

THE STUDENTS' PERCEPTION OF ARTIFICIAL INTELLIGENCE-BASED INSTRUCTION IN SPEAKING CLASS

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ABSTRACT

This study focuses on the students perceive of Artificial Intelligence based-instruction in English Language Teaching. This research used a survey method with descriptive analysis. This research involved the students of the English Department who have studied English by using Artificial Intelligence (AI). The populations of this research were English Department students, was taken 100 students as sample. The number of samples is taken by using randomly. This research focus on 4 constructs of studies according to the theory of Technology Acceptance Model (TAM) that develop by Davis in Ayu Mira (2016) with the students' perception of Easy to use, the Usefulness of AI in English, the students' attitude, and the students' behavioural Intention of AI in English. All the data of the construct were taken by using a questionnaire. The result of this study shows that, the students' acceptance of Artificial Intelligence is very good, whereas, the Students' Perception of AI Perceived Ease of Use (PEU) is mostly high, and using AI seems easy to operate, use, and access for the students and in the same time the Students' Perceived Usefulness (PU) of AI is helpful.

Keyword: Artificial Intelligence, Perceive, ELT, Instruction

1) INTRODUCTION

When Covid 19 spread Indonesia, technology have a high role in teaching learning process, including teaching English. However, the meaning of technology as long as this time has an important part in teaching learning process.

Technology is nothing more than a tool! This claim was initially made in scholarly conversations led by professors and lecturers. In most scientific forums, the conclusion is that "technology" is just a tool or facility that connects the content to the teacher/lecturer in the teaching and learning process. However, the definition of technology as a tool has shifted in recent years. Technology has improved learning tools in the last three years. Since the COVID-

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19 Pandemic in Indonesia, technology has become an important part in learning programs, including English. Using technology is increase significantly in education. Besides being entertaining to use, it makes lecturing be simple. After all, several sorts of programs are unquestionably helpful in the classroom. There are hundreds of platforms that are regularly used in education nowadays.

In addition, technology plays a big role in maximizing the education, and it needs a suitable internet network required. Artificial Intelligence slowly but steadily made several achievements, especially in education, after the fast expansion of the Internet during the previous three decades. Artificial Intelligence has influenced autonomous translation and language processing in linguistics. In the current era, everyone writes and using computer practically, and it will assist authors with spelling and grammar, even if they are unaware of it. Many students have employed Artificial Intelligence to help them to write their English papers or task. For examples when the teacher gives some tasks, the students take it easy to do it, because they used technology to do it, like translation tolls or grammar checker.

Artificial Intelligence (AI) is a branch of computer science that examines how to construct machines (computers) that can do tasks and humans, even better than humans. AI is the study and modeling of human cognitive processes and the creation of robots that mimic human behavior. Intelligence is a combination of knowledge and experience, reasoning (making judgments and taking action), and morals. AI is a technology that, like people, requires data to use as knowledge. AI requires experience and data to improve its intelligence. Learning, reasoning, and self-correction are essential aspects of the AI process. (Jati et al., 2021)

English Department of Tarbiyah Faculty at IAIN Parepare has implemented AI in the teaching-learning process, specially at speaking class. The lecture has a consideration to apply AI in teaching speaking based on the students' need to learn. The point of view of lecturer who teaches in an English Department is that the students need a model (native speaker) to show to student and practice English directly. So, in a few times ago the lecturer thought that to make the students have a good pronunciation they have to study by native speaker directly. In fact, it is very difficult to find out the native speaker from abroad. The institution also ever looking for the native speaker who live in Parepare but no one for it. So, it is too difficult to find out the

native speaker who teaches English on campus. An addition, at pandemic time in two years later, it is forbidden for native speaker come to this country.

After paying attention to the implementing AI in the teaching-learning process at the English Department of Tarbiyah Faculty at IAIN Parepare, so the researcher tries to investigate about the students' perception about Artificial Intelligence-Based Instruction in speaking class at an Indonesian Islamic Higher Education.

2) METHOD

Research Design

In this study focus on quantitative approach. All the data comes from the students' perception of AI-Based Instruction in speaking, The next about the perception of AI-based Instruction In ELT was analyzed by using SPSS verse 12, the theory of Technology Acceptance Model (TAM) is accommodated to make clear about the students perceive learning-teaching speaking by using used TAM's Theory. There are four constructs of the Technology Acceptance Model (TAM) develop by Davis are the Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude Toward Using (ATU), Behavioral Intention (BI) (Ayu Mira Witriyanti Wida et al., 2016).

Research Population and Sampling

This study was conducted in English Education Department of Tarbiyah Faculty IAIN Parepare. The population of this study was 313 students of English department of Tarbiyah faculty academic year 2022/2023. The sample of this research were 100 students selected from the population of this research. This research used voluntary sampling technique. The voluntary sampling technique is a type of sample consisting of self-selected participant. In this study, the students' voluntary participated in survey by filling out a questionnaire to give information or data that related with students' opinion about the implementation of AI-based instruction in ELT. Then to collect the quantitative data the researcher questionnaire to the four and the six semester students. The number of students is approximately 180 students. In fact, just 112 students fill the questionnaire. Then the researcher randomly selected 100 students based on purposive gender, 16% male and 84% female students as sample. Purposive Sampling is choosing a sample from a population based on available information, and the determination of the sample is determined by the researcher based on certain goals and considerations that are

considered to meet the established criteria, so that the representative of the population can be accounted for. (Raihan, 2017).

Focus of the Research

This research is under the study of applied linguistics. It is specified for investigating about the AI-based instruction in Speaking Class. By content, this research is focus on the exploring about the students' acceptance of technology in learning English. By location, the researcher investigated the adoption of AI-based instruction in teaching English courses for English department as one of favorite and famous department of Tarbiyah Faculty at IAIN Parepare. English department is considered as a focus of this research because it is the most popular with most students at this university and has implement AI in speaking class.

Research Instrument

This research used several instruments to take the data based on research question as previous part. The researcher used questionnaire to get the data. The items used in the questionnaire are 50 items consisting of 4 constructs from students' acceptance of AI in ELT. The first construct about students' perception of easy of used (PEU) consist of 15 items. The second construct about the students' attitude (AT) toward the use of AI in ELT consist of 13 items. The third construct about the students perceive of usefulness (PU) of AI in ELT consist of 14 items, the last but not least about the students Behavioral Intention (BI) about AI in ELT consist of 8 items.

The measurement scale for each alternative answer used a Likert scale which is a scale commonly used to measure a persons' attitudes, opinion and perception. The Likert scale used is five level scales. The answer to each questionnaire item were arrange from very positive to very negative gradations.

Data Collection Procedures

The data in this research were collected by distributing questionnaire to the students. The purpose of distribute the questionnaire here is to get the data about the students perceive about the four constructs develop by Davis. The total questions were 50 questions. The questionnaire was distributed to all the respondents simultaneously. This step the researcher distributes the questionnaire by online side. The researcher sends the questionnaire by using google form and

ask the students to access the google form and choose the answer based on the students' perception.

Technique of Data Analysis

The questions about the perception of AI in ELT, the researcher collect the data from the Questionnaire based on TAM theory developed by Davis and the data analysis that researcher was used namely SPSS Application. The data was analyzed by using the SPSS application to measure the students' and lecturer perceive of AI. The Statistical Product and Service Solutions (SPSS), statistical software developed by SPSS Company of America, has the capabilities of basic and advanced statistics. It is well known as professional statistical software with widely applications in many fields, such as communication, medical treatment, bank, security, insurance, manufactory, commerce, market research, scientific research and education, etc. (Chen & Xiao, 2012). All the data from SPSS was presented in descriptive statistics that used to describe the data that has been collected as it is without intending to make conclusions that apply to the public or generalizations. Descriptive statistics can be used when the researcher only wants to describe the sample data, and does not want to make conclusions that apply to the population in which the sample is taken (Sugiyono, 2007).

3) RESULT

In this finding describe the students' perception about AI-based instruction in ELT. There are 4 constructs that we have compiled based on a theory of Technology Acceptance Model (TAM), namely (1) Students' Perceived of AI Ease of Use (PEU), (2) Students' Perceived Usefulness (PU) of AI, (3) Students' Attitude Toward Using (ATU) of AI, (4). Students' Behavioral Intention (BI) of AI. All the construct explained as a table. Each construct comprises several questions that represent the core of each construct. The choice of answer is divided into 5, namely strongly agree (5), agree (4), neutral (3), disagree (2) and strongly disagree (1) or vice versa in negative statement. After calculating the data based on the questionnaire that the researcher has distributed, the researcher calculates the average score (Mean), deviation standard (SD) and the level of the answer. The following is the description in the table below:

CONSTRUCT 1 Perceive Easy of Use (PEU)					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
MEAN	.38	19.13	84.75	226.25	66.25

SD	.806	24.11	37.25	58.07	44.40
TOTAL SCORE	6	306	1356	3620	1060
CONSTRUCT 2 Perceive of Usefulness (PU)					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
MEAN	2.79	19.86	62.57	209.43	110
SD	6.278	29.78	23.38	58.48	47.27
TOTAL SCORE	39	278	876	2932	1540
CONSTRUCT 3 Attitude Toward Using (ATU)					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
MEAN	.92	19.54	97.62	204	67.69
SD	2.21	35.35	31.09	65.27	44.56
TOTAL SCORE	12	254	1269	2652	880
CONSTRUCT 4 Behavioral Intention (BI)					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
MEAN	.92	19.54	97.62	204	67.69
SD	2.21	35.35	31.09	65.27	44.56
TOTAL SCORE	12	254	1269	2652	880

Students' Perceived Ease of Use (PEU)

Regarding the students' perception of AI Perceived Ease of Use (PEU), using AI seems easy to operate, use, and access by the students. It is showed that the mean score shows the ease of AI in high level is twice as many as the middle level. Also, the last item is denied, which states that the AI product is a little difficult product to use. Overall, the perception taken from the students about AI PEU is mostly high.

The table above show that most of students perceive AI is easy to use. It can be seen the mean score is 226.25 agree with the statement. Meanwhile, the highest mean score is 66.25 it means that, mostly students strongly agree that AI is Easy of used. Most of student is very easy to make interaction, and it looks easy to use and to operate.

Students' Perceived Usefulness (PU) of AI

Looking at the table above, the students' Perceived Usefulness (PU) of AI illustrates that there are thirteen items which are high level and an item that is low level. The high level items dominate on the students' AI usefulness perception. The only low-level item is negative statement as well, which means deniable. Hence, the use of AI in English will be the positive choice and useful. The top mean score is 4.13, which states that the students found it helpful to use AI product in every study English.

The table above show that, most of students perceive that the usefulness of AI is high. It was show that the mean score 209.43 is agree with the statement. It means that the students think that AI is useful.

Students' Attitude Toward Using (ATU) of AI

Based on the data shows above, it depicts that the students' attitude toward using (ATU) of AI results seven high levels, five middle levels and one low level. This data almost varies about the mean score of students' attitudes in using AI to learn English. The students treat the AI as the fun and joyful ways to learn English. It is proven that the students unlikely struggle to recognize the AI in learning English. The highest mean score, 3.93, presents that the use of AI is beneficial to the students.

Based on the data above show that the students' attitude in learning English by using AI is positive. It shows the statement that "People around me will take a positive view of me using the AI Product in Learning English" is high level. It means that the students have a positive attitude or view toward AI. This case is supported by another statement that AI product delivers good value on the last statement of this construct.

Students' Behavioral Intention (BI) of AI

The table shows that the students' Behavioral Intention (BI) of AI is balanced between the high-level items and the middle level items with no low-level item. This means the students' intention toward the AI in English is promising. The students intend to use AI product in the future and frequently as well as recommend it to be used. The highest item is that this AI product will be used with a mean score, 4.08. The middle level is about the purchase of the AI product.

4) DISCUSSION

Based on data analysis, there are four kinds of construct of students and lecturer perception of AI-based instruction in ELT. This first about the students' perception of Easy of used. Most of students has the same perception about this. The data show that, most of students perceive AI is easy to use. It can be seen the mean score is agree with the statement. Meanwhile, the highest mean score is 66.25 it means that, mostly students strongly agree that AI is Easy of used. Most of student is very easy to make interaction, and it looks easy to use and to operate. By looking at the previous data about the students' Perceived Usefulness (PU) of AI illustrates that most of lecturer and students has a high level. The high-level items dominate on the students' AI usefulness perception. The only low-level item is negative statement as well, which means deniable. Hence, the use of AI in English will be the positive choice and useful. The top mean score is 4.13, which states that the students found it helpful to use AI product in every study English. Another construct about the students and lecturer perception about the attitude in using AI in speaking class. The data show at the previous chapter that the students and lecturer's attitude towards the use of AI in speaking learning is very good. Most of questionnaire that researcher distribute to the respondents and the data shows that lecturers have a good attitude towards the use of AI in speaking teaching. It means that AI is very useful for them. The last construct about the student and lecturer behavioral intention. The students' Behavioral Intention (BI) of AI is balanced between the high-level items and the middle level items with no low-level item. This means the students' intention toward the AI in English is promising. The students intend to use AI product in the future and frequently as well as recommend it to be used. On the contrary lecturer behavioral Intention about using AI is high level. The lecture intent to ask the people to recommend the people to use and to buy this AI product for teaching English specially speaking subject.

5) CONCLUSION

This study showed that, the students' acceptance of Artificial Intelligence is very good, whereas, **the Students' Perception of AI Perceived Ease of Use (PEU)** is mostly high, and using AI seems easy to operate, use, and access for the students and in the same time the **Students' Perceived Usefulness (PU) of AI** is helpful. The data presents sixteen different statements related to students' perceived usefulness. The data consists of fourteen items that obtain a high level and two items that indicate a low level. In summary, the use of AI in English will be a positive choice and useful. The top mean score is 4.13 which states that the students found it helpful to use AI products in every study of English. Future more based on the data taken, it depicts that the **student's Attitude Toward Using (ATU) of AI** is almost varies. They have a good feeling that those people would support them to use AI in the process of learning English. It is proven that the students are unlikely to have a problem recognizing AI in learning

English. The highest mean score, 3.93, presents that the use of AI is beneficial to the students. Most students think that AI products have a positive impact for using in learning English. The last about **the student's Behavioral Intention (BI)** of AI is balanced between the high-level items and the middle-level items with no low-level items. This means the students' intention toward AI in English is promising. The students intend to use AI products in the future and frequently as well as recommend them to other people to use AI products. The middle-level is all about the purchase of the AI product. It indicates that there is still hesitation to own AI products when it comes to taking money to do it. The highest item proves that AI products will be used in the future with a mean score, of 4.08. It shows how high the students are looking forward to using AI products in the future.

REFERENCES

- Ayu Mira Witriyanti Wida, P., Keri Yasa, N. N., & Gde Sukaatmaja, I. P. (2016). APLIKASI MODEL TAM (TECHNOLOGY ACCEPTANCE MODEL) PADA PERILAKU PENGGUNA INSTAGRAM. *Jurnal Ilmu Manajemen Mahasaraswati*. <https://www.neliti.com/publications/101948/aplikasi-model-tam-technology-acceptance-modelpada-perilaku-pengguna-instagram>
- Bin, Y., & Mandal, D. (2019). *English teaching practice based on artificial intelligence technology*. 11.
- Cioffi, R., Travagliani, M., Piscitelli, G., Petrillo, A., & De Felice, F. (2020). Artificial Intelligence and Machine Learning Applications in Smart Production: Progress, Trends, and Directions. *Sustainability*, 12(2), 492. <https://doi.org/10.3390/su12020492>
- Das, S., Dey, A., Pal, A., & Roy, N. (2015). Applications of Artificial Intelligence in Machine Learning: Review and Prospect. *International Journal of Computer Applications*, 115(9), 31–41. <https://doi.org/10.5120/20182-2402>
- Dewi, H. K., Rahim, N. A., Putri, R. E., Wardani, T. I., Rumambo, M. G., & Pandin, M. G. R. (2021). *THE USE OF AI (ARTIFICIAL INTELLIGENCE) IN ENGLISH LEARNING AMONG UNIVERSITY STUDENT: CASE STUDY IN ENGLISH DEPARTMENT, UNIVERSITAS AIRLANGGA*. 10.
- European Commission. Joint Research Centre. (2018). *The impact of Artificial Intelligence on learning, teaching, and education*. Publications Office. <https://data.europa.eu/doi/10.2760/12297>
- Haswani, F. (2014). The Role of Technology in Efl Classroom. *IJEE (Indonesian Journal of English Education)*, 1(2), 107–118. <https://doi.org/10.15408/ijee.v1i2.1303>
- Hidayati, T. (2016). INTEGRATING ICT IN ENGLISH LANGUAGE TEACHING AND LEARNING IN INDONESIA. *JEELS (Journal of English Education and Linguistics Studies)*, 3(1). <https://doi.org/10.30762/jeels.v3i1.173>
- Hwang, G.-J., Xie, H., Wah, B. W., & Gašević, D. (2020). Vision, challenges, roles and research issues of Artificial Intelligence in Education. *Computers and Education: Artificial Intelligence*, 1, 100001. <https://doi.org/10.1016/j.caeai.2020.100001>

- Jati, G. (2021). *Artificial Intelligence in ELT* [Presentation]. <https://bit.ly/jati-iainpapare>
- Jati, G., Dewi, F., Mali, Y. C. G., Santosa, M. H., Anjarani, S., & Luthfiyyah, R. (2021). *Teknologi dan Pembelajaran Bahasa Inggris*. 178.
- li, xue. (2020). The Application of Artificial Intelligence Technology in College English Blended Teaching. *2020 International Conference on Educational Science (ICES2020)*. 2020 International Conference on Educational Science. <https://doi.org/10.38007/Proceedings.0000342>
- Siegfried Engelmann and Douglas Carnine. (1982). *THEORY OF INSTRUCTION: PRINCIPLES AND APPLICATIONS*. Irvington Publishers.
- Sun, Z., Anbarasan, M., & Praveen Kumar, D. (2021). Design of online intelligent English teaching platform based on artificial intelligence techniques. *Computational Intelligence*, 37(3), 1166–1180. <https://doi.org/10.1111/coin.12351>
- Suryanto, S. (2020). Pengembangan Model Pembelajaran Bahasa Inggris. *Prosiding Seminar Nasional Program Pengabdian Masyarakat*, 10.
- Wang, D. (2021). Changes and Challenges: A Study on the Application of Artificial Intelligence Technology in College English Teaching. *2021 4th International Conference on Information Systems and Computer Aided Education*, 1361–1365. <https://doi.org/10.1145/3482632.3483151>
- Wang, R. (2019). Research on Artificial Intelligence Promoting English Learning Change. *Proceedings of the 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019)*. Proceedings of the 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019), Suzhou City, China. <https://doi.org/10.2991/emehss-19.2019.79>
- Yanhua, Z. (2020). The Application of Artificial Intelligence in Foreign Language Teaching. *2020 International Conference on Artificial Intelligence and Education (ICAIE)*, 40–42. <https://doi.org/10.1109/ICAIE50891.2020.00017>
- Zhu, D. (2017). Analysis of the Application of Artificial Intelligence in College English Teaching. *Proceedings of the 2017 2nd International Conference on Control, Automation and Artificial Intelligence (CAAI 2017)*. 2017 2nd International Conference on Control, Automation and Artificial Intelligence (CAAI 2017), Sanya, China. <https://doi.org/10.2991/caai-17.2017.52>