

***Factors Influencing Legitimate Peripheral Academic Participation of Students  
in Higher Education***

Sari Muthia Silalahi, Institut Teknologi Del, Indonesia

The Southeast Asian Conference on Education 2020  
Official Conference Proceedings

**Abstract**

The aim of this study is to examine factors influencing legitimate peripheral aspects such as: interpersonal teacher, student's behavior, classroom climate and environmental which has influence student's affective and cognitive. The data were obtained using methods: interviews and questionnaire. Random participant has been chosen for interviewed and population has been used for questionnaire. 1585 participants have filled the questionnaire and 24 students have interviewed. Interview data were recorded and analyzed. The results have processed, it was classified according to study programs following the indicator. The research finding shows that: lecturers and teaching assistants got 78 - 81%, academic and non-academic facilities got 74.91% - 80.86% and dormitory got 69.16% which have a big impact on influencing student's affective and cognitive. There were also issues such as teacher's centered-learning, dozy students and class situations can often be uncomfortable.

Keywords: Classroom conditions, environmental, interview, questionnaire, student's behavior, teacher's personality

**iafor**

The International Academic Forum  
[www.iafor.org](http://www.iafor.org)

## **Introduction**

Education enables individuals and society to participate comprehensively in the process of forming and developing knowledge, abilities, skills, and attitudes. The development of academic ability is also influenced by most factors including the attitude of lecturers, student behavior, classroom/laboratory, residence, and facilities.

Lecturers and staff should have an attitude in the forming of knowledge and information regarding the content they conveyed using modern technology and innovative methods in teaching and learning, managing discipline, directing and taking control of the class and other well-organized activities Maina (2010). Besides that, leadership is one of the influences factors changes institutions. Leadership by using knowledge, skills, and talents will produce students with unlimited resources that have good and positive outcomes (Ackerman, Moller & Katzenmeyer, 1996). The Council for Education Policy, Research, and Improvement (2003) state that the influence of quality of education is the lecturer's ability. So, lecturer characteristics and ability are the main factors in achieving the quality of education.

Apart from the resources provided, the regulations set and curriculum changes, it is also the main source of learning for students and lecturers in the class. One example: how were the students understand instruction from teachers and how much they learn is a factor that influences how they can survive and follow learning in school. This has become one of the focuses for educators in implementing education policies and regulations in academic institutions (Education for All, 2005). Kudari (2016) efficiency in classroom management as well, introduced and well managed according to the lesson plans, teaching strategies, teaching-learning processes, etc. When they have discipline and good communication between individuals, it will help students learn better and improve their academic performance.

The attitude of students also plays an important role in determining academics. The attitude that is held is disciplined, diligent, creativity and has positive thoughts in the terms of their schools, lecturers, and academics. With a positive attitude, they will be able to dedicate themselves wholeheartedly to learning and producing the desired academic results (Maina, 2010).

The same thing happened to academic institutions at IT Del. IT Del is an institution that focuses on technological and informatics knowledge. But in its development, IT Del also experienced an increase in student every years, this is also inseparable from some of the problems such as: the attitudes, knowledge, and skills of lecturers and students. At IT Del itself, it was found the most of the students 'academic abilities were very low, students' attitudes and behavior as well were also one of the issues need to be a concern.

This can be seen from the average value of the student that was grade in mathematics course from 2014 - 2018 and the attitude report from students. The following are some of the data presented in grafic1-3 to see the academic abilities of IT Del students.

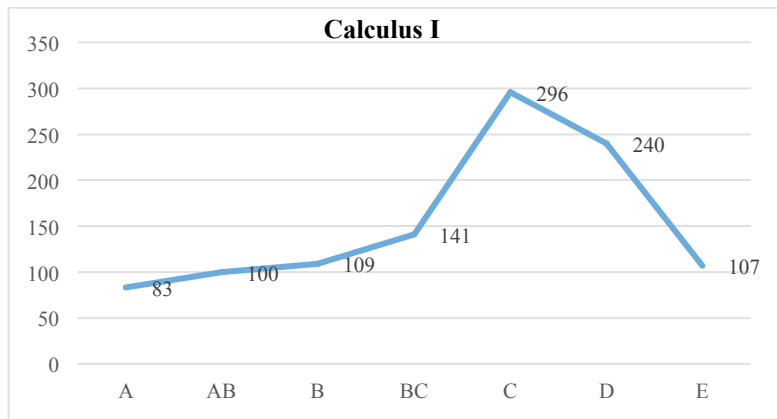


Chart 1 Grade of Calculus I 2014 -2018

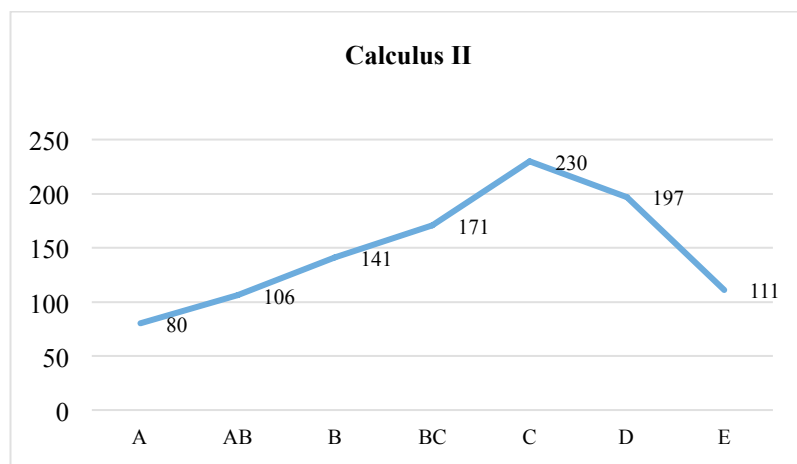


Chart 2 Grade of Calculus II 2014 -2018

(Source: Academic Administration IT Del)

Graphic 1 -3 shows the average score of the student in grade at IT Del was still very low, which is at an grade C and interval of 49.5 - 57. Besides that, it was found the recapitulation of students who were resigned. The data can be seen in graphic 4.

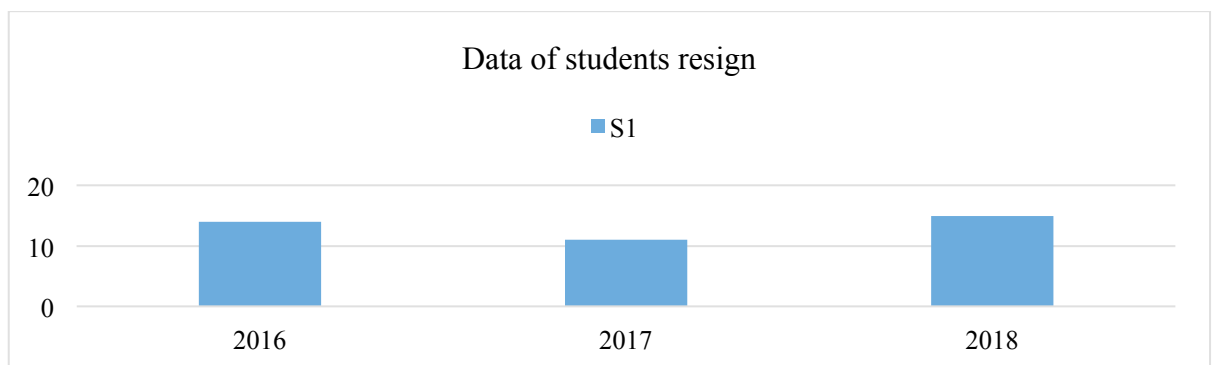


Chart 3 Data of students resign

(Source: Academic Administration IT Del)

Chart 3 describes it indirectly that there was a problem in students. So, in the end, they resign from institutions. Many possibilities caused this happened such as dissatisfaction of services from lecturer and staff, applicable rules/systems, facilities both classroom, and campus environments, and colleagues. Adding more information, students' administration recapitulates data on students who commit transgressions such as smoking and immoral. This was also supported by several lecturers who complained and found problems in doing learning process at IT Del.

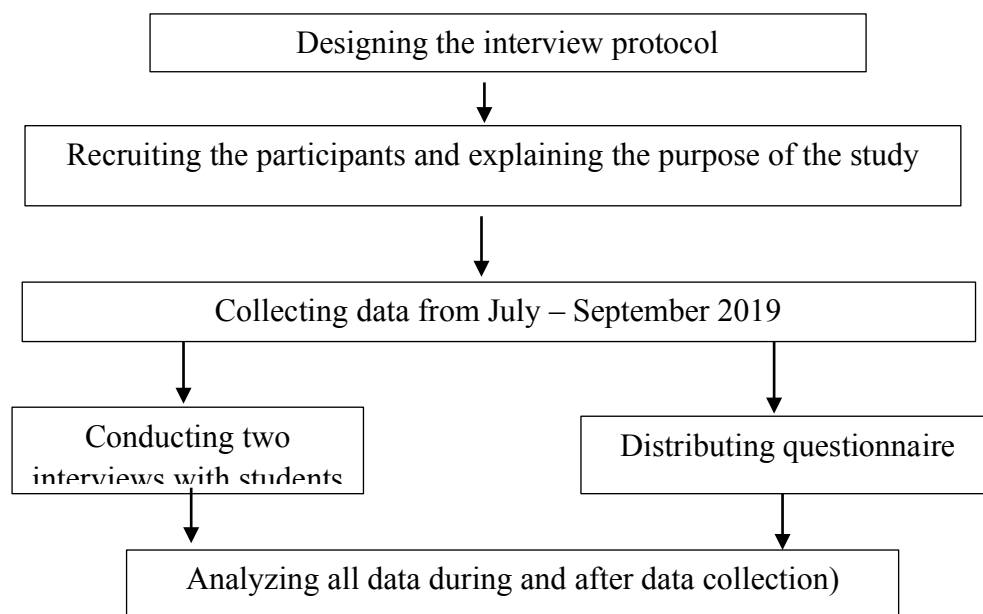
Based on observation and considerations from some of the problems have found in IT Del students. The researcher wants to analyze whether the factors which made students have less academic participation and unfavorable attitudes. Then the researcher wants to identify the main factors which would be found for supporting the advancement of academic institutions. All of these variables that affect student academic participation, this is also one that is the focus of research in the field of education (Srinivas, P., & Venkatkrishnan, S, 2016). This is also in line with Radheshyam H. G., Chandrahas C. H., Rakesh L. H. (2017) describing several parameters that have a significant impact on student performance and academic results in tertiary institutions such as family background, individual personality, academic background, and student environment.

The aim of the study is to investigate and describe the problems that presented about academic participation of students in higher education especially in IT Del based on conceptual framework. The research question was what are the factors influencing academic participation of students?

## Methodology

For the purpose of this study, all of the students in IT Del from 2014 -2019 in any major became the participants. 1541 students have filled the quasioner and 25 students randomly chosen for the interviews. Data sources included interviews with the students, one recording of their conversations in which the researcher discussed their problem and solution with students. The procedure of the study is shown in Figure 1.

Figure 1 *The Procedure of the Study*



## Research Method and Conceptual Framework

The objects of this study are students. Qualitative and Quantitative method have chosen in this study (Slavin,1992).The questionnaire would be analysis by using a framework. The conceptual framework build by discussed and revision with other researcher that had been conducted about problems in IT Del.

## Result and Discussion

In this chapter, results of the analysis of problems presented from questioner and interviews will be reported.

Table 1 Sum of the participant in any major

Studi Program	TI	SI	TE	MR	TB
2014	4	1	8	0	5
2015	49	54	49	57	26
2016	53	53	50	53	26
2017	54	59	47	51	23
2018	57	56	42	60	19
2019	62	62	31	0	16
Total	279	285	227	221	115

Table 1 shows that the average number of bachelor who filled the questionnaire was the highest participants. There was a participant represent in every year dari 2014 - 2108.

Table 2 Reliability statistics of the question in every study program

Reliability Statistics	TI	SI	TE	MR	TB
Cronbach's Alpha	0.984	0.967	0.982	0.977	0.978
Cronbach's Alpha Based on Standardized Items	0.986	0.972	0.984	0.981	0.981

Table 2 presents that every statement has given is reliable and valid for describing data. 42 statements could be able to measure the aims and to answer the question and this study.

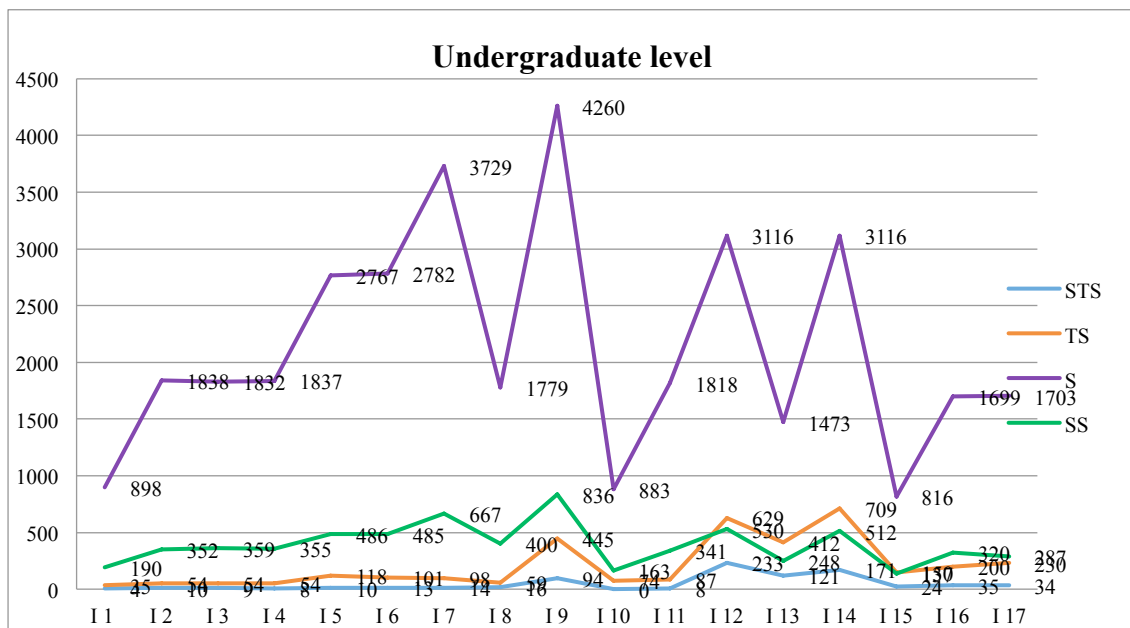


Chart 4 Questionnaire's result for Undergraduate level

In chart 4 emphasizes about student's responses in category agreement including: Indicator 7 gets 82.72% which containing the coherence of assignments, quizzes, and examinations get the highest responses from students. This result different with diploma, it could be at the undergraduate level, they have more theory class than practical which makes more exercise, quiz, and exam. That's why how important it is. Indicator 4 which containing counseling and guiding from lecture and staff get 97.25%, Indicator 8 which containing location and number of students get 96.67%. Almost the same result with diploma in disagreement responses, the result shows 1. Indicator 13 which containing the attitude and behavior dormitory staff get 23.65%, 2. Indicator 14 which containing dormitory and its facilities get 19.52%, and 3. Indicator 12 which containing academic and non-academic facilities get 19.12%.

Assignment, quiz, and examination influence students' learning. It can be used as a measuring tool to review students' abilities in receiving the subject. In the end, they can get the motivation to follow the next subject and they can more understand either. The same explanation from Thorndike who defines in the law of exercise, i.e. the more frequently behavior is repeated or trained, the stronger the correlation will be. However, it would be weakened if the connection is not continued or stopped. It shows the aim of learning is repetition. The more it is repeated, the subject will be increasingly well managed.

At IT Del itself, lecturers and teaching assistants will provide assignments and quizzes to re-measure their understanding of the learning which has been carried out. However, there are several conditions when lecturers or teaching assistants gave excessive assignments and quizzes without taking into account the time students have. This condition makes students have less time to rest and results in the next learning process.

Then, there would be a responsibility for institutions and staff to allocate and prepare what students need to support their learning in class or individual. There might be

included in classrooms (screens, projectors, whiteboards, stationery, and practical tools and materials used by lecturers / TA), library, and laboratory.

In addition, cleanliness and nicety of the class are also included as one of the influencing factors which have an influence on students' health and aesthetic. Therefore, maintaining cleanliness in school is very important. Cleanliness can also improve students' concentration and focus on learning. So, keeping the classroom feel good and clean is the obligation of students for learning activities.

### Interview results

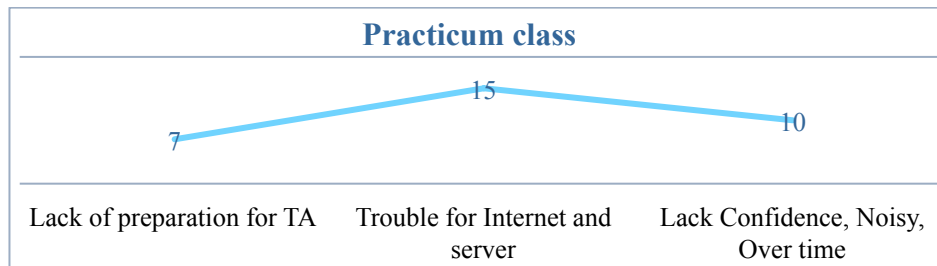


Chart 5 Interview results for practicum class

IT Del has more practical than theoretical credits. The class will be taught by teaching assistants with modules and materials. The aim is to apply the theories that have been delivered by lecturers. Students will be specifically guided and led to finding out whether students understand or not. In the end, the assistant will assign tasks that are submitted to the system at the specified time.

Chart 5 shows some of the deficiencies came out during practicum. Most happening are internet problems, trouble in a server, lack of confidence in conducting work, noisy, and sometimes even assistants who don't have good enough preparation for preparing material. It was one of the interruptions in learning which influence student's academic ability went down. Based on the data, academic administration in IT Del will try to solve the problems such as increasing the bandwidth, re-arranging servers and controlling the assistant preparation.

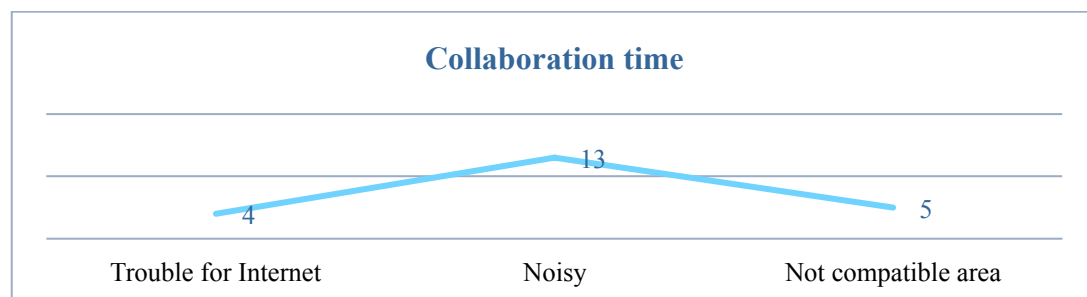


Chart 6 Interview results for collaboration time

IT Del applies individual learning time for their students which are held at night on the campus. The academic affair has organized the place and students are grouped according to class. They start at 8 pm - 10 pm. They are free to use a good laboratory, library, and internet. With the aims of Individual learning, students can have time to

repeat the material before or doing homework together. They even can discuss with peers or lecturers/teaching assistants.

Chart 6 indicates that students still face some problems in their learning, especially for the places. Places which determine by academic affairs are sometimes not appropriate. One of the examples is new students would be placed in the canteen. The type of canteen is open, then causing interruptions like insects, odor, cold, and noise. Perhaps, academic affairs or related stakeholders were less controlled about it.

Based on those problems, IT DEL will try to solve them in several ways such as trying to build a building, re-arranging places in out the academic time, forming teams who will manage and control the independent learning time.

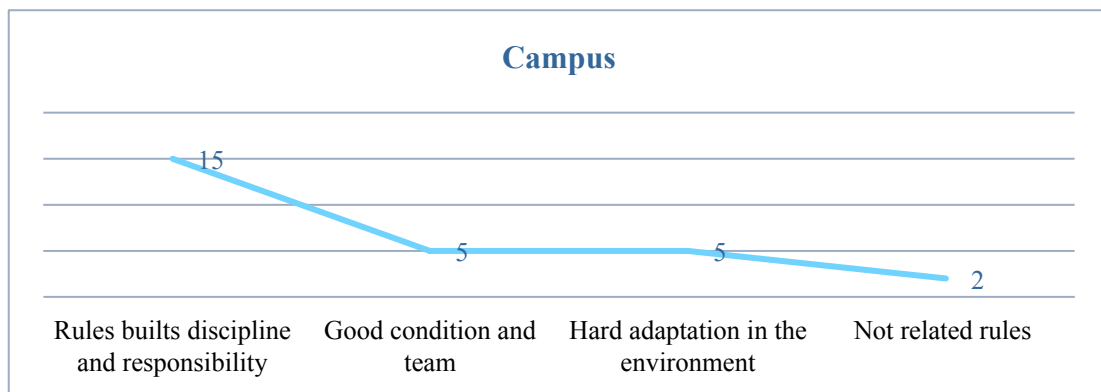


Chart 7 Interview results describes the role impact in campus

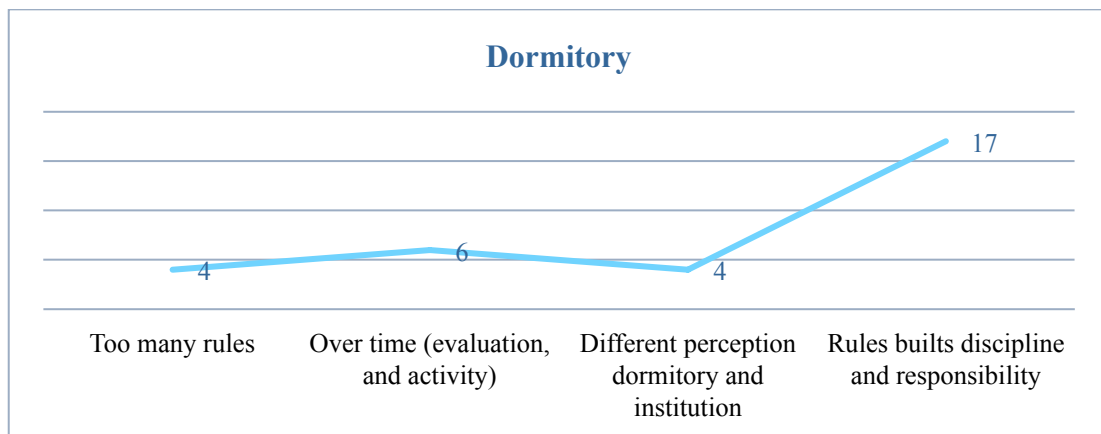


Chart 8 Interview results describes the role impact in dormitory

IT Del provides services to students to be able to live in dormitories. The aims are students can focus on their educational activities. However, with the big number of students around 1500 - 1600, IT Del made policy and academic regulations. Academic regulations applied in the campus and regulations will also be applied in the dormitory. Academic regulations cover all provision which related to students like behaviors, actions, activities as well as prohibitions and sanctions. For dormitory regulations include: 1. Pay boarding fees on time, 2. Obey the rules and guidelines of life in the dormitory, 3. Pay attention to disciplines and security in the dormitory. 4. Participate in all activities programs carried out in the dormitory, both routines or unexpected, 5. Exit and enter the dormitory must be acknowledged by the staff. 6.



Maintaining tolerance and cooperation between students. This regulation helps students to be disciplined, carry out obligations and responsibilities, respect each other and be independent.

However, when interviews were conducted there were still has problems and complaints from students about the regulations and policies. Students described too many policies that were not appropriate, activities that exceed the time, the different perspectives between academics and dormitory staff (Chart 9 and 10). This was what made students felt uncomfortable until they resigned from IT Del. On the other hand, this is very influential in the academic process, self-improvement and final grades of students.

### **Limitation and Recommendation**

Analysis of the different institutions, entire lecturers, students, staff material (course), and facilities may show a different picture and problems. But, it still cannot view the full picture in the data presented. More comprehensive analysis factors influencing legitimate peripheral academic participation of students in higher education can be conducted in this way. Follow the coding mechanism and framework of this study (with suitable refinement as suggested) to have a preliminary analysis of the academic participation of students. Another limitation is that we did not analyze how of the class condition So, for future research, interviews (or by other means) with lecturers, students, staff are required to understand how they perform and go on. We hope that this study can give some insights for further analysis of academic participation of students in higher education.

Acknowledgments: Statemant of the framework

### **Questionnaire for the lecturer and staff**

No	Indicator	Statement
1	Punctuality	Lecturer / TA present and finish on time in the academic process
2	Submission of material	Lecturer / TA presents material systematically and clearly
		Lecturer / TA give material according to the lesson plan
3	Interaction inside or outside the class	Lecturers / TA provide free time to conduct guidance outside the classroom/ laboratorium
		Lecturer / TA provides opportunity for question and answer session (discussion)
4	Direction and Attitude	Lecturer / TA gives examples of good attitude and behavior
		Lecturers / TA provide motivation and moral support during the learning process

### Lecture Materials and Task

No	Indicator	Statement
5	Clarity of lecture material	The course material is structured and well organized
		Lecture material and practicum are presented in an interesting and easy to understand
		Supporting material for lectures and practicums is given and very helpful
6	Readiness and timeliness of lectures	Lecture material and practicum are prepared and given before class begins
		Sufficient time is given to complete the quiz and exam
		The questions and assignments are in accordance with the right proportion of time
7	Suitability of assignments, quizzes, and exam questions in lectures	Quizzes and exams are given in accordance with lecture material and practicum
		Quizzes and exams consist of easy, medium and difficult categories
		Examples of questions and assignments given in accordance with lecture material and practicum
		Examples of questions and assignments help to understand the concept of the lesson

### Lecture Facilities

No	Indicator	Statement
8	Proportional location and amount	Location of the quiz and exam have been carried out in accordance with the proportion of the number of participants
		The number of students influences the learning process
9	Situation and condition of facilities and infrastructure	Situations and conditions in the classroom (temperature and sound) have supported the learning process.
		Student behavior influences the learning process
		The independent hours provided have been implemented and are effective
		Cleanliness and neatness of class have been done
		Facilities in the classroom (PC, Projector, Whiteboard, Writing Equipment, Chairs, Tables and Tools and Practicum Materials) are well available

## Non-Academic Facilities

No	Indicator	Statement
10	Complete library facilities	The library has provided facilities (books, computers, and scientific magazines) in full
11	Library services	The library provides a conducive and comfortable learning space
		The library provides a good system and service
12	Academic and non-academic facilities	Internet facilities can be accessed throughout the IT DEL environment and have a good connection
		Talent and interest facilities are well available
		Academic regulations have been applied and are right on target
		Academic activities (Public Lectures, Competitions and Workshops) have been carried out well
13	The attitude and behavior of the party	The unit of familiarity provides examples of appropriate attitudes and behaviors
		The unit togetherness guides students in character development
14	Facilities and terms of relationship	The unit of friendliness applies regulations that suit the needs of students
		The facilities are adequate and proper to be used
		The event has been carried out according to the needs of students with the right proportion of time
		The allocation of familiarity is structured properly
15	Balanced food proportions	Canteen has provided / provided nutrition in accordance with 4 healthy, 5 perfect standards
16	The situation and condition of the canteen	Canteen involves students to prepare dishes
		The cleanliness and neatness of the canteen is in accordance with the established standards
17	Suitability and timeliness of the canteen	Canteen has implemented regulations according to needs
		Canteen provides food on time

## References

Ackerman, R.H., Moller, G. & Katzenmyer, M. (1996). Every Teacher as a leader. San Francisco: Jossey-Bass.

Council for Education Policy, Research and Improvement. (2003). Florida Teachers and the Teaching Profession. Teaching Profession Committee. May 2019. Retrieved online on 29 May 2019 at 10.00 am.

Education for All (2005). Understanding Education Quality. Global Monitoring Report, 2005. Retrieved online on 29 May 2019 at 11.00 am.

Hultsch, D. F., MacDonald, S. W., Hunter, M. A., Maitland, S. B., & Dixon, R. A. (2002). Sampling and generalisability in developmental research: Comparison of random and convenience samples of older adults. *International Journal of Behavioral Development*, 26(4), 345-359.

Kudari, J.M. (2016). Survey on the Factors Influencing the Student's Academic Performance. *International Journal of Emerging Research in Management and Technology*, 5(6), 30-36.

Laporan mahasiswa undur diri dari Kemahasiswaan IT Del.

Laporan nilai akademik mahasiswa 2014 - 2017. Badan Administrasi Akademik BAAK IT Del

Maganga, J.H. (2016). Factors Affecting Student's Academic Performance: A Case Study of Public Secondary Schools in Ilala District, Dar-es-salaam, Tanzania. University of Tanzania.

Maina, M.J. (2010). Strategies Employed by Secondary School Principals to Improve Academic Performance in Embu West District. Kenyatta University.

Radheshyam H. G., Chandrahas C. H., Rakesh L. H. (2017). Factors influencing academic performance of the students at university level exam: a literature review. *International Journal of Research in Engineering and Technology*, 6(5).

Srinivas, P., & Venkatkrishnan, S. (2016). Factors Affecting Scholastic Performance in School Children. *IOSR Journal of Dental and Medical Sciences*, 15(7), 47-53.

Taylor-Powell, E., & Renner, M. (2003). Analyzing qualitative data. *Program Development & Evaluation*, 1(04)

**Contact email** : sarimuthiasilalahi@gmail.com  
sari.silalahi@del.ac.id