Student Perception Of Lecturers' Teaching Skills In Industrial Engineering Department, Engineering Faculty, Universitas Teuku Umar, Indonesia

Fajar Okta Widarta[1], Rizki Agam Syahputra[2], Iing Pamungkas[3], and Nazar Muhammad[4]

[1,2,3]Industrial Engineering Department, Engineering Faculty, Universitas Teuku Umar, Indonesia

[4]Biology Education Department, Teacher Training and Education Faculty, Universitas Syiah Kuala, Indonesia

e-mail: fajaroktawidarta@utu.ac.id

Abstract— The ability to carry out learning is part of the tridharma of higher education, and it is essential for a lecturer to have.This study aims to determine student perceptions of the teaching skills of lecturers in the Industrial Engineering Study Program, Faculty of Engineering, University of Teuku Umar, Aceh. This research is descriptive and quantitative. The research population is all students in the study program for the 2022–2023 academic year. The research sample was taken using the cluster random sampling technique. Data was collected using a questionnaire arranged according to a Likert scale. The percentage technique is used in analyzing the data obtained. The results of the data analysis revealed that students' perceptions of lecturers' skills in questioning skills, giving various stimuli, opening and closing lessons, and managing classes were in the very good category (mean 88.17%), while lecturers' skills in giving reinforcement were in the good category (77.38%).

Keywords— *perception, basic teaching skills.*

I. INTRODUCTION

Lecturers are professional educators whose job is to transform and develop science, technology, and art through the implementation of the higher education tridharma, including education, research, and community service. In the realm of education, lecturers are expected to be skilled in planning, implementing, and evaluating student learning processes. As a result, the lecturer's mastery of fundamental teaching skills is critical for the process of transforming knowledge, skills, and attitudes toward students to run smoothly.

The importance of knowing students' perceptions of lecturers' skills in carrying out learning in class is also a concern of Orakc (2020), who reveals that students expect lecturers to regularly update their knowledge and skills so they can maintain effective learning in class. Lecturers need to avoid using traditional learning methods and complement teaching with various teaching media and materials. Sahrir et al. (2022) also investigated the knowledge and teaching skills of prospective teacher students in Malaysia. while Woltran et al. (2022) reported that educators in Austria had difficulty ensuring digital learning opportunities for their students when schools closed in early 2020. They examined whether educators had sufficient digital teaching skills to implement learning during the COVID-19 pandemic [12];[14];[20].

Bibi et al. (2020) reported that they found lecturers' questioning skills to be low. That is, it only touches the level of knowledge and understanding of students when referring to Bloom's cognitive taxonomy. whereas learning in tertiary institutions should be able to train students' higher-order thinking skills. Questions that stimulate higher-order thinking skills are those at the levels of analysis, evaluation, and synthesis (Musdalifah et al., 2020). Unlike the teachers at school, they have acquired teaching

knowledge and skills while in college. Salman et al. (2022) revealed that prospective teacher students had positive perceptions of the benefits of microteaching courses in the formation and development of their teaching skills [3];[9];[15].

The teacher's skills in designing items that train students' higher-order thinking skills are also still low. The questions made by the teacher are generally at the level of remembering and understanding only (Ichsan & Rahmayanti, 2020; Widarta & Artika, 2021). Even though higher-order thinking skills are one of the important things that students have as part of their 21st century skills [8];[16];[1].

Dustkobilovich & Laylo (2020) added that lecturers need to apply various forms of modern lectures in class; don't just stick to one model or method. Especially if you still maintain the conventional learning model, it's really very unfortunate. Lecturers should always update their knowledge and skills. A number of basic teaching skills are explained by Widarta (2020), namely asking questions, giving reinforcement skills, skills in providing a variety of stimuli, skills in opening and closing learning, and skills in managing a class. Basic teaching skills can be measured using a questionnaire prepared based on the indicators of basic teaching skills above; they can also be measured by analyzing video recordings of lecturers teaching in class [4];[17];[19].

This study aims to determine student perceptions of the teaching skills of lecturers in the Industrial Engineering Study Program, Faculty of Engineering, University of Teuku Umar. The research results are expected to be a reference for study programs to make improvements and changes for the better.

II. METHOD

This quantitative descriptive research attempts to describe students' opinions about the basic teaching skills of lecturers in the Industrial Engineering Study Program, Faculty of Engineering, University of Teuku Umar, Aceh Province, Indonesia. The research population is all active students in the odd semester of the 2022–2023 academic year in the study program, with a total of 400 people.

By applying cluster random sampling, a sample of 80 students was obtained. Data was collected using a questionnaire arranged according to a Likert scale. Furthermore, the data obtained were analyzed using percentage techniques. The research instrument was prepared based on a number of indicators of basic teaching skills. Furthermore, instrument testing was carried out, including validity and reliability tests, to obtain a good instrument. After calculating the percentage of each indicator of basic teaching skills, the assessment criteria are confirmed (Table 1).

Table 1. Percentage Assessment Criteria

Value Range	Criteria
81% - 100%	Very Good
61% - 80%	Good
41% - 60%	Enough
21% - 40%	Less Good
0% - 20%	Not Good

III. RESULT & DISCUSSION

3.1. Questioning skills

The results of the data analysis on the indicators of the lecturer's questioning skills are shown in Figure 1 below.
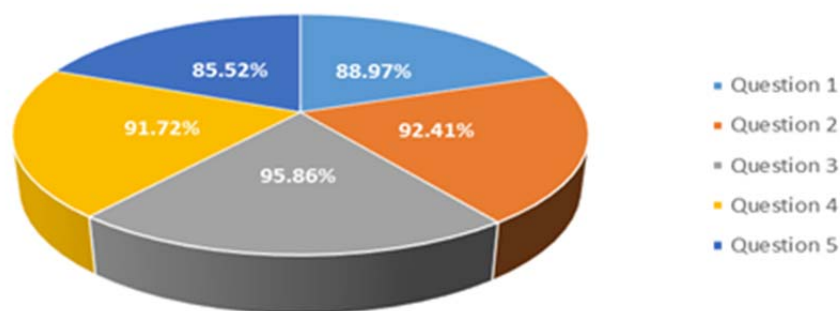
Figure 1. Pie chart of percentage gain for each question for indicators lecturer's questioning skills

The question that received the lowest percentage score, namely 85.52%, is question number 5, which states that if there are difficult questions, the lecturer guides students so they can answer these questions. While the question that received the highest score was question number 3, which stated that the lecturer gave students the opportunity to ask questions (95.86%), The findings above indicate that overall, the lecturer's questioning skills are good. Lecturers always give students the opportunity to ask questions related to the material being discussed.

Unfortunately, this research instrument was unable to provide more detailed information about the quality of questions posed by lecturers or students.At the tertiary level, it is hoped that lecturers can compose questions that train students' higher-order thinking skills, namely questions at the levels of analysis, evaluation, and synthesis [9]. If there are questions that are difficult for students to answer, the lecturer should guide them so they can answer them. not by giving a direct answer but by directing their minds to the right answer.

The percentage score obtained for the lecturer's questioning skill indicator is 90.9%, which, when referring to the percentage assessment criteria table, belongs to the "very good" category. This finding contrasts with the findings of Bibi's research, in which et al. (2020) discovered that lecturers' questioning skills were low, i.e., they only reached the level of student knowledge and understanding. Whereas learning in tertiary institutions should ideally hone students' higher-level thinking skills.

3.2. Providing reinforcement skills

The results of the data analysis on indicators of lecturer skills in providing reinforcement are shown in Figure 2 below.
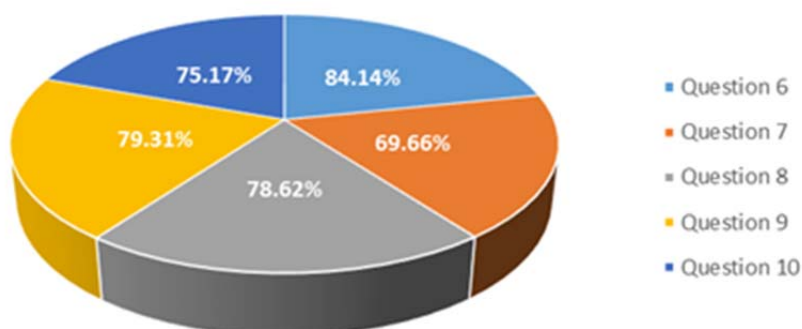

Figure 2. Pie chart of percentage gain for each indicator question of lecturer abilities in providing reinforcement.

The question that received the lowest percentage score, namely 69.66%, was question number 7, which stated that the lecturer invited or asked students to clap their hands when a student or group did a good job. While the question that received the highest score was question number 6, which stated that the lecturer gave praise when a student answered the question correctly or did other good things (84.14%),

In general, the results of the questionnaire analysis revealed that the lecturer's skill indicator in providing reinforcement obtained the lowest score compared to the other four indicators. This shows that the skills of lecturers in providing reinforcement need to be improved. The results of Nair and Jog's research (2021) also recommend the same thing. They revealed that improving the skills and developing the competence of educators through training is a current need. So that later educators will be able to equip students with various 21st century skills. The percentage score obtained for the skill indicator for giving reinforcement is 77.38%, which, when referring to the table of assessment criteria, is in the "good" category [10].

The findings above are also relevant to Orakc's research results (2020), which reveal students' hopes that lecturers will continue to update their knowledge and be able to present effective and fun learning in class. Lecturers should not use traditional learning methods, which tend to be monotonous and boring, and complement teaching with various learning media [12]. Widarta (2020) describes several forms of strengthening educators in the classroom, for example: (1) giving praise, a thumbs up, or applause to certain students or groups when they successfully answer questions or do a job well; (2) walking around guiding and supervising students who are doing the assignments given; and (3) giving punishment to students who are negligent in their duties or do something that is not good.

Lecturers should not be stingy in giving awards to students. Give praise, give a thumbs up, or invite students to applaud for an achievement shown. The simple things above are proven to increase student enthusiasm for learning as well as to lighten the learning atmosphere so that learning in class becomes more enjoyable.

When a student gets praise from the lecturer for his achievements or good behavior, the lecturer has also directed other students to follow this good behavior. And vice versa, when a lecturer consistently punishes students who violate the rules, such as arriving late.So at the same time, the lecturer has shown other students behaviors that they should not follow. If they make the same mistake, they will receive the same punishment.

The pedagogic knowledge and skills above need to be mastered by lecturers, regardless of their background in the field of expertise. These knowledge and skills are also taught at the time of lecturer certification. The findings above are not too surprising because only 26% of the certified lecturers in the study program, or six people out of a total of 23 lecturers in the study program, are certified.

3.3. Providing a variety of stimuli skills

The results of the data analysis on indicators of lecturer skills in providing a variety of stimuli are shown in Figure 3 below.
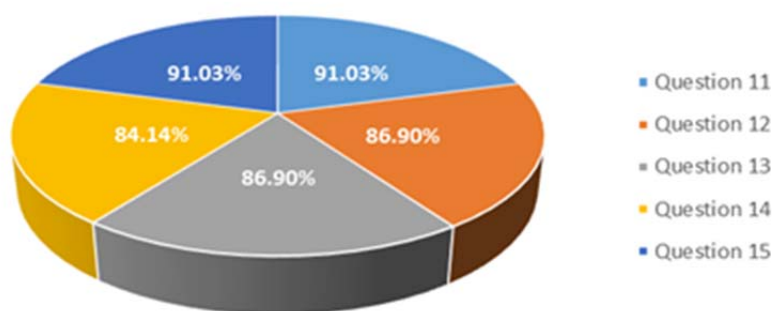

Figure 3. Pie chart of percentage gain for each question for indicators the ability of the lecturer to provide a variety of stimuli.

The question that received the lowest percentage score, namely 84.14%, was question number 14, which stated that the lecturer asked certain students to pay attention to their explanations. while the questions that received the highest score were questions 11 and 15. Question number 11 stated that the lecturer was able to explain lecture material clearly and fluently, while question number 15 stated that the lecturer used various learning media when teaching (91.03% each). The percentage score obtained for the lecturer skills indicator in providing a variety of stimuli is 88.0%, which, when referring to the percentage assessment criteria table, belongs to the "very good" category.

Asking students who neglect to pay attention to the lecturer's explanation is a form of the lecturer's concern for the mastery of lecture material by students. If the lecturer allows students to tell stories behind closed doors, it will also distract the students around them from studying quietly. So the lecturer should admonish the negligent student to focus on attending lectures or, if necessary, send him out of class in order to maintain conducive learning conditions.

The ability to explain material clearly and fluently demonstrates mastery of the material. Only those who master the material well are able to explain it easily and fluently. Furthermore, the use of various media in learning is intended to provide variety in learning. This is done to touch on various student learning styles. Audio learning styles, visual learning styles, and students with a combination of both learning styles (audio-visual) are all possible. The use of a variety of teaching media is also proven to reduce student boredom. Nuroh et al. (2022) revealed that the use of digital stories in learning has a positive impact on student learning processes and outcomes. They also recommend using digital storytelling in the teaching and learning process in the classroom [11].

3.4. Skills in opening and closing learning

The question with the lowest percentage score, namely 78.62%, is question number 20, which states that the lecturer gives assignments or quizzes at the end of the lecture. While the question that received the highest score was question number 18, which stated that the lecturer explained the stages or steps of learning activities to be carried out by students (88.97%), The percentage score obtained for the skill indicator for opening and closing learning is 84.69%, which, when referring to the percentage assessment criteria table, belongs to the "very good" category.

One of the activities that can be given by the lecturer to students at the end of the meeting is to give questions or quizzes to measure the extent to which the material that has been delivered is understood by the students. The number of questions does not need to be many—just three to five questions. Apart from being in the form of questions, closing activities can also be filled with assignments as a follow-up to independent learning at home by students. Another closing activity is asking students to draw conclusions from the material that has been studied. The results of the data analysis on indicators of lecturer skills in opening and closing learning are shown in Figure 4 below.
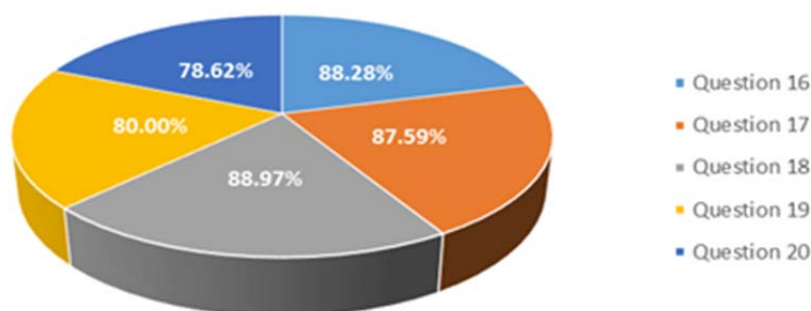

Figure 4. Pie chart of the percentages of each question for indicators of lecturer skills in opening and closing learning.

As for opening learning activities, one of them is explaining the stages of learning activities to be carried out. This aims to help students understand why an activity in learning is necessary.In addition, students will also feel more involved in learning. so that they do not feel as objects but as subjects of learning.Other types of opening learning activities include communicating learning objectives, conducting perceptions, and motivating students.

Hartati et al. (2022) also reported similar results. They found that prospective English teacher students at Merangin University also had low scores on opening and closing skills. Even though the students had been provided with the material beforehand, when they put it into practice when teaching, they found it difficult [5].

3.5. Class management skills

The results of the data analysis on indicators of lecturer skills in managing classes are shown in Figure 5 below.
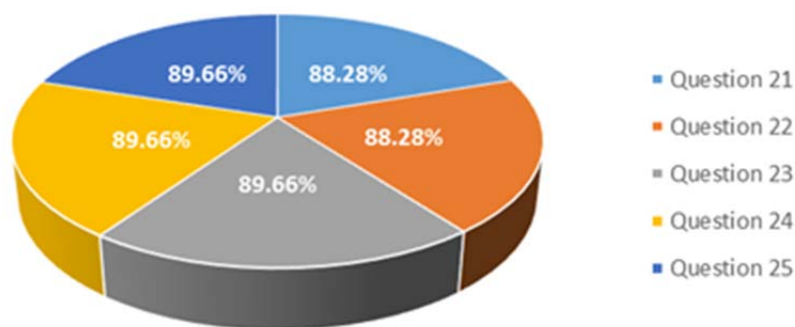
Figure 5. Pie chart calculating the percentage of each question for indicators of lecturer skills in class management.

Questions that received the lowest percentage score of 88.28% were questions 21 and 22. Question number 21 related to the efficient use of study time by lecturers, while question number 22 related to the use of learning aids or media by lecturers. Questions that get the highest score are numbers 23, 24, and 25, each of which asks about whether or not the lecturer checks attendance and asks how students are doing, the lecturer's teaching style that makes students enthusiastic about attending lectures, and the lecturer's ability to keep the class situation conducive during lectures (89.66% each).

The percentage score obtained for the lecturer skills indicator in managing the class is 89.10%, which, when referring to the table of percentage assessment criteria, belongs to the "very good" category. Classroom management refers to the lecturer's ability to present and maintain classroom conditions that remain safe and comfortable for learning to take place. starting from preparing clean and comfortable classes, managing study time well, checking student attendance, and maintaining conducive classroom conditions during lectures.

Lecturers should continue to update their competencies in order to present modern learning (Dustkobilovich & Laylo, 2020), and they should maintain student enthusiasm and motivation by displaying attitudes and behaviors that respect and respect every student in the class (Aguilar et al., 2020). Teaching skills can be trained, for example, during the lecturer certification process. A lecturer will gain a variety of knowledge and skills in implementing good learning at that time, beginning with lesson planning, carrying out learning, and evaluating student learning outcomes. In other words, lecturers who already hold educator certifications typically have basic knowledge and skills in teaching [2];[4];[6].

IV. CONCLUSION

The results showed that students' perceptions of lecturers' basic teaching skills in the indicators of asking skills, stimulus variations, opening and closing lessons, and managing classes were in the very good category (mean 88.17%), while the lecturer's skills in giving reinforcement were in the good category. (77.38%).

REFERENCES

[1] Afrita, M., Rahmawati, D. (2019). Validitas instrumen penilaian kemampuan berpikir tingkat tinggi materi sistem respirasi peserta didik SMA/MA Kelas XI. Jurnal Mangifera Edu. 4(2), 129-142.

[2] Aguilar, N. M., Vidal, A. D., & Cabeza-Ruiz, R. . (2020). Beliefs and Actions of University Lecturers of Sports Sciences and Physical Activity Regarding Students' Learning Motivation. *Pedagogika*, *137*(1), 46–65. https://doi.org/10.15823/p.2020.137.3

[3] Bibi, W., Butt, M. N., & Reba, A. (2020). Relating teachers' questioning techniques with students' learning within the context of Bloom's taxonomy. *FWU Journal of Social Sciences*, *14*(1), 111-119.

[4] Dustkobilovich, R. O., & Laylo, A. (2020). Types of modern lectures in higher education, technology of their design and organization. *Проблемы современной науки и образования*, (12-1 (157)), 41-46.

[5] Hartati, H., Ningsih, R. W., & Oktawati, H. (2022). Teaching Skill Performance of Sixth Semester Students of English Education Program Merangin University. *Jurnal Ilmiah Dikdaya*, *12*(2): 407-415.http://doi.org/10.33087/dikdaya.v12i2.333

[6] Hartiwi, H., Kozlova, A. Y., & Masitoh, F. (2020). The Effect of Certified Teachers and Principal Leadership toward Teachers' Performance. *INTERNATIONAL JOURNAL OF EDUCATIONAL REVIEW*, *2*(1), 70–88. https://doi.org/10.33369/ijer.v2i1.10629

[7] Ichsan, I. Z., & Rahmayanti, H. (2020). HOTSEP: Revised Anderson's Taxonomy in Environmental Learning of COVID-19. *European Journal of Educational Research*, *9*(3):1257-1265.

[8] Karim, F. A., & Marzita, P. (2019). The development of higher order thinking skills (HOTS) assesment instrument for word problems. *International Journal of Academic Research in Business and Social Sciences*, *9*(6):1079-1083.

[9] Musdalifah, Syamsudduha, St., dan Nursalam. (2020). Analisis kualitas soal buatan guru biologi dalam kemampuan berpikir tingkat tinggi siswa. *Jurnal Biotek, 8*(1): 44-56.

[10] Nair, S., & Jog, A. (2021). Skill Enhancement And Competency Building In Educators. *International Journal of Innovation, Leadership, Society and Sustainability*, *1*(1):1-13.

[11] Nuroh, E. Z., Kusumawardana, M. D., & Destiana, E. (2022). Developing Digital Literacy Skill for Initial Teacher Education through Digital Storytelling. *KnE Social Sciences*, 475-496.

[12] Orakcı, Ş. (2020). Postgraduate students' expectations of their lecturers. *The Qualitative Report*, *25*(1):199-215.

[13] Putri, M. L., & Dafit, F. (2022). Teacher Ability to Apply Questioning Skills in Elementary School. *Jurnal Ilmiah Sekolah Dasar*, *6*(1), 21–28. https://doi.org/10.23887/jisd.v6i1.42565

[14] Sahrir, M. S., Hamid, M. A. A. A., Zaini, A. R., Hamat, Z., & Ismail, T. (2022). Investigating the technological pedagogical content knowledge (TPACK) skill among Arabic school trainee teachers in online assessment during COVID-19 pandemic. *Journal of Language and Linguistic Studies*, *18*(2):1111-1126.

[15] Salman, M., Dewi, R., & Ma'ruf, A. (2022). STUDENTS'PERCEPTION TOWARD MICROTEACHING SUBJECT IN SUPPORTING THE STUDENTS TEACHING SKILL. *Jurnal Keguruan dan Ilmu Pendidikan (JKIP)*, *9*(1): 27-35.

[16] Saputri, A. C., Rinanto, Y., & Prasetyanti, N. M. (2019). Improving Students' Critical Thinking Skills in Cell-Metabolism Learning Using Stimulating Higher Order Thinking Skills Model. *International Journal of Instruction*, *12*(1): 327-342.

[17] Widarta, F. O. (2020). Persepsi Siswa Terhadap Keterampilan Dasar Mengajar Mahasiswa Program PLP II Program Studi Pendidikan Biologi PSDKU Universitas Syiah Kuala Gayo Lues di SMP Negeri 1 Blangjerango. *BIOTIK: Jurnal Ilmiah Biologi Teknologi dan Kependidikan*, *8*(1), 106-118. https://doi.org/10.22373/biotik.v8i1.6557

[18] Widarta, F. O., & Artika, W. (2021). Analisis bentuk stimulus, dimensi kognitif, dan karakteristik hots pada instrumen evaluasi mata pelajaran IPA karya guru. *Jurnal IPA & Pembelajaran IPA*, *5*(3), 197-208. https://doi.org/10.24815/jipi.v5i3.21429

[19] Widarta, F., Fajri, F., & Nursafiah, N. (2021). Mengukur Keterampilan Dasar Mengajar Mahasiswa pada Masa Pandemi Covid-19. *Jurnal Pembelajaran Biologi: Kajian Biologi dan Pembelajarannya, 8*(1):1-7. https://doi.org/10.36706/fpbio.v7i2.13265

[20] Woltran, F., Lindner, K.-T., Dzojic, T., & Schwab, S. (2022). Will–Skill–Tool Components as Key Factors for Digital Media Implementation in Education: Austrian Teachers' Experiences with Digital Forms of Instruction during the COVID-19 Pandemic. *Electronics*, *11*(12): 1805. http://doi.org/10.3390/electronics11121805