

**THE MEASUREMENT OF LECTURERS' TEACHING QUALITY AND  
ACADEMIC ATMOSPHERE IN INTERNATIONAL CLASS PROGRAM  
OF FMIPA UNM MAKASAR**

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**Abstract**

The research was aimed to describe two variables, i.e. : lecturers' teaching quality (KMD) and academic atmosphere (AA) in international class program of international class program (ICP) of mathematics and natural science faculty (FMIPA), state university of Makassar (UNM). To achieve the aim, a research instrument was developed through two primary steps, i.e. (a) content validity measurement done by 13 experts that results consistency coefficient inter-expert as many as  $r_{KMD} = 0,906$  and  $r_{AA} = 0,829$ , and (b) item validity measurement comprehending of an instrument with reliability value (alpha-Cronbach)  $r_{KMD} = 0,910$  and  $r_{AA} = 0,870$ . Besides that, a survey was conducted and distributed to 126 ICP students suggesting that KMD, in overall, is highly categorized and AA is in condusive category. Furthermore, it is found that KMD has positive and linear relationship with AA in ICP of FMIPA.

Keywords :lecturers' teaching quality, academic atmosphere, ICP

**1. INTRODUCTION**

Lecturers have a role not only at learning process in class but also at lecturing process in university class at Indonesia. So far, at undergraduate level, lecturers teach by lecture method or variated lecture. But some of them use discussion method or presentation-discussion. It is indicated that lecturers have a dominant role.

To present a lesson in class, lecturers should have many technique in opening and closing lecturing process. It is describe that lecturers can relate the previous lesson with the lesson that will be taught, commonly it got a big attention from students. Thus, after start lecturing process, a wise lecturers will care with students' *entry behavior* level. They know when they start lecturing process to built a pleasant atmosphere whether for students or lecturers.

Most of lecturers unsuccessful to built a pleasant atmosphere in lecturing process especially at afternoon with mathematics as an opening lesson, it caused by the mistake on observe students' entry behavior level. Besides that, there are still many important things that should be understood by lecturers to achieved a satisfy competence at lecturing process.

Mastery of lesson has a big influence at class atmosphere, but it is not the one. Lecturers who mastery a lesson well will bring students to understand a lesson. Besides that, lecturers skill on make a questions to get feed back and make students active at class is one of lecturers quality on lecturing process. According to Arafah (2011 : 33) who make conclusion about researchers' opinion that quality is level of intelligence related with standard which expected by costumer with satisfy indicator, more than expectations, and enlightening customer.

Related with teaching skill and then will form lecturers' quality, Cooper on Alma (on Arafah, 2011 : 35-36) categorized basic skill of teaching: (a) arrange teaching plan, (b) make

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teaching purpose, (c) present a lesson, (d) asking, (e) make concept or teaching preparation, (f) interpersonal communication, (g) manage a class, (h) observation, and (i) evaluation.

Furthermore Alma explain Turney's opinion (Arafah, 2011 : 36-37) about teaching basic skill that consist of skill: (1) asking, (2) managing class and improve the discipline, (3) giving varied stimulation, (4) giving affirmation, (5) explaining, (6) opening the meeting, (7) teaching in group, (8) improving mindset, (9) teaching individually.

Based on the opinions, lecturers' teaching quality can be interpreted as a level of intelligence or lecturers' competence on built conducive studying atmosphere that can make students study so that it can achieve lecturing's purpose effectively and efficiently. On this research, lecturers' teaching quality is students' perception about level of intelligence or lecturers' competence on built conducive studying atmosphere that can make students study so that it can achieve lecturing's purpose effectively and efficiently, which can be observed based on how lecturers opening and closing lecturing, explaining the lesson, using technology media, asking a questions, giving affirmation, and evaluating students' learning outcome that can be measured by an instrument on questionnaire with score range 1 – 5.

A high lecturers' teaching quality may make students study well and build pleasant and conducive of study atmosphere. Related to these things, atmosphere that can make students pleasant on academic activity on physical and non physical condition, it is called academic atmosphere.

Related with organization, Koehler (1981) on Arafah (2011 : 44) said that the scene of organization is an idea on spirit or philosophy that dominant on organization and be responsible to individual relationship on organization. Then, Luthans (1995) said that the scene of organization can be observed by organization culture because because it is talked about things which related with organization changes, organization characteristics, organization principles, and organization types.

Then, scene or atmosphere that related with academic, on book of university quality assurance system (2008) said that academic atmosphere is a condition that should be able created to make learning process at university occurring based on vision, mission and its goal (Arafah, 2011 : 46). The conducive of academic atmosphere can create a pleasant academic situation such as a good interaction between lecturers and students, among students, among lecturers, and between students and employees.

National Accreditation Board for University (2008) defined academic atmosphere as a condition that built for develop the spirit and academic interaction between students-lecturers-education official, expert, guest lecturers, speaker, to increase academic activities quality at class or outside class.

Although it's very difficult to know, but a conducive academic atmosphere can be felt and will be reflected especially on learning process that occur on feeling at home situation. There are many advantages of that situation especially to increase students motivation on study, built ethical solidarity between civitas of academic.

Based on the explain above, so in this research, academic atmosphere defined as students perception towards a condition to develop the spirit and pleasant academic interaction, such as a good interaction between lecturers and students, among students, among students, among lecturers, and between students and employees, to increase academic activities quality at class or outside class, which can be observed based on academic ethics, academic culture, academic interaction, involvement of academic civitas on academic activities which can be measured by an instrument on questionnaire with score range 1 – 5.

Two important things that explain above are lecturers' teaching quality and academic atmosphere at ICP, they are important to know based on empirical situation. Related with it, so

this research try to measure lecturers' teaching quality and academic atmosphere at ICP Mathematic and Natural Science Faculty (FMIPA), state university of Makassar (UNM).

The research problem is formulated as follows :

1. What the description of lecturers' teaching quality at ICP FMIPA UNM Makassar?
2. What the description of academic atmosphere at ICP FMIPA UNM Makassar?
3. Does lecturers' teaching quality have a positive relation with academic atmosphere ICP FMIPA UNM Makassar?

Furthermore, this research try to reveal descriptive of lecturers' teaching quality and the real condition of academic atmosphere at ICP FMIPA UNM. Spesifically, the aims of this research are:

- a. To produce research instrument for measuring lecturers' teaching quality at ICP FMIPA UNM.
- b. To produce research instrument for measuring academic atmosphere at ICP FMIPA UNM.
- c. To analyze latent variable data of lecturers' teaching quality at ICP FMIPA UNM.
- d. To analyze latent variable data of academic atmosphere at ICP FMIPA UNM.
- e. To know the relation between lecturers' teaching quality with academic atmosphere at ICP FMIPA UNM.

## 2. RESEARCH METHOD

This research is a quantitative descriptive research that involves 126 students as a subject sample that randomly taken from students of ICP FMIPA UNM Academic Years 2012/2013. The number of subject sample at each department can be seen at table 2-1.

**Tabel 2-1.** *The number of subject sample at each department*

Parameter	Department					Total
	ICP Mathematic	ICP Physic	ICP Chemistry	ICP Biology	ICP Geography	
Number of sample	26	24	29	27	20	126

Reseachr begins with improvement of instrument then measurement of content validity that involve 13 experts. The results is analyzed by hoyt analysis (Djaali dan Mulyono, 2004 : 79), it's obtained inter rater consistency of each instrument as many as  $r_{kk(KMD)} = 0,906$  dan  $r_{kk(AA)} = 0,829$ . Then, instrument is tested only for 28 students and analysis of items by *product moment* and *pearson* equation (Surapranata, 2004 : 58). Furthermore, the valid items were measured of reliabilitas instrument by Cronbach alpha (Djaali dan Mulyono, 2004 :106) and it's obtained reliability of  $r_{ii(KMD)} = 0,910$  and  $r_{ii(AA)} = 0,870$ . The instrument which has been improved and qualified emprirical validity is used to collect the data of research.

## 3. RESULT AND DISCUSSION

### a. Variable Of Lecturers' Teaching Quality at ICP FMIPA

The resume of descriptive statistical variable for lecturers' teaching quality at ICP FMIPA can be seen at table 3-1 as follows:

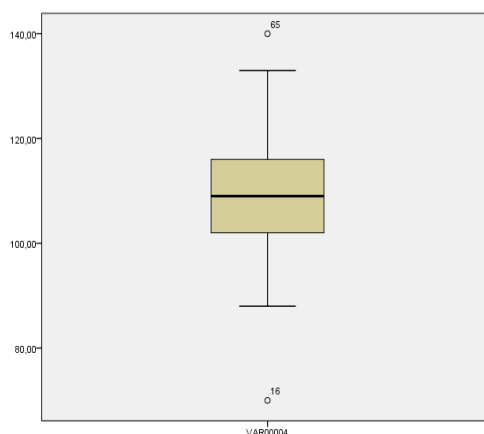
**Tabel 3-1.** Descriptive Statistical Variable for Lecturers' Teaching Quality at ICP

Parameters	Statistics					
	ICP Math	ICP Phys	ICP Chem	ICP Bio	ICP Geo	Total
Number of sample	26	24	29	27	20	126
Mean	116,69	108,29	104,83	109,37	105,55	109,02
Median	115,00	108,50	105,00	106,00	103,00	109,00
Variance	121,58	80,65	59,51	96,55	181,21	118,49
Std. Deviation	11,03	8,98	7,714	9,83	13,46	10,89
Minimum	100,00	88,00	89,00	91,00	70,00	70,00
Maximum	140,00	125,00	117,00	129,00	128,00	140,00
Range	40,00	37,00	28,00	38,00	58,00	70,00
Interquartile Range	18,50	9,50	12,00	15,00	15,25	14,00
Skewness	,25	-,23	-,39	,16	-,69	-,03
Kurtosis	-,83	,518	-,65	-,56	1,292	,81

Source : The raw data of research result

Based on the table above, the important information were from five departments which observed, ICP students of mathematics department have the highest average score of 40.00 while ICP students of chemistry education department have the lowest average score, then ICP students of geography, physics, and biology department, respectively. The score that presented above shows perception score of ICP students about lecturers' teaching quality at ICP class of each department. It is indicate that commonly lecturers who teach at ICP class of mathematic department have the highest teaching quality than the others departments at FMIPA.

Furthermore, the characteristic of students' perception score toward lecturers' teaching quality at each department was presented on *boxplot*. It describe *skewness* variable as picture 3-1.

**Gambar 3-1.** Perception score of ICP students toward lecturers' teaching quality

The *boxplot* have median = 109.02, *interquartil range* = 14.00, minimum score of responden = 70.00, maximum score of responden = 140.00, dan *skewness* = -0,3. The upper whisker is longer than the under whisker, it is indicate data distribution of lecturers' teaching quality tend to right side. It means most of data from lecturers' teaching quality of ICP FMIPA UNM converge on the smaller data.

Furthermore, based on data analysis of ICP FMIPA students about the items who have a low score (score 1 and 2) that should be corrected was presented on table 3-2, as follows :

**Tabel 3-2.** Analysis of lecturers' teaching quality data from students of ICP FMIPA

No	Statement	Score frequency (%)					Total
		1	2	3	4	5	
25.	Giving awards to students on smile, applause or rising a thumb.	11,9	28,6	28,6	20,6	10,3	100
27.	Giving affirmation by point them, pat the shoulder, or pat their back in a reasonable.	25,4	41,3	21,4	11,1	,8	100
28.	Giving a praise on texting to students' worksheet.	46,8	33,3	16,7	1,6	1,6	100
32.	Checking the task/the result of test and back them to students.	14,3	27,8	38,1	18,3	1,6	100
33.	Announcing all score of task, mid semester, final test, and give the opportunity to students for complaints before announce the final score..	17,5	27,8	31,7	14,3	8,7	100

Source: the results of data analysis by SPSS versi 20.0 program

Based on table 3-2, the things that should be corrected which related with lecturers' teaching quality at KMD ICP FMIPA as many as: (1) lecturers of ICP FMIPA should giving awards to students on smile, applause or rising a thumb, (2) lecturers of ICP should Giving affirmation by point them, pat the shoulder, or pat their back in a reasonable, (3) lecturers of ICP should giving a praise on texting to students' worksheet, (4) lecturers of ICP should checking the task/the result of test and back them to students, and (5) lecturers of ICP should announcing all score of task, mid semester, final test, and give the opportunity to students for complaints before announce the final score.

#### b. Variable of Academic Atmosphere at ICP FMIPA

The resume of descriptive statistical variable for academic atmosphere at ICP FMIPA can be seen at table 3-3 as follows:.

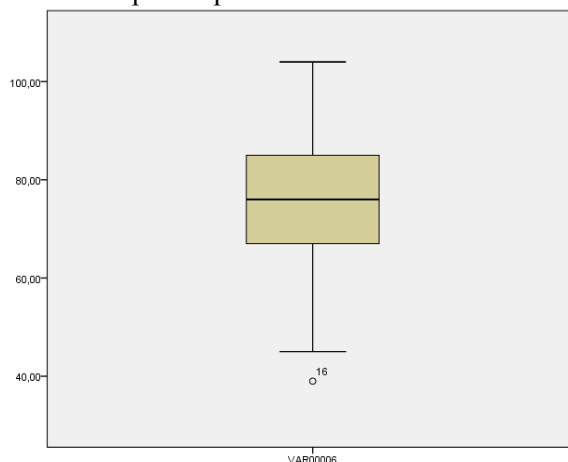
**Tabel 3-3.** Descriptive statistical variable for academic atmosphere at ICP

Parameters	Statistics					
	ICP Geo	ICP Phys	ICP Math	ICP Bio	ICP Chem	ICP Total
Number of sample	20	24	26	27	29	126
Mean	65,00	79,46	84,12	74,33	72,76	75,48
Median	65,50	81,00	85,00	75,00	74,00	76,00
Variance	168,84	131,22	54,11	136,46	58,40	140,22
Std. Deviation	12,99	11,46	7,36	11,68	7,64	11,84
Minimum	39,00	61,00	64,00	49,00	58,00	39,00
Maximum	93,00	104,00	98,00	94,00	86,00	104,00
Range	54,00	43,00	34,00	45,00	28,00	65,00
Interquartile Range	18,75	18,75	7,75	17,00	13,50	18,00
Skewness	,06	,03	-,49	-,29	-,12	-,37
Kurtosis	,34	-,73	1,25	-,47	-,88	,026

Source : The raw data of research result

Based on table 3-3, from five departments that observed, ICP students of mathematics department have the highest average score of 84.12 while ICP students of geography department have the lowest average score, then ICP students of chemistry, biology, and physics, respectively. It is indicate that academic atmosphere (AA) at ICP mathematics is the most conducive than the others departments at FMIPA. This result synchron with teaching quality at each department.

Furthermore, the characteristic of students' perception score toward AA at all department were presented on boxplot at picture 3-2.



**Gambar 3-2.** The score of students' perception at ICP FMIPA toward AA

Boxplot at picture 3-2 content of median = 76.00, interquartil range = 18.00, minimum score of responden = 39.00, maximum score of responden = 104.00, dan skewness = -0.37. The under whisker is longer than the upper whisker, it shows data distributin of AA tend to the left side or negatively skewness. It is indicate most of AA data at ICP FMIPA UNM converge at the highest data.

All off students' score at ICP FMIPA which it is meaning of perception about AA that conducive enough. It is indicated from the average score 75.48 with range of empirical score 104.00 – 39.00. Related with it, the things that should be corrected for make AA more conducive were presented at tabl 4-13, as follows.

**Tabel 4-13.** Analysis of AA items score at ICP FMIPA students

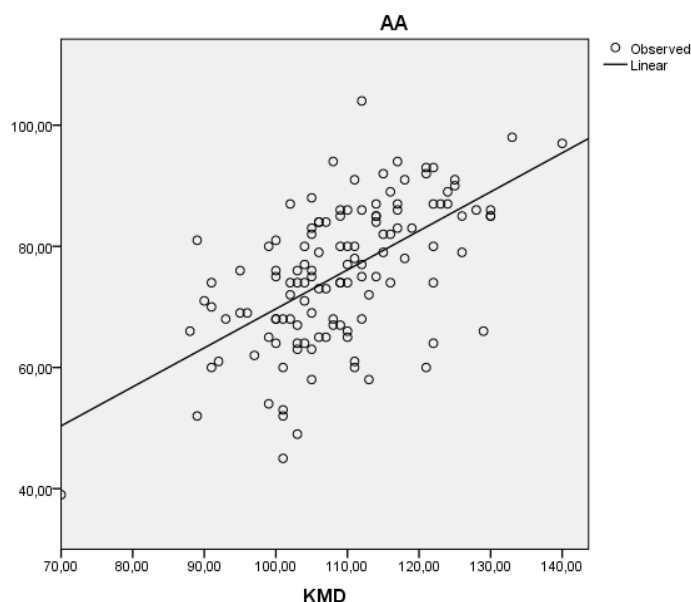
No	Statement	Score Frequency (%)					Total
		1	2	3	4	5	
8.	The leader of department should organize seminar for staff/discussion that involve the students.	19,0	27,0	21,4	21,4	11,1	100
14.	Lecturer accompany the assistant on experimental process.	13,5	18,3	37,3	21,4	9,5	100
20.	On community service, lecturer coordinator make collaboration with the others lecturers and involve some students actively.	7,9	21,4	42,9	19,8	7,9	100
21.	Lecturers with students write paper and presentation on seminar local/national.	12,7	36,5	34,1	12,7	4,0	100

Source : Data analysis using SPSS versi 20.0 program

The things that should be corrected which related with AA of ICP FMIPA as many as :  
(1) The leader of department should organize seminar for staff/discussion that involve the students, (2) Lecturer accompany the assistant on experimental process., (3) On community service, lecturer coordinator make collaboration with the others lecturers and involve some students actively, and (4) On community service, lecturer coordinator make collaboration with the others lecturers and involve some students actively.

### c. Relation Between Lecturers' Teaching Quality with Academic Atmosphere

On hypothesis test that has been done was obtained lecturers' teaching quality have a positive relation on produce a conducive AA. It is shown by graphic on picture 3-3.



**Gambar 3-3.** Relation between lecturers' teaching quality with AA at ICP FMIPA

This picture shows the linear relation between lecturers' teaching quality with AA at ICP FMIPA UNM, it means AA can be increased by increase lecturers' teaching quality before. It means lecturers' teaching quality has an important role on built a conducive AA.

### d. Discussion

Based on analysis of research result was obtained each department have a different characteristic of lecturers' teaching quality and AA. It shows that there are varied problem faced by students or department on ICP management. However, it has been found the same problem at all department and it can be assumed that it's become a faculty problem. The following is presented the general problem faced by faculty on ICP management related with lecturers' teaching quality.

Based on it, we can said that there are some lecturers who are not care on students' readiness. Besides that, it can be seen most of ICP lecturers tend to lazy on give award or appreciate to students who asking or answering the questions. Students also rarely be given a special attention on texting comment in students' worksheet.

Related with giving awards or comment on students' worksheet be expected caused by the amount of students on a class. Finally, lecturers overwhelmed of assessing students' task



moreover be accompanied by comment. Of course, it will be implicated to compliance the standard of facilities and infrastucutre for lecturing at ICP, especially about the amount of students at a class that deserve.

Furthermore, about assessment aspect, based on students' opinion that lecturers of ICP FMIPA there are some lecturers didn't give back their task/test results. Students should be got a feedback from that, it become a thing for them to improve their ability in solve a task or test. Consequently, students may repeat the sama mistakes at future.

In the same aspect, it has been founded that most of lecturers didn't announce all score of task, mid semester, final test and gave the opportunity to students on complaints their final score. Lecturers should do it, so that students have enough times to make complaints if their score that announced is not suitable with score that they get.

Besides lecturers' teaching quality variable, AA variable also become a study, it is for make ICP management better at future. The important things that found in this research is AA in each department have a different characteristics. The things that should be corrected as many as: the leader of department should organize the seminar for staff that involve the students, ICP lecturersat each department should optimizing the research and its report.

Furthermore, ICP lecturers at all department should active on make publication whether local or national, lecturer who have experimental should accompany the assistants in experimental process, interaction between lecturers and students at all department should stay in touch in out class not only on guardianship. Likewise on research process, lecturer coordinator at all department should make collaboration with the others lecturers and involve some of students actively. On community service process, lecturer coordinator at all department should make collaboration with the others lecturers and involve some of students actively. ICP lecturers at all department with students should optimizing on write paper and presentation on seminar local/national.

Variables studied i.e. lecturers' teaching quality has a positive relation and linear with AA. It indicates that if we want a conducive AA at ICP then lecturers' teaching quality should be increased also.

## **Conclusion**

Based on the findings, it can be concluded following things, i.e.:

1. The teaching quality of ICP lecturers (KMD) at each department has each strengths and weaknesses, however, in overall, it is generally in good category
2. The academic atmosphere (AA) in each department within faculty of mathematics and natural science is generally conducive
3. KMD and AA makes apositively linear relationship meaning that when one wants to make a conducive AA, then KMD should be increased

## **Advices**

Based on the findings, in the aim of improving the quality of ICP FMIPA, several things are suggested i.e.:

1. It is necessary to determine the maximum number of students in one class to improve the quality of learning and assessment.
  2. ICP lecturers are obliged to notify aspects of assesment and skills of managing students to enhance the quality of their teachings.
  3. ICP lecturers should involve other lecturers and students in dong research and community service to create a much more conducive AA.
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