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To cite this article: K Sasmita *et al* 2021 *J. Phys.: Conf. Ser.* **1760** 012028

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# What's App integrity in the life science concept during the covid-19 pandemic

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**Abstract.** WhatsApp (WA) is the last alternative learning media in COVID-19 period. This study aimed to see the extent of WA's integrity in supporting the learning process and outcomes. This quantitative research took data on 33 respondents and PAUD student guardians through questionnaires and multiple-choice questions by using random sampling technique. The resulting data in a simple regression test had significance coefficient of 0.05. The results of the data showed that 85% of student guardians were still less able to operate cell phones so they preferred WA. Furthermore, this study showed the integrity of WA in learning process at home which was capable and influential in improving student learning outcomes. The research implied that one's capability in using the media was different to others' and it was complicated for the teacher to equate the media or strategies in the classroom. Therefore, teacher must be more creative and innovative in using learning media.

## 1. Introduction

The concept of Life Sciences (LS) is the most important thing about how living things, especially humans, understand the meaning of life and a healthy environment [1]. The concept of life sciences provides experiences and characteristics to students who are honest, meticulous, patient, and open and have very high literacy in environmental balance [2]. The characters that are formed make students be able to control their performing actions when they encounter problems. This concept is certainly a very important thing to be applied to students as it provides experience when environmental problems occur so that students already have experience. One of the current environmental problems is the emergence of the Covid-19 outbreak [2]. The concept of life sciences needs to be given to students as early as possible, this is because at an early age the learning process and the application of life sciences characters are received by students earlier, although they must be guided with full of patience. Especially, the recent problem of Covid-19 pandemic disease is that it is more susceptible to infect children and the elders [3].



The problem found in the current academic year, namely the emergence of the Covid-19 outbreak, became a major problem in the learning process so that the learning process must be done remotely or online. However, in terms of equality the learning process is very complicated because long-distance learning factors require cooperation between teachers, students, parents, and environmental support. Not all media can be used when looking at environmental conditions and parents' capabilities in term of media presentation or operation [4]. With this problem, it is necessary to create media that is suitable and easy to use by all groups [5].

In the selection of learning media, a teacher must certainly have creativity and innovation in developing the media used. A teacher must be more creative in using media and be able to integrate media into the concepts to be taught [6]. There are so many learning media these days [7]. Teachers' professionalism is tested here in choosing media that is suitable for the school environment and also family's circumstances during the Covid-19 outbreak [8].

The learning media nowadays has many varieties so that its function and use could show the characteristics of the media itself. A teacher must certainly have creativity in choosing and be able to use the media adapted to the learning environment in the classroom or outside the classroom [6]. The varieties offered by learning media are very innovative and full of creativity, but its use should be adjusted to the circumstances or factors of the learning environment itself. No matter how advanced the media offered in the learning process is [9], if the environment does not support it, it will be a very complicated thing to do; this is certainly seen from its appropriateness and normality and in the process of delivering the media as a whole, both in class and outside the classroom [10]. One of the factors that can influence the appropriateness of using media is the school environment or the learning environment itself. Places that are far from internet access or have minimum access from the internet have a very high difficulty to do online learning such as using zoom website or other type of media [11]. This is a big problem for student on how to convey the concepts that must be mastered. To convey the concepts, an equality in the learning process is needed [12].

WhatsApp media is currently an alternative media that almost all students, student guardians and teachers use. Other than that, WhatsApp is also easy to operate and its use does not require very high costs. Almost schools use WhatsApp as the learning media, especially in environments that have limit access to the internet [6]. Yet, during the learning process using WhatsApp for parents and students seem to be monotonous and boring because the features are only in the form of chatting and sending media [13]. As for video calls, the number of joined participants is very limited [14]. Based on the description above, it is necessary to examine the integrity WhatsApp media use in improving understanding of the LS concept for students [15].

## 2. Research Methodology

Quantitative method is a research method that focuses on the value of real numbers which can later be described by the presence of certain tests in the appropriate research domain. Quantitative research was used to obtain data related to the integrity of WhatsApp media use on 33 students with a one group pre-test post-test research design where the respondents were chosen using random sampling technique. The results of data were analysed using a simple regression test at a significance level of 0.05 and were taken using a questionnaire and multiple-choice instruments. In this process, because the students were in an early childhood, parents assisted them in filling out these instruments after they were previously given instruction of commitment to the purpose of this study [16].

### 3. Result and Discussion

**Table 1.** Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399 <sup>a</sup>	.159	.132	6.987

/.a. Predictors: (Constant), WA  
b. Dependent Variable: Outcomes Learning

**Table 2.** Inova

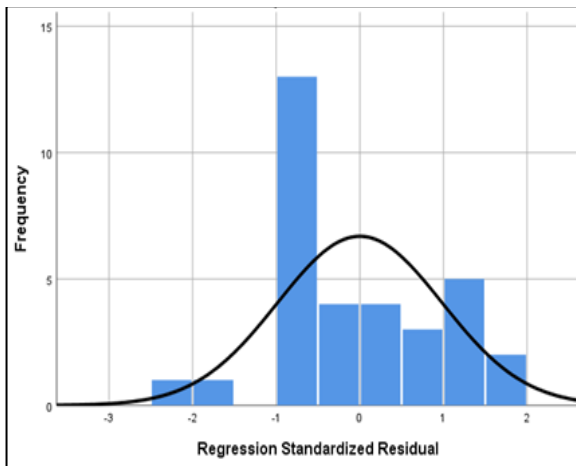
ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	287.057	1	287.057	5.881	.021 <sup>b</sup>
	Residual	1513.186	31	48.812		
	Total	1800.242	32			

a. Dependent Variable: Outcomes Learning  
b. Predictors: (Constant), WA

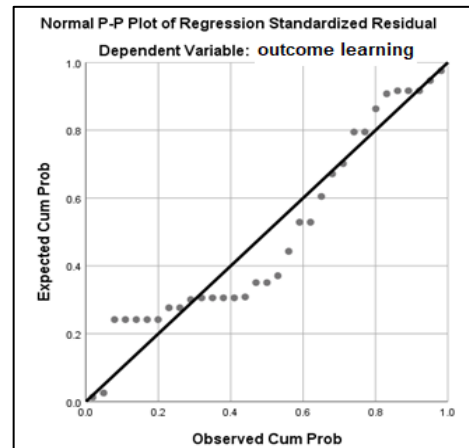
**Table 3.** Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	52.045	7.294		7.136	.000
WA	.325	.134	.399	2.425	.021

a. Dependent Variable: Outcomes Learning



**Figure 1.** Outcome Learning



**Figure 2.** Normalities Data

Based on the results of the data obtained in the Table 2, The significance of the study result is 0.021 which is smaller than the alpha value of 0.05 so it can be stated that learning by using WhatsApp media is able to influence the students' learning outcomes on the LS concept. On the Table 1 R square shows a score of 39.9%. This value score shows that WhatsApp has an influence in improving learning outcomes by 39.9% and the rest is influenced by other factors [4].

On the Table 3, the t count value of 2.425 is smaller than the t table so it can be concluded that learning by using WhatsApp media is able to have an influence in improving knowledge of LS concepts.

As we know, media is a device that can convey certain concepts which are the objectives of learning, and that has its own functions and characters. The ability of media in the learning process during this time is very important because of its characters and functions in the learning process. This is because learning media has properties that can give interesting impression, simplify the learning process, shorten time, and certainly it is not monotonous [5].

The use of WhatsApp in this study is due to WhatsApp characteristics which are different with other media. WhatsApp is very easy to use in the learning process; teachers can send messages in the form of voice notes or videos that are adjusted to the learning objectives or concepts to be conveyed [17]. Instructions or procedures in learning can be delivered in writing or voice notes in the WhatsApp group. To control the learning process by using WhatsApp, teachers asked student guardians to send photos of students in the group while studying. In addition, WhatsApp can store media and images on a regular basis and can be used or seen by all WhatsApp group members. Because of that, students who are not focused and do not fully understand the concepts given can repeat the learning material in the WhatsApp group. The choice of using WhatsApp media during Covid-19 pandemic is appropriate because WhatsApp is very easy to use and it needs no advanced electronic devices. WhatsApp can be installed on smartphones that have Android application [18]

The appropriateness of using WhatsApp with the LS concept was that the LS concept was a natural concept and able to be presented using demonstration videos or even voice notes given by a teacher. Early age students in this learning process used Voice Notes and video more often. Due to the limitations of students in the learning process, they were certainly assisted by parents. LS has special material about nature in the form of health or an introduction to living things and how to maintain ecosystems. This concept fosters traits or characters in students who love a healthy environment as well as literacy. A small example in this learning process was showing a video of students disposing trash in a trash can, washing their hands with soap before eating and drinking, and using masks when traveling long distances [19].

Integrity in the use of WhatsApp media in the LS concept could be seen when the teacher provided learning videos in the form of demonstrations or voice notes and students guided by their parents made videos to perform these demonstrations and send them to the WhatsApp group [6]. This became an attraction to the students and triggered their curiosity in the learning process so that understanding the LS concepts could be absorbed quickly and carried out independently at home [20].

### Acknowledgements

A teacher in the learning process must be able to develop existing media and integrate with other media so that learning results are maximal. The researchers' suggestion for further research is to compare learning using Zoom media, Webex with WhatsApp so that it will be known which one is more effective in terms of cost and accuracy of their own use in certain environments.

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