

"The population is the entire research subject" (Arikunto, 2010). This quantitative research used inferential statistical analysis, the determination of the population and sample becomes very important. The population in this study were all civil servant lecturers of UIN Walisongo Semarang, totaling 321 people.

3.4.2 Sample

According to Arikunto (2010), "sample is a part or representative of the population under study". Meanwhile, Sudjana (2005) states that "sample is part of the reachable population which has the same characteristics as the population". The sample in this study were 87 lecturers spread across 5 faculties at UIN Walisongo.

3.5 RESEARCH VARIABLES

1. Independent Variable

"Variables that have influence are called independent variables" (Arikunto, 2010). The independent variables in this study are work motivation (X_1), job satisfaction (X_2), perception of rewards (X_3), and perception of supervision (X_4).

2. Dependent Variables

"Dependent variable is the variable that is affected, or which is the result of the independent variable" (Arikunto, 2010). The dependent variable in this study is performance of lecturers (Y).

3.6 DATA COLLECTION METHOD

The information assortment technique in this study was a questionnaire method. The instrument used to collect data of work motivation, job satisfaction, perception of rewards, perception of supervision, and performance of lecturers, was a

questionnaire. Questionnaires are data collection techniques through forms containing questions that are submitted recorded as a hard copy to an individual or gathering of individuals to find solutions or reactions and data required by analyst (Mardalis, 2008). The explanation behind utilizing a survey is because it has a high position and can reveal the potential of the respondent and is equipped with uniform instructions for the respondent (Arikunto, 2010). The questionnaire used Likert scale and the data is in ordinal form.

The questionnaire used Likert scale which consists of positive and negative statements and only consists of four alternative answers, namely, strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD) by eliminating alternatives of neutral answer. It is intended to make sure that there are no hesitant (neutral) answers.

The quality for each statement on the attitude scale can be transferred from the qualitative scale to the quantitative scale as follows:

Table 3. 1 The Assessment Criteria of Attitude

Alternative Answers	Quality	
	Positive Statements	Negative Statements
Strongly Agree (SA)	4	1
Agree (A)	3	2
Disagree (D)	2	3
Strongly Disagree (SD)	1	4

3.7 METHOD OF DEVELOPING RESEARCH INSTRUMENTS

According to the principle, researching is an measuring activity, so there must be a good measuring instrument. Measuring

instruments in research are called research instruments. According to Sugiyono (2010), "a research instrument is a tool for measuring observed natural and social phenomena". The instrument utilized in this examination was a Likert scale questionnaire.

The steps in arranging the instrument are:

1) Developing variable indicators of work motivation, job satisfaction, perceptions of reward, perception of supervision, and performance
2) Write down the items of the instrument

The instrument grid is used as a guide in arranging the instrument items.

3) Testing the instrument

Before the survey was utilized to gather information, the questionnaire was tested on lecturers who were not categorized as samples. This is done to determine the eligibility of the questionnaire. The questionnaire used for the trial consisted of 25 statements for the performance of lecturers variable, 11 statements for the work motivation variable, 9 statements for the job satisfaction variable, 14 statements for the perception of reward variable, and 10 statements for the perception of supervision variable.

4) Carry out instrument analysis

To find out whether the instrument used was appropriate or not as a research instrument, an instrument analysis was carried out. The instruments to be analyzed are a questionnaire. The test used to analyze the questionnaire is validity and reliability tests.

In view of the information from the test aftereffects of the instrument, the validity and reliability of the questionnaire were calculated as follows:

a) Validity of Questionnaire

"Validity is a measurement that shows the levels of validity of an instrument" (Arikunto, 2011). "A scale is said to have validity if the scale measures what should be measured" (Nasution, 2003).

In this analysis of validity, the product moment correlation formula will be used using raw-score numbers, the formula is as follows:

$$r_{xy} = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$$

(Suherman, 2003)

Information:

r_{xy} = correlation coefficient between variable x and variable *y*

n = number of tests

x = Value of the test results

y = Total value

The r_{xy} value will be contrasted with the product moment *r* value in the table at the 0.05 significance level. If $r_{xy} > r_{tabel,}$ then the item is valid.

b) Reliability of Questionnaire

"A scale is considered reliable, if it can be trusted by giving the same results when it is also applied to the same sample at different times" (Nasution, 2003).

To find out the reliability of the description and questions, the questionnaire used Cronbach Alpha formula (Sugiyono, 2010):

$$r_i = \left(\frac{k}{k-1}\right)\left(1 - \frac{\sum S_i^2}{S_t^2}\right)$$

Information:

r_i = reliability of instrument

k = number of questions

$\sum S_i^2$ = amount of variance of each item

S_t^2 = total variance

To figure the variance of each item, the accompanying recipe is utilized:

$$S_i = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{N}}{N}$$ (Suherman, 2003)

S_i = Variance of each item
$\sum X_i^2$ = Sum of squared of item X
$(\sum X_i)^2$ = Squared of number of items X_i
N = Number of respondents

The total variance is calculated using the formula below:

$$S_t = \frac{\sum x_t^2 - \frac{(\sum x_t)^2}{N}}{N}$$ (Suherman, 2003)

S_t = Total Variance
$\sum X_t^2$ = Sum of squared of item X
$(\sum X_t)^2$ = Number of item X_t squared
N = Number of respondents

The value of r from the calculation results with the Cronbach Alpha formula will then be compared with the price of r table with = 0.05 and dk = N - 2 (N = number of respondents). If $r_{count} > r_{tabel}$, then the instrument is declared reliable. Meanwhile, to decide the level of reliability of the instrument, the accompanying classes are utilized (Hadi, 1999):

1) 0.800 – 1.000 : very high
2) 0.600 – 0.799 : high
3) 0.400 – 0.599 : sufficient
4) 0.200 – 0.399 : low
5) 0.000 – 0.199 : very low

3.8 RESEARCH PROCEDURES

This examination was led in two stages including the preparation stage and the implementation stage.

1. Preparation stage

   This stage is the initial stage of research, the steps taken are:

a. The preparation of research instruments by compiling a questionnaire in the form of indicators of variables of work motivation, job satisfaction, perception of reward, perception of supervision, and performance of lecturers.

b. Instrument testing, namely, instruments that have been arranged are tested to decide the validity and reliability of the poll.

2. Implementation stage

   This research was done by dispersing surveys to government worker lecturers of UIN Walisongo Semarang.

3.9 DATA ANALYSIS METHOD

The data of questionnaire that has been obtained are then analyzed to answer the research hypothesis. The examination was done on each variable utilizing SPSS program.

The normal equation of the factors affecting lecturer performance is assumed to be as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Definition : $\beta_1 > 0; \beta_2 > 0; \beta_3 > 0; \beta_4 > 0$ (Kutner, et.al., 2004) where:

Y = estimation of performance of lecturers
X_1 = work motivation score
X_2 = job satisfaction score
X_3 = perception of reward score
X_4 = perception of supervision score
β_0 = constant

$\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficient of the variable
e = epsilon/ variable that has not been revealed

The impact of free factors on marked factors was tested with a confidence level of 95% or $\alpha = 5\%$.

3.9.1 Requirement Test for Multiple Regression Analysis

The test requirements for multiple regression analysis include:

1. Normality

Normality assumption is a residual assumption that is normally distributed. This assumption must be fulfilled for a good regression model. The normality test is done on the leftover estimation of the regression model. Causes of normality cases:

a) There is residual data from the regression model that has data values that are far from the data set or extreme data (outliers) so that the data distribution becomes non-normal.
b) There is a natural condition of the data which is basically not normally distributed or otherwise distributed.

These are ways to identify cases of normality:

i) Examination with the graph method, namely, nomality check with the normal output of the P-P Plot or Q-Q plot. Santoso (2000) states that on the off chance that the information spreads around the inclining line and follows the bearing of the corner to corner line, the relapse model satisfies the suspicion of ordinariness. Alternately, if the information spreads a long way from the inclining line and/or doesn't follow the bearing of the slanting line, the relapse model doesn't meet the suspicion of ordinariness.
ii) Testing is done with formal methods, such as normality testing which is carried out through Kolmogorov-Smirnov test, Anderson-Darling test, Shapiro-Wilk test, and Jaque-Bera

test where all of these tests have a hypothesis of interpretation:

H_0: normally distributed

H_1: not normally distributed

The assumption of normality is fulfilled when the normality test results in a P-value (Sign.) is greater than α with $\alpha = 5\%$.

2. Non-Multicollinearity

Multicollinearity is the occurrence of a straight connection between the independent factors in a multiple linear regression model (Gujarati, 2003). Linear relationship between independent variables can occur in the form of a perfect linear relationship (perfect) and a linear relationship that is less perfect (imperfect). The impact of multicollinearity in multiple linear regression models is (Gujarati, 2003 and Widarjono, 2007):

a) OLS (ordinary least square) estimator is still BLUE (best linear unbiased estimator), but it has large variances and covariances so that it is hard to get an exact gauge.
b) As a result of the OLS estimator has a large variance and covariance, the estimation interval will tend to be wider and the t-test statistical value will in general be more extensive and the t-test measurable worth will be little, subsequently making the independet factor genuinely irrelevant to influence the dependent variable.
c) Although individually the independent variable does not affect the dependent variable through the *t* test, the coefficient of determination (R2) in any case be moderately high..

A good multiple regression model is one that doesn't happen multicollinearity. Furthermore, to recognize multicollinearity in multiple linear regression models, it very well may be finished utilizing the variance inflation factor (VIF) and tolerance (TOL) values provided that if the VIF value exceeds score 10, multicollinearity occurs in the regression model. Then if the TOL

value approaches score 1, then multicollinearity does not occur in the regression model.

3. Non-Heteroscedasticity

A good regression model is one that doesn't happen heteroscedasticity. Heteroscedasticity is the variance of the regression model error which isn't consistent or the variance between one blunder and another is extraordinary (Widarjono, 2007). The impact of heteroscedasticity in the regression model is that although the OLS estimator is still linear and unbiased, it has not, at this point least change and causes the standard error calculation of the OLS method to be untrustworthy. In addition, the estimation interval and hypothesis testing based on the *t* and *F* distribution can no longer be trusted to evaluate the regression results. As a result of the heteroscedasticity impact, the OLS estimator does not produce a BLUE estimator and only produces an OLS estimator with a linear unbiased estimator (LUE).

Furthermore, the detection of heteroscedasticity problems is carried out in the regression model. One way that can be used to detect heteroscedasticity in the regression model is the Glejser method. Glejser is an econometric expert and said that the variance value of the regression model error variable depends on the independent variable. Furthermore, to determine whether the error variable pattern contains heteroscedasticity, Glejser suggested to relapse the total estimation of the residuals with the independent variable. If the *F* test results of the regression model are not significant, then there is no heteroscedasticity in the regression model (Widarjono, 2007).

The Glejser test is generally notated as follows:

$|e| = b_1 + b_2 X_2 + v$ (Widarjono, 2007)

where:

$|e|$ = absolute value of the residuals generated from the regression model

X_2 = explanatory variable

In the event that the explanatory variable is measurably huge in influencing the residuals, then it is certain that this model has a heteroscedasticity problem. Apart from using the Glejser test, heteroscedasticity can also be tested through the graph method (scatterplot). According to Santoso (2000) in his book entitled *Buku Latihan SPSS Statistik Parametrik,* he states that a good regression model is one that doesn't happen Heteroscedasticity.

To find out whether there are symptoms of heteroscedasticity, it can be done by analyzing the distribution of points contained in the scatterplot generated from SPSS on the basis of decision making according to Santoso (2000) as follows:

a) If there is a certain pattern, for example, specks that structure a customary example (wavy, extended at that point limited) at that point heteroscedasticity has happened.
b) If there is no unmistakable example and the spots spread above and underneath the 0 on the *Y* axis, there is no heteroscedasticity.

4. Non-Autocoleration

A good regression model is one that does not occur autocorrelation. Autocorrelation is the correlation between one error variable and another error variable. Autocorrelation often happens in time arrangement information and can likewise happen in cross segment information, but it is a rare condition (Widarjono, 2007). The impact of autocorrelation in the regression model is the same as that of the heteroscedasticity described above, although the OLS estimator is as yet linear and unbiased, it no longer has minimum variance and causes the standard error calculation of the OLS method to be untrustworthy.

In addition, the estimation interval and hypothesis testing based on the *t* and *F* distribution can no longer be trusted to evaluate the regression results. As a result of the impact of the autocorrelation in the regression model, the OLS estimator does not produce BLUE estimators and only produces LUE OLS estimators (Widarjono, 2007).

Furthermore, to recognize the presence of autocorrelation in multiple linear regression models, the Durbin-Watson method can be used. Durbin-Watson has succeeded in developing a technique used to distinguish autocorrelation problems in multiple linear regression models using hypothesis testing with popular test statistics as in the following equation.

$$d = \frac{\sum_{t=2}^{n}(e_t - e_{t-1})^2}{\sum_{t=1}^{n} e_t^2} \qquad \text{(Gujarti, 2003)}$$

Where :

e_t = residual period *t*

e_{t-1} = residual period *t* – 1

d = Durbin-watson value

Then, Durbin-Watson succeeded in lowering the critical value of lower limit (*dl*) and upper limit (*du*) so that if the value of *d* is calculated from the above equation lies outside this critical value, then whether there is autocorrelation either positive or negative can be known. Autocorrelation detection in multiple linear regression models using the Durbin-Watson method is as in the table 3.2.

One of the advantages of the Durbin-Watson test which is based on errors is that each computer program for regression always provides statistical information d. The procedure for the Durbin-Watson test is (Widarjono, 2007):

1. Perform OLS method regression and then get the error value.

2. Calculate the *d* value from the above equation (most computer programs automatically calculate the *d* value).
3. With the number of observations (*n*) and a certain number of independent variables excluding the constant (*p*-1), we look for the critical values of *dl* and *du* in the Durbin-Watson statistic.
4. The decision on whether autocorrelation exists in the regression model is based on Table 3.2

Table 3. 2 Durbin-Watson Test Statistics

D-W Value	Result
$0 < d < dl$	There is positive autocorrelation
$dl \leq d \leq du$	Area of doubt; no decision
$du \leq d \leq 4 - du$	There is no positive/negative autocorrelation
$4 - du \leq d \leq 4 - dl$	Area of doubt; no decision
$4 - dl \leq d \leq 4$	There is positive autocorrelation

In addition to the test criteria as in Table 3.2, different measures can likewise be utilized to distinguish the presence of autocorrelation in multiple linear regression models, which are as follows (Santoso, 2000):

1. If the value of $d < -2$, then there is positive autocorrelation.
2. If $-2 \leq d \leq 2$, then there is no autocorrelation.
3. If $d > 2$, then there is negative autocorrelation.

3.9.2 Hypothesis Testing: Testing Parameters Simultaneously (Simultaneously)

This test is carried out to answer the first hypothesis, whether work motivation, job satisfaction, perception of reward, and

perception of supervision simultaneously have an influence on performance of lecturers in the teaching and learning process.

The simultaneous parameter testing procedure is as follows:

1. Making a hypothesis.
   Ho : $\beta_1 = \beta_2 = \beta_3 = ... = \beta_{p-1} = 0$
   H_1 : Not all β_k are equal to 0, for $k = 1, 2, \ldots, p\text{-}1$.
   (Kutner, et.al., 2004) or:
   H_0 : $X_1, X_2, \ldots, X_k$ Variable simultaneously have no impact on the dependent variable
   H_1 : $X_1, X_2, \ldots, X_k$ Variable simultaneously affect the dependent variable
2. Determine The degree of significance (α).
   The degree of significance (α) which is frequently utilized in research is 5%.
3. Deciding test statistics.
   The test statistics used are:

$$F = \frac{RKR}{RKE} = \frac{\frac{JKR}{k-1}}{\frac{JKE}{N-k}}$$

   with:
   RKR is the average of squares of the regression (can be acquired from the Analysis of Variance Table).
   RKE is the average error squared (can be acquired from the Analysis of Variance Table).
   JKR = Sum of squares of regression
   JKT = Total Sum of Squares
   JKE = Sum of squares of error
   N = Number of respondents
   k = number of variables
4. Determining the area of criticism (rejection H_0).
   The critical area used is that H_0 is rejected if $F > F$ (α; *p*-1, *n* – *p*). With $F_{(\alpha;\ p\text{-}1,\ n-\ p}$ is called *F* table. Apart from the areas of

criticism above, other areas of criticism can also be used, in the event that the opportunity value (Sig.) < Significance level (α), then H_0 is rejected.

5. Taking conclusions.

To discover how much impact the independent variables (work motivation, job satisfaction, perception rewards, and perception of supervision) on the dependent variable (performance of lecturers) can be seen from the coefficient of determination. The coefficient of determination is expressed as R^2 for multiple linear regression testing that includes more than two variables. The coefficient of determination is to determine the extent of the absolute variety in the dependent variable *Y* which can be clarified or clarified by the independent variables *X* that are in the multiple linear regression equation model together. Then R^2 will be determined by the formula:

$$R^2 = \frac{JKR}{JKT} = \frac{JKT - JKE}{JKT}$$

$$JKE = \sum (y_i - \hat{y}_i)^2$$

$$JKT = \sum (y_i - \bar{y})^2$$

$$JKR = \sum (\hat{y}_i - \bar{y})^2$$

With :

JKR = Sum of Squares of Regression

JKT = Total Sum of Squares

JKE = Sum of Squares of Error

There is something to be considered when interpreting multiple regression R^2 values. It is consistently conceivable to expand the R^2 value by adding the independent variable to the regression or having something to do with the dependent variable or not. For the regression results to be reliable, the observed

number must be significantly greater than the estimated coefficient. Thus, it is advisable to calculate the adjusted R^2.

$$(adjusted\ R^2) = 1 - \frac{(1 - R^2)(N - 1)}{N - k}$$

N = Number of respondents

k = number of variables

3.9.3 Hypothesis Testing: Testing Individual Parameters (Partial)

This test is conducted to answer the second to fifth hypotheses, whether each of the independent variables (work motivation, job satisfaction, perception of reward, and perception of supervision) affects the performance of lecturers in implementing the teaching and learning process. The partial parameter testing procedure is as follows:

1. Make a hypothesis.

   Ho: $\beta_k = 0$

   H_1: $\beta_k \neq 0$

   (Kutner, et.al., 2004) or:

   H_0: The independent variable to k has no impact on the dependent variable

   H_1: The independent variable to k influences the dependent variable

2. Determine the degree of significance (α).

   The degree of significance (α) which is frequently utilized in research is 5%.

3. Determine the test statistics.

   The test statistics used are:

$$t = \frac{b_k}{s(b_k)}$$

   With:

b_k is the estimated value of β_k parameter (obtained from the OLS / Ordinary Least Square method).

$s(b_k)$ is the standard deviation of the estimated value of the parameter β_k.

4. Determine the area of criticism (rejection H_0). The areas of criticism used are:

   H_0 is rejected if $t > t_{\left(\frac{\alpha}{2};n-p\right)}$ or $t < -t_{\left(\frac{\alpha}{2};n-p\right)}$ with $t_{\left(\frac{\alpha}{2};n-p\right)}$ is called *t* tabel. Apart from the areas of criticism above, other areas of criticism can also be used, in the event that the opportunity value (Sig.) < Significance level (α), then H_0 is rejected.

5. Take conclusion

   To discover how much impact of the independent variables (work motivation, job satisfaction, perception of reward, and perception of supervision) partially on the dependent variable (performance) can be seen from the partial correlation coefficient. Correlation coefficient is used to quantify the closeness of the relationship between 2 factors, while other variables are considered constant.

   Examples of partial correlation coefficients for 3 variables:

$$r_{Y1,2} = \frac{r_{Y1} - r_{Y2}r_{12}}{\sqrt{(1-r_{Y2}^2)(1-r_{12}^2)}}$$

$$r_{Y2,1} = \frac{r_{Y2} - r_{Y1}r_{12}}{\sqrt{(1-r_{Y1}^2)(1-r_{12}^2)}}$$

$$r_{12,Y} = \frac{r_{12} - r_{Y1}r_{Y2}}{\sqrt{(1-r_{Y1}^2)(1-r_{Y2}^2)}}$$

$r_{Y1.2}$ = correlation coefficient between *Y* dan X_1, X_2 is constant

$r_{Y2.1}$ = correlation coefficient between *Y* and X_2, *Y is* constant

$r_{12.Y}$ = correlation coefficient between X1 and X2, Y is constant

Partial determination coefficients for 3 variables: $r_{Y1,2}^2, r_{Y2,1}^2, r_{12,Y}^2$

Chapter IV

RESEARCH RESULTS AND DISCUSSION

4.1 DESCRIPTION OF THE TRIAL RESULTS OF THE QUESTIONNAIRE

Before being given to the research sample, the questionnaire was first tried out on members of the population who were not the samples. The trial was conducted before the questionnaire was given to the sample. Questionnaire trials were given to 25 lecturers in UIN Walisongo which were spread over 5 faculties. The questionnaire that was tested contained 69 statement items, consisting of 25 statements for performance variables, 11 statements for work motivation variables, 9 statements for job satisfaction variables, 14 statements for perception of reward variables, and 10 statements for perception of supervision.

4.1.1 Validity of Questionnaire

The validity of the questionnaire (survey) was determined utilizing the product moment correlation formula using the raw score. The r_{xy} value from the estimation results will be contrasted

and the product moment *r* price in the table at the 0.05 significance level. If $r_{xy} > r_{tab,}$ at that point the thing is declared valid. The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 (*N* = number of respondents) and the 5% significance level is *r* = 0.413. In view of the aftereffects of the estimation, it was discovered that out of 69 statement items, 62 items were declared valid and 7 items were invalid (attachments 1, 3, 5, 7, 9). The calculation results for the statements on each variable can be found in the table 4.

Table 4. 1 Questionnaire Validity

Variable	Total questions	Valid	Invalid
Performance of lecturers	25	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	4, 15
Work motivation	11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	11
Work satisfaction	9	1, 2, 3, 4, 5, 6, 7, 8, 9	0
Perception of reward	14	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2, 11, 13
Perception of supervision	10	1, 2, 3, 4, 5, 6, 8, 9, 10	7

4.1.2 Reliability of Questionnaire

The reliability of the poll was determined utilizing the Cronbach Alpha equation. The estimation of *r* from the calculation results with the Cronbach Alpha formula will then be compared with the price of *r* table = 0.05 and dk = *N* - 2 (*N* = number of respondents). If $r_{count} > r_{table}$, then the instrument is declared reliable.

In view of the consequences of estimations utilizing SPSS (attachment 2, 4, 6, 8, 10), the Cronbach's Alpha worth is obtained as in the table 4.2. This value is more noteworthy than the estimation of *r* table (0.413) because *r* count > *r* table, it very well may be expressed that the poll is reliable.

Table 4. 2 Questionnaire Reliability

Variable	The value of alpha cronbach (r_i)	Table *r*	Information
Performance of lecturers	0.847	0.413	Very high reliability
Work motivation	0,781	0.413	High reliability
Job satisfaction	0.684	0.413	High reliability
Perception of reward	0.672	0.413	High reliability
Perception of supervision	0.775	0.413	High reliability

4.2 DESCRIPTION OF THE RESEARCH RESULTS

Exploration information assortment was done by disseminating polls to lecturers at UIN Walisongo Semarang. From 150 questionnaires distributed, 103 questionnaire is returned with a response rate of 68.67%. From 103 returned questionnaires, 87 questionnaires could be analyzed while 16 questionnaires could not be analyzed because the respondents only filled in part of the list of statements. Thus, the quantity of tests in this investigation was 87 people. The total number of Civil servant (*PNS*) lecturers at UIN Walisongo is 321 people. So that the percentage of the sample used is 27.1%. Sample details can be found in the table 4.3.

Table 4. 3 Sample Details

No	Faculties	Total	Percentage
1	*Syariah*	8	9.20
2	*FEBI*	12	13.79
3	*Ushuludin*	14	16.09
4	*FITK*	40	45.98
5	*FDK*	13	14.94
	Total	87	100

4.2.1 Data Description of Work Motivation Questionnaire

Each statement in the lecturer's work motivation questionnaire consists of 4 answer choices. Data of the calculation of the work motivation questionnaire can be found in the table 4.4.

Table 4. 4 Data of Work Motivation Questionnaire

No	Indicator Score								Total	%
	4		3		2		1			
	Freq	%	Freq	%	Freq	%	Freq	%		
1	67	77	18	21	2	2	0	0	87	100
2	68	78	16	18	3	3	0	0	87	100
3	60	69	23	26	2	2	2	2	87	100
4	28	32	25	29	18	21	16	18	87	100
5	68	78	14	16	4	5	1	1	87	100
6	71	82	15	17	0	0	1	1	87	100
7	71	82	13	15	2	2	1	1	87	100
8	70	80	14	16	2	2	1	1	87	100
9	68	78	15	17	3	3	1	1	87	100
10	68	78	14	16	4	5	1	1	87	100
	639		167		40		24			

From the table above, the work motivation of the lecturer with score 4 = 639 (64 respondents) for all statements, score 3 =

167 (17 respondents), with score 2 = 40 (4 respondents), and score 1 = 24 (2 respondents).

4.2.2 Data Description of Job Satisfaction Questionnaire

Each statement on the job satisfaction questionnaire consists of 4 answer choices. Data of the calculation of the job satisfaction questionnaire can be found in the table 4.5.

Table 4. 5 Data of Job Satisfaction Questionnaire

No	Indicator								Total	%
	4		3		2		1			
	Freq	%	Freq	%	Freq	%	Freq	%		
1	60	69	18	21	6	7	3	3	87	100
2	7	8	48	55	26	30	6	7	87	100
3	23	26	35	40	19	22	10	11	87	100
4	17	20	32	37	29	33	9	10	87	100
5	19	22	41	47	18	21	9	10	87	100
6	49	56	27	31	4	5	7	8	87	100
7	43	49	34	39	7	8	3	3	87	100
8	56	64	22	25	4	5	5	6	87	100
9	23	26	33	38	24	28	7	8	87	100
	297		290		137		59			

From the table above, the job satisfaction of the lecturer with score 4 = 297 (33 respondents) for all statements, score 3 = 290 (32 respondents), score 2 = 137 (15 respondents), and score 1 = 59 (7 respondents)

4.2.3 Data Description of Perception of Reward Questionnaire

Each statement on the perception of reward questionnaire consists of 4 answer choices. Data of the calculation of perception of reward questionnaire can be found in the table 4.6.

Table 4. 6 Data of Perception of Reward Questionnaire

No	Indicator								Total	%
	4		3		2		1			
	Freq	%	Freq	%	Freq	%	Freq	%		
1	15	17	49	56	18	21	5	6	87	100
2	6	7	44	51	32	37	5	6	87	100
3	10	11	39	45	26	30	12	14	87	100
4	6	7	48	55	22	25	11	13	87	100
5	9	10	40	46	30	34	8	9	87	100
6	6	7	46	53	25	29	10	11	87	100
7	29	33	40	46	14	16	4	5	87	100
8	35	40	44	51	5	6	3	3	87	100
9	30	34	43	49	9	10	5	6	87	100
10	36	41	40	46	8	9	3	3	87	100
11	32	37	47	54	6	7	2	2	87	100
	214		480		195		68			

From the table above, according to perception of lecturers about the rewards given by the institution, score 4 = 214 (19 respondents) for all statements, score 3 = 480 (44 respondents), with score 2 = 195 (18 respondents), and score 1 = 68 (6 respondents).

4.2.4 Data Description of Perception of Supervision Questionnaire

Each statement on the perception of supervision questionnaire consists of 4 answer choices. Data of the calculation of perception of supervision questionnaire can be found in the table 4.7.

Table 4. 7 Data of Perception of Supervision Questionnaire

No	Indicator								Total	%
	4		3		2		1			
	Freq	%	Freq	%	Freq	%	Freq	%		
1	6	7	55	63	19	22	7	8	87	100
2	19	22	47	54	16	18	5	6	87	100

3	8	9	52	60	20	23	7	8	87	100
4	20	23	37	43	23	26	7	8	87	100
5	14	16	44	51	22	25	7	8	87	100
6	20	23	44	51	17	20	6	7	87	100
7	25	29	42	48	15	17	5	6	87	100
8	13	15	44	51	24	28	6	7	87	100
9	13	15	41	47	27	31	6	7	87	100
	138		406		183		56			

From the table above, the perceptions of supervision carried out by HoD (Head of Department) = 138 (15 respondents) for all statement items, score 3 = 406 (45 respondents), with score 2 = 183 (20 respondents), and score 1 = 56 (6 respondents).

4.2.5 Data Description of Performance of Lecturers Questionnaire

Each statement in the lecturer performance questionnaire consists of 4 answer choices (always (A), often (O), Rarely (R), and never (N). For positive statements; A = 4, O = 3, R = 2, and N = 1. For negative statements; A = 1, O = 2, R = 3, and N = 4. Data of the calculation of performance of lecturers questionnaire can be found in the table 4.8.

Table 4. 8 Data of Perception of Reward Questionnaire

No	Indicator								Total	%
	4		3		2		1			
	Freq	%	Freq	%	Freq	%	Freq	%		
1	28	32	36	41	19	22	4	5	87	100
2	73	84	10	11	4	5	0	0	87	100
3	68	78	16	18	3	3	0	0	87	100
4	52	60	29	33	6	7	0	0	87	100
5	21	24	40	46	20	23	6	7	87	100
6	48	55	28	32	10	11	1	1	87	100
7	68	78	14	16	4	5	1	1	87	100
8	52	60	24	28	11	13	0	0	87	100

9	45	52	29	33	10	11	3	3	87	100
10	74	85	9	10	2	2	2	2	87	100
11	30	34	41	47	13	15	3	3	87	100
12	47	54	30	34	10	11	0	0	87	100
13	41	47	39	45	5	6	2	2	87	100
14	38	44	43	49	5	6	1	1	87	100
15	42	48	38	44	5	6	2	2	87	100
16	56	64	27	31	3	3	1	1	87	100
17	53	61	24	28	9	10	1	1	87	100
18	44	51	39	45	3	3	1	1	87	100
19	69	79	10	11	6	7	2	2	87	100
20	76	87	7	8	3	3	1	1	87	100
21	67	77	15	17	4	5	1	1	87	100
22	42	48	34	39	8	9	3	3	87	100
23	40	46	34	39	11	13	2	2	87	100
	1174		616		174		37			

From the table above, the performance of lecturers with score 4 = 1174 (51 respondents) for all statements, with score 3 = 616 (27 respondents), with score 2 = 174 (8 respondents), and score 1 = 37 (2 respondents).

4.3 DATA ANALYSIS

4.3.1 Statistical Description

Table 4. 9 Table Description of the Statistics of Variables

Descriptive Statistics

	N	Mini-mum	Maxi-mum	Mean	Std. Deviation
K	87	64	92	79.64	7.026
MK	87	31	40	36.33	2.735
KK	87	17	35	27.48	3.788
PI	87	26	37	31.70	2.961
PS	87	9	36	25.20	4.812

The table above shows the summary statistics for each variable with the following information:

K = *kinerja* (performance)
MK = *Motivasi Kerja* (Work Motivation)
KK = *Kepuasaan Kerja* (Job Satisfaction)
PI = *Persepsi Imbalan* (Perception of Reward)
PS = *Persepsi Supervisi* (Perception of Supervision)

4.3.2 Classic Assumption Test

Before carrying out hypothesis testing, first, a classic assumption test is carried out which is intended to guarantee that a multiple linear regression model can be utilized or not. On the off chance that the traditional suspicion test has been satisfied, multiple linear regression statistical tests can be utilized.

1. Normality Test

Testing the normality of the data in this examination was brought out through graphical investigation created through regression estimations with SPSS. Santoso (2000) states that if the information spreads around the inclining line and follows the heading of the corner to corner line, the regression model satisfies the presumption of ordinariness. Alternately, if the information spreads a long way from the corner to corner line and/or doesn't follow the heading of the inclining line, the regression model doesn't meet the supposition of ordinariness. The aftereffects of the ordinariness test can be found in figure 4.1.

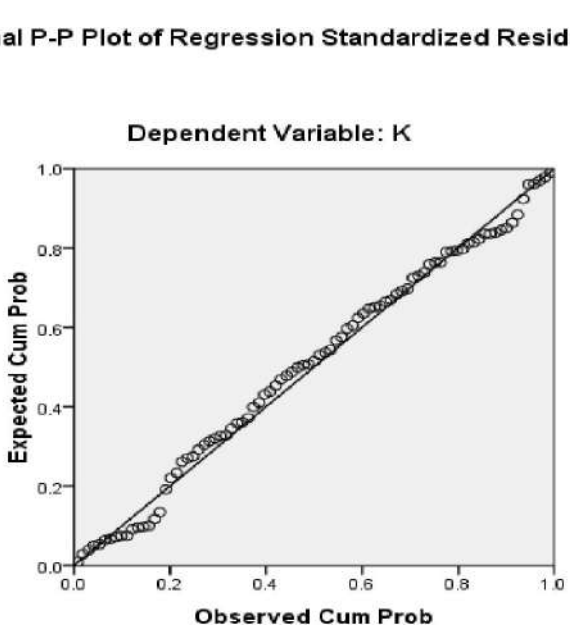

Figure 4. 1 Normality Test Using SPSS

From the figure above, it tends to be reasoned that the information utilized show typical signs. In this graph, the spots spread around the corner to corner line and the spread follows the heading of the inclining line. At that point, the regression model is reasonable to be utilized to anticipate the exhibition of teachers dependent on information on the independent variable.

2. Heteroscedasticity Test

The heteroscedasticity test plans to test whether the relapse model happens or there is an imbalance of difference of the leftover that begins starting with one perception then onto the next. In the event that the change of the leftover incentive starting with one perception then onto the next is consistent, it is called Homoscedasticity. What's more, if the fluctuation contrasts starting with one perception then onto the next, it is called heteroscedasticity.

To find out whether there are symptoms of heteroscedasticity, it can be done by analyzing the distribution of points

contained in the scatterplot generated from SPSS based on decision making according to Santoso (2000), as follows:

a) If there is a sure example, for example, dabs that structure a standard example (wavy, extended at that point limited) at that point heteroscedasticity has happened.
b) If there is no reasonable example and the spots spread above and beneath the 0 on the *Y* hub, there is no heteroscedasticity.

In light of the consequences of the heteroscedasticity test from SPSS, the Scatterplot is gotten which can be found in figure 4.2.

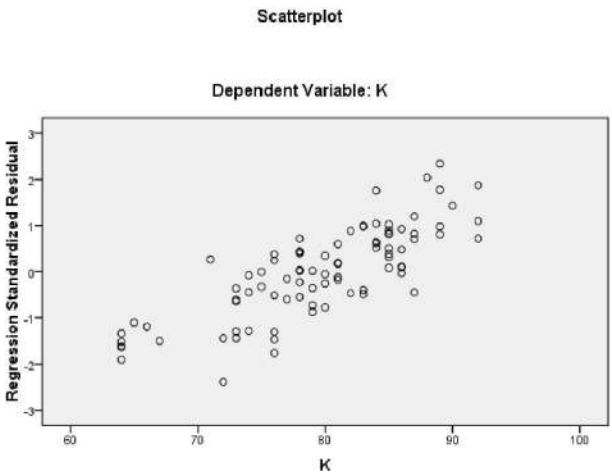

Figure 4. 2 Heteroscedasticity Test of Scatterplot

In the image over, the irregular spreading dabs don't frame a reasonable example, either above or underneath the number 0 on the *Y* hub. It very well may be reasoned that there is no heteroscedasticity in the regression model.

3. Multicollinearity Test

The reason for utilizing this test is to test whether the regression model finds a relationship between's the free factors. In the event that there is a connection, at that point, there is a multicollinearity issue. A decent regression model ought not have a

connection between's the independent variables. The multicollinearity test results can be found in the table 4.10.

Table 4. 10 Multicollinearity Test Table

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	MK	.799	1.251
	KK	.826	1.211
	PI	.850	1.176
	PS	.918	1.089

From the table above, the VIF or the Variance Inflation Factor can explain variables that have multicollinearity problems. According to Santoso (2000), in the event that the VIF is more prominent than 5, at that point the variable has multicollinearity issues with different factors. The results of the multicollinearity test of this study obtained the VIF of the variables of work motivation (MK), job satisfaction (KK), perception of reward (PI), and perception of supervision (PS) were still below 5. The tolerance value for MK = 0.799, KK = 0.826, PI = 0.850, and PS = 0.918. The tolerance value is close to 1. This demonstrates that there is no multicollinearity in this examination.

4. Autocorrelation Test

The autocorrelation test means to test whether in the direct relapse model there is a relationship between's jumbling mistake in period t and bewildering blunder in the past period. In the event that there is a connection, it is called an autocorrelation issue. The consequences of the autocorrelation test can be found in the table 4.11.

Table 4. 11 Table of Durbin-Watson Test Results.

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	.600[a]	.361	.329	1.624

In this study, the Durbin-Watson (*d*) value = 1.569. The value of the Durbin-Watson table with 4 independent variables and a sample size of 87 responses is *dl* = 1.5567 and *du* = 1.7485. based on the criteria, *d* > *dl* and *d* < *du*. It tends to be clarified that the connection coefficient is between the lower and maximum cut-off points. The value of d = 1.624 is between the values of -2 and 2 or -2 ≤ 1.624 ≤ 2. According to Santoso (2000), this symptom shows no autocorrelation.

4.3.3 Hypothesis Testing

1. Simultaneous Test (*F* Test)

Simultaneous test is a test that shows whether every autonomous variable (work motivation, job satisfaction, perception of reward, and perception of supervision) significantly affect the reliant variable (performance). The simultaneous test results with the help of SPSS are in the table 4.12.

Table 4. 12 F test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1530.683	4	382.671	11.556	.000[a]
	Residual	2715.271	82	33.113		
	Total	4245.954	86			

a. Predictors: (Constant), PS, KK, PI, MK

b. Dependent Variable: K

In view of the consequences of the count, it is obtained that *F* is equal to 11.556 with a significance level of 0.000. The *F* table values for $k = 5$ and $N = 87$ (k - 1, N - k) or (4.82) is 2.48. Because $F_{count} > F_{table}$, so very well may be concluded that in this study, H_0 is rejected and H_a is accepted. This means that at the 95% level of confidence, there is at least an independent variable that significantly affects the dependent variable. So, collectively, the variables of work motivation, job satisfaction, perception of reward, and perception of supervision significantly affect the performance of lecturers in implementing the teaching and learning process.

Table 4. 13 Adjusted R Square Table

Model	R	R Square	Adjusted R Square
1	.600[a]	.361	.329

The coefficient of determination can be seen from the adjusted R Square value, which is 0.329. This shows that the ability of the variables of work motivation, job satisfaction, perception reward, and perception of supervision in influencing the variable of performance of lecturers is only 32.9% while the rest is impacted by different elements.

2. Partial Test (*t* Test)

In view of the consequences of multiple regression analysis, data is obtained as in the table 4.14.

Table 4. 14 Table of t Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.165	9.392		1.934	.057
	MK	.950	.254	.370	3.744	.000
	KK	.373	.180	.201	2.067	.042
	PI	.423	.227	.178	1.863	.066
	PS	.131	.135	.090	.974	.333

The results of the regression calculation for variable *X* on variable *Y* can be predicted as follows:

$Y = 18.165 + 0.950\ X_1 + 0.373\ X_2 + 0.423\ X_3 + 0.131\ X_4$

From this equation, the regression coefficient of the work motivation variable (X_1) has a positive sign of 0.950 and this shows that the effect of work motivation is in line with performance of lecturers. The regression coefficient of the job satisfaction variable (X_2) has a positive sign of 0.373 and this indicates that the impact of occupation fulfillment is in line with execution of lecturers. The regression coefficient of perception of reward variable (X_3) has a positive sign of 0.423 and this shows that the impact of occupation fulfillment is in line with performance of lecturers. The regression coefficient of the perception of supervision variable (X_4) has a positive sign of 0.131 and this shows that the effect of job satisfaction is in line with the performance of lecturers.

The partial influence of the variable of work motivation, job satisfaction, perception of rewards, and perceptions of supervision can also be seen in table 4.14. The *t* value for the work motivation variable / MK (X_1) is 3,744. The *t* value for the job satisfaction variable/ KK (X_2) is 2.067. The *t* value for the perception of reward variable / PI (X_3) is 1.863. The *t* value for perception of supervision variable / PS (X_4) is 0.974. Meanwhile, the t_{table} value is obtained by determining the degree of freedom ($N - k$) at the alpha level of 0.05 or (87 - 5 = 82), the alpha level of 0.05 is the t_{table} of 1.989.

In view of the calculation results, it is found that for the work motivation variable, *t* count is greater than *t* table. In this way, it tends to be reasoned that H_1 is accepted. At the end of the day, motivation has an influence on performance of lecturers in the instructing and learning measure. For the job satisfaction variable, t_{count} is greater than t_{table}. This also states that H_1 is accepted,

or in other words, job satisfaction has an influence on performance of lecturers in the instructing and learning measure. In contrast to the variables of work motivation and job satisfaction, perception of reward and perception of supervision each have a smaller t_{value} than the t_{table}. Because t_{count} is smaller than t_{table}, H_o is accepted. Thus, the perception of reward has no effect on performance of lecturers in the teaching and learning process. Likewise, the perception of supervision has no effect on the execution of speakers in the instructing and learning measure.

In this way, in view of the halfway test, it tends to be presumed that the factors of work motivation and job satisfaction have an influence on the execution of speakers in the instructing and learning measure, while the variables of perception of reward and perception of supervision have no effect on the execution of instructors in the educating and learning measure.

To find out how much influences of the independent variables (work motivation, job satisfaction, perception of reward, and perception of supervision), partially on the dependent variable (performance), it very well may be seen from the incomplete correlation coefficient. Based on the calculation of the correlation coefficient using SPSS, the following results were:

Table 4. 15 Table of Partial Correlation of Independent to Dependents Variables

No	Partial Correlation	Value of r	r^2	r^2 x 100%
1	rY1.234	0.382	0.1459	14.59
2	rY2.134	0.223	0.0497	4.97
3	rY3.124	0.201	0.0404	4.04
4	rY4.123	0.107	0.0114	1.14

From the table 4.15, the partial correlation coefficient between work motivation and performance variables is 0.382 and $r^2_{Y1.234}$ is 0.1459. In this case, the other variables (job satisfaction, perception of reward, and perception of supervision) are considered constant. The partial correlation coefficient between job satisfaction and performance variables (work motivation, perception of reward, and perception of supervision are considered constant) is 0.223, so the r^2 is 0.0497. The value of 0.201 shows the partial correlation coefficient between the perceptions of reward variable on performance (other variables are considered constant), so that the value of r^2 is 0.0404. The partial correlation between the variable of perception of supervision towards performance variable (the other variables are considered constant) is 0.107 and r^2 is 0.0114.

4.4 DISCUSSION

The population in this study were all civil servant lecturers (*PNS*) at UIN Walisongo Semarang, totaling 321 people. The samples were 87 people or 27.1% of the total population. The data in this research is a questionnaire. The number of questionnaires distributed to respondents was 150 copies, but only 103 were returned and only 87 could be analyzed.

After collecting data, then analysis will be carried out. In light of the aftereffects of the SPSS estimation, the determined *F*count = 11.556 with a significance *F* of 0.000. At the 5% significance level, the value of *F* table with $k = 5$ and $N = 87$ so that (k - 1, N - k) or (4.82) is 2.48. Because *F*count is greater than *F*table, H_1 which states that work motivation, job satisfaction, perception of reward, and perception of supervision simultaneously have an influence on the performance of lecturers in the teaching and learning process is accepted.

The coefficient of determination can be seen from the adjusted R Square value, which is 0.329. This shows that the ability of the 4 independent variables in influencing the variable of

performance is only 32.9% while the rest is influenced by other factors.

The equation for the regression line is $Y = 18.165 + 0.950\ X_1 + 0.373\ X_2 + 0.423\ X_3 + 0.131\ X_4$. This can be interpreted that the performance of lecturers without the support of the 4 independent variables is 18.165. Every change or improvement between the 4 independent variables will determine the level of performance of lecturers. Every 1-point increase in the work motivation variable, this results in an increase in score (variable of performance of lecturers) by 0.950. If variable of job satisfaction increases by 1 point, the performance variable will increase by 0.373. Likewise, with the variable of perception of rewards. If the variable increases by 1 point, the performance variable will increase by 0.423. And if the variable of perception of supervision increases by 1 point, the performance variable will increase by 0.131. So, the higher result of the 4 independent simultaneously, these will also increase the performance of lecturers in carrying out the teaching and learning process.

Based on the results of the SPSS calculation on the standardized coefficient, the independent variable that has the most impact on the performance of lecturers is the work motivation variable (X_1), which is 37%. The job satisfaction variable (X_2) is in the second place, which is 20.1%. Perception reward variable (X_3) affects performance of lecturers by 17.8%. The variable that has the lowest impact on performance of lecturers is perception of supervision (X_4), which is 9%. This informs that the work motivation of lecturers has the potential to affect the exhibition of lecturers doing the educating and learning measure.

Work motivation, job satisfaction, perception of supervision, and perception of reward simultaneously have an influence on performance of lecturers in carrying out the teaching and learning process. This is also stated by Gybson. According to Gybson (1996), there are three main variables that affect individual

performance (individual, psychological, and organizational variables). Singular factors incorporate capacities, abilities, fulfillment, foundation, qualities/socioeconomics: age, sexual orientation, conjugal status, long stretches of administration and instruction. Mental factors incorporate discernments, perspectives, character, learning and inspiration. Authoritative factors incorporate administration, rewards, working conditions, and oversight.

Apart from conducting the test (simultaneous test), a partial test was additionally led to determine the impact of every factor individually on performance of lecturers. From the calculation using SPSS, it is found that the *t* value for the work motivation variable / MK (X_1) is 3.744. The *t* value for the variable of job satisfaction / KK (X_2) is 2.067. The *t* value for the perception of reward variable / PI (X_3) is 1.863. The *t* value for the variable of perception of supervision / PS (X_4) is 0.974. Meanwhile, the t_{table} value was obtained by determining the degree of freedom ($N - k$) at the alpha level of 0.05 or (87 - 5 = 82), the alpha level of 0.05 is the t_{table} of 1.989. By comparing between t_{count} and t_{table}, it is found that t_{count} for work motivation and job satisfaction variables is greater than t_{table}. Meanwhile, t_{count} for perception of reward and perception of supervision variables is smaller than t_{table}.

In view of the consequences of this examination, it very well may be reasoned that partially the variables of work motivation and job satisfaction respectively accept H_1 and reject H_o so that they have a significant effect on the performance of lecturers in carrying out the teaching and learning process. Meanwhile, perception of reward and perception of supervision accept H_o and reject H_1 so that partially they do not have a real effect on performance of lecturers in implementing the teaching and learning process.

To discover how much influence the 4 independent variables partially on the dependent variable (performance) can be

seen from the partial correlation coefficient. From the results of the SPSS calculation, the partial correlation coefficient between work motivation and performance variables is 0.382 and $r^2_{Y1.234}$ is 0.1459. This shows that partially the impact of work motivation on performance is 14.59%.

The partial correlation coefficient between the variables of job satisfaction and the performance is 0.223 so that the $r^2_{Y2.134}$ is 0.0497. The value of 0.0497 shows that partially the job satisfaction variable affects performance by 4.97%. The value of 0.201 shows the partial correlation coefficient between the perceptions of reward variable on performance so that $r^2_{Y3.124}$ value is 0.0404. The effect of the variable of perception of reward on performance partially is 4.04%. The partial correlation between the perception of supervision variable on performance is 0.107 and $r^2_{Y1.234}$ is 0.0114 so that the effect of perception of supervision on performance is partially 1.14%. Along these lines, it tends to be inferred that partially the dominant variable that affects performance is work motivation. The second and third place are the variables of job satisfaction and perception of reward. The perception of supervision variable is in the lowest order.

This is in line with the ends dependent on the consequences of the SPSS calculation on the standardized coefficient. In this calculation, it is found that the independent variable that most influences performance of lecturers is the work motivation variable (X_1) followed by the job satisfaction variable (X_2) which is in the second place, the perception of reward variable (X_3) is in the third place and the variable that has the lowest effect on the performance of lecturers is the variable of perception of supervision (X_4).

The large impact of the independent variable on the performance lecturers also shows that this variable significantly affects performance. The aftereffects of the *t* test confirm this conclusion. In view of the t test, it was discovered that the variables that

significantly affected performance were the variables of work motivation and job satisfaction. This is also obtained in the results of the partial correlation coefficient. From these results, work motivation and job satisfaction rank first and second in influencing performance. Meanwhile, perceptions of reward and perception of supervision variables were in the lowest order. The *t* test also strengthens these results, the variable of perception of reward and perception of supervision do not significantly affect performance.

The consequences of model testing show that work inspiration and occupation fulfillment significantly affect performance of lecturers. Thus, the implication can be taken that the improvement of performance of lecturers can be done by providing motivation. The motivation can be in the form of reward for excellent lecturers. In addition, the method used by higher education leaders to motivate the lecturers to complete the instructing and learning measure is to evaluate each lecturer every semester. At the beginning of each semester, lecturers are required to make plans such as syllabus and *SAP* which will be held for one semester.

Apart from work motivation, performance of lecturers can also be improved through job satisfaction. Lecturers who are happy with the work that has been done will improve their performance. A lecturer will feel satisfied if his students understand the material taught by the lecturer, the lecturer teaches in accordance with their field of expertise, the lecturer teaches with adequate facilities and infrastructure. For enabling lecturers to teach well, it needs to be supported by increasing the competence of lecturers, both professional, pedagogical, social, and personality. For example, opportunities for further study are open, opportunities and dissemination of scientific research, and opportunities for attending scientific forums.

In this study, the only variables that influence performance of lecturers are work motivation and job satisfaction. Meanwhile, perception of reward and perception of supervision variables had no effect. The variable of perception of reward has no effect because the amount of the lecturer salary has been determined. This variable can be increased by providing honorarium outside of salary to lecturers, for example, question making fees, corrector fees, etc. But the thing needs to be emphasized is that the reward given to lecturers is because of their good performances and do not expect rewards for their performances.

The variable of perception of supervision also has no effect on lecturer performance. This is due to the absence of a role from the head of department to improve the nature of instructing and learning in class. To increase the influence of the variable of perception of supervision on instructor execution, it is important to optimize the role of the head of the department in providing exemplary, guidance, direction, and evaluation to each lecturer so that, there will be an input and improvement in implementing the teaching and learning process. The evaluation given by the head of the department is not having intention to look for deficiencies in lecturers or patronize but to improve the nature of realizing so the learning interaction turns out to be more optimal.

Chapter V

CONCLUSIONS AND SUGGESTIONS

5.1 CONCLUSION

From the consequences of the research that has been done, it can be concluded that:

1. Simultaneously or collectively, the variables of work motivation, job satisfaction, perception of rewards, and perceptions of supervision have a significant effect on the lecturers performance in implementing the teaching and learning process. This is based on the results of the calculation of the *F* test using SPSS which obtained a calculated *F* value of 11,556 with a significance level of 0,000. The *F* table values for $k = 5$ and $N = 87$ so that (k - 1, N - k) or (4.82) is 2.48. Because $F_{count} > F_{table}$, so it can be decided that this study rejects H_0 and accepts H_1. This means that at the 95% level of confidence there is at least an independent variable (work motivation, job satisfaction, perception of reward, or perception of

supervision) which has a significant effect on the dependent variable (performance).

2. Partially, work motivation variable has a significant influence on lecturer performance. This depends on the consequences of the SPSS calculation for the *t* test which states that the *t* count for the work motivation variable / MK (X_1) is 3.744 while the *t* table at $\alpha = 0.05$ with dk = 85 is 1.989. Because *t* count is greater than *t* table, it can be concluded that H_1 is accepted.
3. Partially, job satisfaction variable has a significant influence on the performance of lecturers. This is based on the results of the SPSS calculation for the *t* test which states that the *t* count for the job satisfaction variable / KK (X_2) is 2.067 while the *t* table at $\alpha = 0.05$ with dk = 85 is 1.989. Because *t* count is greater than *t* table, it can be concluded that H_1 is accepted.
4. Partially, perception of reward variable does not have a significant effect on lecturers performance in implementing the teaching and learning process. This is based on the results of the SPSS calculation for the *t* test which states that the *t* value for the perception of reward variable / PI (X_3) is 1.863 while the *t* table at $\alpha = 0.05$ with dk = 85 is 1.989. Because *t* count is smaller than *t* table, it tends to be presumed that H_0 is accepted.
5. Partially, the variable of perception of supervision does not have a significant effect on lecturers performance in implementing the teaching and learning process. This is based on the results of the SPSS calculation for the *t* test which states that the *t* count for the variable of perception of supervision / PS (X_4) is 0.974 while the *t* table at $\alpha = 0.05$ with dk = 85 is 1.989. Because *t* count is smaller than *t* table, it can be concluded that H_0 is accepted.

5.2 SUGGESSTION

Suggestions that can be obtained from the results of this study are to improve the presentation of instructors in doing the educating and learning measure by providing motivation to the lecturers. The motivation can be in form of rewards for outstanding lecturers or by evaluating each lecturer every semester. At the beginning of each semester, lecturers are required to make lesson plans such as syllabus and *SAP (Satuan Acara Perkuliahan)* which will be held for one semester.

Apart from work motivation, lecturer performance can also be improved through job satisfaction. A lecturer will be satisfied if his students understand the material taught by the lecturer, the lecturer teaches in accordance with their field of expertise, the lecturer teaches with adequate facilities and infrastructure. For enabling lecturers to be able to teach well, they needs to be supported by increasing the competence of lecturers, both professional, pedagogical, social, and personality. For example, opportunities for further study are open, opportunities and dissemination of scientific research, and opportunities for attending scientific forums.

In this study, the variables of perceptions of reward and perception of supervision had no effect on the performance of lecturers in completing the instructing and learning measure. However, this variable needs to be improved with the goal that it significantly affects increasing the performance of lecturers. To increase the perception of reward, the welfare of lecturers must be improved. For example, by providing fees for correctors, fees for writing questions, fees for excess teaching, and provision of food allowance without being limited by absences. Fees for excess teaching need to be given so that lecturers do not object to too much teaching load. Furthermore, to increase the perception of supervision, the top of the division needs to give direction,

direction, and evaluation to each lecturer so that there will be an input and improvement in doing the educating and learning measure.

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Appendix

Appendix 1 Analysis of the Validity of the Performance of Lecturers Questionnaire

To calculate the validity of the test questions, it is calculated using the product moment correlation formula using the raw score, as follow:

$$r_{xy} = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$$

The r_{xy} value obtained will be consulted with the product moment *r* price in the table at the 0.05 significance level. If $r_{xy} > r_{tab}$ then the item is declared valid.

The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 and the 5% significance level are *r* = 0.413.

No	*r* count	Comparison of *r* count and *r* table	Information
1	0.439	*r* count > *r* table	Valid
2	0.640	*r* count > *r* table	Valid
3	0.466	*r* count > *r* table	Valid
4	0.129	***r* count < *r* table**	Invalid
5	0.625	*r* count > *r* table	Valid
6	0.459	*r* count > *r* table	Valid
7	0.555	*r* count > *r* table	Valid
8	0.571	*r* count > *r* table	Valid
9	0.549	*r* count > *r* table	Valid
10	0.559	*r* count > *r* table	Valid
11	0.488	*r* count > *r* table	Valid
12	0.501	*r* count > *r* table	Valid
13	0.450	*r* count > *r* table	Valid
14	0.510	*r* count > *r* table	Valid
15	0.049	***r* count < *r* table**	Invalid
16	0.454	*r* count > *r* table	Valid
17	0.491	*r* count > *r* table	Valid
18	0.422	*r* count > *r* table	Valid
19	0.423	*r* count > *r* table	Valid
20	0.555	*r* count > *r* table	Valid
21	0.428	*r* count > *r* table	Valid
22	0.439	*r* count > *r* table	Valid
23	0.553	*r* count > *r* table	Valid
24	0.426	*r* count > *r* table	Valid
25	0.500	*r* count > *r* table	Valid

Statements 4 and 15 are discarded because of invalidity.

Appendix 2 Reliability of Performance of Lecturers Questionnaire

The reliability of the questions to measure mathematical reasoning ability was calculated using the Cronbach-alpha formula. The estimation of *r* is obtained from the calculation results with the Cronbach Alpha formula will then be compared with the estimation of *r* table with = 0.05 and dk = *N - 2* (*N* = number of respondents). If $r_{count} > r_{table}$, then the instrument is declared reliable. The estimation of the reliability of the questions was carried out using SPSS. The consequences of the SPSS output for the test questions look like the table below.

Reliability Statistics

Cronbach's Alpha	N of Items
.847	25

The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 and 5% significance level are *r* = 0.413

Due to Cronbach's Alpha value is 0.847 > 0.413, the questionnaire is reliable with a very high level of reliability.

Appendix 3 Analysis of the Validity of Work Motivation Questionnaire

No	*r* count	Comparison of *r* count and *r* table	Information
1	0.521	*r* count > *r* table	Valid
2	0.617	*r* count > *r* table	Valid
3	0.795	*r* count > *r* table	Valid
4	0.805	*r* count > *r* table	Valid
5	0.560	*r* count > *r* table	Valid
6	0.409	***r* count < *r* table**	Invalid
7	0.545	*r* count > *r* table	Valid
8	0.667	*r* count > *r* table	Valid
9	0.636	*r* count > *r* table	Valid
10	0.493	*r* count > *r* table	Valid
11	0.295	***r* count < *r* table**	Invalid

Statements 6 and 11 are discarded because of the invalidity.

Appendix 4 Reliability of Work Motivation Questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
.781	11

The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 and 5% significance level are *r* = 0.413

Because Cronbach's Alpha value is 0.781 > 0.413, the questionnaire is reliable with a high level of reliability.

Appendix 5 Analysis of the Validity of Job Satisfaction Questionnaire

No	*r* count	Comparison of *r* count and *r* table	Information
1	0.708	*r* count > *r* table	Valid
2	0.616	*r* count > *r* table	Valid
3	0.475	*r* count > *r* table	Valid
4	0.479	*r* count > *r* table	Valid
5	0.448	*r* count > *r* table	Valid
6	0.805	*r* count > *r* table	Valid
7	0.465	*r* count > *r* table	Valid
8	0.651	*r* count > *r* table	Valid
9	0.435	*r* count > *r* table	Valid

All statements are used as instruments for collecting data.

Appendix 6 Reliability of Job Satisfaction Questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
.684	9

The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 and the 5% significance level are *r* = 0.413

Because Cronbach's Alpha value is 0.684 > 0.413, the questionnaire is reliable with a high level of reliability.

Appendix 7 Analysis of the Validity of the Perception of Reward Questionnaire

No	*r* count	Comparison of *r* count and *r* table	Information
1	0.490	*r* count > *r* table	Valid
2	0.176	***r* count < *r* table**	Invalid
3	0.553	*r* count > *r* table	Valid
4	0.556	*r* count > *r* table	Valid
5	0.572	*r* count > *r* table	Valid
6	0.462	*r* count > *r* table	Valid
7	0.590	*r* count > *r* table	Valid
8	0.491	*r* count > *r* table	Valid
9	0.428	*r* count > *r* table	Valid
10	0.550	*r* count > *r* table	Valid
11	0.255	***r* count < *r* table**	Invalid
12	0.629	*r* count > *r* table	Valid
13	0.351	***r* count < *r* table**	Invalid
14	0.435	*r* count > *r* table	Valid

Statements 2, 11, and 13 are discarded because of the invalidity.

Appendix 8 Reliability of Perception of Reward Questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
.672	14

The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 and the 5% significance level are *r* = 0.413

Because Cronbach's Alpha value is 0.672 > 0.413, the questionnaire is reliable with a high level of reliability.

Appendix 9 Analysis of the Validity of Perception of Supervision Questionnaire

No	*r* count	Comparison of *r* count and *r* table	Information
1	0.687	*r* count > *r* table	Valid
2	0.468	*r* count > *r* table	Valid
3	0.682	*r* count > *r* table	Valid
4	0.774	*r* count > *r* table	Valid
5	0.824	*r* count > *r* table	Valid
6	0.443	*r* count > *r* table	Valid
7	0.075	***r* count < *r* table**	Invalid
8	0.729	*r* count > *r* table	Valid
9	0.736	*r* count > *r* table	Valid
10	0.594	*r* count > *r* table	Valid

Statement 7 is discarded because of the invalidity.

Appendix 10 Reliability of Perception of Supervision Questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
.775	10

The value of *r* table for dk = *N* - 2 = 25 - 2 = 23 and the 5% significance level are *r* = 0.413

Because Cronbach's Alpha value is 0.775> 0.413, the questionnaire is reliable with a high level of reliability.

Appendix 11 Research Questionnaire

QUESTIONNAIRE

This questionnaire is for scientific purposes only and will not affect your position or reputation at this institution. Please fill in honestly based on your thoughts and in accordance with your experiences.

Instructions

1. **Read each statement carefully.**
2. **Put a checklist (√) in one of the available answer options according to your condition. With the answer items as follows:**

N: Never	**O: Often**
R: Rarely	**A: Always**
SD: Strongly Disagree	**A: Agree**
D: Disagree	**SA: Strongly Agree**

FACULTY

: …….

MAJOR / STUDY PROGRAM

: .....…….

NO	STATEMENT	N	R	O	A
	PERFORMANCE OF LECTURERS IN *PBM* (PLANNING OF TEACHING LEARNING PROCESSES)	**N**	**R**	**O**	**A**
1	I do not have a discussion with the team while preparing the learning materials				
2	I design a syllabus before lecturers begin				
3	I design *SAP (Satuan Acara Perkuliahan)* before lecturing started				
4	I determine learning methods/ strategies in the syllabus				
5	I do not specify props before *PBM*				
6	I determine the learning media on *SAP*				
7	I determine learning sources (Current source books/ literature, labs, etc.) when making a syllabus				
8	I do not design exam materials according to the rules of preparing course materials				
9	I determine the type of assessment on *SAP*				
	PERFORMANCE OF LECTURERS IN THE IMPLEMENTATION OF *PBM*	**N**	**R**	**O**	**A**
10	I execute a study contract				

11	I do not apply space management in the learning method				
12	I relate the theory for students with the learning material				
13	I do not meet the time and class schedule				
14	I do not use props according to *SAP*				
15	I do not always use learning media while lecturing				
16	I give reinforcement while students are asking/ answering questions				
17	I do not give structured assignments to students				
	PERFORMANCE OF LECTURERS IN IMPLEMENTING THE EVALUATION OF *PBM*	**N**	**R**	**O**	**A**
18	I do not make grid questions according to the rules before the test				
19	I administer UTS (Mid Term Test) for each course				
20	I administer *UAS* (Semester Final Examination) according to the provisions of each course				
21	I submit the scores on time for each course				
22	I do not provide feedback for students about the structured assignments				
23	I do formative assessments and provide feedback				
	WORK MOTIVATION	**SD**	**D**	**A**	**SA**
1	Learning objectives are made to fulfill expected competencies				
2	Lesson plan is functioning as the reference for				

	implementing *PBM*				
3	There is no need to design *SAP* because there is already a syllabus				
4	I need to teach diligently to get promoted				
5	Lecturing does not need to be face-to-face, because the honorarium given is in accordance with a predetermined *SKS*				
6	I need to be on time, as a role model for students				
7	I do not have to be diligent in lecturing, because I do not involve in every exam				
8	End of semester needs to be held, to measure students' achievements				
9	The assessment of the implementation of *PBM* as the reference for improving *PBM*				
10	I do not need to submit scores on time because there is no reward				
	WORK MOTIVATION	**SD**	**D**	**A**	**SA**
1	Preparation of *SAP* before teaching, helps me in implementing *PBM*				
2	I feel disappointed with the preparation of the syllabus, if there is no discussion with the team				
3	There is a discrepancy between course assignments and professional expertise				
4	The number of credits (*SKS)* does not match the lecturer's position				

5	I feel disappointed with the teaching aid for *PBM*				
6	Complete facilities and infrastructure can support the lecturing process				
7	Participating in seminars and training can support the lecturing process				
8	I like to teach the active students				
9	I am disappointed with the students' poor result of final exams				
	PERCEPTION OF REWARD	**SD**	**D**	**A**	**SA**
1	The salary and honorarium for each month is sufficient				
2	The honorarium does not match the number of credits				
3	Transportation fees does not match the number of attendees				
4	The amount of honor as a supervisor for exams is sufficient				
5	The excess teaching fee is appropriate				
6	Teaching and evaluation fees are in accordance with the lecturer's position				
7	I get an opportunity to take part in seminars (suitable with the courses) that is covered by institutional fees				
8	I get an opportunity to attend a workshop				
9	I do not get an opportunity to take part in training				
10	I do not get an opportunity to participate in an educational program				

11	I do not get an opportunity to take part in an office recreation program				
	PERCEPTION OF LECTURERS ON THE SUPERVISION OF HD (HEAD OF DEPARTMENT)	**SD**	**D**	**A**	**SA**
1	HD guides and directs me for preparing the syllabus				
2	HD guides and gives motivation in implementing *PBM*				
3	HD evaluate attendance in teaching				
4	HD observes the lecturing process				
5	HD does not provide guidance for solving *PBM* problems				
6	HD does not provide direction in carrying out assessments of student achievement and *PBM*				
7	HD conducts a final semester assessment to assess *PBM*				
8	HD does not provide feedback of *PBM* for lecturers				
9	HD does not use the result of *PBM* assessment for future *PBM* improvements				

Appendix 12 Partial Correlation Coefficient

Correlations

Control Variables			K	PS
MK & KK & PI	K	Correlation	1.000	.107
		Significance (2-tailed)	.	.333
		df	0	82
	PS	Correlation	.107	1.000
		Significance (2-tailed)	.333	.
		df	82	0

Correlations

Control Variables			K	PI
PS & MK & KK	K	Correlation	1.000	.201
		Significance (2-tailed)	.	.066
		df	0	82
	PI	Correlation	.201	1.000
		Significance (2-tailed)	.066	.
		df	82	0

Correlations

Control Variables			K	KK
PI & PS & MK	K	Correlation	1.000	.223
		Significance (2-tailed)	.	.042
		df	0	82
	KK	Correlation	.223	1.000
		Significance (2-tailed)	.042	.
		df	82	0

Correlations

Control Variables			K	MK
KK & PI & PS	K	Correlation	1.000	.382
		Significance (2-tailed)	.	.000
		df	0	82
	MK	Correlation	.382	1.000
		Significance (2-tailed)	.000	.
		df	82	0

Appendix 13 SPSS Output Results for Linear Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	PS, KK, PI, MK[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: K

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.600[a]	.361	.329	5.754	.361	11.556	4	82	.000	1.624

a. Predictors: (Constant), PS, KK, PI, MK

b. Dependent Variable: K

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regres sion	1530.683	4	382.671	11.556	.000[a]
	Residu al	2715.271	82	33.113		
	Total	4245.954	86			

a. Predictors: (Constant), PS, KK, PI, MK
b. Dependent Variable: K

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	18.165	9.392		1.934	.057		
	MK	.950	.254	.370	3.744	.000	.799	1.251
	KK	.373	.180	.201	2.067	.042	.826	1.211
	PI	.423	.227	.178	1.863	.066	.850	1.176
	PS	.131	.135	.090	.974	.333	.918	1.089

a. Dependent Variable: K

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	MK	KK	PI	PS
1	1	4.954	1.000	.00	.00	.00	.00	.00
	2	.027	13.672	.01	.01	.07	.01	.95
	3	.011	20.771	.05	.02	.89	.09	.05
	4	.005	30.712	.09	.23	.02	.85	.00
	5	.003	43.127	.86	.75	.03	.05	.00

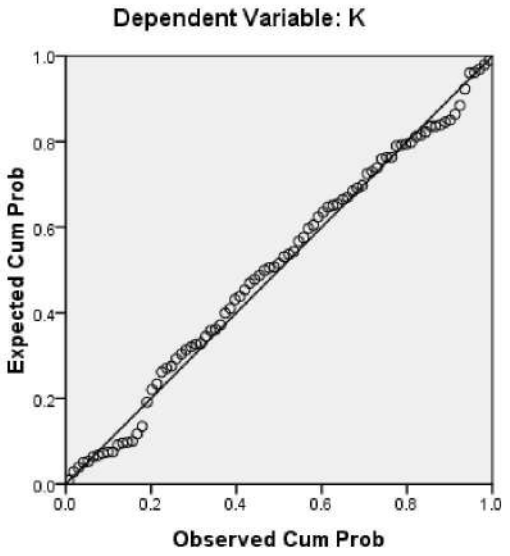
a. Dependent Variable: K

Residuals Statistics[a]

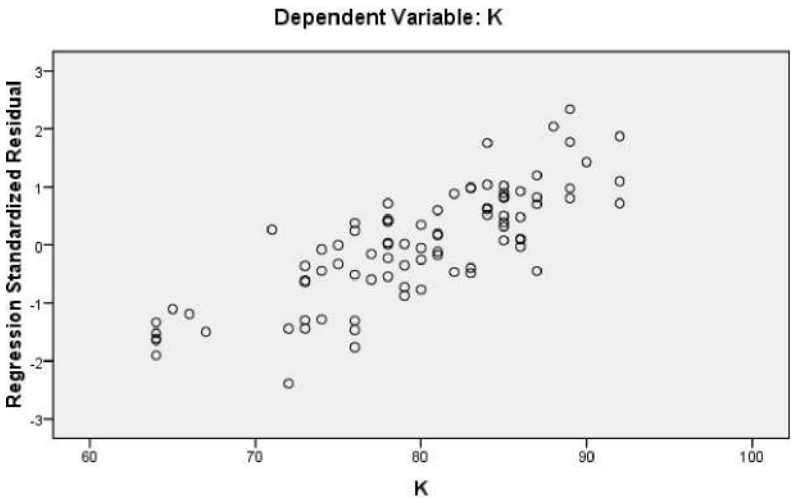
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	69.47	89.59	79.64	4.219	87
Residual	-13.732	13.453	.000	5.619	87
Std. Predicted Value	-2.411	2.357	.000	1.000	87
Std. Residual	-2.386	2.338	.000	.976	87

a. Dependent Variable: K

Normal P-P Plot of Regression Standardized Residual



Scatterplot



Appendix 14 Researcher Biodata

Name : Emy Siswanah

Place and date of birth : Bengkulu, February 2nd 1987

Academic background :

1. Bachelor degree : Mathematics Education, Universitas Bengkulu, 2004 - 2008
2. Masters degree : Mathematics, Universitas Gadjah Mada, 2008 - 2010

Occupation : Lecturer of Mathematics Departement, Faculty Of Science And Technology, Universitas Islam Negeri Walisongo Semarang

Courses : Trigonometry, Statistical Methods, Introduction to Mathematical Statistics, Economic Mathematics, Financial Derivatives

Research Projects :

1. Analysis of the Errors of Mathematics Education Students of IAIN Walisongo Semarang in Solving Trigonometric Identity Proof Problems
2. Use of Flash Flip Book Media in Trigonometry Learning to Improve Mathematics Education Student Learning Outcomes
3. American Call Option Pricing Using Binomial Method
4. Determining The Price of The Bermuda Option Price Using The Fast Fourier Transform (FFT) Method