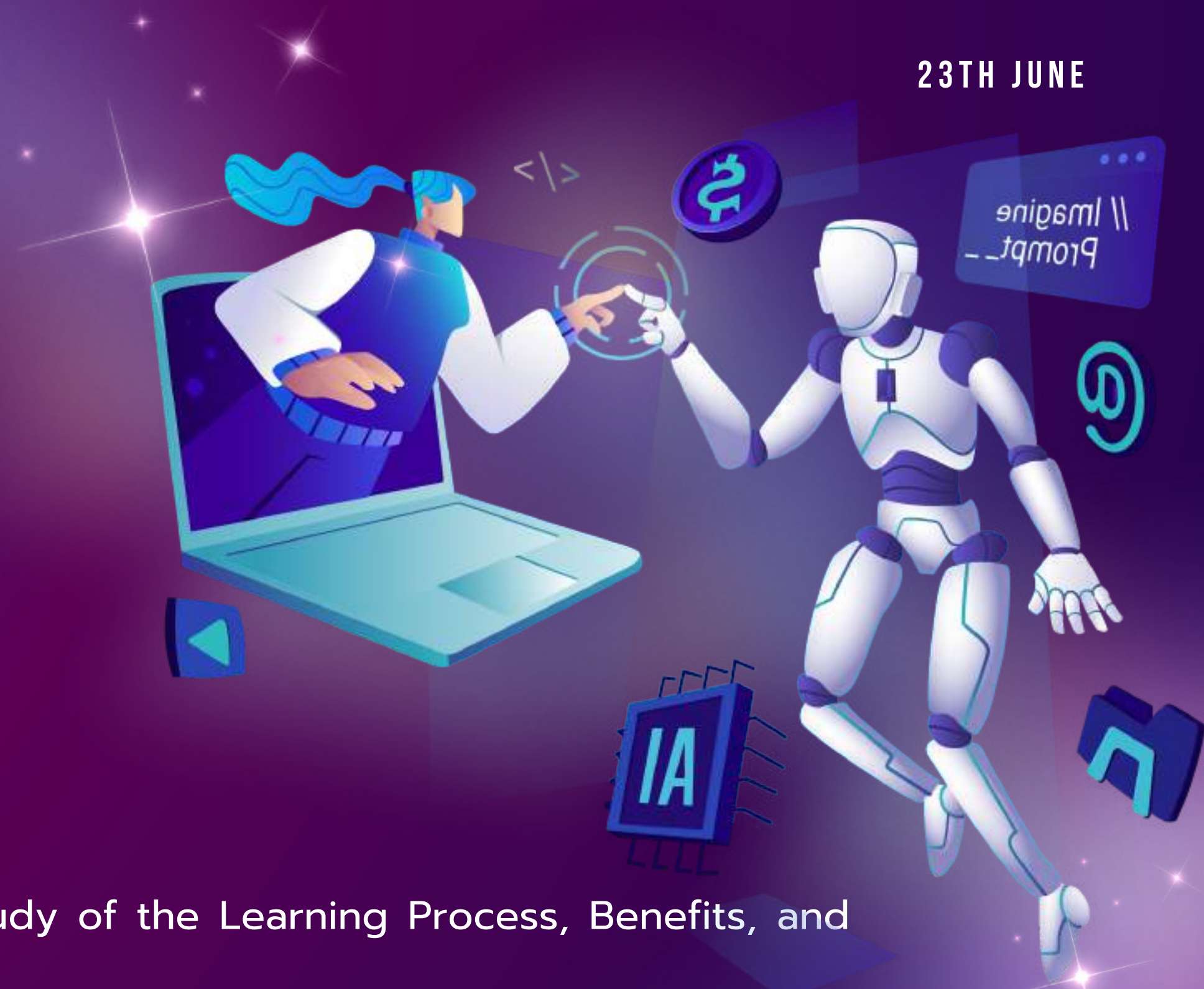


# Exploring the Boundaries of AI in Education

## Group 7

Exploring the Boundaries of AI in Education: A Study of the Learning Process, Benefits, and Challenges from Student's Perspective





# Introduction

Higher education in the vocational field is closely related to the use and development of technology. With the development of Artificial Intelligence or AI technology today, it can provide new benefits or problems in higher education in the vocational field, especially in Indonesia. Student perceptions related to the application of AI are important because they represent or represent the end users of higher education services in the vocational field. This study aims to find out the extent of the use of AI in the learning process, its benefits and challenges from a student perspective.





# Methods

This study uses a descriptive quantitative research method. Quantitative research is a method based on the philosophy of positivism, used in researching research samples and populations. Quantitative research is research that presents data in the form of numbers as a result of the research.

## Data collection techniques:

- The data collection technique we used was purposive sampling to determine the case study, namely FPTK students, but to determine the respondents we used snowball sampling

## Population :

- UPI Vocational College Students (FPTK)
- 2020-2023 Class Year

## Intervention :

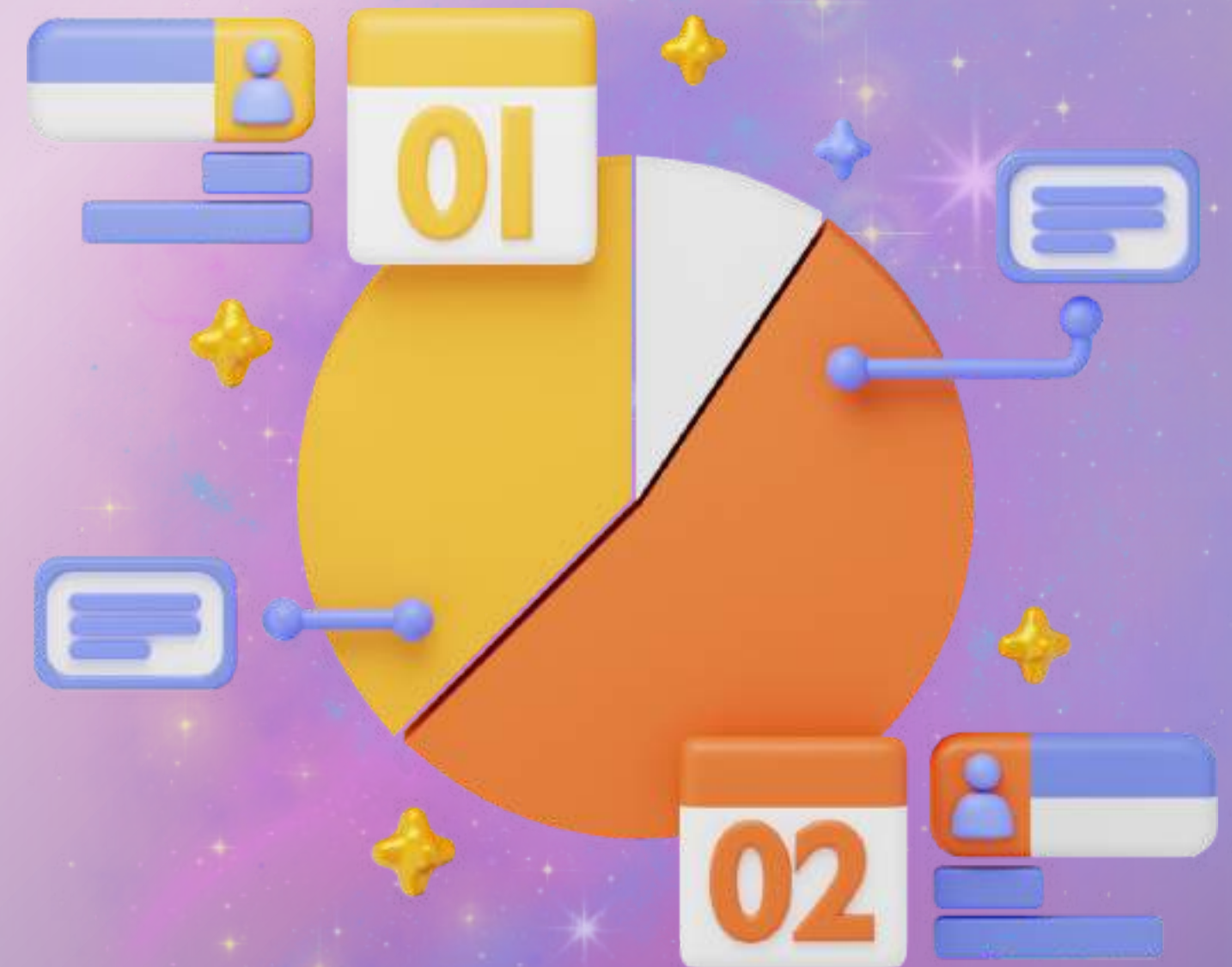
- Feeling towards AI
- AI as a Sources
- Perspectives about potential impact of AI
- The advantages of AI
- The drawback of AI



# Results & Discussions

This study is not fully completed yet although the study is still formed like a plan we really can't give you the proper results of this study, what really affected by it its Time and The Amount of samples that we've got.

- Conclude the Samples
- Calculate the Samples

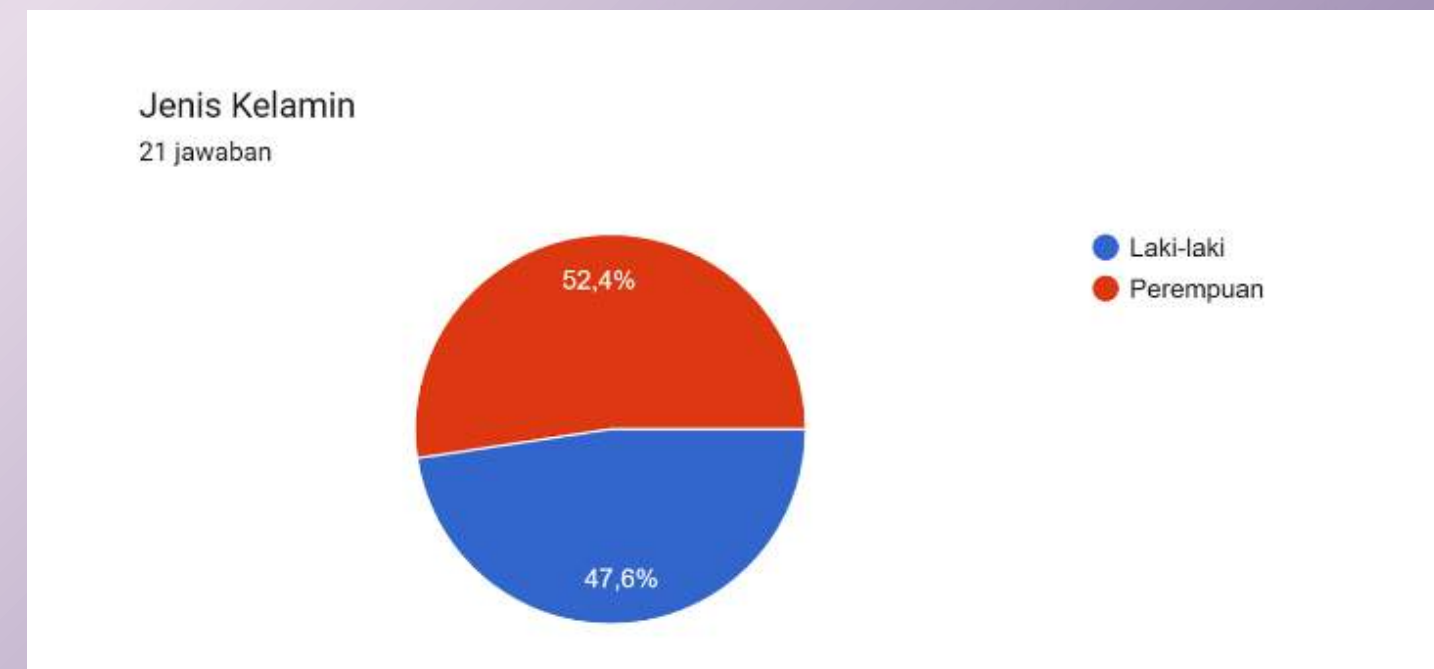
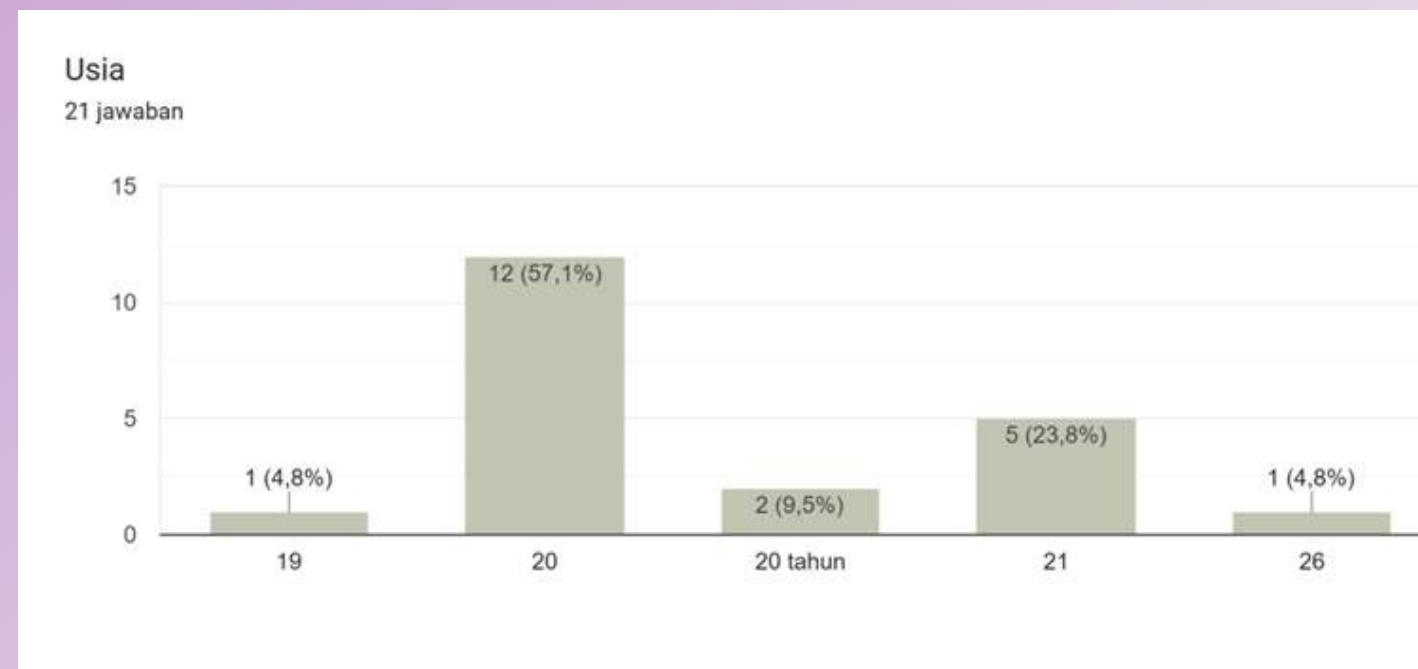




The research was carried out in June 2024 at the Faculty of Technology and Vocational Education, Universitas Pendidikan Indonesia. The data sources in the study are primary data and secondary data. Primary data was taken from a questionnaire in the form of structured questions that had been disseminated through a google form link with integrated direction by the researcher as many as 15 questions. The respondents were selected using the purposive sampling technique, namely FPTK UPI students who had an understanding of the topic being researched with a total of 21 respondents.



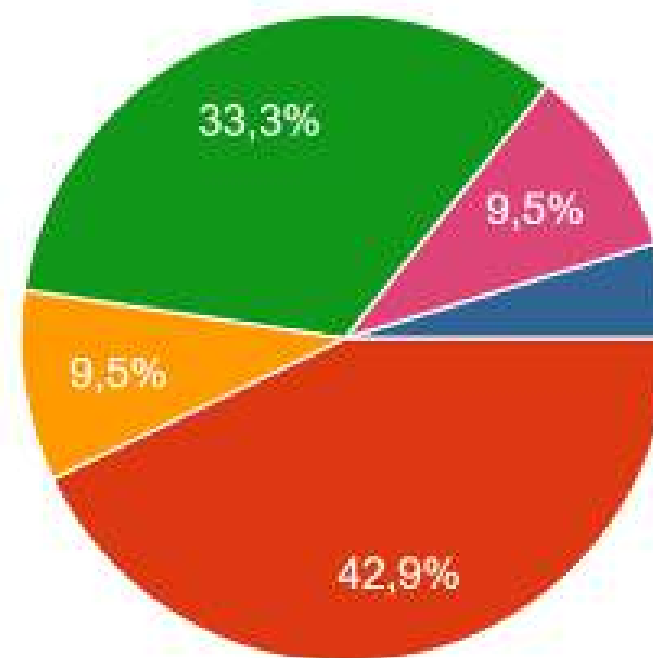
For the provisional results of the respondents that have been obtained, there are 21 total respondents. The age range of respondents aged 19 years was (4.8%), 20 years (66.6%), 21 years (23.8%), and 26 years (4.8%).





## Program Studi

21 jawaban



- Pendidikan Teknik Arsitektur
- Pendidikan Teknik Bangunan
- Pendidikan Teknik Elektro
- Pendidikan Teknik Mesin
- Pendidikan Teknik Otomotif
- Pendidikan Kesejahteraan Keluarga
- Pendidikan Tata Boga
- Pendidikan Tata Busana

▲ 1/2 ▼

The study programs of respondents from 8 study programs at FPTK only 5 study programs filled out this questionnaire. The total respondents from the construction engineering education study program were 42.9%, electrical engineering education 9.5%, mechanical engineering education 33.3%, culinary education 9.5%, and architecture education 4.8%.

## Uji Validitas (menguji apakah pertanyaan valid atau benar)

		Correlations																
		Butir Soal 1	Butir Soal 2	Butir Soal 3	Butir Soal 4	Butir Soal 5	Butir Soal 6	Butir Soal 7	Butir Soal 8	Butir Soal 9	Butir Soal 10	Butir Soal 11	Butir Soal 12	Butir Soal 13	Butir Soal 14	Butir Soal 15	Total	
Butir Soal 1	Pearson Correlation	1	.461 <sup>**</sup>	.000	.724 <sup>**</sup>	.300	.311	.064	.339	.430	.251	.420	.233	.048	-.059	-.038	.585 <sup>**</sup>	
	Sig. (2-tailed)		.038	.777	.000	.109	.179	.783	.133	.052	.272	.068	.309	.844	.799	.872	.008	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 2	Pearson Correlation	.461 <sup>**</sup>	1	.274	.217	.217	.444 <sup>**</sup>	.569 <sup>**</sup>	.281	.339	.350	.388	.404	.192	-.170	-.156	.594 <sup>**</sup>	
	Sig. (2-tailed)	.038		.230	.345	.344	.044	.000	.218	.140	.119	.083	.089	.409	.481	.499	.005	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 3	Pearson Correlation	.000	.274	1	.138	.274	.212	.358	.023	.544 <sup>**</sup>	.494 <sup>**</sup>	.508 <sup>**</sup>	.383	.374	-.313	.219	.022 <sup>*</sup>	
	Sig. (2-tailed)	.777	.230		.552	.290	.307	.112	.920	.011	.023	.019	.106	.084	.167	.340	.015	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 4	Pearson Correlation	.724 <sup>**</sup>	.217	.138	1	.468 <sup>**</sup>	.054	-.081	.328	.268	.226	.402	.325	.269	-.137	.063	.534 <sup>**</sup>	
	Sig. (2-tailed)	.000	.345	.552		.032	.816	.726	.149	.240	.325	.070	.151	.255	.556	.787	.012	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 5	Pearson Correlation	.300	.217	.274	.468 <sup>**</sup>	1	.027	.294	.325	.371	.182	.128	.585 <sup>**</sup>	.343	-.235	.429	.577 <sup>**</sup>	
	Sig. (2-tailed)	.109	.344	.230	.032		.908	.330	.150	.098	.430	.441	.008	.128	.306	.052	.008	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 6	Pearson Correlation	.311	.444 <sup>**</sup>	.212	.054	.027	1	.584 <sup>**</sup>	.508 <sup>**</sup>	.292	.092	.300	.333	.216	-.112	.362	.563 <sup>**</sup>	
	Sig. (2-tailed)	.170	.044	.357	.816	.908		.005	.019	.100	.681	.188	.140	.347	.629	.107	.008	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 7	Pearson Correlation	.064	.569 <sup>**</sup>	.358	-.081	.294	.584 <sup>**</sup>	1	.742	.339	.468 <sup>**</sup>	.402	.584 <sup>**</sup>	.526 <sup>**</sup>	-.239	.408	.672 <sup>**</sup>	
	Sig. (2-tailed)	.783	.000	.112	.726	.330	.005		.290	.133	.033	.070	.085	.014	.298	.067	.001	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 8	Pearson Correlation	.339	.281	.023	.328	.325	.508 <sup>**</sup>	.242	1	-.112	-.023	-.180	.188	.029	-.084	.107	.421	
	Sig. (2-tailed)	.133	.218	.920	.149	.150	.019	.280		.678	.922	.687	.471	.933	.716	.844	.057	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 9	Pearson Correlation	.430	.388	.544 <sup>**</sup>	.268	.371	.292	.339	-.112	1	.559 <sup>**</sup>	.537 <sup>**</sup>	.467 <sup>**</sup>	.440 <sup>**</sup>	-.202	.113	.608 <sup>**</sup>	
	Sig. (2-tailed)	.052	.140	.011	.240	.088	.199	.133	.628		.010	.012	.033	.046	.252	.826	.003	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 10	Pearson Correlation	.251	.350	.494 <sup>**</sup>	.226	.182	.092	.468 <sup>**</sup>	-.023	.559 <sup>**</sup>	1	.565 <sup>**</sup>	.614 <sup>**</sup>	.465 <sup>**</sup>	-.102	.119	.647 <sup>**</sup>	
	Sig. (2-tailed)	.272	.119	.023	.325	.430	.681	.033	.922	.010		.008	.003	.035	.681	.609	.002	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 11	Pearson Correlation	.420	.388	.508 <sup>**</sup>	.402	.309	.309	.402	-.100	.537 <sup>**</sup>	.565 <sup>**</sup>	1	.489	.601 <sup>**</sup>	-.125	.145	.658 <sup>**</sup>	
	Sig. (2-tailed)	.058	.083	.019	.070	.441	.186	.070	.667	.012	.008		.072	.004	.449	.531	.001	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 12	Pearson Correlation	.233	.404	.383	.325	.565 <sup>**</sup>	.333	.584 <sup>**</sup>	-.166	.487 <sup>**</sup>	.614 <sup>**</sup>	.489	1	.648 <sup>**</sup>	-.202	.414	.784 <sup>**</sup>	
	Sig. (2-tailed)	.309	.069	.100	.151	.008	.149	.005	.471	.033	.003	.072		.001	.381	.002	.000	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 13	Pearson Correlation	.048	.180	.374	.280	.343	.218	.028	.020	.440 <sup>**</sup>	.463 <sup>**</sup>	.601 <sup>**</sup>	.648 <sup>**</sup>	1	.016	.298	.678 <sup>**</sup>	
	Sig. (2-tailed)	.844	.409	.084	.258	.128	.347	.914	.933	.046	.035	.004	.001		.946	.282	.001	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 14	Pearson Correlation	-.059	-.170	-.313	-.137	-.235	-.112	-.239	-.084	-.262	-.102	-.175	-.202	.018	1	-.162	-.119	
	Sig. (2-tailed)	.799	.481	.167	.366	.306	.629	.288	.716	.252	.661	.488	.381	.948		.482	.007	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Butir Soal 15	Pearson Correlation	-.038	-.156	.219	.063	.429	.362	.408	-.107	.113	-.119	.146	.414	.255	-.182	1	.379	
	Sig. (2-tailed)	.872	.489	.340	.787	.062	.157	.067	.644	.926	.609	.531	.052	.262	.482		.081	
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Total	Pearson Correlation	.585 <sup>**</sup>	.594 <sup>**</sup>	.522 <sup>**</sup>	.537 <sup>**</sup>	.577 <sup>**</sup>	.583 <sup>**</sup>	.672 <sup>**</sup>	.421	.608 <sup>**</sup>	.647 <sup>**</sup>	.658 <sup>**</sup>	.784 <sup>**</sup>	.678 <sup>**</sup>	-.119	.379	1	
	Sig. (2-tailed)	.008	.005	.016	.012	.006	.008	.001	.067	.003	.002	.001	.000	.001	.607	.091		
	N	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Data was obtained from a questionnaire with a likert scale of 1-5. From the validity test that has been carried out using the significance value (p-value) where if  $N.Sig < 0.05$  was declared Valid and  $N.Sig > 0.05$  was declared Invalid, so it was found that out of 15 questions there were 3 invalid questions and the rest were valid



# Uji reliabilitas

## Reliability Statistics

Cronbach's

Alpha

N of Items

.813

15

For the reliability test carried out, Cronbach's alpha value was obtained which was 0.813 which was said to be reliable because it exceeded 0.70



## Analisis data deskriptif

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Total	21	18	40	30.71	6.404
Valid N (listwise)	21				

From the analysis of the descriptive data, the minimum score of the total number of questions was 18, the maximum score was 40, the average score was 30.71, and the value of the standard deviation was 6.404



# Conclusion

The provisional conclusion of the research that has been carried out on June 2024 at the Faculty of Technology and Vocational Education, University of Education Indonesia. The data sources in this study are primary data and secondary data. Primary data was taken from a questionnaire in the form of structured questions that had been disseminated through a google form link with integrated direction by the researcher as many as 15 questions. Respondents were selected using the purposive sampling technique, namely FPTK UPI students who have an understanding of the topic being researched with a total of 21 respondents. Over time, research data can change at any time.



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**Maulana, H. A. & Hamidi, M., 2020.** Persepsi Mahasiswa terhadap Pembelajaran Daring pada Mata Kuliah Praktik di Pendidikan Vokasi. *Equilibrium: Jurnal Pendidikan*, 8(2), pp. 224-231.

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**Sang jon Lee K & Kyungbin Kwon, 2024.** A systematic review of AI education in K-12 classrooms from 2018 to 2023: Topics, strategies, and learning outcomes

**Karin julia rot & Julia Lao, 2022.** Needs and requirements for an additional AI qualification during dual vocational training: Results from studies of apprentices and teachers



# Note

The paper that we've build right now is not in completed form it still formed as an plan.

**This paper was created by the member below :**

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Thank you !!!  
**Group 7**