The Determinant of Student Learning Achievement and Student Performance in Vocational Higher Institution

Arkas Viddy[1] and Hanadelansa[2]

[1]Bussiness Administration, Politeknik Negeri Nunukan, Ujang Dewa Street, Nunukan, Indonesia
[2]Management Department, STIE Wira Bhakti, Tamamaung, Makassar, Indonesia

Keywords: Lecture Quality, Learning Facilities, Service Quality, Learning Achievement, Academic and Student Performance.

Abstract: The purpose of this study is to analyze determinant of student Learning achievement and academic and student performance in vocational higher Institution in case of Politeknik Negeri Nunukan. It is decided there are several factors could affect on student learning achievement and academic and student performance, namely the quality of lecturers, learning facilities, service quality. To analyze all the data, SmartPLS version 3.20 is used as the instrument of the path analysis software program. The research sample is students majoring in Business Administration, totaling 100 students. This study found that the quality of lecturers and teaching facilities have no significant effect on student achievement and academic and student performance. Meanwhile, service quality has a significant effect on student learning achievement and academic and student performance.

1 INTRODUCTION

Teaching and learning activities are very important activities carried out in the educational process, starting from elementary school, middle school, up to university. Based on these activities, there will be interactions between teachers and their students, namely through the process of knowledge transfer and it is hoped that later educational goals will be achieved in the form of changes in student behavior (Saputra, and Yuniawan, 2011).

Learning achievement achieved by students or students is the result of the interaction between various factors that influence it both from within and from outside the student or student. According to reference (Hetika, 2008) learning achievement is the achievement or skill that is shown in expertise or a collection of knowledge. Meanwhile reference (Hetika, 2008) states that achievement is the result of efforts made and produces changes which are expressed in the form of symbols to show the ability to achieve work results within a certain time.

Well learning achievement could contribute positive effect on student performance (Hasibuan, 2002). stated that performance is the result of work achieved by a person in carrying out his duties on skills, efforts and opportunities. The definition of

performance refers to the level of success in carrying out tasks and the ability to achieve the goals that have been set. Performance is declared good and successful if the desired goals can be achieved well (Gibson et al., 1994)

References (Saputra, and Yuniawan, 2011) have revealed that there are three elements in teaching and learning activities. The first is students, both students and students with all their behaviors and characteristics who always try to develop themselves through learning activities. Second, teaching staff, both teachers and lecturers, are required to always create a conducive atmosphere in the teaching and learning process so that the knowledge transfer process can be achieved. The third is the goal, which is everything that is expected to happen or appear after the learning process is carried out. If these three elements can run in harmony, then the objectives of the learning process will be achieved properly.

Reference (Peña-Lang et al., 2022) revealed that the competence of lecturers greatly determines student learning achievement. Research conducted by reference (Nyavon, 2017). also reveals that the quality of lecturers has a significant influence on student learning achievement. Based on research conducted by reference (Pujasari, 2013). states that learning media has a positive influence on student

learning achievement. Research conducted by reference (Setyawan, 2016). Also states that learning media has an influence on student learning achievement. References (Safi'i and Handoko, 2015). revealed that service quality is considered sufficient or has a positive influence on student learning achievement. (Peña-Lang et al., 2022) while found that service quality, academic engagement, and student satisfaction had an influence on accounting students' academic achievement (Satuti et al., 2020)

Higher education as an institution that organizes the teaching and learning process must also be able to harmonize the three elements mentioned above. What's more, universities are required to be able to produce graduates who have quality according to user needs. This becomes a challenge for every university, so that the academic community is directed to be able to actualize themselves professionally based on their respective duties. Higher education performance can run well if lecturers have the competencies that have been stipulated in Law Number 14 of 2005 focusing on the people who responsible to the students in implementing teaching method and skill such as pedagogic competence, social and professional competence and personality competence. High competence will result in optimal performance.

(Iskandarsyah et al., 2012) in their research concludes that the factors that can affect student learning achievement include lecturers' teaching styles, assistance to students, lecture structure, and teaching and learning facilities. Students prefer lecturers' teaching styles that are interesting and not stressful, so that students' understanding and achievement in studying subjects will increase. It turns out that students don't really like lecturers who can't make the classroom atmosphere comfortable for the learning process. The inability of lecturers to interact with students in class could be responsible for the poor performance observed by students in class. In addition to the competence of lecturers, higher education performance will run well if it is supported by good facilities and infrastructure for the process of teaching and learning activities.

In addition, regular and systematic assistance will make students better understand the courses being taken and will be able to improve their learning achievements, in the sense that they have good final/exam scores for the courses in question. The use of a lecture structure that is in accordance with the course is also felt to be able to improve student learning achievement. Unfortunately, mostly higher vocational institution such as Polytechnics are put their concern for this matter specifically. Thus, it is

necessary to explore regard to all the determinant of learning achievement and student performance.

2 METHODOLOGY

2.1 Research Road Map

The road map of this research could be done by path analyzing or by using the software of Smart Partial Least Square (PLS) with the steps as follows:
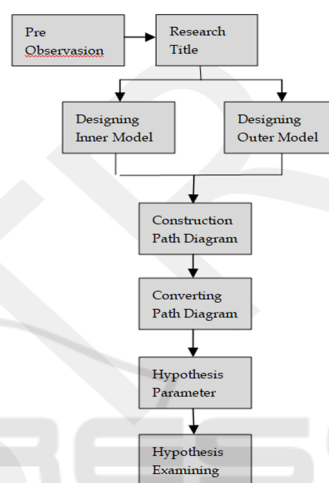

Figure 1: Research Road Map.

From Fig. 1, there are several steps need to be done the such as literature reviews following by determining a research main topic, to build the structural equation model following by building measurement model, to create construction a path diagram following by converting a path diagram to regression formulation, and the other needs be done is creating hypothesis in order to can be examined.

2.2 Hypothesis Parameter

Hypothesis will be accepted by testing P Value with 0.05 with the level of confidence 95 percent (alpha 0.05) When P Value $\leq$ 0.05 means H0 is rejected, Ha is accepted or the Hypothesis is accepted T table is 1.990, and when test > 1.990 so H0 is rejected and the Hypothesis is accepted.

2.3 Data Collected

Data were collected using accidental random sampling technique by distributing questionnaires to respondents generated by several variables such as

quality of lecturers, teaching facilities, quality of service, learning achievement and academic performance and student study program of business administration Politeknik Negeri Nunukan.

All variables consist of several indicators such as the quality of lecturers with indicators of mastery of the material, explanation of the material, arousing interest in learning, and being able to answer questions; for teaching facilities with indicators of equipment and laboratories/workshops; for service quality with indicators of tangible, reliability, assurance, responsiveness, empathy; for learning achievement with internal and external indicators; for academic and student performance with indicators of academic performance and student performance. The next steps is testing of the validity and reliability of instrument by using SPSS 21 version for ensure the all of the items of questioners are appropriate. For analysis the data Path Analysis instrument is used by using SmartPLS 3.20 version with the steps such as designing the structural model (inner and outer model), constructing a path diagram, converting a path diagram to regressions, hypothesis parameter, and examining the hypothesis.

The reasons using SmartPLS 3.20 version are this research using small sample only 30 respondents, this research is path analysis research, using SmartPLS is quite easy because the data is not necessary normal, and linier, moreover not only significance of direct effect but also the significance of indirect effect can be resulted.

2.4 Hypothesis

Based on the gaff, theoretical and empirical foundation, the hypothesis can be explored as follows:
1. Lecturer Quality has significant effect on Learning Achievement.
2. Learning Facilities has significant effect on Learning Achievement.
3. Service Quality has significant effect on Learning Achievement.
4. Lecturer Quality has significant effect on Academic and Student Performance.
5. Learning Facilities has significant effect on Academic and Student Performance
6. Service Quality has significant effect on Academic and Student Performance.
7. Learning Achievement has significant effect on Academic and Student Performance

2.5 Validity and Reliability

By using SPSS 17 version, all items need to examine whether they are valid or reliable.

3 RESULTS AND DISCUSSIONS

This research is quantitative research with some type of variables such exogenous, intervening and endogenous variable. For this type of research SmartPLS version 3.20 could effective used for analysis data. This kind of analysis is called path analysis.

3.1 Results

By using Smart PLS 3.20 version, the figure of model with loading factor and path coefficients can be displayed as below:
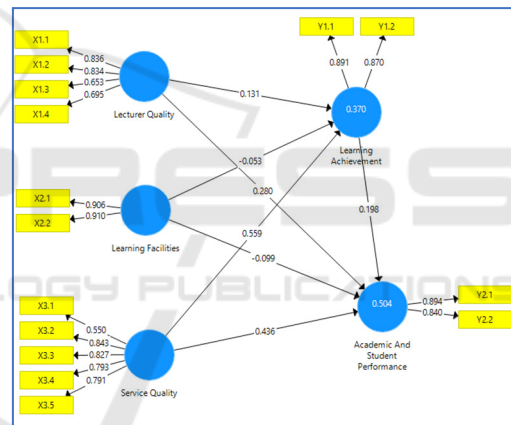

Figure 2: Structural Model.

From Fig. 1, it can be mentioned that only learning facilites have negative effect on both learning achievement and academic and student performance.
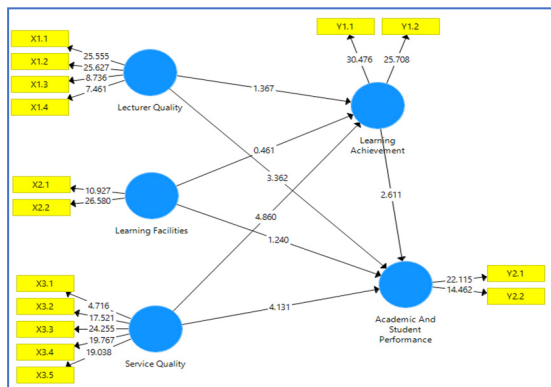

Figure 3: Path Coefisien.

893

Figure 4: Bootstrapping Structural Model.

From Fig. 2, it can be noted that only 3 t test less than 1.990 which indicated that only 3 hypothesis are rejected. The path coefficcient can be estimated as follows:

Figure 5: Hypothesis Examining.

From the Table 1, the formulation results of path analysis can be mentioned as below:

$$Y1 = 0{,}131X1 - 0.053X2 + 0.559X3 \quad (1)$$

$$Y2 = 0.280X1 - 0.099X2 + 0.436X3 + 0.198Y1 \quad (2)$$

This equation can be indicated that only learning facilities has negative effect on learning achievement and academic and student performance.

Table 1: T Test.

No	Results	Examined	Decision
1	T test = 1,367	H0 Accepted Ha Rejected	LQ has no significant effect on LA
2	T test = 0,461	H0 Accepted Ha Rejected	LF has no significant effect on LA
3	T test = 4.860	H0 Rejected Ha Accepted	SQ has significant effect on LA
4	T test = 3.362	H0 Rejected Ha Accepted	LQ has significant effect on ASF
5	T test = 1.240	H0 Accepted Ha Rejected	LF has no significant effect on ASF
6	T test = 4.131	H0 Rejected Ha Accepted	SQ has significant effect on ASF
7	T test = 2,611	H0 Rejected Ha Accepted	LA has significant effect on ASF

Note: LQ (Lecturer Quality), LF (Learning Facilities), SC (Service Quality), LA (Learning Achievement), ASF (Academic and Student Performance)

3.2 Discussion

Based on the analysis, it can be mentioned there are several hypotheses are accepted, while others are rejected. It can be discussed as follows:

Lecturer Quality has no significant effect on Learning Achievement, because mostly all off the lecturer in Politeknik Negeri Nunukan are new and they have a few of experience in teaching, moreover they have average quality, thus the student unable to classify which one the standard quality lecturer and which one under standard quality lecturer. This contrary with (Saputra, and Yuniawan, 2011) stated that lecturer could effect on learning achievement. It is found that Lecturer Quality has significant effect on Academic and Student Performance, because the lecturer in Politeknik Negeri Nunukan not only as a teacher but also as a facilitator, a motivator and a supervisor.

Learning Facilities has no significant effect on Learning Achievment and Academic and Student Performance, because as vocational institution which has more practical matters rather than theoretical matters, the student usually focus on practical implementation especially in Laboratory or in outside fields. These results contrary with what (Iskandarsyah et al., 2012) stated that learning facilities could determine the learning achievement and academic and student performance.

Service Quality has significant effect on Learning Achievment and Academic and Student Performance, because the management attempt to improve their service quality year by year, because this matter is the main instrument can make the students satisfaction, finally affects on academic and student performance.

Learning Achievement has significant effect on Academic and Student Performance, because learning achievement is the main aim in all higher institution, especially Polytechnic, that why all management levels always focus on this matters and attempt to improve all determinant factor of learning achievement, thus when learning achievement is quite well improved, it can be a trigger for students in improving their academic and student performance.

4 CONCLUSIONS

Based on the analysis, results and discussion, it can be concluded that only service quality has a positive

and significant on learning achievement, while learning facilities and lecturer quality have no significant effect on learning achievement.

Then for variable of learning achievement, quality of lecturers, and quality of service have positive and significant effect on academic and student performance, while learning facilities have no significant effect on academic and student performance.

ACKNOWLEDGEMENTS

REFERENCES

Setyawan, A. A. (2016). Pengaruh Gaya Belajar, Prokrastinasi dan Fasilitas Belajar Terhadap Prestasi Belajar Mahasiswa Prodi Pendidikan Akuntansi Fakultas Ekonomi Universitas Negeri Surabaya. *Jurnal Pendidikan Akuntansi (JPAK)*, *4*(1).

Gibson, J. L., & Donnely, J. H. (1994). Organisasi dan manajemen: perilaku, struktur, proses.

Islam, M. P. Ahmadi, Abu dan Supriyono, Widodo, 2004, Psikologi Belajar, Jakarta: PT Rineka Cipta.

Hasibuan, M. (2002). Manajemen Sumber Daya Manusia. Edisi Revisi. Cetakan keenam. *Jakarta: PT. Bumi Aksara*.

Hetika (2008). Buku Penuntun Membuat Tesis, Skripsi, Disertasi, Makalah. *Bandung, Bumi Aksara*.

Iskandarsyah, D. and I. Ghozali (2012). Analisis faktor-faktor yang memengaruhi prestasi mahasiswa dalam mempelajari matakuliah akuntansi keuangan menengah (studi empiris pada mahasiswa jurusan akuntansi reguler di Fakultas Ekonomika Dan Bisnis Universitas Diponegoro tahun angkatan 2009 dan 2010), Fakultas Ekonomika dan Bisnis

Nyavon, P. (2017). Pengaruh Kinerja Dosen Dengan Motivasi Belajar Pada Mahasiswa Prodi Sosiatri Fakultas Ilmu Sosial Dan Ilmu Politik Universitas Mulawarman Samarinda, Psikoborneo

Peña-Lang, M. B., Barrutia, J. M., & Echebarria, C. (2022). Service quality and students' academic achievement. *Quality Assurance in Education*, (ahead-of-print).

Pujasari, Y., & Nurdin, N. (2008). Pengaruh Kompetensi Profesional Guru terhadap Keberhasilan Belajar Siswa. *Jurnal Administrasi Pendidikan*, *8*(2).

Reski, A. (2018). Pengaruh Fasilitas Belajar Terhadap Motivasi Dan Hasil Belajar Fisika Mahasiswa. *Musamus Journal of Science Education*, *1*(1), 001-008.

Safi'i, I., & Handoko, F. (2015). Kualitas Pelayanan Di Tinjau Dari Prestasi Akademik Mahasiswa Studi Kasus Pada Universitas Kadiri. *Jurnal Teknologi Dan Manajemen Industri*, *1*(2), 22-27.

Saputra, V. D., & Yuniawan, A. (2011). *Analisis Kepribadian Dosen yang Berpengaruh terhadap Prestasi Belajar (Studi pada Mahasiswa Fakultas Ekonomi Universitas Diponegoro)* (Doctoral dissertation, Universitas Diponegoro).

Satuti, J. R., Sunaryanto, S., & Nuris, D. M. R. (2020). Does Student Satisfaction Mediate the Correlation between E-learning Service Quality, Academic Engagement and Academic Achievement?. *Jabe (Journal of Accounting and Business Education)*, *5*(1), 38-53.