The Use the Elaboration phase in ICT and Social Studies to Educate Junior High School Students about the Covid 19 Pandemic

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Abstract

This study aims to analyse the Elaborate phase in ICT and social studies to educate Junior High School students about Covid 19. The independent variables were the Elaborate phase in ICT and the Elaborate phase in social studies. Attitude towards Covid 19 is the dependent variable. The research uses a quantitative approach with simple linear regression and the Paired Sample T-test method. With 388 samples of students from 3 Public Junior High Schools, the results indicate a significant influence of the Elaborate phase in ICT with attitude towards Covid 19 is 0.59. A significant influence of the Elaborate phase in social studies on attitude towards Covid 19 with a correlation test result is 0.57. Results show there is a significant influence between the Elaborate phase in ICT and the Elaborate phase in social studies on attitude towards Covid 19. Result of the hypothesis testing with multiple regression analysis shows an increase in attitude towards Covid 19 by 13,509. The ICT and social studies variables simultaneously influence students' attitude towards preventing the Covid 19 virus in Junior High School. The study indicates that ICT and social studies can improve students' understanding of broader population problems, such as Covid-19. Students can also adapt to an online learning process, and they can increase their learning motivation. Students demonstrated cognitive and affective attitude in the learning process by undertaking independent learning. In addition, the combination of ICT and social studies to elaborate on their understanding affected students' cognitive attitude, namely the desire to take preventive action against Covid 19.

Keywords: ICT, social studies, preventing, Junior High School.

Introduction

The rapid development of technology and information in various aspects of life, including in education, is an effort to bring the present and the future together by introducing reforms to meet efficiency and effectiveness (Yehya, Barbar, & Rjeily, 2018). Social science education is relevant to this effort in that it deals with humans and their environment where human life is a dynamic that never stops and is always active (Kilinc et al., 2016). That dynamic creates a link between

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technology and information and social science education (Tarman et al., 2019). Young (2018) shows that cultural identity can be restored by using ICT for social good. On the other hand, Cener, Acun, and Demirhan (2015) claim that using ICT tools in social studies learning such as multimedia CDs, documentaries, and PowerPoint, do not significantly influence the learning process. That is despite social studies teachers having a positive attitude towards ICT integration in the learning process (Hong, 2016). The lack of availability of ICT and students' low levels of competency in applying ICT in the learning process creates obstacles to learning (Subedi & Subedi, 2020). Therefore, the application of ICT and social studies curriculation elaborations needs to improve (Arinze, Okonkwo, & Iwunor, 2012). Amid the world-wide Covid-19 Pandemic that hit Indonesia in 2020, changes occurred in the delivery of teaching and learning activities. Teachers and students had no choice but to use ICT in the learning process and, in doing so, online learning activities became an option for the Ministry of Education and Culture to help prevent the spread of the Covid-19 virus. On March 02, 2020, The President of the Republic of Indonesia, accompanied by the Minister of Health, announced the first positive case of Covid 19 and declared it a national disaster.

Sulistyawati et al. (2021) considered that public knowledge about Covid 19 was sufficient; however, people still responded negatively to the government's policies in response to the threat of a pandemic. The social change resulting from the policies has had a comprehensive impact on the structure of community life in Indonesia, none more so than on the education sector required to adapt rapidly to distance learning methods in the home. Yates et al. (2020) highlighted that secondary schools in New Zealand were successfully using online learning. It is challenging for teachers to conduct ICT curriculum elaborations in online learning due to the lack of adequate facilities. In addition, Rasmitadila et al. (2020) indicate that online learning success during the Covid 19 home learning period, was determined by technology readiness and adequate support.

Carrillo and Flores (2020) consider online education amid the Covid 19 pandemic supports teaching and learning. However, in the online learning environment, access to effective learning media is essential. To be considered effective, learning media needs to be supported by systems that offer fast access to audiovisual material (Başal & Eryılmaz, 2020; Evans-Amalu & Claravall, 2021; Kim et al., 2021).

For most educators and students, online learning is a new experience. Whilst in an ideal situation adapting to an online platform would take place over a long period of time, the sudden impact of

the Covid-19 pandemic forced educators to adapt overnight so that learning could continue in line with the academic calendar (Page et al., 2021). Whether teachers and students can successfully adapt to using online media is one of the main factors affecting the success of online learning (Leslie et al., 2021; Rapoport, 2020; Watson, 2020). Aduba and Mayowa-Adebara (2021) point out that without adaptation, the introduction of learning media, and training in using learning media, would be difficult for teachers and students to carry out effectively, efficiently and optimally amid the Covid-19 pandemic, despite wide use of the internet generally.

Social studies education is a compulsory subject in Junior High Schools in Indonesia, and it plays an important role in producing quality students (Saye, 2013). Social studies' goal is to prepare, foster, and shape students' abilities, values, and basic competencies needed for life in society (Karatekin, 2012) and support the achievement of those objectives. Therefore, according to McCorkle (2020), social studies lessons provide opportunities for students and teachers to respond to social problems, such as the Covid 19 virus, that occur in society. A learning process must be supported by a conducive climate that includes engaging learning methods (Thacker, 2017).

On the other side, to engaging learning methods for students, the Elaborate phase is closely related to communication theory whereby attitudes when receiving messages are discussed (Jennings, 2019). By elaborating on their understanding, students are challenged to observe and analyse various possibilities from the information obtained through the exploration phase to respond to social problems (Pires, et al., 2020). Students hone their cognitive abilities by reasoning to draw conclusions about what they have explored in the learning process (Powell et al., 2018) and, as a result, will be motivated to experiment and re-explore (Bolkan, 2016). To help students understand and respond to the Covid 19 pandemic, a teacher plays a significant role. Elaboration activities are developed to assist students to extrapolate their understanding without deviating from the previous focus developed during the exploration phase (Kangas, Koskinen, & Krokfors, 2017). To effectively carry out the Elaborate phase in ICT and social studies, parental support is necessary to influence students' social and cultural competence.

Suswandari et al. (2020) claim that the empirical reality at the school level is that teachers do not optimally utilise learning resources or creating in-depth social studies learning processes to empower students. Social studies learning activities tend to be teacher-centred, textbook-centered, and use mono media, as revealed by Capin and Vaughn (2017). Teacher-centered learning processes render social studies learning to a culture of memorising facts rather than a creating a

culture of critical analysis (Rienties, Nanclares, Jindal-Snape, & Alcott, 2013). Social studies is related to the development of human life that includes technology (Aldahdouh, Nokelainen, & Korhonen, 2020), from an economic (Fan, 2012), social relations (Persich, Krishnakumar, & Robinson, 2020), cultural (Ramirez, 2012), historic (Brugar, 2017) and law perspective, and their interactions with the natural environment related to each level of human civilisation (Carlin-Menter, 2013). Information Communication Technology (ICT) has been widely researched as an online learning medium (Smith, Basham, Rice, & Carter, 2016; Vivolo, 2016; Rahmadi, 2020; Hunt & Oyarzun, 2020). Despite Cener, Acun, and Demirhan (2015) claim that ICT does not have a significant positive effect on learning, Burbules, Fan, and Repp (2020) mention that ICT can enable the use of modern technology in the distance-learning process. Therefore, Zhang et al. (2015) suggest using E-learning as an effective contemporary learning technology.

Saxena, Baber, and Kumar (2020) suggest that an e-learning approach could improve online-based learning during the Covid 19 period where students migrated to off-campus learning. Project-based learning (Kuhfeld et al., 2020) can maximise online learning as well as create a more student-centred learning environment. Students have the opportunity to learn concepts in-depth, thereby improving their learning outcomes (Duke, Halvorsen, & Strachan, 2016). ICT can be adapted to create effective learning opportunities that support students at all academic levels (Eickelmann & Vennemann, 2017). The use of ICT in learning is optimised through the design process where effective strategies are developed. An important aspect of this study included the development of ICT learning tools for used during the period when learning was impacted by the Covid 19 pandemic.

Students' responses to the Covid 19 outbreak, and the impact on their learning, needed to be assessed as conditions changed (Mok, Xiong, Ke, & Cheung, 2021). Li & Curdt-Christiansen (2020) describe three aspects of attitude: cognition, affection, and cognition that are further explained by Rossiter et al. (2017) as the sum of tendencies and feelings, suspicions and prejudices, detailed understanding, ideas, fears, threats, and beliefs that students hold about a situation. A change in attitude can describe how students respond to particular objects, such as changes in their environment because of the Covid 19 pandemic (Ali et al., 2020).

The use of technology as a pedagogical process is a mechanism for implementing effective learning (Turvey & Pachler, 2020). The main purpose of education is to develop students' knowledge, skills, and learning competencies. According to Wei, Saab, and Admiraal (2021), the

introduction of new technology provides a wide variety of activities such as games, searching, cognitive exercises, and the opportunity for creating emotionally significant developmental situations for both students and teachers. Therefore, during the Covid 19 pandemic, technology has become a pedagogical tool that challenges teachers' creativity (Isidro & Teichert, 2021; Kuanysheva, et al., 2019; Tahili et al., 2021).

The onset of the Covid 19 pandemic also provided opportunities for teachers to carry out new technological innovations to increase student achievement of ICT concepts in social studies. During this time, ICT also helped facilitate communication between students and teachers (Chaturvedi, Vishwakarma, & Singh, 2021). Olugbenga (2019) believes that using ICT through Computer-Assisted Instructional Strategy can positively impact students' social skills. Computer-Assisted Instructional is a learning and teaching system that uses computers as learning media (Olugbenga, 2019). ICT uses tools to process and transfer data from one device to another (Mainangsih, 2015).

Research Question

The research focus was explored based on the following questions:

1. Is there any significant influence of the Elaborate phase in ICT on Junior High School students' attitude towards Covid 19?

2. Is there a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19?

3. Is there any interaction of the Elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19?

Hypothesis

Based on the theoretical study and research questions above, the following hypotheses can be formulated:

H_1: There is a significant influence of the Elaborate phase in ICT on Junior High School students' attitude towards Covid 19.

H_2: There is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19.

H_3: There is an interaction between elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19.

Method

Research Design

A quantitative research design was used to determine the change in attitudes that occur in students when conducting learning in ICT and social studies at the Elaborate phase (Dixon, et al., 2005; Smith & Hasan, 2020). This research was a correlation study because it aimed to find the Elaborate phase in ICT and social studies on Junior High School students' attitude towards Covid 19 Pandemic. The method used in this research was the causal associative method to obtain a systematic description of the data (Stevens & De Bruycker, 2020). Two types of variables, the independent and dependent variables, were used in the study. Aspects of the independent variables were the Elaborate phase in ICT and the Elaborate phase in social studies. At the same time, the dependent variable was an attitude towards Covid 19. This research was conducted from November 2019 to September 2020 at 3 Public and Private Junior High Schools in Padang, West Sumatra, Indonesia.

Sample

The number of samples in this study was 388 students selected from three Junior High Schools in Padang, West Sumatra. The sampling technique used in this research is proportional random sampling. Of the total population of 7 classes, 25% of each class was carried out by sortition in three schools (Pitard, 2019).

Table 1.

Characteristics of the Sample

	SMP N 1 Bukit Tinggi	SMP N 3 Bukit Tinggi	SMP N 5 Bukit Tinggi
Gender			
Men	60 (46.9%)	63 (52.1%)	67 (48.2%)
Women	68 (53.1%)	58 (47.9%)	72 (51.8%)
Age			
13 – 14	89 (69.5%)	79 (65.3%)	76 (54.7%)
15 – 16	39 (30.5%)	42 (34.7%)	63 (45.3%)
Grade			
7th	42 (32.8%)	41 (33.9%)	45 (32.2%
8th	42 (32.8%)	41 (33.9%)	47 (33.9%)
9th	44 (34.4%)	39 (32.2%)	47 (33.9%)

Based on table 1, it shows that we are working with three public Junior High Schools, namely SMP N 1 Bukit Tinggi (128 students), SMP N 2 Bukit Tinggi (121 students), and SMP N 5 Bukit Tinggi (139 students) in Padang, West Sumatra, Indonesia.

Research Instrument

We measure the variables in this study by questionnaire with a Likert scale (Retief, Potgieter, & Lutz, 2013). The procedure for developing this questionnaire using a research instrument was by formulating a conceptual and operational definition that comprised the instrument items. For the variables elaborate phase in ICT indicators, we used the information to process, information manipulation, and information development with ten items (see **Table 2**.) (Fernandes, Rodrigues, and Ferreira, 2019). Variables the Elaborate phase in social studies indicators are social science, the search for social science knowledge and behaviour with six items (see **Table 3**.) (Knowles, Hawkman, and Nielsen, 2020). Then, variables of attitude towards Covid 19 indicators are cognitive, affective, and conative with nine items (see **Table 4**.) (Radwan, Radwan, and Radwan, 2020). The Likert scale is 1-4. For variables, Elaborate phase in ICT and social studies, the categories used are Excellent, Good, Not Good, and Not Very Good. As for the variable of attitude, we use categories of always, often, rarely, and never. The instrument grid used in this study is as follows:

Table 2

Questionnare the Elaborate phase in ICT

Aspect	Indicator	Sub-Indicator	Item Questions
Elaborate phase in ICT (X_1)	Information Process	Availability of ICT-based learning media	1,2,3,4,5,6,7,8,9,10
	Information Manipulation	Frequency of use of ICT-based media	
	Information Development	Benefits of ICT-based learning media	
		Types of ICT learning media ICT development	

Table 3

Questionnaire the Elaborate phase in Social Studies

Aspect	Indicator	Sub-Indicator	Item Questions
Elaborate phase in Social Studies (X_2)	Social sciences	The physical condition of the geographic area with population activities	11,12,13,14,15,16
	The search for social science knowledge	Population problems and their impact on the development	
	Social science behaviour	The process of seeking knowledge and social science behaviour	

Table 4

Questionnaire of Attitudes towards Covid 19

Aspect	Indicator	Sub-Indicator	Item Questions
Attitude towards Covid 19(Y)	Cognitive	Knowledge of population problems and their impact on the development	17,18,19, 20,21,22,23,24,25
		Knowledge of the decline in the quality of population health due to the Covid 19 disaster	
		Understanding of the preventive measures for Covid 19	
		Knowledge of Covid 19	
	Affective	Assessment of the learning process since Covid 19	
		An assessment of changes that have occurred in Covid 19	
	Conative	The tendency to seek information about preventive actions against Covid 19	
		The desire to take preventive action against Covid 19	

Based on the validity calculation of the tryout items, it can be seen that for the self-concept variable of the 30 item questions, there are five invalid items, namely numbers 5, 8, 26, 27 and 28. For the Elaborate phase in ICT variables, 12 items are not valid, namely numbers 5 and 8. The variables attitude in Covid 19 of the 12 invalid items, namely numbers 26, 27, and 28. These five items are invalid because rcount <rtabel, and the invalid item will be dropped. These validity test results have been adjusted to the item questions in table 2, table 3, and table 4. The calculation results obtained by the reliability of the Elaborate phase in ICT questionnaire is 0.346. These results were then consulted with r table at a significance level of 0.05, and a result of 0.148 was obtained, because r12> rtabel or 0.346> 0.148, the question item in the questionnaire was reliable. The reliability of the Elaborate phase in social studies questionnaire is also high. This is obtained from the calculation results obtained by the reliability of 0.383, the results are then consulted with rtabel at the 5% significance level, and the result is 0.148 because r12> rtabel or 0.383> 0.148, then the question items in the questionnaire are reliable.

Data Analysis

A simple regression test was conducted to determine whether a similarity between the Elaborate phase in ICT and social studies on Junior High School students' attitude towards Covid 19. The mean T-test theory is a theory used in statistics to test whether a certain value (given as a comparison) differs significantly or not from the average of a sample (Chaudhuri, 2019). To perform the average difference test with the T-test, the data used were quantitative. Paired T-test is a hypothesis testing method in which the data used are not independent (paired). The characteristics most often encountered in paired cases are individuals. The hypothesis in this analysis is as follows:

a.   Hypothesis Test I

H_1: There is a significant influence of the Elaborate phase in ICT (X1) on Junior High School students' attitude towards Covid 19 (Y).

H_0: There is no significant influence of the Elaborate phase in ICT (X1) on Junior High School students' attitude towards Covid 19 (Y).

b.   Hypothesis Test II

H_2: There is a significant influence of the Elaborate phase in social studies (X2) on Junior High School students' attitude towards Covid 19 (Y).

H_0: There is no significant influence of the Elaborate phase in social studies (X2) on Junior High School students' attitude towards Covid 19 (Y).

c.   Hypothesis Test III

H_3: There is an interaction between elaborate phase in ICT (X1) and social studies (X2) on Junior High School students' attitudes towards Covid 19 (Y).

H_0: There is no interaction between elaborate phase in ICT (X1) and social studies (X2) on Junior High School students' attitudes towards Covid 19 (Y).

The significance value used was = 0.05. Furthermore, the results of the Fcount hypothesis were compared with Ftable with the following conditions:

(1) If Fcount ≥ Ftable, then H0 is rejected, H1 is accepted

(2) If Fcount <Ftable, then H0 is accepted, H1 is rejected

Findings

The research data consisted of independent variables, namely the Elaborate phase in ICT (X1), the Elaborate phase in social studies (X2) and the dependent variable, namely attitude towards Covid 19 (Y). To describe and test the relationship between the independent and dependent variables in this study, we tested the analysis prerequisites before analysing the data as follows:

Normality Test

The normality testing uses statistical tests Kolmogorov Smirnov. Normality test the Elaborate phase in ICT, Elaborate phase in social studies, and attitudes towards Covid 19:

Table 5

Normalised gain normality test on ICT, social studies and attitude variables

No	Variable	Factors	Score
1	Elaborate phase in ICT	Kolmogorov-Smirnov Z value	1,986
		Probability	0,08
2	Elaborate phase in Social Studies	Kolmogorov-Smirnov Z value	1,699
		Probability	0,14
3	Attitudes powards Covid 19	Kolmogorov-Smirnov Z value	1,648
		Probability	0,12

Table 5 shows that the Elaborate phase in ICT obtained Kolmogorov Smirnov score = 1.986 with probability 0.08 (Asymp. Sig. (2-tailed)). Data requirements are called normal if the probability or p> 0.05 in the Kolmogorov Smirnov test. Table 5 indicates that the p value> 0.05 shows that the Elaborate phase in ICT variable data is normally distributed or meets the requirements normality test. For the Elaborate phase in social studies variable results, the value was obtained Kolmogorov Smirnov = 1.599 with probability 0.12 (Asymp. Sig. (2-tailed)). The data requirement is called normal if the probability or p> 0.05 on the test Kolmogorov Smirnov. Table 5 shows that the p value> 0.05, then it is known that the Elaborate phase in social studies variable data is normally distributed or meet the requirements of the normality test, and the results of the attitudes variable obtained the Kolmogorov Smirnov value = 1.628 with the probability of 0.10 (Asymp. Sig. (2-tailed)). Data requirements are called normal if the probability or p> 0.05 in the Kolmogorov Smirnov test. Table 5 indicates that the p value> 0.05 shows that the variable data attitudes are normally distributed or meet the normality test requirements. Its mean variable elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19 follow a normal distribution.

Linearity test

The linearity test aims to determine the relationship between the independent and linear dependent variables. The criteria for linearity testing is that if the calculated F value is smaller than the F table, there is a significant level of 0.05, then the relationship between the independent and dependent variables is linear. The results of the linearity test are presented as follows:

Table 6

Linearity Test

Variable	Df	Fcount	Ftable	Sig	Information
X1 ⟶ Y	385	0,877	3,86	0,633	Linear
X2 ⟶ Y	385	0, 678	3,86	0,871	Linear

The linearity test results for variables X1 and Y in table 3 show that the calculated F value is 0.877, and the F table value is 3.86 with a significance value of 0.633. These results indicate that the calculated F value <F table (0.877 <3.86) and the significance value is greater than 0.05 (p> 0.05), which means that the relationship between X1 and Y is linear. The linearity test results for the

variables X2 and Y in table 6 show that the calculated F value is 0.678 and the F table value is 3.86 with a significance value of 0.871. These results indicate that the calculated F value <F table (0.678 <3.86) and the significance value is greater than 0.05 (p> 0.05), which means that the relationship between X2 and Y is linear. The linearity test is used to determine the data distribution whether the data is around the straight line of the equation. If it is around the equation's straight line, the functional relationship between the variables X and Y is linear. Table 6 shows that the linearity test results show a straight line of the functional relationship equation between the variables so that these results can be used to test the hypothesis of this study.

Homogeneity test

The variance homogeneity test of the Elaborate phase in ICT (X1) variable, the Elaborate phase in social studies (X2) and attitude towards Covid 19 (Y) were carried out using the F-test, provided that if Fcount <Ftable, the variance of the group was homogeneous. Based on the results of the homogeneity test, the following results were obtained:
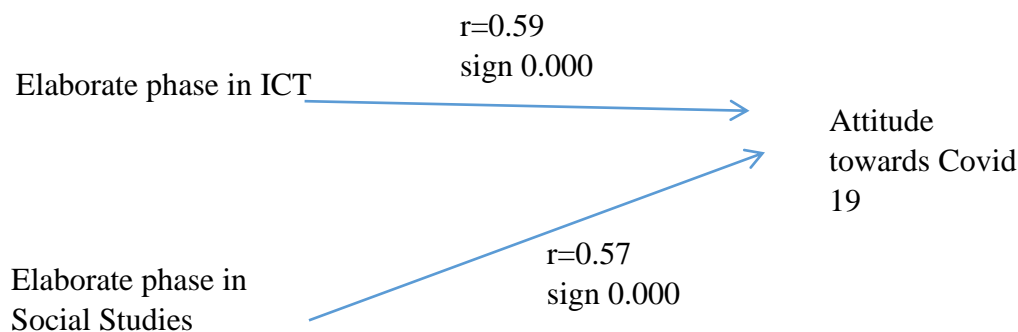
Table 7
Test of Homogeneity

	Levence Statistic	Df1	Df2	Sig.
Elaborate phase in ICT	3.990	115	270	.000
Elaborate phase in social studies	2.987	115	270	.000

Table 7 shows that the elaborate phase's r-value in ICT and social studies variables is smaller than the levels used, namely 0.000 <0.05 and 0.000 <0.05. Thus, the scores on the Elaborate phase in ICT and social studies variables spread homogeneously.

Descriptive Statistic Results

Table 9 shows that the constant value = 35.389 and the value B = 0.59. Then the simple regression equation Y over X1 is: Y = 35.389 + 0.59X1. Table 11 shows that the constant value = 10.415 and the value B = 0.57. Then the simple regression equation Y over X1 is: Y = 10.415 + 0.57X2. The table above shows that the value of Fcount> Ftable, or a significance value of 0.000 <0.05. It implies the Elaborate phase in ICT (X1) and Elaborate phase in social studies (X2) with attitude towards Covid 19 in Junior High School simultaneously. The hypothesis proposed in this study accepts H1 and rejects H0. Simultaneous variables from tables 9 and 11 on Figure 1:

r=0.59
sign 0.000

Elaborate phase in ICT

Attitude towards Covid 19

r=0.57
sign 0.000

Elaborate phase in Social Studies

Tables 9 and 11 show a positive influence from using elaboration in an ICT and social science inquiry for preventing Covid 19 in students.

Hypothesis testing

Ha$_1$: Elaborate phase in ICT on Junior High School students' attitude towards Covid 19

The first hypothesis tested in this study was "there is a significant influence of the Elaborate phase in ICT on Junior High School students' attitude towards Covid 19."

Table 8

Simple correlation test for the Elaborate phase in ICT with attitude towards Covid 19

		Elaborate phase in ICT	Attitude towards Covid 19
Elaborate phase in ICT	Pearson Correlation	1	.385(**)
	Sig. (2-tailed)		.000
	N	388	388
Attitude towards Covid 19	Pearson Correlation	.385(**)	1
	Sig. (2-tailed)	.000	
	N	388	388

Based on table 8, the value of r is smaller than the level used 0.000 <0.05, so H0 is rejected. The strength of the relationship is 0.385. There is a significant influence of the Elaborate phase in ICT on Junior High School students' attitude towards Covid 19. This means that the Elaborate phase in ICT can be more effective on the attitude towards Covid 19.

Table 9

Regression Equations test of X1 - Y

Coefficients (a)

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
Elaborate phase in ICT	35.389	2.691		13.1485	.000
	0.59	0.21	.385	1.828	.000

Based on table 9 the regression direction coefficient is 0.59, and the regression equation is Y = 35.389 + 0.59X1. The criterion used is that the value of r is greater than a certain value, then H0 is accepted. Conversely, if the value of r is less than a certain value of a, then H0 is rejected.

Table 10

Correlation of simple regression test on elaborate phase in ICT with attitude towards Covid 19

ANOVA (b)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2210.047	1	2210.047	55.972	.000(a)
		384	39.782		
Residual	913.915	385			
Total	3123.962				

    a.   Predictors: (Constant) Elaborate phase in ICT

    b.   Dependent Variable: Attitude towards Covid 19

The P-value is smaller than the level used, which is 0.000 <0.05, so H0 is rejected. Therefore, the regression equation is 35.389 + 0.59X1; there is a positive influence of the Elaborate phase in ICT with attitude towards Covid 19 with a score of 55.972.

Ha$_2$: Elaborate phase in social studies on Junior High School students' attitude towards Covid 19
The second hypothesis tested in this study is "there is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19."

Table 11

Simple correlation test for Elaborate phase in social studies with attitude towards Covid 19

		Elaborate phase in Social Studies	Attitude towards Covid 19
Elaborate phase in Social Studies	Pearson Correlation	1	.255
	Sig. (2-tailed)		.000
	N	388	388
Attitude towards Covid 19	Pearson Correlation	.255(**) 1	
	Sig. (2-tailed)	.000	
	N	388	388

Based on table 11, the correlation calculation known that the value of r is smaller than the level used 0.000 <0.05, so that H0 is rejected. There is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19 with a strong relationship of 0.255. This means that the better the Elaborate phase in social studies, the more effective Covid 19.

Tabel 12

Regression Equations test of X2 - Y

Coefficients (a)

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
Social Studies	10.415	2.691		3.870	.000
	0.57	0.23	.255	1.828	.000

Based on table 12 the regression direction coefficient is 0.59, and the regression equation is Y = 10.415 + 0.57X2. The criterion used is that the value of r is greater than a certain value, then H0 is accepted. Conversely, if the value of r is less than a certain value of a, then H0 is rejected.

Table 13

Correlation of simple regression test on Elaborate phase in social studies with attitude towards Covid 19

ANOVA (b)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2096.847	1	2096.847	46.891	.000(a)
Residual	1047.123	384	46.494		
Total	3143.97	385			

a.   Predictors: (Constant) Elaborate phase in social studies

b.   Dependent Variable: Attitude towards Covid 19

The P-value is smaller than the level used, which is 0.000 <0.05, so H0 is rejected. Therefore, from the regression equation 35.389 + 0.59X1, there is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19.

Ha3: Elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19

The third hypothesis tested in this study is that there is an interaction between Elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19. The third hypothesis is carried out by multiple regression analysis, which predicts two independent variables affect value on one dependent variable.

Table 14

Multiple Regression test

Elaborate phase in ICT (X1) and Elaborate phase in social studies (X2) with attitude towards Covid 19
Coefficients (a)

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	7.642	8.606		.848	.409
Elaborate phase in ICT	.488	.195	.547	2.637	.021
Elaborate phase in social studies	.269	.176	.364	1.665	.130

a.   Dependent variable: attitude towards Covid 19

Referring to table 14, the calculation results of the multiple regression direction coefficients of the Elaborate phase in ICT (b1) is 0.488, and the coefficient of multiple regression of the Elaborate phase in social studies (b2) is 0.269, with a constant (a) 7,642. So the regression equation is Y = 7.462 + 0.488X1 + 0.269X2. Following are the results of the analysis of the significance of multiple regression:

Table 15

Multiple regression Test

ANOVA (b)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2344.194	2	1181.082	13.509	.000(a)
Residual	820.876	383	38.864		
Total	3165.07	385			

a. Predictors: (Constant). Elaborate phase in ICT, Elaborate phase in Social Studies

b. Dependent Variable: Attitude towards Covid 19

Referring to table 15, the value of r was smaller than the level used is 0.05, so that H0 was rejected. There is a significant influence of elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19. From the regression equation Y = 7,462 + 0.488X1 + 0.269X2, the multiple regression value Y: 13.509 can be explained that there is a positive correlation. If the Elaborate phase in ICT scores and social studies increases together, the interaction between Covid 19 will also increase. Thus, it can be explained that if the Elaborate phase in ICT and elaborate in social studies increases by 13,509, it will be followed by an increase in the interaction of attitude towards Covid 19.

Discussion

We conducted an analysis through this study regression test after the right indicators related to the Elaborate phase in ICT and social studies. The first hypothesis tested in this study is that there is a significant influence of the Elaborate phase in ICT on Junior High School students' attitude towards Covid 19. To test the evidence for the first hypothesis, we conducted statistical tests using correlation and simple regression and showed a significant influence of the Elaborate phase in ICT

on Junior High School students' attitude towards Covid 19 is 0.59. This means that the Elaborate phase in ICT is quite meaningful at attitudes towards covid 19.

The research results show a significant influence of ICT and Social Studies learning through the elaboration stage on students' attitudes towards preventing Covid 19 in junior high school students. From the second hypothesis in this study, there is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19 with a correlation test result of 0.57. This means a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19 is effective. The third hypothesis is a significant influence of the Elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19.

In testing the hypothesis with multiple regression analysis, there was an increase in attitude towards Covid 19 by 13,509. This research shows that Cener, Acun, and Demirhan (2015) study are not entirely correct regarding ICT does not affect the learning process. This study results indicate that the Elaborate phase in ICT has a significant influence on attitudes towards Covid 19. So that learning theoretically, students are also directed to implement their learning outcomes in everyday life. On the other hand, this study provides an alternative for teachers to improve student attitudes against actions preventing Covid 19.

However, Basal and Eryilmaz (2020) explain that online learning effectiveness must be supported by a system that has audiovisual material. But this research offers something new, wherein implementing online learning in the midst of Covid 19, an Elaborate phase in ICT and an Elaborate phase in social studies is needed. Thus, students are also able to seek information about preventive actions against Covid 19. Even though not all online education can support learning during the Covid 19 pandemic, the elaboration phase is needed, especially for junior high school students. Because online learning is something new, teachers need to elaborate the phase in social studies in forming attitudes towards Covid 19. This is supported by the second hypothesis results, which states that there is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19. Online learning amid Covid 19 is also questioned by Yates et al. (2020) which states that going to school is more comfortable than studying at home. This can be overcome by conducting an elaboration phase in ICT and an elaboration phase in social studies.

The third hypothesis results indicate that students can adapt and become comfortable with ICT learning depending on the learning pattern that is carried out. The Elaborate phase in ICT cannot be carried out alone during the learning process because to do online learning, and students also need information related to the ongoing condition of Covid 19. This study compares with Kuhfeld (2020) which explains that project-based learning is the right approach to use in the online learning process. However, during the Covid-19 transition to online learning, an inquiry approach was not always possible. The teacher's role is developing dramatically so that it is necessary to provide learning material to students and innovate and provide real-life examples for online learning to be successful. Therefore this study shows the influence of the Elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19.

Young (2018) explains that using ICT for social science can be done through websites, this study highlights obstacles such as an inadequate internet connection that can affect the learning process. Collaboration between teachers, students, parents, and the government is essential for successfully studying Covid-19 in an online environment. This research highlights that, although ICT plays a role in developing and supporting the educational process(Lim, Yan, & Xiong, 2015), and social studies provide content to address social problems, students still need to be educated and motivated by teachers to take preventive action against Covid- 19. However, ICT and social sciences play a role in the distance learning process.

Conclusion

In summary, results of the regression and correlation analysis indicate that the first hypothesis of this study has a significant influence of the Elaborate phase in ICT on Junior High School students' attitude towards Covid 19. The second hypothesis shows that there is a significant influence of the Elaborate phase in social studies on Junior High School students' attitude towards Covid 19 with the Correlation test of 0.57. The third hypothesis results that there is a an interaction between Elaborate phase in ICT and social studies on Junior High School students' attitudes towards Covid 19. The evidences show that during Covid-19 pandemic, learning spaces for students were limited due to physical distancing rules implemented at schools to stop or slow down the spread of the Covid-19 virus. Therefore, the need for online learning becomes important in the distance learning process. The effectiveness of teaching and learning can be measured in various ways, one of which is through the selection of appropriate learning resources. Educators choose various resources

according to the content that needs to be conveyed and adjust the material to the needs of the students. Social contact and effective communication between educators and students can increase learning motivation in social studies. This study's findings indicate that the integration of the Elaborate phase in ICT and social science can positively impact attitudes towards preventing Covid 19 in students.

In a world where alternative education environments are possible, online learning is an option that has allowed the teaching and learning process to continue amid the Covid-19 Pandemic. However, online learning reveals a dilemma for educators. On the one hand, it helps educational institutions carry out the teaching and learning process while the pandemic impact continues; on the other hand, it creates inequality. It is, therefore, a challenge for future researchers to find ways to reduce problems in the online teaching and learning process. The implication of this research shows that ICT cannot succeed without collaboration in dealing with online learning amid the COVID-19 pandemic so that students' sensitivity to social forces influence their attitudes and response to Covid 19.

References

Aduba, D. E., & Mayowa-Adebara, O. (2021). Online Platforms Used for Teaching and Learning during the COVID-19 Era: The Case of LIS Students in Delta State University, Abraka. *International Information & Library Review*, *0*(0), 1–36. https://doi.org/10.1080/10572317.2020.1869903

Aldahdouh, T. Z., Nokelainen, P., & Korhonen, V. (2020). Technology and Social Media Usage in Higher Education: The Influence of Individual Innovativeness. *SAGE Open*, *10*(1). https://doi.org/10.1177/2158244019899441

Ali, M., Allihyani, M., Abdulaziz, A., Alansari, S., Faqeh, S., Kurdi, A., & Alhajjaji, A. (2020). What just happened? Impact of on-campus activities suspension on pharmacy education during COVID-19 lockdown – A students' perspective. *Saudi Pharmaceutical Journal*, (xxxx). https://doi.org/10.1016/j.jsps.2020.12.008

Arinze, F., Okonkwo, E., & Iwunor, A. (2012). Information and Communication Technology (ICT) Application in Secondary Schools and Students" Academic Performance in Social Studies. *African Research Review*, *6*(4), 266–278. https://doi.org/10.4314/afrrev.v6i4.18

Başal, A., & Eryılmaz, A. (2020). Engagement and affection of pre-service teachers in online learning in the context of COVID 19: engagement-based instruction with web 2.0 technologies vs direct transmission instruction. *Journal of Education for Teaching*, 47:1, 131-

133, DOI: [10.1080/02607476.2020.1841555](10.1080/02607476.2020.1841555)

Bolkan, S. (2016). The Importance of Instructor Clarity and Its Effect on Student Learning: Facilitating Elaboration by Reducing Cognitive Load. *Communication Reports*, *29*(3), 152–162. https://doi.org/10.1080/08934215.2015.1067708

Brugar, K. A. (2017). Teaching Social Studies / History to Elementary School Students Through a Discipline-Specific Approach. *Journal of Education*, *196*(2), 101–110.

Burbules, N. C., Fan, G., & Repp, P. (2020). Five trends of education and technology in a sustainable future. *Geography and Sustainability*, *1*(2), 93–97. https://doi.org/10.1016/j.geosus.2020.05.001

Carlin-Menter, S. (2013). Exploring the effectiveness of an online writing workspace to support literacy in a social studies classroom. *E-Learning and Digital Media*, *10*(4), 407–419. https://doi.org/10.2304/elea.2013.10.4.407

Cener, E., Acun, I., & Demirhan, G. (2015). Bilgi ve İletişim teknolojilerinin (BİT) sosyal bilgiler öğretiminde öğrenci başarısı ve tutumuna etkisi. *Journal of Social Studies Education Research*, *6*(1), 190–207. https://doi.org/10.17499/jsser.67856

Chaturvedi, K., Vishwakarma, D. K., & Singh, N. (2021). COVID-19 and its impact on education, social life and mental health of students: A survey. *Children and Youth Services Review*, *121*(July 2020), 105866. https://doi.org/10.1016/j.childyouth.2020.105866

Chaudhuri, A. (2019). *Survey Sampling*. Florida: CRC Press Taylor & Francis Group.

Dixon, W. M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2005). synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research & Policy*, *10*(1), 45–55.

Duke, N. K., Halvorsen, A.-L., & Strachan, S. L. (2016). Project-based learning not just for STEM anymore. *Phi Delta Kappan*, *98*(1), 14–19.

Eickelmann, B., & Vennemann, M. (2017). Teachers' attitudes and beliefs regarding ICT in teaching and learning in European countries. *European Educational Research Journal*, *16*(6), 733–761. https://doi.org/10.1177/1474904117725899

Evans-Amalu, K., & Claravall, E. (2021). Inclusive Online Teaching and Digital Learning: Lessons Learned in the Time of Pandemic and Beyond. *Journal Of Curriculum Studies Research*, *3*(1), i-iii. https://doi.org/10.46303/jcsr.2021.4

Fan, F. (2012). the relationship Between the Socio-Economic Status of Parents and Students' Academic. *Research in Education*, *87*(1), 99–103.

Hunt, B. D., & Oyarzun, B. (2020). Online Learning Perspectives of Native American Students.

Journal   of   Educational   Technology   Systems,   *48*(3),   321–334.
https://doi.org/10.1177/0047239519867921

Isidro, E., & Teichert, L. (2021). Towards Socially Just Literacy Teaching in Virtual
    Spaces. *Journal   Of Curriculum   Studies Research*, *3*(1),   21-41.
    https://doi.org/10.46303/jcsr.2021.6

Jennings, F. J. (2019). An uninformed electorate: identity-motivated elaboration, partisan cues,
    and   learning.   *Journal   of   Applied   Communication   Research*,   *47*(5),   527–547.
    https://doi.org/10.1080/00909882.2019.1679385

Kangas, M., Koskinen, A., & Krokfors, L. (2017). A qualitative literature review of educational
    games in the classroom: the teacher's pedagogical activities. *Teachers and Teaching: Theory
    and Practice*, *23*(4), 451–470. https://doi.org/10.1080/13540602.2016.1206523

Karatekin, K. (2012). Environmental Literacy in Turkey Primary Schools Social Studies
    Textbooks.   *Procedia - Social   and   Behavioral   Sciences*,   *46*,   3519–3523.
    https://doi.org/10.1016/j.sbspro.2012.06.096

Kilinc, E., Kilinc, S., Kaya, M., Başer, E., Er Türküresin, H., & Kesten, A. (2016). Teachers'
    Attitudes Toward the Use of Technology in Social Studies Teaching. *Research in Social
    Sciences and Technology*, *1*(1). https://doi.org/10.46303/ressat.01.01.3

Kim, D., Coenraad, M., & Park, H. R. (2021). Digital storytelling as a tool for reflection in virtual
    reality   projects. *Journal   Of Curriculum   Studies Research*, *3*(1),   101-121.
    https://doi.org/10.46303/jcsr.2021.9

Knowles, R. T., Hawkman, A. M., & Nielsen, S. R. (2020). The social studies teacher-coach: A
    quantitative analysis comparing coaches and non-coaches across how/what they teach.
    Journal   of   Social   Studies   Research,   *44*(1),   117–125.
    https://doi.org/10.1016/j.jssr.2019.04.001

Kuanysheva, Bakyt. T., Rakhila Zh, Aubakirova., Nelli lu. Pigoyaveya., & N. I. F. (2019). draft1-
    JSSER-QN-20. *Journal of Social Studies Education Research*, *10*, 404–433.

Kuhfeld, M., Soland, J., Tarasawa, B., Johnson, A., Ruzek, E., & Liu, J. (2020). Projecting the
    Potential Impact of COVID-19 School Closures on Academic Achievement. *Educational
    Researcher*, *49*(8), 549–565. https://doi.org/10.3102/0013189X20965918

Leslie, A., Watson, V., Borunda, R., Bosworth, K., & Grant, T. (2021). Towards Abolition:
    Undoing the Colonized Curriculum. *Journal of Curriculum Studies Research*, *3*(1), 1-20.
    https://doi.org/10.46303/jcsr.2021.5

Lim, C. P., Yan, H., & Xiong, X. (2015). Development of pre-service teachers' information and
    communication technology (ICT) in education competencies in a mainland Chinese
    university.   *Educational   Media   International*,   *52*(1),   15–32.

https://doi.org/10.1080/09523987.2015.1005425

McCorkle, W. D. (2020). Problematizing Immigration Restrictions during COVID-19 in the Social Studies Classroom. *Research in Social Sciences and Technology*, *5*(3), 1–24. https://doi.org/10.46303/ressat.05.03.1

Mok, K. H., Xiong, W., Ke, G., & Cheung, J. O. W. (2021). Impact of COVID-19 pandemic on international higher education and student mobility: Student perspectives from mainland China and Hong Kong. *International Journal of Educational Research*, *105*(November 2020), 101718. https://doi.org/10.1016/j.ijer.2020.101718

Olugbenga A. IGE. (2019). Using Action Learning, Concept-Mapping, and Value Clarification to Improve Students' Attainment in ICT Concepts in Social Studies: The Case of Rural Learning Ecologies. *Journal of Social Studies Education Research*, *10*, 301–322.

Page, A., Charteris, J., Anderson, J., Boyle, C., Page, A., Charteris, J., … Boyle, C. (2021). Fostering school connectedness online for students with diverse learning needs : inclusive education in Australia during the COVID-19 pandemic. *European Journal of Special Needs Education*, *0*(0), 1–15. https://doi.org/10.1080/08856257.2021.1872842

Persich, M. R., Krishnakumar, S., & Robinson, M. D. (2020). Are You a Good Friend? Assessing Social Relationship Competence Using Situational Judgments. *Personality and Social Psychology Bulletin*, *46*(6), 913–926. https://doi.org/10.1177/0146167219880193

Pires, E. M. S. G., Daniel-Filho, D. A., de Nooijer, J., & Dolmans, D. H. J. M. (2020). Collaborative learning: Elements encouraging and hindering deep approach to learning and use of elaboration strategies. *Medical Teacher*, *42*(11), 1261–1269. https://doi.org/10.1080/0142159X.2020.1801996

Pitard, F. F. (2019). *Theory of Sampling and Sampling Practice*. Retrieved from http://publications.lib.chalmers.se/records/fulltext/245180/245180.pdf%0Ahttps://hdl.handl e.net/20.500.12380/245180%0Ahttp://dx.doi.org/10.1016/j.jsames.2011.03.003%0Ahttps:// doi.org/10.1016/j.gr.2017.08.001%0Ahttp://dx.doi.org/10.1016/j.precamres.2014.12

Powell, R. B., Vezeau, S. L., Stern, M. J., Moore, D. W. D., & Wright, B. A. (2018). Does interpretation influence elaboration and environmental behaviors? *Environmental Education Research*, *24*(6), 875–888. https://doi.org/10.1080/13504622.2017.1339302

Radwan, E., Radwan, A., & Radwan, W. (2020). The role of social media in spreading panic among primary and secondary school students during the COVID-19 pandemic: An online questionnaire study from the Gaza Strip, Palestine. *Heliyon*, *6*(12), e05807. https://doi.org/10.1016/j.heliyon.2020.e05807

Rahmadi, I. F. (2020). Whatsapp group for teaching and learning in indonesian higher education what's up? *International Journal of Interactive Mobile Technologies*, *14*(13), 150–160. https://doi.org/10.3991/ijim.v14i13.14121

Ramirez, A. D. (2012). Latino Cultural Knowledge in the Social Studies Classroom. *Journal of Hispanic Higher Education*, *11*(2), 213–226. https://doi.org/10.1177/1538192711436084

Rapoport, A. (2020). Editorial: Technologization of Global Citizenship Education as Response to Challenges of Globalization. *Research in Social Sciences and Technology*, *5*(1), i-vii. https://doi.org/10.46303/ressat.05.01.ed

Rasmitadila, Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the covid-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies*, *7*(2), 90–109. https://doi.org/10.29333/ejecs/388

Retief, L., Potgieter, M., & Lutz, M. (2013). The usefulness of the rasch model for the refinement of likert scale questionnaires. *African Journal of Research in Mathematics, Science and Technology Education*, *17*(1–2), 126–138. https://doi.org/10.1080/10288457.2013.828407

Rienties, B., Nanclares, N. H., Jindal-Snape, D., & Alcott, P. (2013). The Role of Cultural Background and Team Divisions in Developing Social Learning Relations in the Classroom. *Journal of Studies in International Education*, *17*(4), 332–353. https://doi.org/10.1177/1028315312463826

Rocha Fernandes, G. W., Rodrigues, A. M., & Rosa Ferreira, C. A. (2019). *Using ICT in Inquiry-Based Science Education*. Retrieved from http://link.springer.com/10.1007/978-3-030-17895-6

Rossiter, J. A., Barnett, L., Cartwright, E., Patterson, J., Shorten, N., & Taylor, J. (2017). Encouraging student learning of control by embedding freedom into the curriculum: student perspectives and products. *IFAC-PapersOnLine*, *50*(1), 12149–12154. https://doi.org/10.1016/j.ifacol.2017.08.2155

Saxena, C., Baber, H., & Kumar, P. (2020). Examining the Moderating Effect of Perceived Benefits of Maintaining Social Distance on E-learning Quality During COVID-19 Pandemic. *Journal of Educational Technology Systems*, 4723952097779. https://doi.org/10.1177/0047239520977798

Saye, J. (2013). Authentic pedagogy: Its presence in social studies classrooms and relationship to student performance on state-mandated tests. *Theory and Research in Social Education*, *41*(1), 89–132. https://doi.org/10.1080/00933104.2013.756785

Smith, J. D., & Hasan, M. (2020). Quantitative approaches for the evaluation of implementation research studies. *Psychiatry Research*, *283*(March 2019), 112521. https://doi.org/10.1016/j.psychres.2019.112521

Smith, S. J., Basham, J., Rice, M. F., & Carter, R. A. (2016). Preparing Special Educators for the K–12 Online Learning Environment: A Survey of Teacher Educators. *Journal of Special Education Technology*, *31*(3), 170–178. https://doi.org/10.1177/0162643416660834

Stevens, F., & De Bruycker, I. (2020). Influence, affluence and media salience: Economic resources and lobbying influence in the European Union. *European Union Politics*, *21*(4), 728–750. https://doi.org/10.1177/1465116520944572

Subedi, D., & Subedi, R. (2020). Practicing Self Learning of ICT for Resilience Amidst the COVID-19 Outbreak: Experiences from Kathmandu Valley. *Research in Educational Policy and Management*, *2*(2), 78-96. https://doi.org/10.46303/repam.2020.5

Sulistyawati, S., Rokhmayanti, R., Aji, B., Wijayanti, S. P. M., Kurnia Widi Hastuti, S., Sukesi, T. W., & Mulasari, S. A. (2021). Knowledge, Attitudes, Practices and Information Needs During the COVID-19 Pandemic in Indonesia. *Risk Management and Healthcare Policy*, *14*, 163–175. https://doi.org/10.2147/rmhp.s288579

Suswandari, M., Siswandari, Sunardi, & Gunarhadi. (2020). Social skills for primary school students: Needs analysis to implement the scientific approach based curriculum. *Journal of Social Studies Education Research*, *11*(1), 153–162.

Tarman, B., Kilinc, E., & Aydin, H. (2019). Barriers to the effective use of technology integration in social studies education. *Contemporary Issues in Technology and Teacher Education, 19*(4). Retrieved from https://citejournal.org/volume-19/issue-4-19/social-studies/barriers-to-the-effective-use-of-technology-integration-in-social-studies-education

Tahili, M., Tolla, I., Ahmad, M., Saman, A., & Samad, S. (2021). The Effect of Strategic Collaboration Approach on the National Educational Standards Achievement and Service Quality in Basic Education at Local Government in Indonesia. *Research in Social Sciences and Technology*, *6*(1), 53-82. https://doi.org/10.46303/ressat.2021.4

Turvey, K., & Pachler, N. (2020). Design principles for fostering pedagogical provenance through research in technology supported learning. *Computers and Education*, *146*, 103736. https://doi.org/10.1016/j.compedu.2019.103736

Vivolo, J. (2016). Understanding and combating resistance to online learning. *Science Progress*, *99*(4), 399–412. https://doi.org/10.3184/003685016X14773090197742

Watson, E. (2020). #Education: The Potential Impact of Social Media and Hashtag Ideology on the Classroom. *Research in Social Sciences and Technology*, *5*(2), 40-56. https://doi.org/10.46303/ressat.05.02.3

Yates, A., Starkey, L., Egerton, B., & Flueggen, F. (2020). High school students' experience of online learning during Covid-19: the influence of technology and pedagogy. *Technology, Pedagogy and Education*, *0*(0), 1–15. https://doi.org/10.1080/1475939X.2020.1854337

Yehya, F. Y., Barbar, A., & Abou Rjeily, S. (2018). Diagnosing the barriers for integrating Educational Technology in Physics courses in Lebanese secondary schools. *Research in Social Sciences and Technology*, *3*(2), 14–39. https://doi.org/10.46303/ressat.03.02.2

Young, A. G. (2018). Using ICT for social good: Cultural identity restoration through emancipatory pedagogy. *Information Systems Journal*, *28*(2), 340–358. https://doi.org/10.1111/isj.12142

Zhang, X., Gao, Y., Yan, X., de Pablos, P. O., Sun, Y., & Cao, X. (2015). From e-learning to social-learning: Mapping development of studies on social media-supported knowledge management. *Computers in Human Behavior*, *51*, 803–811. https://doi.org/10.1016/j.chb.2014.11.084

Thacker, E. S. (2017). "PD is where teachers are learning!" high school social studies teachers′ formal and informal professional learning. *Journal of Social Studies Research*, *41*(1), 37–52. https://doi.org/10.1016/j.jssr.2015.10.001