PET/ER

Psychology, Evaluation, and Technology in Educational Research

WhatsApp blast as digital multiliteracy 4.0 product to improve students' English learning achievement

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Abstract: Many private universities located in Tasikmalaya city which their students' English learning achievement stands in low category. Therefore, WhatsApp Blast as digital multiliteracy 4.0 product acted to solve the problem. The research was carried out to recognize the influence of WhatsApp Blast on the students' English learning achievement. Experiment with one group pre-test and post-test factorial design was played as research methodology. Multiple choice test ruled data collection. The number of sample was 120 students taken from three private universities. Random sampling works as technique of technique of taking the sample. Data calculation and analysis concluded that *Asymp. Sig. (2-tailed)* =0.000 less than *Asymp. Sig. (2-tailed)* < 0.05 explaining that H_0 is rejected. The result is also strengthened by the mean average score after treatment is higher than before treatment. The average mean score of pre test is 48.7 and the average mean score of post-test is 67.1. It means that there was a significant effect of WhatsApp Blast on the students' English learning achievement. The next research should take larger amount of population and sample.

Keywords: WhatsApp Blast, Multiliteracy, English Learning Achievement

INTRODUCTION

The research inspiration was obtained originally from finding's weaknesses conducting by previous researcher entitled *"Research and development of English Millennial Multiliteracy Genre Handbook in Improving Students' English Learning Achievement"*. The students' English learning achievement increased after playing the book. Eventhough, the instructional media (the book) generally provided positive contributions, the research wrote that there were weaknesses in the research. The research finding's weaknesses focused on the content of various learning activities that got the weakest score from the data of questionnaire. He conveyed that the average of test result in individual, group and limited scale are eighty in layout, eighty nine in methodology, fifty in the various learning activities, eighty six in language skill, eighty six in millennial topic and eighty eight in assessment (Permadi, 2021).

Keywords core mindset on students' responses about various learning activities concluded in the research was less varied, less integrating technology, and still find it difficult in achieving English learning achievement maximally if they only relied on the developed handbook. It indicates that the students need technology involving to learn something (academic technology addict). Multimedia and technology start influencing teaching learning process and its'

evaluation, seminar, text books to assist student to understand, demonstrate, consolidate their knowledge (Hyland, 2009).

Besides the facts of research gap found above, the national-international data show that the innovation in educational field should be practiced continuously. On April 2020, UNESCO stated at least 1.5 billion students influenced by Covid 19 in 188 countries including 60 million students in Indonesia. For that reason, education innovation is in need to prepare uncertain atmosphere in the future (Suharwoto 2020).

Based on the statements, it can be concluded that the various learning activities with technology integration become primary needs for millennial students. One of the technologies that can be instructional media in improving English learning achievement, including in increasing students' English learning achievement is WhatsApp Blast. The product also can be part of solutions to avoid uncertain educational condition affected by global pandemic.

WhatsApp Blast is a product of digital multiliterate 4.0. The support system itself is literacy integration, among information technology sophistication, WhatsApp software, internet connection, broadcasting language, and handphone numbers. WhatsApp Blast is digitally operated by only once clicking, WhatsApp message can be sent to thousands of people or even unlimited receiver. WhatsApp Blast is also a product of industrial revolution technology 4.0 because it was born from the creation of a cyber physical system (computer) and the procedure involves integration between information and communication technology.

The use of digital information technology, like synchronizing teletext of the WhatsApp Blast system, is considered powerfully afford and positively contribute to the education ecosystem development. WhatsApp Blast as a digital multiliterate media 4.0 is also technological pedagogical and content knowledge (TPACK) (Mubarak, 2018).

WhatsApp Blast can be an effective teaching media and solution for teaching learning process variety in improving students' English learning achievement. WhatsApp Blast is communication and information technology integration (ICT). The communication and information technology has been approved in educational field. In addition, one of its' roles is to revitalize teaching concept (Rofi'i, 2021).

WhatsApp Blast will create students to become independent learner due to they will not always learn in the classroom. They will be responsible for themselves without teacher's attendance to study, to do the tasks, and comprehend the information conveyed by WhatsApp Blast (Harmer, 2007).

In detail, campus should provide self-access for the students such as WhatsApp Blast and the students should realize that the lecturers will not teach well if the students do not have learning willingness. Learning is a partnership effort between lecturers and the students (Harmer, 2007). WhatsApp Blast become solution for modern campus to motivate the students in actualizing English self access learning. Academic literacy in modern context needs digital literacy (Simpson & Obdalova, 2014).

LITERATURE REVIEW

English learning achievement

Learning achievement is necessary for stakeholders of education (government, institution, foundation, principal, rector, parent) to recognize the final portrait report how the education process run and to prepare a good human reasouces in the future. All countries need competent labour to fill the gaps in the labour market. This situation puts much pressure on all stakeholders to get a high level of achievement (Irambona & Syomwene, 2023). Besides, it also will be a motivation for the students to take another future advantages.

Learning achievement is someone's success in academic field after experiencing testing (Kitikanan & Sasimonton, 2017). In addition, the test used should have correlation with the learning material and learning element (Dwinalida and Setiaji 2022). As well in English, achievement is a measure to know students ability in English skill (Triyogo & Syaprizal, 2019).

WhatsApp Blast

Many applications that can be operated to send texts, audio, links, flayer, or other notifications format to hundred or thousands persons such as Short Messages Broadcasting, WhatsApp Broadcasting, and WhatsApp Blast. The following are the benefits of using WhatsApp blast to send the notifications than the others; (a) User can send the notifications without saving the receiver on smartphone first; (b) It can help send the notification to hundreds or even billion persons by once clicking; (c) The application can write the name of the receiver automatically; (d) Easy and affordable to register; (e) Automatically fast work and no error found; (f) It works by our digital setting.

WhatsApp blast is a technology engagement that bridge reformation in education and opportunity to do interactive communication (Blevins 2018). It is also a multimodal teaching media that can reform students' cognitive level (Guo & Feng, 2015).

WhatsApp Blast synchronization in English learning is one of kinds of multiliterate learning. Multiliterate learning aims for the good language skill development by using one of medias, information and communication technology (Abidin, 2015; Li et al., 2018). It can be categorized into teaching media with technology feature (Sudjana, 2020).

Digital media engagements, such as WhatsApp Blast synchronization, is compatible multiliterate in English learning. Multiliterate through digital media will be compatible for English learning since it integrates technology, pedagogy and knowledge content (Mubarak, 2018). English learning with millennial multiliterate will be meaningful if the projection expands more the meaning of language learning to more productive, such as, meaning maker, code user, text user and analyzer text. In addition, that is the atmosphere of language literacy learning in the 2020s (Abidin, 2015).

Based on the statements above, WhatsApp Blast as a digital multiliterate product 4.0 can assist in creating the most outstanding students in English, either in achievement or in the students who have high intelligence in meaning creation, code user, text user and analyzer text. Millennial students are expected to be more productive in utilizing their knowledge and experiences. WhatsApp Blast synchronization is predicted to assist the most outstanding students, which functions as a meaning maker by providing sustainable treatment in sharing video information about how to write journals, how to write articles, basic technique in writing English, academic writing, and becoming a professional writer.

WhatsApp Blast will also function to create students' English achievements by language code. English millennial students' demands in code user context are that the students have to be able to make feature of writing structure, visual, and spoken text, becoming a professional public speaker. WhatsApp Blast in this case will have the role of providing sustainable treatment in sharing information about English structure, visualization of English conversation, and conversation on certain topics. Hence, students' listening and speaking skills achievement will be improved.

Demands on students' achievement as text users and text analyzers require students' intelligence to catch information consisting in texts. WhatsApp Blast will have the role of providing sustainable treatment in sharing information about compatible reading texts and reading tips and tricks. Hence, students' reading skills achievement will also be improved.

Based on the procedures stated, English learning will be more projective, productive, and never-ending English learning because students will be more pro-active in creating on their own and having self-guided, self-access learning provided by lecturers through WhatsApp Blast. The way is also able to categorize effective language learning, as follows are; learning objectives are conveyed obviously, learning context should be meaningful, challenging and motivating, new information is presented obviously, explanation and instruction is conveyed obviously, new skills and procedures are modeled effectively, curriculum is organized well, coherently and content, learning process is designed well, structured obviously, and very likely to be implemented, involving the students actively and participative, during learning process, new knowledge is practiced and applied by the students, new materials can be understood deeply by the students, all the students' responses, either positive or negative, obtain feedback from the teachers, assessment and measurement periodically, newly taught learning materials provide opportunities for teachers and students to interact educatively with each other (Goldenberg & Coleman, 2010).

According to the statements above, it can be concluded that the millennial generation needs a place to express the four English skills, and they should be creative and productive in their language expression affiliations, such as the functions of meaning maker, code user, text user, and text analyzer. One of the media can assist in creating millennial students' achievement, as the purposes above are WhatsApp Blast as a digital multiliterate product 4.0.

WhatsApp Blast to Improve Students' English Learning Achievements

The millennial generations' condition is distinctive from the previous generations. It needs certain tricks to adapt with this generation having character in believing interactive information from internet access, prioritizing handphone rather than television, having social media, not liking reading conventionally, and relying on technology.

No exception with the learning process; it needs great influence to balance millennial generations'necessity. The learning process with conventional teaching and lecture methods will be tedious, and by now it has started to be left.

The learning practice for millennial generations is oriented towards multimodal combinations, wherein learning facilities are not only books. The use of multimodality allows millennial generations to use various instructional media. The multimodal concept in education relates to the amount of material type that is able to be used in literacy learning which implicates the presence of the multiliterate concept. The concept is an awareness of various humans' ways to communicate, read, and write and various materials or media for reading and writing activities (Sari et al., 2014).

In increasing students' English learning achievement, WhatsApp Blast can be applied. The students involve themselves to find and consume the knowledge by topics, material, journals, links, information, texts and images shared by the researcher through teletext system WhatsApp Blast.

The researcher sent the topics or the material that has correlation with English subjects every day or twice a week, or three times a week depend on the treatment. It is better to share the topics or the material after the lecturers do brainstorming in the classroom. Let the students have time to study the topics shared in one or two days. The next day, the researcher open question and answer session using WhatsApp blast.

The information or the topics given to the students through WhatsApp Blast focused on the strengthening of listening, structure and written, and reading in several session. The first session, it treated listening. The second session, WhatsApp Blast play for treating structure and written. The last one. It gave tips and tricks for reading.

For listening tips and tricks session or the first session, WhatsApp Blast shared the tips and tricks about how to focus on the second line or speaker, choose answer with the synonyms, avoid similar sounds, draw conclusion about who, what, where, listen for who and what for passive, listen for who and what in multiple noun, listen for negative expression, listen for almost negative expression, listen for negative with comparative, listening for expression of agreement, listening for expression of uncertainty and suggestions, listening for emphatic expression of surprise, listening for wishes, listening for emphatic, listen for two or three parts verb, listen for idioms, anticipate the topics, anticipate the questions, determine the topic, draw conclusion about who, what, when, where, listen for answer in order, understand the casual conversation, recognized the organization, listen the direct and indirect detail, dan visualize the passage.

The next is the second session, the researcher gave the suggestions many structure and written tips to the students such as recognizing problem subject verb agreement, problem with parallel structure, problem with comparative and superlative, problems with the form of verb, problems with the use of verb, problems with passive verb, problems with nouns, problems with pronoun, problems with adjectives and verbs, more problems with adjectives, problems with articles, problems with preposition, problems with usage.

Figure 1. The sample in campus 1 are having teaching treatment

Figure 2. The sample in campus 2 are having teaching treatment

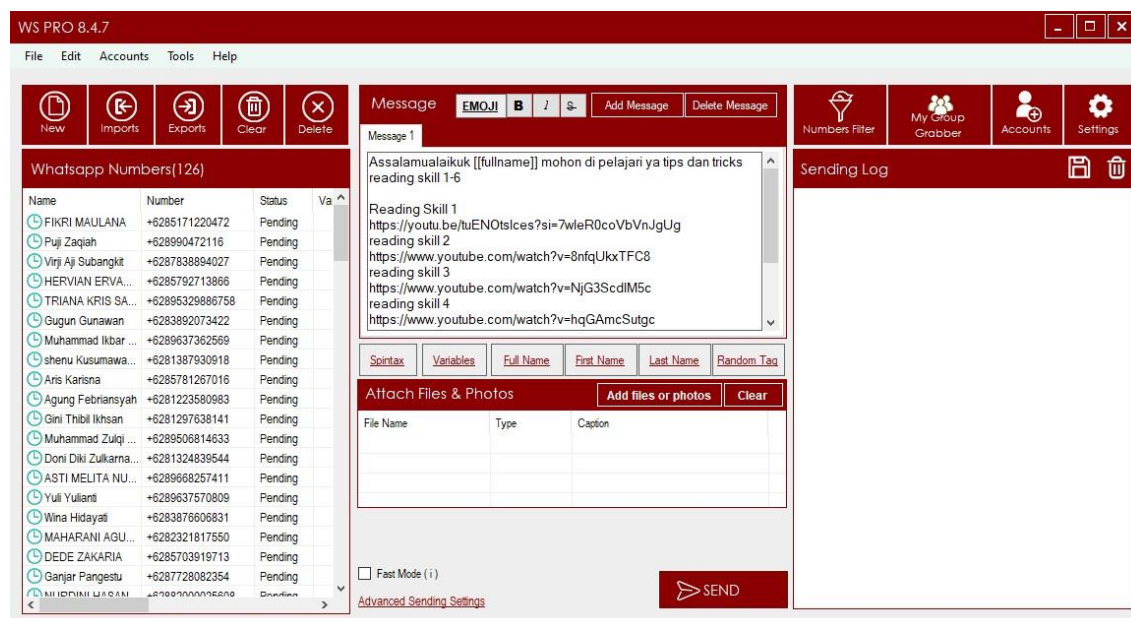**Figure 3**. The sample in campus 3 are having teaching treatment

Figure 4. All samples are having treatment by WhatsApp Blast

The last session for the research, WhatsApp Blast assisted the students to detect the problem and how to solve reading questions. The information conveyed to the students are as follows: answer the main idea correctly, recognize the organization of the ideas, answer stated details correctly, find unstated detail, find pronoun referents, answer implied detail questions

correctly, answer transition questions correctly, find definitions from structural clues, determining meanings from word parts, use contexts to determine meanings, of difficult word, use context to determine meaning of simple words, determine where specific information is found, determine the tone, purpose, or course, dan determine where to insert a piece of information.

METHODS

Method of the research

To recognize the effect of WhatsApp Blast as digital multiliteracy 4.0 product on the students' English learning achievement, the researcher used experiment as method of research. He observed the manipulation phenomenon, special design, and doing treatment to the sampel (Nazir, 2013). It will assist the researcher to prove the data scientifically with systematic, concrete, objective steps (Sugiyono, 2016).

Population and sample

Population is the amount of researched subject (Sanders, 1990). Besides, population has relation with analyzed element or unit (Sudjana, 2020). Population in this research is the first semester students of Institut Agama Islam Tasikmalaya, LP3I Kampus Tasikmalaya and Universitas Mayasari Bakti academic year 2023-2024. Those universites represented all universities existing in Tasikmalaya City, West Java, Province of Indonesia Republic. Institut Agama Islam Tasikmalaya represented all Islamic campuses, LP3I Kampus Tasikmalaya represented all colleges, and Universitas Mayasati Bakti represented all private universities in Tasikmalaya. Sample is part of the analyzed population. The samples of this research were 120 students. They were chosen as they have same extraordinary English curriculum designed by the campus. It started on October to December 2023. The beginning of the research contains several activities such as validity and reliability test in non sample class, conducting permission to the rector or head unit of campus, pre-test. On the main process of research, the students had three times teaching treatments each in two hours, the first treatment focussed on brainstorming tips and tricks for listening, the second treatment was for strengthening structure and written test tips and tricks, and the last was tips and tricks reading teaching treatment. Then, still in main process of the research, the students are treated by WhatsApp Blast everyday between end week of Nopember to first week of December. The students obtained many English information concentrating self access learning such as English links, flayers, tips and tricks texts, video. The final chapter of the research was post test.

Research variables

Variable is a concept or a noun that stands for variation within a class of object (Fraenkel et al., 2012). The variables of this research, as follows are: (1) Independent Variable, WhatsApp Blast (Variable X); and (2) Dependent Variable, students' English learning achievements (Variable Y)

Research instrument

The instrument of this research was test. Test is a method to measure somebody's skills (Brown & Abeywickrama, 2018). The validity of the instrument was examined by SPSS 21. Validity means eligibility (Fajaruddin et al., 2021; Swanson, 2014). In research, validity is related to instrument or measuring tool. A measuring tool can be called valid or having high validity if the measuring tool can measure what people want to measure. Validity is a measurement to indicate level of validity of instruments (Jumiyanto et al., 2021; Setiawan et al., 2019). Validity

test is used to know whether there are instruments, which are questions, have to be removed or replaced because those are not relevant.

The test was English learning achievement multiple choice test consisting 42 questions. The researcher provided multiple choice computer-based test with the students as samples. The validity test was conducted at non-sample class by involving 60 students. All items of the test are valid and the reliability test can be recognized in the Table 1.

Table 1. Reliability result

Cronbach's Alpha	N of Items
,958	42

Research Design

Research design is a plan, research's guide to know the essence between researched variable (Creswell & Creswell, 2017). Research design used is one-group pretest-posttest design.

Table 2. Research design

$$O_1 \times O_2$$

Note:
O_1 = pre-test score
O_2 = post-test score
$\times$ = treatment

Data Collection and Data Analysis

Primary data of this research is multiple choice computer-based test. All validity and reliability of test items are examined. The purpose of this research is to analyze and know the significant average score of pre-test and post-test. Hence, the researcher use paired sample test to analyze data.

RESULT AND DISCUSSION

Result

Data description

The output of the data description of this study concentrated on the comparison of scores before and after treatment including range (values that often appear), lowest value, maximum value, total number of values obtained, mean value, standard deviation and variance. More details are presented in the Table 3.

Table 3. Descriptive statitistics result

	N	Range	Min	Max	Sum	Mean		Std.Dev.	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std.Error	Statistic	Statistic
WA Blast Pretest	120	46,00	26,00	72,00	5845,00	48,7083	,89430	9,79658	95,973
WA Blast Posttest	120	68,00	30,00	98,00	8053,00	67,1083	1,16963	12,81267	164,165
Valid N (listwise)	120								

It can be recignized that the difference score that often appear before treatment (pre test) and after treatment (post test). Before treatment the value of students which often appear is 46. Different things are shown when students have experienced treatment, the score that often appears is 68. Another difference is recognized by the minimum score obtained by students

before and after treatment through WhatsApp Blast, the minimum score before treatment is 26 and the minimum score after WhatsApp Blast treatment is 30.

Another atmosphere of distinction in this study can be seen from the maximum score in both the pre test and post test. The maximum score of students obtained before the pre test was 72 and the maximum value of the post test was 98. Likewise, the overall score obtained by students experienced an upward graph from 5845 to 8053.

One of the other important things that needs to be focused on is the increasing graph of the average student score. The average score of students before treatment (pre test) is lower than the average value of students after treatment (post-test) or in other words, the average score of students after treatment (post-test) is higher than the average score of students before treatment (pre test). The mean of students before treatment was 48.7 and the mean of students after treatment was 67.1. It indicates that students progressively achieved mean score 18.4 in this study. The descriptive result also can be described on the Figure 5.
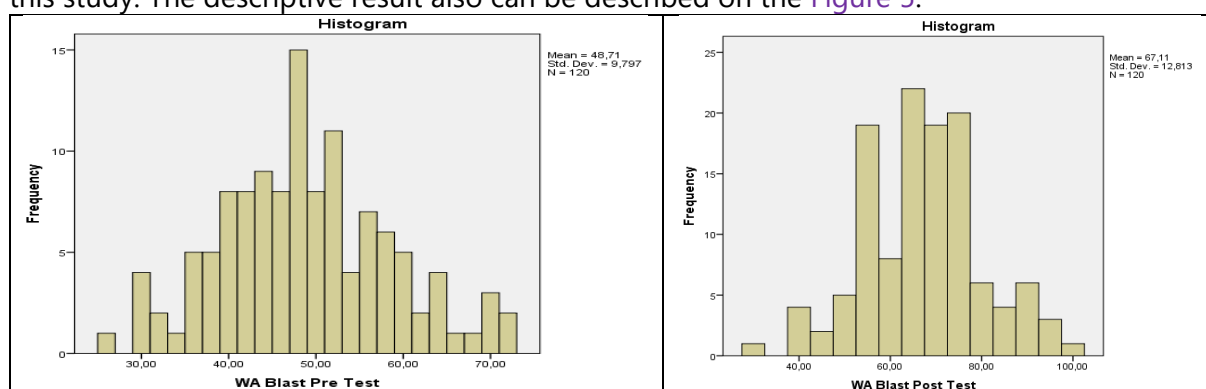

Figure 5. Pre-test and Post-Test histogram graphic

Normality test

Data population distributed normally or would not be detected by conducting normality test. This test is also intended to determine statistical test that will be used next. In this research, normality test was conducted by using SPSS 21, using Lilliefors test by noticing Kolmogorov-Smirnov score. If the significance obtained more than 0.05, samples were taken from population which was distributed normally and data would be analyzed by using parametric statistics. However, if the data obtained was not distributed normally, it used non-parametric statistics. From the calculation results of normality test above by using One-Sample Kolmogorov-Smirnov test technique, the significance score obtained in the normality test for the pre-test was 0.64 and post test was 0.76. Significance score of pre-test and post-test > 0.05 or more than α. Therefore, pre-test and post-test scores were taken from the normal-distributed population. The result of normality test can be engaged on the Table 4.

Table 4. Normality test result

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statiistic	df	Sig.	Statiistic	df	Sig.
WA Blast Pretest	,079	120	,064	,988	120	,343
WA Blast Posttest	,077	120	,076	,987	120	,305

Homogeneity test

The homogeneity test is used to know whether some data population variants have similarity or not. As test criteria, if the significance score is more than 0.05, it can be said that the variant, which is more than two or more, the data group was similar (homogeneous). However,

if the significance score is less than 0.05, the data that is used is not similar (inhomogeneous). Based on the calculation in the Table 5, the significance score of the homogeneity test was 0.66. The significance score was more than 0.05. Therefore, it can be said that the variant, which is more than two or more data groups, was similar (homogeneous). The result of homogeneity test can be engaged on the Table 5.

Table 5. Homogeneity test result

		Lavene Statistic	df1	df2	df3
WA Blast	Based on Mean	3,423	1	238	,066
	Based on Median	3,493	1	238	,063
	Based on Median and with adjusted df	3,493	1	225,142	,063
	Based on trimmed mean	3,388	1	238	,067

Hypothesis testing

After conducting normality test, it continued to conduct a comparison hypothesis test between students' English learning achievement before and after learning using WhatsApp Blast. Hypothesis test used paired samples t-test. The statistical hypotheses towards the research about the impact of the thematic learning model were assigned decision-making rules, as follows are:

Null Hypothesis (H_0): There is no difference between the pre-test and post-test scores by using WhatsApp Blast synchronization on students' English learning achievement.

Alternative Hypothesis (H_a): There is a difference between the pre-test and post-test scores by using WhatsApp Blast synchronization on students' English learning achievement.

As for the statistical hypotheses from the working hypotheses, they are:

H_0 : $\mu_1 = \mu_2$
H_a : $\mu_1 \neq \mu_2$
Note:
μ_1 = Students' English learning achievements before using WhatsApp Blast
μ_2 = Students' English learning achievements after using WhatsApp Blast

The terms are used is if $\mu_1 = \mu_2$, then H_0 is accepted. In addition, if $\mu_1 \neq \mu_2$, then H_0 is declined and H_a is accepted. The result of the t-test for the difference between the pre-test and post-test scores is shown in the Table 6.

Table 6. Hypothesis testing result (Paired Samples Test)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Dev	Std.Error Mean	95% Confidence Interval of the Difference				
					lower	upper			
Pair 1	WA Blast Pretest-Postest	-18,400	15,84399	1,44635	-21,26392	-15,53608	-12,722	119	,000

From the Table 6, it can be known that in column Sig. (2-tailed) or two-tailed significance test on Equal Variances Assumed was 0.000, it was obtained score Sig. < 0,05 or Sig. < α, then H_0 was declined and H_a was accepted. It meant that there was a significant difference between the pre-test score and the post-test score, or it can be said that WhatsApp Blast synchronization contributed positively on the students' English learning achievement.

Discussion

The research focussing WhatsApp Blast was obviously improving students' English learning achievement in Tasikmalaya Islamic Private University. Due to that reasons, several important points can be discussed, as follows:

There is a significant contribution applying WhatsApp Blast in improving students' English learning achievement. Therefore, the media play positive role in English teaching process particularly in improving English learning achievement. The students like a lot comprehending the topics given by using the modern digital media matching with their psychology and need. WhatsApp Blast media is digital media to share information, film, link, flayer and it can emboss knowledge, comprehension and skill (Abidin, 2015).

People rely on WhatsApp as communication tool recently, so it is one of the obvious right media that can be played by many teachers or lecturers in improving the quality of teaching learning process. Technology development like WhatsApp blast can escalate the result and the quality of English teaching (Anisa et al., 2018). Efficient teaching and learning are the ultimate goals of every educational system. This goal can be achieved when education moves with the recent changes in technology (Zheng et al., 2023).

The sample on the research is limited on 120 students, the next one, it is recommended to take larger number of the population and sample as WhatsApp Blast will work still effectively.

CONCLUSION

Based on the research's finding, it can be summed up that there was a difference between students' English learning achievements before and after using WhatsApp Blast . This could be accounted by looking at the results of the hypothesis testing, which stated that the significance level of the WhatsApp Blast treatment was 0.000. The significance level was less than 0.005, which means that the WhatsApp Blast had a positive contribution on the students' English learning achievements. Analyzing the score range of the pre-test and post-test, it stated that the WhatsApp Blast was also very effective in improving students' English learning achievements. The average score of the students' English learning achievements pre-test was 48.7. Meanwhile, based on the results of the students' English learning achievements post-test, the average score was 67.1. It means that there was an improvement in students English learning achievements approximately 18.4. The study finding gives hand for the lecturers or institution to engage WhatsApp Blast technology in educating their students. This application is easy to obtain, easy to register, easy to operate and it obviously creates different nice atmosphere or interactive teaching learning process based on the students' nowadays habit. It also become self learning access for the students to learn a lot without lecturers' face to face or person to person attendance.

ACKNOWLEDGEMENT

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