

# The Influence of Academic Atmosphere, Academic Service, Motivation of Achieving Toward of Learning Achievement Physics

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**Abstract:** Learning in all level of education was strongly influenced by internal factors and external factors. This research aims to know the influence of the academic atmosphere, service, and academic motivation of achieving good results against the results of the study of physics students of class XI SMA Negeri 1 Tomohon. The methods used in this study method survey with a sample taken from 6 classes i.e. class  $X_1$  to  $X_6$  proportionately. Data about academic atmosphere, service, and academic motivation overachievers retrieved from the now, for the value of the results obtained from the documentation studied physics school Semester Final Exam (SFE). Data analysis was done with Path Analysis. The results showed a direct influence of the academic atmosphere of the big against the results of learning Physics 0.287, indirectly through the motivation of overachievers 0.027, large and direct influence of academic service learning achievement against 0.130, indirectly through the motivation of overachievers 0.045. Research it can be concluded that there is a positive influence of the academic atmosphere, service, and academic motivation of achieving good results against the results of the study of physics students of class XI SMA Negeri 1 Tomohon.

**Keywords:** Academic Atmosphere, Academic Services, Motivation, and Path Achievers Analysis.

## 1. Introduction

In fact, in the learning process, there are two main factors that influence, that of internal factors and external factors. Internal factors in the form of motivation, level of intelligence, interests, learning style, health, and so on. While external factors may include socioeconomic status, learning environment, learning facilities, and more. One of the external factors that influence the outcome of allegedly studied physics is academic services. With regard to the Ministry, some experts contend, among other Laksana (2008) stated that the Ministry is any action or activity that can be offered by one party to the other party, that is essentially intangible and does not result in ownership of any kind. Moenir (1995) call it that public service is an activity that someone or a group of people with a grounding system through material factors, specific methods and procedures in order to meet the business interests of another person in accordance with its rights.

Based on the notion of service above, it can be concluded that the service is an activity that someone or a group of people that aim to provide convenience to the public in order to meet their needs. If the service associated with the academic, then it can be defined as an activity undertaken by education providers that aim to provide convenience to learners in academic activities meet the needs.

The results of the study of physics was also influenced by climate or atmosphere of learning where students are. Of course the other thing required tools or facilities capable of learning so that learning activities take place either. A good learning facilities, if possible with enough, then it will help the students in their learning. Learning facilities here can be interpreted as a form of goods production results among others in the form of a learning tool as a means, and the building and its equipment as a pra-sarana function provides the learning process. Such learning facilities, books, tables,

chairs, stationery, media presentations (LCD or OHP), curriculum, and props.

On-site learning can support the learning activities of students and teachers. Indirectly, on-site learning can make students more interested in learning, pay more attention to what was explained by the teacher, and more active in learning activities. For teachers, a learning facility can make it easier to work with because of the existence of good and sufficient learning, then the teacher more easily explain the material to be given to the students. To help explain the subject matter of physics, much-needed facilities either by teachers or by the students themselves. For example, the existence of the lab to do a simple experiment, is one of the facilities that must be available. In addition to laboratory facilities, availability of props, very helpful to the learning process. The props used by teachers to show students how a case was applied in daily activities.

Beyond the second these external factors, there are internal factors that have an important role in student learning achievement. The factor is the motivation of overachievers. According to Sardiman (2008:73), motivation is the catalyst and driving force of individuals who can rise and give direction for individuals to perform specific activities to achieve a particular goal.

Learning environment and learning facilities are able to cultivate the motivation for students in learning. If students are place learning environment is good and conducive environment, and there are enough facilities and worthy, then does not close the possibility that students will be motivated to learn and obtain good results. Vice versa, if the students are in a less conducive environment and less available, then it is likely that students will be less motivated to succeed. Education is currently facing three major challenges: (1) raise awareness about the importance of related pihat problem solving skills, (2) optimizing way of

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assessing problem solving skills, and (3) explore how to develop and maintain skills problem solving (Samuel Greiff, et al, 2014).

Based on the above issue, having regard to the scope of the problem are discussed, as well as more specific studies are required in order to make the discussion more focused, writers limit problems, namely: the academic atmosphere of academic, service, and an accomplished motivational effect on the results of learning Physics

The atmosphere of academic very in influence by various components, including the environment. The environment is a factor that can influence human development. The intended environment is an environment that is capable of providing an atmosphere of academic (academic atmosphere) or a climate conducive for learning students are in school and outside school. Sartain describes the environment are all conditions in this world in certain ways of giving the influence on behaviour, growth, development, or the process of life (life processes) except for gene-gene and gene-gene even viewed as *penyiap* the environment for other genes (Purwanto, N. 2006:28).

According to Dalyono (2005:129), covers all the material and environmental stimulation (stimulus) inside and outside the individual good are physiological, psychological, and socio-cultural. The neighborhood is defined by Baharuddin (2007:68), is something around the individual in his life, both in physical form as parents, home, Playmate, and surrounding communities, as well as in the form of such psychological feelings experienced, ideals, problems encountered and so on. Suryabrata (2006:239) suggests that the environment is all that different from outside individuals where in the overall behavior of the individual is he to interact with the environment, either consciously or subconsciously, directly or indirectly.

Therefore, it can be inferred that the learning environment is everything around the individual good are physiological, and psychological, as well as directly or indirectly give meaning to that individual in a learning process.

Laksana (2008) academic service is any action or activity that can be offered by one party to the other party, that is essentially intangible and does not result in ownership of any kind. Tampubolon (2001) there are five different types of academic services that can be provided to learners, namely: 1. curriculum Services: includes academic regulations, activities of lecture or learning, curriculum, academic counseling or guidance, teaching, evaluation, final project, including learning tools, such as: libraries, LCD, laboratories, and others. 2. Research 3. Community service under services and deliver services in accordance with the agreed time. C. Responsiveness, willingness to help and provide services *secatarkat* 4. Academic Administration services: registration, transcripts, exams and information systems. 5. Services of Extracurricular student activities, program management, development interests, welfare, sports, health, and tools supporting means. Pansolong (2007). There is a measure of the academic service satisfaction: a. Tangibles: quality of service in the form of the physical means of computerized administration, offices,

waiting rooms and place information, b. reliability, ability and reliability to provide a trusted customers without making a mistake. Academic environment that is the atmosphere of the school and implementation of teaching and learning activities and *kokurikuler* activities.

Community environment according to Soemardjan and Soemardi (Ari Gunawan, 2004:4), is a place where people live together that produces a form of culture. Whereas the community according to (Soekanto, 2006:22) are the ones who live together that produces culture and they have in common areas, identity, customs, traditions, attitudes, and feelings of the Union bound by the similarities.

Based on the above description, it can be concluded that support the learning process, not be separated from the role of the family, school, neighborhood and community. Family environment provides the Foundation for the education of the child, the school environment helps families in providing education that cannot be afforded by families and supporting facilities, while providing community education about environmental norms and rules that govern the behavior of a child in social interaction as well as providing support to education carried by a child.

The motivation comes from the word *motif* that means effort that encourages someone to do something (Sardiman, 2008:73). Motivation is the driving force of someone doing an activity to meet his needs (Rabideu, 2005:1). In other words, the motives arising from inside a person to do something.

According to Dimiyati (2006:42), motivation is power moves and exert its activity from someone. So, one is the activities due to motivation. In learning, motivation is divided into two kinds of (Uno, 2006:33), namely: (1) extrinsic motivation which is the motives that arise due to stimuli from outside, such as because there is an exam; (2) the intrinsic motivation that are the motives that arise without being stimulated from outside or from within oneself, for example the desire to obtain a high achievement.

Motivation can be defined as achievers need for success or desire to succeed (Rabideu, 2005:1). Meanwhile, according to McClelland and Atkinson, the most important motivation for someone getting a good achievement motivation is an accomplished, where someone is likely to struggle to achieve success or choose activities that are oriented to success (Djiwandono, 2002:48). According to Rabideu (2005:2), there are two aspects of the underlying motivation of overachievers, that hope for success, and avoid failure. Effort for success can give you confidence, so being able to do something with avoiding failure. Businesses avoid failure is defined as a form of work assignments or job *seoptimal* may be.

Finally, in the case of classroom innovations, the question rises whether the effects of the content of the innovations (i.e. differences in teaching methods) are being measured or unintended 'side'-effects (e.g. the learning process of teachers, whoneed to adapt to different circumstances), therefore, replicating this research is advisable in order to confirm the results. Despite these limitations, the present

paper show the added value of gradually implementing case based learning in terms of students' approaches to learning, nevertheless, it remains difficult to enhance the deep approach, monitoring studying, organized studying and effort management. (Bacten, M., Struyven, K., and Dochy, F. 2013)

According to Sukadji, (2001:40-43), the characteristics of individuals who have the motivation high achievers are: (1) always trying, not easily give up on achieving a success and competed, with its own standard to determine their progress and meaning, (2) are generally not showing better results on routine tasks, but usually display better results on specific tasks that have meaning to them, (3) tend to take reasonable risks and taken into account, (4) in conducting an action not encouraged or influenced by rewards (rewards), (5) try optein derri the feedback of his deeds, (6) observing the environment and looking for an opportunity, (7) get along better gain experience, (8) enjoy challenging situations, where they can take advantage of its ability, (9) tend to seek out unique ways in resolving problems, creative, (10) and (11) in work or study as if chased by time. For physics lessons need to be learned through custom built test, such as: (Munasco, 2013:39) to form the habit of students to always learn on a regular basis and foster student learning motivation then administering the test as often as possible and repeated in frekuensi will be easy to remember and there is the influence of time of administering tests against the results of the study of physics.

Based on the above description, it can be inferred that the motivation of doing is a form of encouragement that emerged from within themselves to achieve success or achievement. Learning activities, students who have the motivation high achievers do the hard effort and had no fear of failure. As a good teacher, surely expected to be able to give an impetus to their students that are considered less motivated to Excel. Hope in the future, the results of the study gained students will increase from before.

Therefore, learning is an active process, learning is a process of mereaksi of all the situations that exist around the individual. Learning is a process which is directed towards a goal, do the process through a variety of experiences. Learning is the process of seeing, observing, understand something. When we talk about learning then we bebicara how to change the behavior of a person. (Nana Sudjana, 2001:28)

(Syah, M. 2010:65) argues that "learning is the acquisition change the behaviour of a relatively settled as a result of training and experience". According to the Slameto study (2003:2) is the process of work done to a person to obtain the shape of the new behaviour change as a whole, as a result of his experience in interaction with the environment.

Learning process there are five kinds of abilities that can be observed on the student as a result of his studies as follows: (1) the intellectual Skills, or procedural knowledge that includes learning the concepts, principles and problem-solving that is obtained through the presentation of the material in schools, (2) Cognitive Strategies, namely the ability to control and regulate the activities of thinking and learning on his own, (3) verbal Information, namely the

ability to describe something with words with the set up information-relevant information (4) motor skills, i.e. the ability to implement and coordinate the movements associated with muscle, and (5) attitude, i.e. internal ability to choose one's department actions based on emotions, beliefs and intellectual factors (Aunurrahman, 2009:49) So it can be concluded that learning is a form of a change of behaviour from someone because of the results of experience or training. Surya (2004:65) claimed that the results of the study in the form of numbers or letters. According to Suprijono (2011:5), the results of the study are the patterns of deeds, values, understanding-understanding, attitudes, appreciations, and skills. Hamalik (2006:30) States that the results of learning is when someone has learned will occur changes in the behaviour of the person. While according to Sudjana (2005:22) results of study skills is owned by students through the learning experience.

### Research Hypotheses

- 1) There is a positive influence of the academic atmosphere against the results of the study of physics students of class XI SMA Negeri 1 Tomohon.
- 2) There is a positive influence of academic service learning Physics results against students of class XI SMA Negeri 1 Tomohon.
- 3) There is a positive influence of motivation towards results achievers studied physics grade XI SMA Negeri 1 Tomohon.
- 4) There is a positive influence from the atmosphere through academic achievers motivation towards results studied physics students of class XI SMA Negeri 1 Tomohon.
- 5) There is a positive influence from the Ministry through academic motivation of achieving good results against the results of the study of physics students of class XI SMA Negeri 1 Tomohon.

## 2. Research Methodology

This study used a survey method. The survey method is used to find out the influence of the academic atmosphere of learning, motivation, and academic service excels against the results of the study of physics students of class XI SMA Negeri 1 Tomohon.

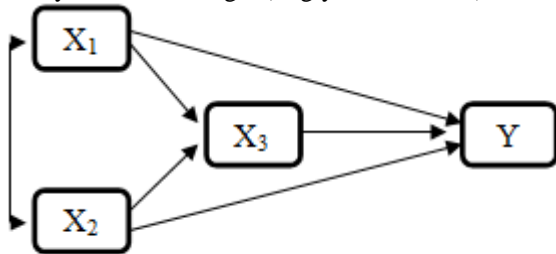
Place of implementation research in SMA Negeri 1 — which has some learning activities supporting facilities such as classrooms, which totalled 34, space laboratories, library, BP/BK, the INFIRMARY, the principal, teachers, businesses, cooperatives, as well as the Hall. The number of teachers in SMA Negeri 1 Tomohon amounted to 56, with the number of physics teacher as much as two people. The number of students on school year 2014/2015 totalled 1099 people. Implementation of research even semester academic year 2014/2015.

The target population in this study, taken from the whole grade XI SMA Negeri 1 Tomohon totalling 192. The sample in this study, taken using proportionate stratified random sampling are 48 students. This research, there are 3 independent variables (free) and the dependent variable is 1. Free variable 1: academic Atmosphere ( $X_1$ ), 2-free Variables, Academic Services ( $X_2$ ). Free 3 variables:

Motivation Overachievers ( $X_3$ ). Variables bound to: results of Learning Physics (Y).

### 2.1. Constalation Research

This research used the paradigm of path analysis. The use of a paradigm there is a variable path serves as the line between ( $X_3$ ) or variable called interveing. The use of these variables between the concept, intended to be able to know whether toreaching the final target must pass between the variables or directly to the final target (Sugiyono, 2014:72).



Picture .1 Constalation Research by Path Analysis

Variable consists of 3 independent variable and the dependent variable is 1, i.e.:

- 1) The atmosphere of academic learning as the independent variable ( $X_1$ ), which is defined as everything around the individual good are physiological, and psychological, as well as directly or indirectly give meaning to that individual in a learning process in terms of the environmental conditions of learning, interaction in the environment, and the function of the learning environment is measured using the now academic learning atmosphere.
- 2) Academic Services as an independent variable ( $X_2$ ) are defined as all the activities performed by the institutions which aim to provide convenience to students either in the form of equipment, devices, materials, and furnishings that can make it easier to launch, and supports students in a learning activity, as seen from the availability of on-site learning, learning facilities, the completeness condition learning facilities, and use of facilities study, as measured by the now learning facilities.
- 3) Motivation overachievers as the independent variable ( $X_3$ ) which is defined as a form of encouragement that emerged from within themselves to achieve success or achievements include, the desire for success, discipline in learning, self-directed learning, and diligent in learning, as measured by the now motivated achievers.
- 4) Student Learning Achievement the dependent variable (Y) which is the Achievement of midterm lessons of physics.
- 5) This study, using 2 data collection techniques, namely: 1. The questionnaire (question form): a questionnaire was used to obtain information about the author of the learning environment, learning, and motivation of students achieving good results.

### 2.2 Documentation

The documentation is a technique of collecting data with data sourced from the physics teacher, midterm results data even the school year 2014/2015.

The steps of data analysis in this research are:

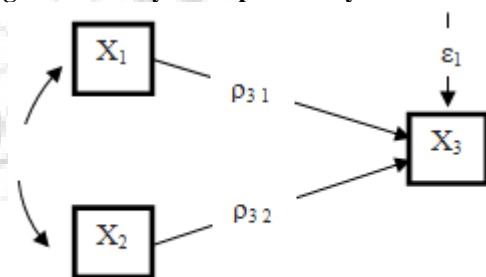
- 1) Test validity and reliability. Normality test data using the Kolmogorov-Smirnov Test (in SPSS, this same test with Test Lilliefor).
- 2) Correlation Between variables. To calculate the correlation coefficient between the big variable, using the formula of the Pearson Product Moment Test with Significance-F (Sundayana, 2014:228). To determine the value of the relationships between variables, the data is analyzed using path analysis, with the help of SPSS version 20.

### 3. Results and Discussion

The results of the data analysis 48 grade XI Programme IPA SMA Negeri 1 Tomohon school year 2014/2015, obtained research data for the academic atmosphere of the variables ( $X_1$ ), Academic Services ( $X_2$ ), Motivated Achievers ( $X_3$ ), and the results of Learning Physics (Y) can be seen in the table. Before the now given to a sample of the research, the now tested on students outside of the sample by the total number of respondents is equal to the sample. Testing the validity and reliability of the instrument using the help program p. Excel.

Pre requisite data before it is analyzed using analysis of multiple linear regression and correlation, data for each variable tested average deployment by using the Kolmogorov-Smirnov Test (SPSS, this same test with Test Lilliefor). If the value is Sig. or significance or value probability  $< 0.05$ , data distribution is not normal if the value of the Sig or significance or value probability  $> 0.05$ , data distribution is normal. The results of the analysis with SPSS (the value of the Sig the above variables to 0.05), obtained that data distribution for variables  $X_1$ ,  $X_2$ ,  $X_3$ , and Y is the Gaussian.

#### 3.1 Regression analysis To path analysis

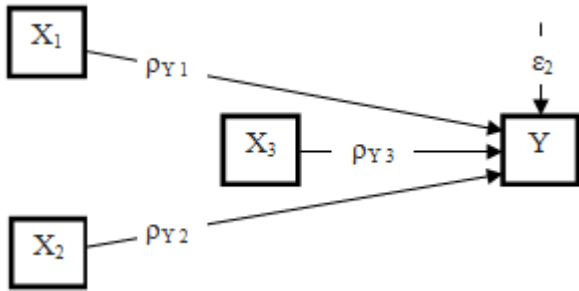


Picture .2. Substruktur 1 Chart

To simplify calculations, structure of path analysis is divided into 2 the substructure, i.e.:

Substructure 1: from Figure 2. retrieved form the substructure equation 1, namely:

$$X_3 = \rho_{31}X_1 + \rho_{32}X_2 + \varepsilon_1$$



Substructure: 2

Based on Figure 3, retrieved from the substructure equation 2, namely:

$$Y = \rho_{Y1}X_1 + \rho_{Y2}X_2 + \rho_{Y3}X_3 + \varepsilon_2$$

Descriptive Statistics

**Table 1:** Description of the Statistical Substructure 1

Descriptive Statistics			
	Mean	Std. Deviation	N
Motivation of achieving	72.83	2.444	48
Academic Atmosphere	75.00	11.038	48
Academic Service	33.52	2.052	48

### 3.2 Substructure 1

From Table 1, the average value obtained from each of the variables, namely: 75.00 for X<sub>1</sub>, X<sub>2</sub>, and to 33.52 72.83 for X<sub>3</sub>, as well as the value of the standard deviation of each of the variables, namely: 11.038 for X<sub>1</sub>, X<sub>2</sub>, and for the 2,052 2,312 for X<sub>3</sub>, with the number of respondents (N) is the same that is 48.

Table 2. give the value of the correlation between variables. Great relationships between the variables X<sub>1</sub> with X<sub>2</sub> which is the correlation coefficient is calculated by totalling 0.635, between variables X<sub>1</sub> with X<sub>3</sub> of 0.470, and between the variable X<sub>2</sub> with X<sub>3</sub> of 0.527. The level of significance of the correlation coefficient is one side of the output obtained the number 0000 or practically 0. The results of probability values well below 0.05, then the correlation between variables X<sub>1</sub>, X<sub>2</sub>, and X<sub>3</sub> are very real.

**Table 2:** The correlation Between the variable's Substructure 1

Correlations				
		Motivation of Achieving	Academic Atmosphere	Academic Service
Pearson Correlation	Motivation of Achieving	1.000	.470	.527
	Academic Atmosphere	.470	1.000	.635
	Academic Service	.527	.635	1.000
Sig. (1-tailed)	Motivation of Achieving	.	.000	.000
	Academic Atmosphere	.000	.	.000
	Academic Service	.000	.000	.
N	Motivation of Achieving	48	48	48
	Academic Atmosphere	48	48	48
	Academic Service	48	48	48

**Table 3:** Simultan ValueSubstructure 1

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.555 <sup>a</sup>	.308	.278	2.077

a. Predictors: (Constant), Academic Service, Academic Atmosphere  
 b. Dependent Variable: Motivation of achieving

Figure R Square (R<sup>2</sup>) is 0.308. Means, simultaneous influence of quantity of variables X<sub>1</sub> and X<sub>2</sub> of X<sub>3</sub> against 30.8% or in other words, the variable X<sub>3</sub> can be explained by the variables X<sub>1</sub> and X<sub>2</sub> are variable, and the rest of 43.0% explained by other reasons.

Of Test Anova F-test, or retrieved values F calculate the level of significance of 10.029 0000. Where the value of significance is much smaller than 0.05, then this regression model can be used to predict the X<sub>3</sub>.

**Table 4:** Analysis Varians Substructure 1

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	86.533	2	43.266	10.029	.000 <sup>b</sup>
	Residual	194.134	45	4.314		
	Total	280.667	47			

a. Dependent Variable: Motivation of Achieving  
 b. Predictors: (Constant), Academic Service, Academic Atmosphere

**Table 5:** Coefficients aquation Substructure 1

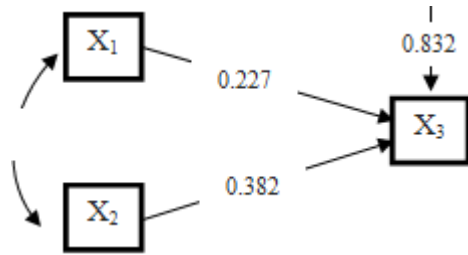
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	53.796	5.152		10.442	0
	Academic Atmosphere	0.05	0.036	0.227	1.417	0.163
	Academic Service	0.455	0.191	0.382	2.383	0.021

a. Dependent Variable: Motivation of Achieving

Further significance testing was done on an individual basis through the parameters of the test statistic t. The test results on an individual basis shows that on the X<sub>31</sub> there is no significant influence, as seen from the Sig value. That are far above the value of probability 0.05. This means that the variable X<sub>1</sub> give influence on the X<sub>3</sub> but not significantly. On line X<sub>32</sub> there is a significant influence, as seen from the Sig. value under value probability 0.05. Meaning, the variable X<sub>2</sub> gives influence on X<sub>3</sub> significantly. Partially, the variable X<sub>1</sub> positive effect and directly against the X<sub>3</sub>. The influence of the great partial and variable X<sub>1</sub> is directly against the X<sub>3</sub> is 0.227 or 22.7%. Then, high low X<sub>3</sub> is influenced by X<sub>1</sub> of 22.7% and the remaining 141.25% is affected by other factors outside the model. Partially, the variable X<sub>2</sub> positive effect and directly against the X<sub>3</sub>. The influence of the great partial and variable X<sub>2</sub> is directly against the X<sub>3</sub> is 0.382 or 38.2%. Thus, high low X<sub>3</sub> is influenced by X<sub>2</sub> amounted to 38.2% and the remaining 38.4% is affected by other factors outside the model.

Table 3. and Table 5, obtained values for Equation 1 substructure, i.e.:

$\rho_{31} = 0.227; \rho_{32} = 0.382; \varepsilon_1 = 0.832$  with,  $\varepsilon_1 = \sqrt{1 - R^2}$ , then the empirical equations form the substructure 1 becomes:



$$X_3 = 0.227X_1 + 0.382X_2 + 0.832$$

**Table 6:** Descriptive Statistics Substructure 2

Descriptive Statistics			
	Mean	Std. Deviation	N
Learning Achievement	76.83	3.392	48
Academic Atmosphere	75.00	11.038	48
Academic Service	33.52	2.052	48
Motivation of Achieving	72.83	2.444	48

**Table 7:** The correlation Between the variable's Substructure 2

Correlations					
		Learning Achievement	Academic Atmosphere	Academic Service	Motivation of Achieving
Pearson Correlation	Learning Achievement	1.000	.424	.373	.320
	Academic Atmosphere	.424	1.000	.635	.470
	Academic Service	.373	.635	1.000	.527
	Motivation of Achieving	.320	.470	.527	1.000
Sig. (1-tailed)	Learning Achievement	.	.001	.004	.013
	Academic Atmosphere	.001	.	.000	.000
	Academic Service	.004	.000	.	.000
	Motivation of Achieving	.013	.000	.000	.
N	Learning Achievement	48	48	48	48
	Academic Atmosphere	48	48	48	48
	Academic Service	48	48	48	48
	Motivation of Achieving	48	48	48	48

**Table 8:** Simultan Substructure 2 Value

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455 <sup>a</sup>	.207	.153	3.121

a. Predictors: (Constant), Motivation of Achieving, Academic Atmosphere, Academic Service.  
 b. Dependent Variable: Learning Achievement

**Table 9:** Analysis Varians Substructure 2

ANOVA <sup>a</sup>						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	112.138	3	37.379	3.838	.016 <sup>b</sup>
	Residual	428.529	44	9.739		
	Total	540.667	47			

a. Dependent Variable: Learning Achievement  
 b. Predictors: (Constant), Motivation of Achieving, Academic Atmosphere, Academic Service.

Figure R Square ( $R^2$ ) was 0.207. Means, simultaneous influence of quantity of variables  $X_1, X_2$  and  $X_3$  against Y of 20.7% or Y variable can be explained by the variable  $X_1, X_2, X_3$ , and the rest of 79.3% explained by other reasons. Test results or test Anova F, retrieved the value F count of 3937 with a level of significance of 0.016.

#### 4.1.2.2. Substructure 2

From Table 6., obtained average value of each variable, namely: 75.00 for  $X_1, X_2$ , to 33.52 72.83 for  $X_3$ , and 76.83 for Y, as well as the value of the standard deviation of each of the variables, namely: 11.038 for  $X_1, X_2$ , to 2,052 2,312 for  $X_3$ , and with the number of Y to 3.392 respondents (N) is 48.

Table 7. give the value of the correlation between variables. Great relationships between the variables X 1 with Y measured by a coefficient of correlation between the variable  $X_2$  0.424 with Y of 0.373, and between the variable  $X_3$  with Y of 0.320. The level of significance of the correlation coefficient is one side of the output for the  $X_1$  with Y is 0.001, for  $X_2$  with Y is 0.004, and for  $X_3$  with Y is 0.013. where the probability value below 0.05, then the correlation of  $X_1, X_2, X_3$  and Y is real.

the result value smaller than 0.05 significance, then this regression model can be used to predict Y.

**Table 10:** Coefficients Equation Substructure 2

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	51.218	14.321		3.576	.001
	Academic Atmosphere	.088	.055	.287	1.614	.114
	Academic Service	.215	.305	.130	.705	.485
	Motivation of Achieving	.162	.224	.117	.724	.473

a. Dependent Variable: Learning Achievement

Further significance testing was done on an individual basis through the parameters of the test statistic t. The test results on an individual basis demonstrate that the on line there are influences that  $YX_1$  insignificant, as seen from the Sig value. that are far above the value of probability 0.05. This means that the variable  $X_1$  gives the effect on Y but not significantly. On the path there is the influence of  $YX_2$  insignificant, as seen from the Sig value. that is above the value of probability 0.05. This means that the variable  $X_2$  gives influence on Y but not significantly. On the path there

are influences that  $YX_3$  insignificant, as seen from the Sig value. that is above the value of probability 0.05. This means that the variable  $X_2$  gives influence on  $Y$  but not significantly.

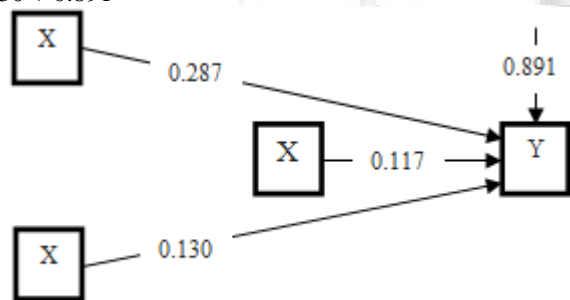
Partially, the variable  $X_1$  positive effect and directly against the influence of the Great partial  $Y$ . and directly the variables  $X_1$  against  $Y$  is 0.287 or 28.7%. Thus, high low  $Y$  are affected by  $X_1$  of 28.7% and 77.1% the rest is influenced by other factors outside the model.

Partially, the variable  $X_2$  positive effect and directly against the big  $Y$ . influence of partial and variable  $X_2$  is directly against  $Y$  is of 0.130 or 13%. Thus, high low  $Y$  are affected by  $X_2$  of 13% and the remaining 87% is affected by other factors outside the model.

Partially, the variable  $X_3$  effect positively and directly against the influence of the Great partial  $y$ . and directly against the  $X_3$  variable  $Y$  is 0.117 or 12.1%. Thus, high low  $Y$  of  $X_3$  is influenced by 11.7% and 54.9% of the rest are influenced by other factors outside the model.

Based on Table 8 and Table 10, retrieved values for equation 2: substructure  $\rho_{Y1} = 0.287$ ;  $\rho_{Y2} = 0.130$ ;  $\rho_{Y3} = 0.117$ ;  $\varepsilon_2 = 0.891$

With,  $\varepsilon_1 = \sqrt{1 - R^2}$ , then the empirical equations form the substructure 2 becomes:  $Y = 0.287 X_1 + X_2 + X_3 \cdot 0.117 + 0.130 + 0.891$



Picture 5: Substructure 2 Value

#### 4. Discussion of Research Results

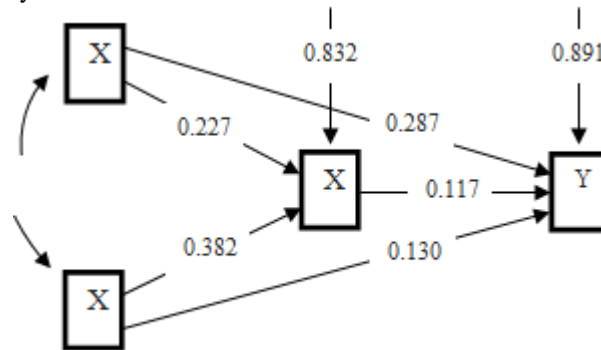
##### Interpretation of the Data Substructure 1

Based on the analysis of the data is performed using the SPSS program, assistance was obtained that simultaneously learning academic atmosphere and academic services exert influence directly and positively amounting to 39.3% against motivation overachievers. A regression model of the substructure 1 this happens significantly. It can be seen from the value of the Sig. far below 0.05, so the probability of this model can be used to predict motivation overachievers. Further testing on individual testing indicates that the academic atmosphere of the direct and positive influence on the motivation of an accomplished but not significantly (Sig value. greater than 0.05 probability) with the highest influence of 0.227 or 22.7%. The rest of 141.25% is affected by other factors outside the model. Academic services provide direct and positive influence on learning motivation and significantly with the influence of 0.382 or 38.2%. The remaining 38.4% is affected by other factors outside the model. The influence of time (outside influences that can't

be explained by the model) of 0.832, then the form of the equation for the substructure of 1 is  $X_3 = 0.227 X_1 + X_2 + 0.832$ . If the value of the academic atmosphere of the increase, the value of motivation overachievers will experience an increase of 0.227, whereas if the academic atmosphere is made variable constant, then any increase in the value of the academic services will increase the motivation of 0.382 achievers.

##### Interpretation of the Data Substructure 2

The data analysis was done using SPSS program assistance, retrieved that simultaneously academic atmosphere, service, and academic motivation overachievers exert influence directly and positively of 20.7% against the results of the study of physics students. A regression model of the substructure of this 2 happen significantly. It can be seen from the value of the Sig. far below 0.05, so the probability of this model can be used to predict the results of the study of physics students. Further testing on individual testing indicates that the academic atmosphere of the direct and positive influence on the achievement of learning Physics students but not significantly (Sig value. greater than 0.05 probability) with the highest influence of 0.287 or 28.7%. The rest amounted to 77.1% were influenced by other factors outside the model. Academic services provide direct and positive influence on the achievement of learning Physics students but not significantly with the influence of 0.130 or 13%. The remaining 87% is affected by other factors outside the model. The motivation of doing direct and positive influence on the achievement of learning Physics students but not significantly with the influence of 0.117 or 12.1%. The rest is 88.3% were influenced by other factors outside the model. The influence of time (outside influences that can't be explained by the model) of 0.891, then the form of the equation for substructure 2 is  $Y = 0.287 X_1 + X_2 + X_3 \cdot 0.117 + 0.130 + 0.891$ . If the value of the academic atmosphere of the increase, the value of the results of learning Physics students will experience an increase of 0.287, if the constant value of the academic atmosphere is created and the value of improved academic services, the value of the results of learning Physics Students will experience an increase of 0.130, while if the value of the variable of the academic atmosphere and academic services made constant, then any increase in the value of the motivation of overachievers will improve the results of Physics students of 0.117.



Picture 6: Path chart Empiric Learning

Non directly, the great influence of the academic atmosphere against the results of the study of physics students through motivational achievers of 0.027. So the total effect of the academic atmosphere against the results of the study of

physics students of 0.314. Meanwhile, the big influence of academic services not directly against the results of the study of physics students through motivational achievers of 0.045. Then the total influence of the academic service learning students Physics results of 0.175.

Based on the results of the data processing and analysis of data from the substructure substructure of 1 and 2, retrieved empirical line diagrams to model the results of learning Physics students described pictures 6

A good learning conditions provide opportunities for students to learn the existence of. Student learning entitlement needs to be formed while attending. Through the observations of individual students in a lecture, will be retrieved information on whether students are learning or not. Observation learning and learning outcomes assessment form will give you a good influence against the learning outcomes of students (Dungus Ferdy, 2015).

## 5. Conclusion

Based on the results of the analysis can be inferred several things, as follows:

There is the influence of the academic atmosphere against the dinyatakan achievers in the motivation equation  $X_3 = 0.227 X_1 + X_2 + 0.832$  0.382, with influences of 0.227. This means that if the value of the variable is the academic atmosphere is enhanced, it will increase the value of the variable is the motivation of overachievers.

There is the influence of academic service against the motivation of overachievers who modelled in the  $X_3 = 0.227 X_1 + X_2 + 0.832$  0.382, with influences of 0.382. This means that if the value of the variable academic services increased, it will increase the value of the variable is the motivation of overachievers.

There is the influence of the academic atmosphere directly against the results of the study of physics students of Class XI Programme IPA SMA Negeri 1 Tomohon modeled in the equation  $Y = 0.287 X_1 + X_2 + X_3$  0.117 0.130 + 0.891, with direct influences of 0.287.

This means that if the value of the variable is the academic atmosphere is enhanced, it will increase the value of the variable results of learning physics.

There is the influence of the academic services directly against the results of the study of physics students of Class XI Programme IPA SMA Negeri 1 Tomohon modeled in the equation  $Y = 0.287 X_1 + X_2 + X_3$  0.117 0.130 + 0.891, with direct influences of 0.130. This means that if the value of the variable academic services increased, it will increase the value of the variable results of learning Physics

There is the influence directly of the motivation of overachievers against a result studied physics grade XI Programme IPA SMA Negeri 1 Tomohon modeled in the equation  $Y = 0.287 X_1 + X_2 + X_3$  0.117 0.130 + 0.891, with direct influences of 0.117. This means that if the value of the

variable, then the upgraded achievers motivation will increase the value of the variable results of learning physics. There are influences from the atmosphere through academic achievers motivation towards results studied physics students of Class XI Programme IPA SMA Negeri 1 Tomohon amounted to 2.7%.

There is the influence of the academic services through motivated achievers against the results of the study of physics students of Class XI Programme IPA SMA Negeri 1 Tomohon amounting to 4.5%.

## References

- [1] Aunurrahman. 2009. *Learning and Learning*. Bandung: Alfabeta.
- [2] Bacten, M., Struyven, K., and Dochy, F., (2013). Student Centred Teaching Methods: Can they Optimise Students' Approaches to Learning in Professional higher Education? *Journal Studies in Educational Evaluation* 39 (2013) 14-32
- [3] Baharuddin. 2007. *The Psychology of Education*. Yogyakarta: Ruzz Ar Media.
- [4] Dalyono. 2005. *The Psychology of Education*. Jakarta: Cipta Rineka.
- [5] Dimiyati, Mudjiono. 2006. *Study and Learning*. Jakarta: Cipta Rineka.
- [6] Dungus Ferdy. 2015. The Influence Of Learning Application Model And Assessment Techniques Toward Basic Physics II Learning Achievement (An Experiment Of Department Physics OffMIPA Unima ). *International Journal of Scientific and Research Publications*. Vol. 5. Issue 10. Oktober 2015 Edition. ISSN. 2250-3153. Online.(p.9)
- [7] Djiwandono, s. 2002. *Psychology of Education*. Jakarta: PT Gramedia Widiasarana Indonesia.
- [8] Gunawan, Ari. 2004. *The Education Policies*. Jakarta: Rineka Cipta.
- [9] Greiff Samuel, Wustenberg, S., Csapo, B., Demetriou, Andreas., Hautamaki., Graesser., C Arthur, and Martin .,R. (2014) Domain-General Problem Solving Skills and Education in the 21<sup>st</sup> Century, *Journal Educational Research Review* 13 (2014) 74-83
- [10] Hamalik, Oemar. 2004. *The Psychology Of Learning And Teaching*. Bandung: Some New Light Algensindo.
- [11] \_\_\_\_\_. 2006. *The Process Of Teaching And Learning*. Bandung: Earth Alphabet.
- [12] Laksana, Fajar. 2008. *Marketing Management*. Yogyakarta: PT Graha Ilmu.
- [13] Munasco, The Form of The Test, The Qualification of Teachers and The Learning of Physics By Controlling The Initial Ability. *Journal of Educational Evaluation: UNJ Graduate Programs*. Vol. 4, no. 1, March, 2013: (37-51)
- [14] Moenir. A. S. 1995. *Public Service Management in Indonesia*. Jakarta: Bumi Aksara.
- [15] Pasolong, Harbani. 2007. *The Theory of Public Administration*. Bandung: Alfabeta
- [16] Purwanto, Ngalim. 2006. *The Psychology of Education*. Bandung: PT. Remaja Rosdakarya.
- [17] Rabideu, s. t. 2005. *Effects of Achievement Motivation on Behavior*.



<http://www.personalityresearch.org/papers/rabideau.htm>

1. In access, February 26, 2015

- [18] Sardiman. 2006. *The Interaction of Teaching And Learning And Motivation*. Jakarta: Raja Grafindo Persada.
- [19] Slameto. 2003. *Study And The Factors That Affected It*. Jakarta: Cipta Rineka.
- [20] Soekanto, Soerjono. 2006. *Sociology: an Introduction*. Jakarta: Raja Grafindo Persada.
- [21] Sudjana, Nana. 2005. *An Assessment of The Results of The Teaching and Learning Process*. Bandung: Pt. Remaja Rosdakarya.
- [22] Sugiyono. 2014. *The Method of Educational Research*. Bandung: Alfabeta.
- [23] Sukadji, S. 2001. *Success in College (Special Edition)*. Singapore Education: Psychology Faculty of Psychology of the University of Indonesia.
- [24] Suprijono, Agus. 2011. *Cooperatif Learning Theory And Applications Paikem*. Yogyakarta: Pustaka Pelajar.
- [25] Surya, Mohamad. 2004. *The Psychology of Learning and Teaching*. Bandung: Pustaka Banu Quraish.
- [26] Suryabrata, Sumadi. 2006. *The Psychology of Education*. Jakarta: PT Raja Grafindo Persada.
- [27] Shah, Muhibbin. 2010. *The Psychology of Education With a New Approach*. Bandung: Teen Rosdakarya.
- [28] Tampubolon. 2001. *The New Paradigm of Quality Colleges And Management of Higher Education Facing The Challenges of The 21st century*. Jakarta: PT Gramedia Pustaka Utama.
- [29] Uno, Hamzah. 2006. *The theory of Motivation & Measurement*. Jakarta: Aksara Earth.

