

2. Effectiveness of Interactive Web Technology in Improving Students Arabic Language in the Higher Education of Islamic State Sumatera

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Effectiveness of Interactive Web Technology in Improving Students Arabic Language in the Higher Education of Islamic State Sumatera

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3 Abstract

This study aims to determine the effectiveness of interactive web technologies in improving students' mastery of Arabic at the State Islamic University of Sumatera. The design of this study is quasi-experimental. The sample of this study were students who programmed Arabic courses 2 at IAIN Metro and UIN Raden Intan Lampung, totaling 160 people. The sample was divided into 4 classes: 2 experimental classes and 2 control classes from IAIN Metro and UIN Raden Intan Lampung. Data collection techniques using Arabic language mastery test 2. Data analysis of this study was carried out using a t-test with the prerequisite test for normality test and homogeneity test. The results of the analysis using the SPSS 16 program are known to test the sig normality value of each experimental class and the control class that is 0.084, 0.067, 0.063, and 0.072 respectively, which means the sample comes from populations that are normally distributed. Furthermore, the homogeneity test results known the sig value 0.993 which means the population has a homogeneous variance. T-test results with the SPSS program obtained a sig (2-tailed) value of 0,000 so that it was concluded that interactive web technology was effective in increasing students' Arabic Language mastery at the Sumatran Islamic Religious College.

Keywords: effectiveness, mastery of Arabic, interactive web technology

1. Introduction

The industrial revolution 4.0 has influenced the behavior of all activities of human life. Its influence can also be felt in the world of education, such as the emergence of new learning methods, the learning system does not have to go through face-to-face, and learning becomes more effective and interesting. That way this presence certainly has an impact on the education system, especially those in Indonesia. Education 4.0 is characterized by the use of digital technology in the learning process, also known as the cyber system. That way the industrial revolution gave birth to a learning revolution, where the system makes the process of learning and teaching can take place continuously without space and time limits. This can be seen in the use of e-learning in learning Arabic.

The mastery of four Arabic language skills is ideally owned by Arabic learners. Mastery of istima' which includes knowing the sounds of languages and their makhroj and knowing the meaning of Arabic vocabulary. The mastery of kalam includes the mastery in pronouncing the sound of his makhroj well and correctly, can say long and short harokat, expressing ideas in the right way by paying attention to the existing grammatical rules. Whereas mastery of qiro'ah can

recognize the contents of the manuscript thoroughly, can understand the relationship in sentences, between sentences and between paragraphs. Finally, the authority of the Arabic language which must be possessed by Arabic learners covering themes and other provisions must be clear, able to master the rules of nahwu and shorof properly (Asyrofi, Syamsuddin, & Pransisca, 2019)

The rapid development of technology and information is still a big problem for students majoring in Arabic Education at the State Islamic University of Sumatra in mastering the four skills namely istima', kalam, qiroah and chitabah. it was explained that one of the factors causing the lack of mastery of Arabic for students was the use of media and learning resources that were less effective, in addition to the teaching strategies used by the instructor were not relevant. This problem results in the low mastery of Arabic students. The low data on students' Arabic mastery is shown in the following picture:

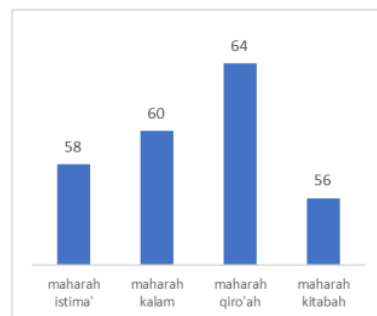


Figure 1. Student language skill scores

The problem experienced by students is not only in mastering the four language skills above, but also the elements of language, namely the mastery of Arabic vocabulary and grammar. Susilawati's research by a second-semester student majoring in PBA IAIN Metro shows that the majority of students do not master Arabic vocabulary and find it difficult to understand grammar. The results of this study are described as follows:

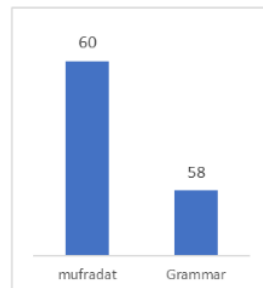


Figure 2. Muradat and grammar mastery values

The problem of writing Arabic is also felt by students. Novita's research shows that many students still feel confused about writing correct vocabulary like the word al-Islam (الإسلام) written as الإسلام/التسلام (Rahmi, 2016). The word al 'fatâ (الفتى) is written الفتا. The problem of mastering Arabic in students also occurs at the level of sound pronunciations that violate the rules of Arabic pronunciation and grammar. Walfajri's research results state that there are three language errors experienced by students, namely: (1) errors in pronunciation of language sounds, (2) morphological errors (Sharaf), and (3) grammatical errors (nahwu) (Walfajri, 2018). In the pronunciation of language sounds, the highest frequency of errors occurs in pronunciation of

sounds /ع/, /اِث/, /ض/, and /ذ/. In morphological (sharaf) errors, the highest frequency of errors occurs in the text of madhiy and the text of mudhari. In grammatical errors (nahwu), the highest frequency of errors occurs in the structures of ilaih, na'at-man'ut mudhaf-mudhaf, and jar-majrur.

Some problems of student mastery of Arabic in writing skills at UIN Bandar Lampung colleges are still relatively low because of the less varied assignment model, learning is done face-to-face and does not use methods and strategies that are appropriate to the course being delivered. The problems mentioned above should be used as a basis for Arabic language teachers in higher education to continue to improve the teaching process to produce skilled output in Arabic.

The above problems are used as a basis by researchers to analyze the need for Arabic teaching for students at the State Islamic Religious College (PTKIN). The results of the need analysis conducted found that there were 42% of respondents proposing online interactive learning, 12% proposing offline learning, 38% proposing joint learning and 8% of respondents proposing face-to-face learning. From the results of the survey needs analysis of the needs of Arabic learning that remains most 42% of respondents proposed online interactive learning. From the results of this analysis need then designed online interactive learning which was tested on students of the State Islamic University Raden Intan Lampung and the IAIN Metro, Lampung.

Interactive web technology learning in the process of learning Arabic needs to be created to improve Arabic language skills which include four language skills. Blended Learning-based learning that develops face-to-face learning processes, online learning, and offline learning are currently more desirable because it is a source of learning besides teachers and lecturers. Where through audio technology, audiovisual, computer, internet, and mobile become another source to access knowledge and knowledge (Mahmudi, Febriani, Hasanah, & Arifa, 2019). Based on several problems and need analysis results above, the use of web technology is one of the most effective ways to improve language understanding. Where in essence the industrial revolution 4.0 has given birth to distance learning. Edutech trends have sprung up a lot, the role of the teacher is not just conveying material using a blackboard, marker, long ruler as a pointer, but more than those various creative findings related to learning have been created.

The following picture is at the same time the steps of using interactive web technology in learning Arabic for students at PTKIN:

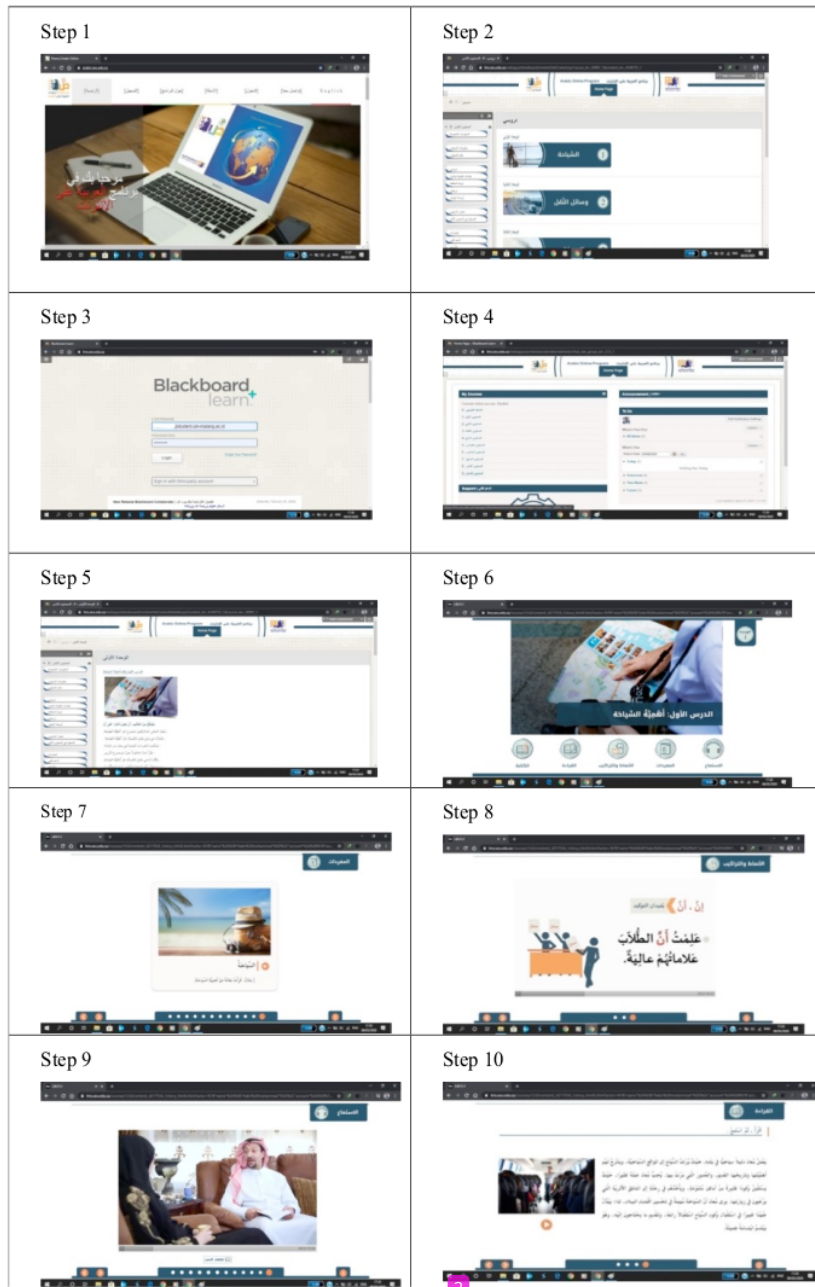


Figure 3. Steps to use interactive web technology in language learning

2. Literature Review

Technology is the practical use of knowledge in a particular field as well as a way to perform tasks using technical processes, methods, or knowledge. The use of technology not only includes machines (computer hardware) and instruments, but also involves structured relationships with

other people, machines, and the environment (Chen, 2012; İşman, 2012; Stark, Brünken, & Park, 2018). In the world of technology, there is the term technology integration where teachers use technology in the learning process to be more effective and efficient. Learners must use technology as an important part of the learning process. While the teacher's role is as a model that uses this technology to improve their language skills (Costley, 2014; Suryadi, 2019).

Bennett, Culp, Honey, Tally, and Spielvogel (Bennett et al. 2000) emphasize that the use of computer technology can increase students' mastery in the classroom. The use of computer technology helps the teacher's role in meeting the educational and learning needs of students (González & Deal, 2017; Kusano, Fredriksen, Jones, & Kobayashi, 2013; van den Bossche, Gijssels, & Miltner, 2013). Bransford, (2000) the application of computer technology enables teachers and students to create a community both locally and globally that connects them in the learning process. The use of interactive web technology depends on how the teacher uses it in the classroom learning the language. Teachers must find methods of applying technology as a learning instrument that is useful for students even though they have not yet learned technology and cannot use it as a computer expert. The application of technology has changed many methods of teaching Arabic, which provides so many alternatives to make teaching more interesting and more productive in terms of progress (Leow & Neo, 2014; Patel, 2013).

Gilakjani & Sabouri, (2014) states that using technology in the learning process can create an atmosphere of learning that is centered on the students themselves. They emphasize that by using web technology, language classes become active places that can bring learners accountable for their learning. Drayton, Falk, Stroud, Hobbs, and Hammerman (Drayton, Falk, Stroud, Hobbs, & Hammerman, 2010). Technology encourages students to learn individually and responsibly.

The limited duration of meetings in the classroom as well as several obstacles that are often faced by lecturers encourages him to look for solutions that can bridge the interaction of lecturers and students so that student participation in the class will be more optimal by considering the characteristics or conditions of the student. The solution that can be applied is the use of the interactive web in improving Arabic language mastery. Web-based learning media is an innovation that has a very large contribution to changes in the learning process, the learning process is no longer just listening to the material description from educators but students also carry out other activities such as observing, doing, demonstrating and others. This technology has abilities, characteristics that can improve teaching and learning well (Domingo & Gargante, 2016; Whitesman & Mash, 2016).

3. Methodology/Materials

The design of this research is a quasi-experiment (Sugiyono, 2018) that aims to find out the effectiveness of interactive web technology in improving the mastery of the Arabic Language of students at the State Islamic College of Sumatra. The population in this study were students who programmed Arabic 2 courses at the State Islamic College of Sumatra. The sample used in this study is students of IAIN Metro and UIN Raden Intan Lampung with the following details:

Table 1. Research sample

Sample	Class	College
40 student	A	IAIN Metro
40 student	B	
40 student	A	UIN Raden Intan Lampung
40 student	B	

After taking the sample, the research design is then arranged. The following is a quasi-experimental research design conducted:

Table 2: Research sample

Class	Pre-test	Treatment	Post-test	College
E1	X _{E1}	X	Y _{E1}	IAIN Metro
O1	X _{O1}	-	Y _{O1}	
E2	X _{E2}	X	Y _{E2}	UIN Raden Intan Lampung
O2	X _{O2}	-	Y _{O2}	

Information:

E1 : IAIN Metro experimental class

O1 : IAIN Metro control class

E2 : UIN Raden Intan Lampung experimental class

O2 : Control class of UIN Raden Intan Lampung

XE1 : Pretest the IAIN Metro experimental class

XO1 : Pretest the IAIN Metro control class

XE2 : Pretest of the UIN Raden Intan Lampung experimental class

XO2 : Pretest the control class of UIN Raden Intan Lampung

X : Learning with interactive web technology

YE1 : Posttest of the IAIN Metro experimental class

YO1 : Posttest IAIN Metro control class

YE2 : Posttest of the UIN Raden Intan Lampung experimental class

YO2 : Posttest control class of UIN Raden Intan Lampung

The data collection technique used in this research is to use the material comprehension test instrument in Arabic Language 2 courses consisting of pretest and posttest instruments. Data analysis was performed by conducting a prerequisite test that is a homogeneity test and normality test. After the prerequisite test is then tested the hypothesis using the t-test. The process of analyzing the hypothesis testing is done with the help of statistical software namely SPSS 16.

4. Results and Findings

This research is a quasi-experimental study carried out in two universities namely IAIN Metro and UIN Raden Intan Lampung. At each university 2 classes are taken which are used as experimental class and the control class. In the experimental class, lectures were carried out by applying interactive web technology while in the control class conventional learning was carried out. At the beginning of learning, students are given a pretest as a basis for initial abilities. Furthermore, learning is done by using the interactive web for the experimental class and conventional learning in the control class. The following is the recapitulation of students' pretest and posttest scores from each class.

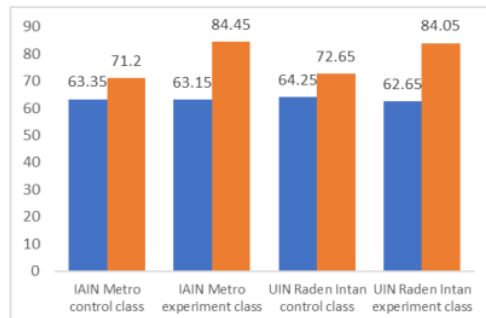


Figure 4. Graph of pre-test and post-test mean value of experiment class and control class

Based on the graph above it can be seen that in each experimental and control class there is an increase in the value of the results of the pretest and posttest. Increasing the value of pretest and posttest in each experimental class and control class as follows:

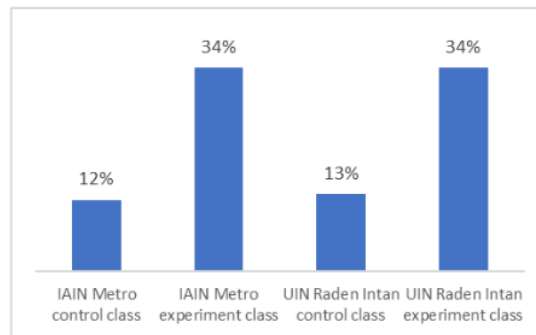


Figure 5. Improved graph of pretest and posttest scores

Based on the graph above it is known that the pretest and posttest scores of all the experimental and control classes increased. In the control class, the pretest and posttest scores increased by 12 =% at IAIN Metro Lampung and 13% at UIN Raden Intan Lampung. In the experimental class, the pretest and posttest scores tended to be the same at 34%. The next step taken in this research is hypothesis testing to prove the effectiveness of interactive web technology in improving students' mastery of Arabic. Before the hypothesis test is done the prerequisite test is the normality test and homogeneity test. Analysis of normality and homogeneity tests was carried out using SPSS 16. The normality test was carried out to determine whether the sample came from a normally distributed population. The following are results of normality tests using the SPSS 16 program:

Table 3. Normality test results

	Tests of Normality						
	Class	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Value	1	.130	40	.084	.911	40	.004
	2	.140	40	.067	.912	40	.004
	3	.138	40	.063	.914	40	.005
	4	.138	40	.072	.911	40	.004

Lilliefors Significance Correction

Based on the above results it is known that the results of the analysis using the SPSS 16 program in the sig normality test of each experimental class and the control class are 0.084, 0.067, 0.063, and 0.072 respectively, which means the sample comes from a population that is normally distributed. Next, a homogeneity test is performed to determine whether the population variance is the same or homogeneous. Following are the homogeneity test results using the SPSS 16 program:

Table 4. Homogeneity test results

Test of Homogeneity of Variances			
Value			
Levene Statistic	df1	df2	Sig.
.030	3	156	.993

Based on the above results it is known that the results of the analysis using the SPSS 16 program on the homogeneity test of sig value 0.993, which means the population has a homogeneous variance. Based on the prerequisite test results that are normality and homogeneity test it is known that the research data is normal and homogeneous. Therefore the statistical test used to test the hypothesis of this study is the t-test. The t-test was used to prove the effectiveness of interactive web technologies in improving students' mastery of Arabic. T-test analysis was also carried out using the SPSS program. The following:

Table 5. T-test results

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Value	Equal variances assumed	.000	.999	-11.443	158	.000	-16.47500	1.43974	-19.31861	-13.63139
	Equal variances not assumed			-11.443	157.999	.000	-16.47500	1.43974	-19.31861	-13.63139

Based on the above results it is known that the results of the analysis using the SPSS 16 program on the t-test obtained a sig (2-tailed) value of 0,000 so that it was concluded that interactive web technology was effective in increasing students' mastery of Arabic at the Islamic State Islamic University of Sumatra.

5. Conclusion

Based on the results of research and discussion, it is known that the results of hypothesis testing with the t-test value of sig (2-tailed) is 0,000, which means that interactive web technology is effective in increasing students' mastery of Arabic at the State Islamic University of Sumatra.

References

- [1] Asyrofi, Syamsuddin, & Pransisca, T. (2019). *Desain Pembelajaran Bahasa Arab (Model, Strategi dan Permainan Edukatif)*. Yogyakarta: Pustaka Ilmu.

- [2] Bransford, J. D. (2000). *How people learn: Brain, mind, experience, and school*. Washington DC: National Academy Press.
- [3] Chen, C. (2012). Research on the learning effects of multimedia assisted instruction using information technology model, 4(3), 84–86. <https://doi.org/10.5897/IJEAPS11.086>
- [4] Costley, K. C. (2014). *The Positive Effects of Technology on Teaching and Student Learning*. Arkansas Tech University kcostley@atu.edu.
- [5] Domingo, M. G., & Gargante, A. B. (2016). Exploring the use of educational technology in primary education: Teachers' perception of mobile technology learning impacts and applications' use in the classroom. *Computer in Human Behavior*, 56, 21–28. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0747563215302387?via%3Dihub>
- [6] Drayton, B., Falk, J. K., Stroud, R., Hobbs, K., & Hammerman, J. (2010). After Installation: Ubiquitous Computing and High School Science in Three Experienced, High-Technology Schools. *Journal of Technology, Learning, and Assessment*, 9(3).
- [7] Gilakjani, A. P., & Sabouri, N. B. (2014). Role of Iranian EFL Teachers about Using Pronunciation Power Software in the Instruction of English Pronunciation. *Journal English Language Teaching*, 7(1), 139–148. <https://doi.org/10.5539/elt.v7n1p139>
- [8] González, G., & Deal, J. T. (2017). Using a creativity framework to promote teacher learning in lesson study. *Thinking Skills and Creativity*, 75. <https://doi.org/10.1016/j.tsc.2017.05.002>
- [9] İşman, P. A. (2012). Technology and Technique: An Educational Perspective. *TOJET: The Turkish Online Journal of Educational Technology*, 11(2), 207–213.
- [10] Kusano, K., Frederiksen, S., Jones, L., & Kobayashi, M. (2013). The Effects of ICT Environment on Teachers' Attitudes and Technology Integration in Japan and the U. S. *Journal of Information Technology Education: Innovations in Practice*, 12.
- [11] Leow, M. F., & Neo, M. (2014). Interactive Multimedia Learning: Innovating Classroom Education in A Malaysian University. *TOJET: The Turkish Online Journal of Educational Technology*, 13(2), 99–110.
- [12] Mahmudi, A., Febriani, S. R., Hasanah, M., & Arifa, Z. (2019). Classroom Management and Arabic Learning Process Based on Multiple Intelligences in Elementary School. *Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, 6(2), 222–237.
- [13] Patel, C. (2013). Use of Multimedia Technology in Teaching and Learning communication skill": An Analysis. *International Journal of Advancements in Research & Technology*, 2(7), 116–123.
- [14] Rahmi, N. (2016). Pengembangan Materi Qawa'id Ai Imla sebagai Penunjang Mata Kuliah Kitabah I (Studi pada Mahasiswa Jurusan PBA Fakultas Tarbiyah IAIN Metro). *Jurnal An-Nabighoh*, 20(01).
- [15] Stark, L., Brünken, R., & Park, B. (2018). SC. *Computers & Education*. <https://doi.org/10.1016/j.compedu.2018.02.003>
- [16] Sugiyono. (2018). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, kualitatif dan R & D)*. Bandung: Alfabeta.
- [17] Suryadi. (2019). Peningkatan Hasil Belajar IPA Melalui Model Pembelajaran Kooperatif Tipe Tebak Kata. *Jurnal Inovatif Ilmu Pendidikan*, 1(1), 15–28.
- [18] van den Bossche, P., Gijsselaers, W. H., & Milter, R. G. (2013). Facilitating learning in the 21st century: Leading through technology, diversity and authenticity. *Facilitating Learning in the 21st Century: Leading Through Technology, Diversity and Authenticity*. <https://doi.org/10.1007/978-94-007-6137-7>
- [19] Walfajri. (2018). Analisis Kesalahan Bahasa Pada Percakapan Bahasa Arab Mahasiswa Jurusan Pendidikan Bahasa Arab (PBA) Institut Agama Islam Negeri (IAIN) Metro. *Jurnal Al - Fathin*, 1(1).
- [20] Whitesman, S., & Mash, R. (2016). Examining the effects of a mindfulness-based distance learning professional training module on personal and professional functioning: a qualitative study. *BMC Medical Education*, 16(1), 1–8. <https://doi.org/10.1186/s12909-016-0810-2>

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