



## The Interaction of Teachers in Online Learning During the Pandemic (A Study Comparison of Teacher and Student Perspectives)

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### Abstract:

Online learning is the solution chosen to avoid crowds, which are feared to lead to the new cluster of the Covid-19 pandemic. It's just that online learning is often followed by a different process of teacher interaction in online learning. This study is intended to describe teacher interactions in online learning during the pandemic between teacher and student perspectives. The research approach is quantitative with the type of comparative research, through random sampling, namely on respondents who are in teacher and student social media forums, from January to March in 2021. The results of data collection obtained 789 teachers and 910 student respondents. The data collection instrument used a closed questionnaire. The results showed interaction of teachers providing online learning during the pandemic at all levels of education is significantly different and there is a significant difference between a teacher and student learning interactions, at the level of achievement of teacher and student respondents at certain times/times both have had online learning interactions during the pandemic. For teachers the average value is 2.55 with a percentage of 56.1%, for students, the average value is 2.55 with a percentage of 63.9%. The researcher recommends that it is necessary to reflect and evaluate teacher interactions in online learning.

**Keywords:** online learning, students, teacher interaction, teacher

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### Preliminary

The online learning process does not feel like it has been running for two years, the online learning that has been running in the last two years is considered to be varied. In Indonesia, online learning is considered ineffective and will have an impact on reducing the quality of education, Indonesian children are also feared to experience a decline in

learning abilities. The survey results of the Kompas newspaper show that 70% of respondents are worried about the ineffectiveness of distance learning using online methods. This anxiety is felt by the community, both those who live in cities and villages. The same thing was acknowledged by 55.8% of respondents towards offline learning methods, such as the use of modules, student



worksheets, teaching materials, or through learning programs on television or radio. This problem is not only related to the capacity and learning facilities but also concerns the ineffectiveness of absorption and understanding of the material as well as skill development through online learning must be immediately anticipated and solutions found (Kompas: 2021, May 25). The decline in learning ability is a widespread effect of the impact of Covid-19 in all parts of the world (Gustafsson, 2021). This shows that the importance of teacher interaction in online learning can be said to be not working as it should, especially in covering psychological needs, this is indicated by respondents who stated that the majority of respondents (79%) assessed that the system of teaching and learning activities would be effective if carried out in full face-to-face. Meanwhile, 67% of respondents stated that learning would be more effective through blended learning by combining distance learning, the use of assistive devices, and face-to-face (Kompas: 2021, May 25).

Most teachers in the online learning process find it difficult to build fun learning interactions in an online atmosphere, especially developing safe, realistic, simple, and meaningful learning during this pandemic (Efriana, 2021). However, different studies have found that online learning can be carried out optimally if changes are made gradually by placing learning that is truly student-centered (Hershkovitz, 2018). However, the position of the teacher-student relationship is a position that can be interpreted as a formal interpersonal that takes place in an atmosphere of authority-subordinate figures who interact almost every day (Camp, 2011).

Difficulties in building authority and good interactions will form a problematic learning interaction structure and of course, will have an impact on the effectiveness of online learning,

which due to the Covid-19 pandemic is held in an 'emergency' condition. Unfortunately, this 'emergency' condition causes the implementation of online learning, not with adequate preparation so that the implementation varies according to conditions in the field, the interaction of teachers with students becomes problematic, because there are teachers who give weekly assignments without delivering the material directly. Students are expected to be able to learn independently with the given assignments (Alifia, Barasa, Bima, Pramana, Revina, & Tresnatri, 2020).

Referring to the description above, teacher interaction is very meaningful in determining the direction of the learning abilities of school students, teachers and schools are increasingly challenging to develop student's learning abilities in different ways (Engzell, Frey, & Verhagen, April 2021). The amount of student adaptation to the learning process in improving learning abilities certainly varies (Betebenner, January 2021). Of course, teachers in the learning process during the pandemic interact with students, but is the interactive teacher in online learning during the pandemic following what is felt by students? This study is intended to analyze the comparison of teacher and student perspectives in assessing the interactive picture made by teachers in online learning.

### **Literature Review**

The teacher's role in building interaction with students in the learning process can build student academic achievement, especially when the teacher becomes interactive in a fun way (Nisar, Khan & Khan, 2019). The definition of teacher-student interaction during a pandemic should be formulated differently because learning during this pandemic Covid-19 has put aside some of the positive, heartwarming, and relational things to teach and replaced it with



stress, increased demands, and concerns about safety. students, which of course changes the meaning of the shift in the value of the teacher's existence with the meaning of a 'facilitated' relationship rather than a direct relationship (see Azim Premji Foundation, February 2021). Maybe for some other teachers, it is not a problem,

The demand for flexibility in carrying out the learning process is considered a practical solution that can be done primarily when providing learning materials, however, this often conflicts with the rules for implementing the education curriculum that was well-established previously (Hanover Research, December 2020). Therefore, the learning process that emphasizes online interaction is expected to be developed into an independent and collaborative learning activity. Teachers have access to automated grading and demonstration of model answers, as well as peer review. Live student engagement can be characterized based on student participation in live virtual classroom sessions. Content creation tools allow teachers to design their lesson plans, assignments, lesson schedules, and feedback models (Reimers, Schleicher,

As described by Fisher, Fraser & Cresswell (1995) the interaction of teachers in the learning process contains at least the eight most important elements present in the classroom: (1) teachers who can demonstrate leadership attitudes, especially in managing classroom management; (2) teachers who can help/friendly with their students so that students feel comfortable with them; (3) teachers who can understand what students want; (4) teachers who can encourage students to be responsible / give freedom to choices and provisions that are prepared together; (5) teachers who show uncertainty, or doubts about the decisions taken; (6) teachers who often express student dissatisfaction so that

some students may feel uncomfortable; (7) teachers who often give reprimands and sometimes the reprimands are delivered loudly; and (8) teachers who develop and formulate strict rules. In everyday life as an educator, all or part of the interaction elements referred to is carried out by the teacher both consciously and unconsciously.

Then by Fisher, Fraser & Cresswell (1995), the eight existing elements were stated as indicators in the questionnaire compiled by them, which was called "Questionnaire on Teacher Interaction." This questionnaire was developed to measure the professional development of the teaching profession. As previously stated, this research is intended to measure teacher interactions that occur in an online learning environment, where the interaction process is assessed by the teacher concerned and by students.

Of the eight elements proposed by Fisher, Fraser & Cresswell (1995) in our limited preliminary study by conducting random online interviews with 3 teacher respondents and 6 student respondents, we found only the elements: leadership, understanding, admonishing, being responsible/ giving freedom, helping / friendly, dissatisfaction, and setting strict rules that are dominantly found in the online learning process, so it needs to be measured.

### **Significant Theory**

This research is important to do to analyze the comparison of the description of teacher interactions in online learning, how online learning is carried out by teachers, from the statements submitted by teacher respondents and student respondents to teacher interactions during the online learning process, whether there are parallel comparisons or different comparisons, so that the results of the research statement on teacher interaction are obtained.



## Research methodology

### Research design

The researcher used a comparative survey research design to collect answers from the choice statements that had been distributed to teachers and students from junior high school to high school/vocational school as respondents.

### Population and Research Sample

The population in this study were teachers and students from junior high school

to high school/vocational school which we randomly distributed through social media. To take the sample using a random sampling technique with the assumption that members of the social media group who fill out the instrument become respondents. In the range of random sampling, we found two groups of respondents, namely 789 teacher respondents and 910 student respondents who filled out the instruments that we distributed, with details in the table as follows.

**Table 1. School Level**

School Level	Respondent	Percentage	Respondent	Percentage
	Teacher	Teacher	Student	Student
Junior high school	355	45.0%	286	31.4%
Senior High School	275	34.9%	407	44.7%
Vocational High School	159	20.2%	217	23.8%
<b>Total Respondents</b>	<b>789</b>	<b>100%</b>	<b>910</b>	<b>100%</b>

The total number of respondents obtained is unequal between teacher respondents and student respondents as stated above. The largest number of teacher respondents was in junior high school (45.0%). The biggest respondents were high school students with 44.7% of respondents.

**Table 2. Working Period While Being a Teacher**

Years of service	Respondent	Percentage
Less than 10 years	223	28.3%
10 years running	146	18.5%
More than 10 years	420	53.2%
<b>Total Respondents</b>	<b>789</b>	<b>100%</b>

The majority of respondents have worked as teachers for more than 10 years or 53.2%, while respondents who have worked as teachers for less than 10 years have a percentage of 28.3%, so it can be assumed that the respondents in our study are teachers with long work experience.

### Data Collection Instruments

The study used an instrument composed of the views of Fisher, Fraser & Cresswell (1995) on teacher interaction in online learning during the pandemic. The questionnaire in the form of a closed statement consists of 25 items with five choices of answer categories, namely:

'Never,' 'Never does,' 'Sometimes does,' 'Does' and finally 'Always does'.

### Data Collection Procedure

The distribution of the questionnaires is shared online through chain shares from social media groups, which are entrusted from one sample to another. The distribution of the online questionnaire uses the Google Form application. Considering that it is not possible to distribute directly in pandemic conditions, the distribution of instruments is limited to 3 (three) months from January to March in 2021, from the total population in question, a sample is captured, namely, respondents who fill out the instruments distributed by researchers.



### Data analysis method

The data analysis technique used the Kolmogorov-Smirnov statistical analysis, the Kruskal-Wallis test, and the Mann-Whitney Test facilitated using the Microsoft Excel 2016 program and the Statistical Package for the Social Sciences (SPSS) version 23.0.

### Result Presentation

Based on the tabulation of the instrument statement items answered by the respondents, it is obtained an analysis of teacher perspective data on the description of teacher interactions in online learning and comparisons of teacher and student

perspectives on teacher interactions in online learning.

### Teacher's Perspective on Teacher Interaction in Online Learning

The hypothesis is built as follows:

H0: There is no difference between teacher learning interactions at all levels of education.

H1: There are differences between teacher learning interactions at all levels of education.

After the data has been collected, a prerequisite test is carried out with the assumption that the data is normally distributed and homogeneous variance is used as a requirement using parametric statistics with a 95% confidence level (analytical confidence) and an alpha level (error tolerance) 5% (0.05).

**Table 3. Tabulation of Teacher Respondent Questionnaire Data**

N o	Statement	Mea n	TCR	Category
1	I talk enthusiastically about the subject matter.	2.77	69.3%	Sometimes Doing
2	I trust students' abilities.	2.61	65.2%	Ever Do
3	I explain the subject matter clearly.	2.31	57.7%	Ever Do
4	If students do not agree with me, then I allow them to discuss.	1.52	38.0%	Never
5	I get angry quickly.	2.60	65.0%	Never
6	I am willing to explain again if students do not understand it.	2.24	56.0%	Ever Do
7	I know everything that happens in online learning classes.	2.33	58.4%	Ever Do
8	If students want to say something, I will listen.	2.42	60.5%	Ever Do
9	I realize when students don't understand.	2.56	63.9%	Ever Do
10	I am very confident in teaching.	1.69	39.4%	Never
11	I am patient with students.	2.56	64.0%	Ever Do
12	Students are very easy to argue unfounded.	2.38	59.4%	Never
13	I like to help students with schoolwork.	1.53	38.2%	Ever Do
14	Students, I am free to decide some things in class.	2.05	51.3%	Sometimes Doing
15	I found students cheating.	2.66	66.4%	To do
16	I try to be friendly.	2.30	57.4%	Sometimes Doing
17	I thought that the students didn't know anything.	2.32	58.0%	Never
18	I think students in online classes should be silent in learning.	2.54	63.5%	Never
19	I let students play around in class.	2.32	58.1%	Never



No	Statement	Mean	TCR	Category
20	I think students need to be self-aware.	2.24	55.9%	Ever Do
21	Exams when online learning is difficult to need to emphasize the level of difficulty.	1.57	39.2%	Never
22	I insert humor into the lesson.	2.10	52.5%	Never
23	The current standard of online learning needs to be improved.	2.09	52.3%	Never
24	I try to be assertive when assessing assignments.	2.31	57.8%	Ever Do
25	Online classes are fun.	2.25	56.3%	Ever Do
<b>An Overview of Teacher Interactions Expressed by Teachers</b>		<b>2.25</b>	<b>56.1%</b>	<b>Ever Do</b>

The determination of the category of the choice of the category scale statement obtained the standard as follows.

**Table 4. Determination of Statement Category**

No	Category	TCR (%)
1	Always Do	90 - 100
2	To do	80 - 89
3	Sometimes Doing	70 - 79
4	Ever Do	55 - 69
5	Never	1 - 54

The formation of norms on the instrument is shown in table 5 below.

**Table 5. Instrument Norms**

Instrument Norms	
Xmin (1 x number of question items)	25
Xmax (number of question items x number of question choices)	100
Range (Xmax - Xmin)	75
Mean(Xmax + Xmin)/2	62.5
SD (Range/6)	12.5
	0

For the categorization of instrument norms, it is shown in table 6 below.

**Table 6. Instrument Norm Category**

Instrument Norm Category			
Always Do	$M + 1.5 * SD \leq x$	81	$\geq 81$
To do	$M + 0.5 * SD < X < M + 1.5 * SD$	69	69 - 80
Sometimes Doing	$M - 0.5 * SD < X < M + 0.5 * SD$	56	56 - 68
Ever Do	$M - 1.5 * SD < X < M - 1.5 * SD$	44	44 - 55
Never	$X < M - 1.5 * SD$	43	$\leq 43$

Next, the pre-requisite normality test is carried out



**Table 7. Tests of Normality**

Tier	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Interaction Junior high school	.134	355	.000	.917	355	.000
Senior High School	.171	275	.000	.851	275	.000
Vocational High School	.178	159	.000	.833	159	.000

<sup>a</sup>Lilliefors Significance Correction

Seen in the column normality test table Kolmogorov-Smirnova if the significance value of Sig. > 0.05. it is assumed that the data are normally distributed (symmetrically). In the junior high school line, a signification of 0.000 means that the data distribution is not normal because it is less than 0.05. In the high school row, a signification of 0.000 means that the data distribution is not normal because it is less than 0.05. In the line of vocational high school, a signification of 0.000 means that the data distribution is not normal because it is less than 0.05.

After knowing the normality test, it is found that the overall data is not normally distributed, so it is not necessary to do a homogeneity test as a condition for conducting parametric statistics. Because the parametric statistical requirements were not met, nonparametric statistics were used. The non-parametric statistical tool used to process the data is the Kruskal-Wallis test. Kruskal-Wallis test because there are more than 2 groups, namely junior high school, high school, and vocational high school.

**Table 8. Ranks**

tier	N	Mean Rank
Interaction Junior high school	35	309.77
Senior High School	27	465.14
Vocational High School	15	463.99
<b>Total</b>	<b>78</b>	

**Table 9. Test Statistics, b**

Interaction	
Chi-Square	90.361
df	2
asypm. Sig.	.000

<sup>a</sup>Kruskal Wallis Test

<sup>b</sup>Grouping Variable: Level



Table 8 in the junior high school row results in an average rank of 309.77 which is the smallest of all levels. In the high school row, the average score is 465.14 which is greater than the vocational high school level with an average rank of 463.99.

In Table 9, the results of the Asymp Sig value are obtained. of 0.000, where if the significance value of Sig. > 0.05 then H0 is rejected. So it can be interpreted that The interaction of teachers providing online learning during the pandemic at all levels of education is significantly different. Furthermore, to see the amount of percentage along with its categorization at each level, a descriptive statistical test of frequency was carried out.

**Table 10. First School Group**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	46	5.8	13.0	13.0
	Ever Do	47	6.0	13.2	26.2
	Sometimes Doing	107	13.6	30.1	56.3
	To do	129	16.3	36.3	92.7
	Always Do	26	3.3	7.3	100.0
	Total	355	45.0	100.0	
Missing	System	434	55.0		
<b>Total</b>		<b>789</b>	<b>100.0</b>		

Table of groups of junior high school education levels with the largest percentage of 36.3% for the category of doing. It can be interpreted that in the implementation of online learning during the pandemic, teachers are very interactive.

**Table 11. High School Group**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	19	2.4	6.9	6.9
	Ever Do	28	3.5	10.2	17.1
	Sometimes Doing	129	16.3	46.9	64.0
	To do	93	11.8	33.8	97.8
	Always Do	6	.8	2.2	100.0
	Total	275	34.9	100.0	
Missing	System	514	65.1		
<b>Total</b>		<b>789</b>	<b>100.0</b>		

Table of high school level groups with the largest percentage 46.9% for the category Sometimes doing. It can be interpreted that teachers sometimes do online learning to interact during a pandemic.





**Table 12. Vocational High School Group**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	12	1.5	7.5	7.5
	Ever Do	19	2.4	11.9	19.5
	Sometimes Doing	67	8.5	42.1	61.6
	To do	57	7.2	35.8	97.5
	Always Do	4	.5	2.5	100.0
	Total	159	20.2	100.0	
Missing	System	630	79.8		
<b>Total</b>		<b>789</b>	<b>100.0</b>		

Table of the highest percentage of vocational high school level group 42.1% for the category Sometimes doing. It can be interpreted that teachers sometimes conduct online learning interactions during a pandemic.

**Comparison with Student Perspectives on Teacher Interaction in Online Learning**

Hypothesis on student perspective on teacher interaction in online learning:

H0: There is no difference between a teacher and student learning interactions or vice versa.

H1: There is a difference in the interaction between teachers and students or vice versa.

After the data has been collected, a prerequisite test is carried out with the assumption that the data is normally distributed and homogeneous variance is used as a requirement using parametric statistics with a 95% confidence level (analytical confidence) and an alpha level (error tolerance) 5% (0.05). Testing using the SPSS version 23 application.

Normality test using Kolmogorov-Smirnov because the sample is independent with a large number of respondents.

**Table 13. One-Sample Kolmogorov-Smirnov Test**

		Teacher	Student
N		789	910
Normal Parameters, b	mean	56.32	66.83
	Std. Deviation	13.028	6.691
Most Extreme Differences	Absolute	.142	.048
	Positive	.075	.033
	negative	-.142	-.048
<b>Test Statistics</b>		<b>.142</b>	<b>.048</b>
asympt. Sig. (2-tailed)		.000c	.000c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.



Seen in the column normality test table Kolmogorov-Smirnova if the significance value of Sig. > 0.05, it is assumed that the normality of the data is normally distributed (symmetrically). In the teacher column, a signification of 0.000 means that the data distribution is not normal because it is less than 0.05. In the Student signification column of 0.000, it means that the data distribution is not normal because it is less than 0.05.

After knowing the normality test, it is found that the overall data is not normally distributed, so it is not necessary to do a homogeneity test as a condition for conducting parametric statistics. Because the parametric statistical requirements were not met, nonparametric statistics were used. The non-parametric statistical tool used to process the data is the Kruskal-Wallis test. Kruskal-Wallis test because there are more than 2 groups namely junior high school, high school, and vocational high school.

**Table 14. Ranks**

	Group	N	Mean Rank	Sum of Ranks
Teacher and student	Teacher	789	603.09	475841.00
	Student	910	1064.08	968309.00
	Total	1699		

**Table 15. Test Statistics**

	Teacher and student
Mann-Whitney U	164186.000
Wilcoxon W	475841.000
Z	-19.329
asymp. Sig. (2-tailed)	.000

<sup>a</sup>Grouping Variable: VAR00004

Table 14 in the teacher row produces an average rank of 603.09 which is smaller than the results in the student row which produces an average value of 1064.08.

Table 15 obtained Asymp Sig value results. of 0.000, wherein the significance value of Sig. > 0.05 then H0 is rejected. So it can be interpreted that there is a significant difference between a teacher and student learning interactions.

Furthermore, to see the percentage size and its categorization between teachers and students, a comparison of the respondent's achievement level (TCR) is carried out as revealed in table 4.

**Table 15. Tabulation of Student Respondent Questionnaire Data**

No	Statement	mean	TCR	Category
1	The teacher talks enthusiastically about the subject matter.	3.13	78.1 %	Sometimes Doing
2	Teachers trust our abilities.	2.27	56.8 %	Ever Do
3	The teacher explains the subject matter clearly.	3.17	79.3 %	To do
4	If we do not agree with the teacher. we will be allowed to discuss it.	1.57	39.2 %	Never



<b>No</b>	<b>Statement</b>	<b>mean</b>	<b>TCR</b>	<b>Category</b>
5	The teacher is quick to anger.	2.33	58.1 %	Never
6	The teacher is willing to explain again. if we don't understand it.	2.22	55.6 %	Ever Do
7	Teachers know everything that happens in online learning classes.	2.73	68.2 %	Ever Do
8	If we want to say something. the teacher will listen.	3.31	82.7 %	To do
9	Master realized when we didn't understand.	2.85	71.2 %	Sometimes Doing
10	Our teachers act with confidence.	3.24	80.9 %	To do
11	Our teacher is patient.	2.28	57.0 %	Ever Do
12	We are very easy to fool the teacher.	2.76	69.0 %	Never
13	Teachers like to help with our work.	2.78	69.5 %	To do
14	We freed the teacher to decide some things in class.	2.83	70.8 %	To do
15	The teacher thought we were cheating.	1.91	47.7 %	Sometimes Doing
16	Our teacher is friendly.	3.25	81.1 %	Always Do
17	Master thought that we didn't know anything.	2.52	63.0 %	Never
18	We in the online class must be silent.	2.60	65.0 %	Never
19	The teacher let us play around in class.	2.50	62.4 %	Never
20	The teacher likes to put us down.	1.46	36.6 %	Never
21	Teacher exams when online learning is difficult.	1.15	28.7 %	Never
22	Teachers have a sense of humor.	2.67	66.8 %	Ever Do
23	Our teachers' standards when it comes to online learning are very high.	2.89	72.4 %	Sometimes Doing
24	The teacher is strict when assessing assignments.	2.61	65.2 %	Ever Do
25	Online classes are fun.	2.86	71.4	Sometimes Doing



No	Statement	mean	TCR	Category
			%	
<b>Overview of Teacher Interactions Expressed by Students</b>				
		2.55	63.9 %	Ever Do

Based on the results of the data analysis, the average student-teacher interaction was carried out in online learning during the pandemic because the average score was 2.55 with an achievement rate of 63.9% of respondents who were included in the category of Never Doing.

Based on the results of the data analysis, the average interactive teacher for students has been carried out in online learning during the pandemic because the average score is 2.55 with an achievement rate of 56.1% of respondents who are included in the category of having done.

The description of the data above shows that the teacher-student interaction has a significant difference in online learning during the pandemic with the Asymp Sig value. of 0.000. Although there are significant differences, at the level of achievement of teacher and student respondents at certain times/times both have done online learning interactions during the pandemic. For teachers, the average score is 2.55 with a percentage of 56.1%. In students, the average value is 2.55 with a percentage of 63.9%.

**Finding Discussion**

Implementation of online learning for teachers during the pandemic is a challenge in itself that almost takes up mental and psychological burdens, including efforts to build interaction with students by understanding students' existence as a whole (Zhao, 2021; Hasan & Khan, 2020). The results of the data analysis state that the interactions made by the teacher during online learning both from the teacher himself and from students have varied

scores, this shows that there is indeed a significant effort.

Silverthorn (2007) reveals that to make successful classrooms interactive requires: teachers who believe that students are capable of independent learning, given appropriate guidance and support so that interactively, the classroom becomes a place of learning that focuses on concepts, principles and application of knowledge rather than transfer. fact. In many ways, the classroom is where students learn what they don't know rather than what they do know. The research data that we compiled reveal that the choice of having made a choice is often the dominant choice. One of the choices that have been made is the choice of speaking or delivering material enthusiastically, but in reality, for students, it is stated that sometimes what is done. For students, the dominant choice is the statement about the teacher who has a sense of humor. This proves building classes to be interactive is not as easy a matter as Silverthorn wants it to be.

From the two perspectives between teacher respondents and student respondents, it varies, believed by Wut & Xu (2021), due to not being able to fully build cognitive social presence and affective social presence. Another factor occurs due to the lack of technical skills of teachers and their teaching styles that are not well adapted to online conditions, which is exacerbated by the presence of assignments that students receive but are not delivered due to poor communication interactions (see Coman, ru, Meseşan-Schmitz, Stanciu, & Bularca, 2020).



## Conclusions and Recommendations

Based on the description that has been stated above. So several conclusions can be drawn. namely as follows.

1. There is a significant difference between teacher interactions providing online learning during the pandemic at all levels of education
2. The description of teacher interaction with students has a significant difference in online learning during the pandemic.

Teacher interaction is conducting online learning occurs significantly, but in fact, there is a significant comparison of teacher interactions that occur both from the teacher himself and with students. Therefore, the researcher recommends that it is necessary to reflect and evaluate whether the interactions made by the teacher during the pandemic have been conveyed correctly or not to the students because it is feared that the interactions intended by the teacher are not perceived by the students properly.

## Research Limitations

This research was carried out with limited efforts to describe teacher interactions in the learning process during the pandemic, which was widely used as teacher respondents from junior high school to high school/vocational school so that it would be difficult to draw specific descriptions describing teacher interactions, especially in detail because they were limited by instrument statements. Another limitation encountered was in the technical distribution of instruments which was carried out randomly in social media groups that were followed by researchers.

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## References

- Alifia. Ulfah. Barasa. Arjuni Rahmi. Bima. Luhur. Pramana. Rezanti Putri. Revina. Shintia & Tresnatri. Florischa Ayu. (2020). Belajar dari Rumah: Potret Ketimpangan Pembelajaran pada Masa Pandemi Covid-19. SMERU: Research Institute.
- Azim Premji Foundation. (Februari 2021). Loss of Learning during the Pandemic: Field Studies in Education. Azim Premji University.
- Betebenner. Damian W. (January 2021). Understanding Pandemic Learning Loss and Learning Recovery: The Role of Student Growth & Statewide Testing. Center for Assessment: Dover. New Hampshire. USA.
- Camp. Michael David. (2011). The Power of Teacher-Student Relationships in Determining Student Success. Dissertation on Doctor of Education Degree University of Missouri. Kansas: unpublished.
- Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online Teaching and Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. Sustainability, 12(24), 10367. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/su122410367>
- Efriana. L. (2021). Problems of Online Learning during Covid-19 Pandemic in EFL Classroom and the Solution. JELITA. 2(1). 38-47. Retrieved from <https://jurnal.stkipmb.ac.id/index.php/jelita/article/view/74> [Accessed on June 2. 2021].



- Engzell. Per. Frey. Arun. & Verhagen. Mark D. (April 2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences*. 118 (17) e2022376118; DOI: 10.1073/pnas.2022376118
- Fisher. D.. Fraser. B.. & Cresswell. J. (1995). Using the "Questionnaire on Teacher Interaction" in the Professional Development of Teachers. *Australian Journal of Teacher Education*. 20. 2.
- Gustafsson. Martin. (2021). Pandemic-related disruptions to schooling and impacts on learning proficiency indicators: A focus on the early grades. UNESCO Institute for Statistics: Montreal. Canada.
- Hanover Research. (Desember 2020). Best Practices for Learning Loss Recovery. Hanover Research.
- Hasan, Naziya & Khan, Naved. (2020). ONLINE TEACHING-LEARNING DURING COVID-19 PANDEMIC: STUDENTS' PERSPECTIVE. 8. 202-213.
- Hershkovitz. A. (2018). The student-teacher relationship in the one-to-one computing classroom. *Páginas De Educación*. 11(1). 37-65.  
<https://doi.org/10.22235/pe.v11i1.1553>
- Jones. AL & Kessler. MA. (2020). Teachers' Emotion and Identity Work During a Pandemic. *Front. Educ*. 5: 583775. doi: 10.3389/educ.2020.583775
- Mehlenbacher. B.. Miller C. R.. Covington. D.. & Larsen. J. S. (2000). Active and interactive learning online: a comparison of web-based and conventional writing classes. *IEEE Transactions on Professional Communication*. 43(2). 166-184. doi: 10.1109/47.843644.
- Mengatasi Ketidakefektifan Sekolah Daring. (2021. May 25). Retrieved June 2. 2021 from news articles: <https://www.kompas.id/baca/riset/2021/05/25/mengatasi-ketidakefektifan-sekolah-daring/>.
- Nisar. Muhammad. Khan. Iqbal Amin. & Khan. Faridullah. (2019). Relationship between classroom management and students academic achievement. *Pakistan Journal of Distance & Online Learning*. V(I). 209-220.
- Reimers. Fernando. Schleicher. Andreas. Saavedra. Jaime. & Tuominen. Saku. (2020). Supporting the continuation of teaching and learning during the COVID-19 Pandemic Annotated resources for online learning. OECD.
- Silverthorn, Dee. (2007). Teaching and learning in the interactive classroom. *AJP Advances in Physiology Education*. 30. 135-40. 10.1152/advan.00087.2006.
- Wut, TM. & Xu, J. (2021). Person-to-person interactions in online classroom settings under the impact of COVID-19: a social presence theory perspective. *Asia Pacific Educ. Rev.* <https://doi.org/10.1007/s12564-021-09673-1>
- Yogesh Hole et al 2019 *J. Phys.: Conf. Ser.* 1362 012121
- Zhao, Y. (2021). Build back better: Avoid the learning loss trap. *Prospects*. <https://doi.org/10.1007/s11125-021-09544-y>

