



## Blended Learning, E-Learning and Conventional Learning Methods on Achievement of Grammar, Reading And Speaking Scores As Considering Perspective For English Teaching in Digitalization Era

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### ABSTRACT

The enormity of the world's digitalization wave has given new civilizations to master technology so that it has a major impact on the current digital learning process. This study aims to prove the very significant effect of using blended, electronic and conventional methods on the achievement of students' grammar, reading and speaking scores with IQ control (111-118). The sample was taken from 120 Tarbiyah students of the English Language Study Program at the Fatmawati Sukarno State Islamic University, Bengkulu with groupings of students who had IQs from 111 to 118, so that as many as 30 students of English Tarbiyah were used as research samples. Data analysis techniques used normality and homogeneity tests. They were tested by the Multi Variance Analysis of Covariance (MANCOVA) statistical test. The results of data analysis based on Wilk's Lambda showed a significance value of  $0.00 < 0.05$ , so it can be concluded that there is a very significant effect on the use of blended, electronic and conventional methods on grammar, Speaking and Reading scores simultaneously after controlling for IQ.

**Keywords :** *Blended learning, E-Learning, conventional Learning and IQ*

### Introduction

Digital civilization is a big magnet that is able to attract all walks of life today, without exception the more modern world of education. Sophisticated digital dominance is able to change all teaching systems in the world of education. Digital technologies are gaining prominence and are now ingrained in our everyday lives, workplaces and society. As a multipurpose medium, digital technology is widely used in the field of education to enhance the teaching and learning process in schools and higher education institutions. It has been proven that when digital technology is used in the classroom, students are more motivated to participate in activities that are not only productive but also active and passive than when no technology is used in the classroom. In addition, students who take part in active, productive and interactive activities have better learning outcomes(C. Wekerle, M. Daumiller, and I. Kollar, 2022).

Fundamentally, learning through the digital world also requires a combination with the conventional so that a blended learning method is formed. (Kaye, Thorne, 2013) describes blended learning, namely as a mixture of e-learning and multimedia technologies, including video streaming, virtual classes, online animated text combined with traditional forms of

learning in the classroom. The application of blended learning has more positive impacts on students and teachers. Future research needs to explore blended learning in science learning in elementary schools and what is needed by students, teachers, and technological developments(Herwulan Irine Purnama, Insih Wilujeng, Cepi Safruddin Abdul Jabar, 2023). This method also has weakness, including the time that students have to study is not flexible. Students must study within a certain time limit, so students need several facilities and infrastructure that can help students if they do not understand the learning material properly. The purpose of applying the blended learning method is to make learning more flexible. Of course this is different if you compare it to traditional learning. This method allows students to learn at their own pace. Media and material validation test results show that all media can be used with minor adjustments. Students gave a positive response to the implementation of the Digital Learning Environment (DLE) for online learning in tertiary institutions. Learning tools are essential to increase motivation and achieve course learning outcomes. In the future, the evolution of learning media may be accompanied by the evolution of learning designs (Rahmat Fadhli, Aris Suharyadi, Fery Muhamad Firdaus, Meilina Bustari, 2023).

While the implementation of E-learning, knowledge about the identification and analysis of e-learning service quality uses the service quality method (SERVQUAL) by calculating the score gap between perceived service quality (performance) and expected service quality using website content research, guarantees, empathy.(Theresiawati Theresiawati, Henki Bayu Seta, Artika Arista, 2023). One of the drawbacks of this learning method is the limited access to the internet. If students are in an area that does not get stable internet coverage, it will be difficult for students to access e-learning services, reduced interaction with teachers because the e-learning learning method is one-way. This causes the interaction of teachers and students to decrease so that it will be difficult for us to get further explanation about material that is difficult to understand. Then supervision in learning is of course very minimal due to lack of supervision in conducting online learning which makes e-learning users sometimes lose focus. With easy access, some users tend to procrastinate studying. Self-awareness is needed so that the learning process with online methods is directed and achieves goals. In addition to lecturers' information technology capabilities, new indicators of the effectiveness of online learning in tertiary institutions during the COVID-19 pandemic are the availability of assessment guidelines, semester lesson plan guidelines, academic positions, types of lecturer publications, lecturer certifications, and workload.(Fairusy Fitria Haryani, Sarwanto Sarwanto, Dwi Maryono, 2023).

The application of conventional learning where the learning process is centered on the lecturer, where the role of the lecturer controls most of the presentation of learning or can also be referred to as the lecture method. This method is not very effective so it has weaknesses, namely students become passive, learning is dominated by lecturers and does not get much feedback or tends to be in the same direction, and students do not understand the material presented by lecturers. Factually and fundamentally the teaching process really needs these

three methods, namely blended, e-learning and conventional where these three methods are naturally integrated. It is proven in fact that blended teaching and e-learning cannot be carried out continuously to overcome boredom that occurs in students and can provide variations between the combination of technology and the emotional relationship between lecturers and students so that it will be able to form technology-based character education. Conventional methods affect students' naturalist intelligence, for conventional learning methods in learning are included in the very good category, this can be seen from the data on the results of the distribution of objective tests of 83.6% (Rini Devita1, Cepi Budiyanto, 2022). Research provides a rational picture that these three teaching methods will have a positive impact even with the various weaknesses of each method. With various advantages and disadvantages of each method, these three methods can be applied so that they will create a form of combined method that is integrated in the implementation process. Conventional learning is a teaching stream that is more naturalistic in nature where communication and interaction are formed naturally as a result of direct encounters between lecturers and students even though it is more directed at lecturer centralism, however in essence teaching can create close emotional relationships so as to develop character teaching to students.

Conventional methods are not easily abandoned, therefore this research was conducted in collaboration between the conventional model and the cooperative model. So the collaboration of the conventional-lecture learning model with the cooperative-Make–A Match model is able to improve student learning outcomes (IBRAHIM, 2017). Professional teachers really need to combine blended learning, e-learning and conventional learning methods to make an integrated unit so that they can mutually fulfill the deficiencies contained in each method. Conventional and modern learning techniques will produce learning methods that are tactical, technical, and practical in the form of expository methods, demonstrations, panel discussions and debates, role playing techniques, and simulation techniques. The efficacy, efficiency and quality of modern and traditional learning methods can be measured from these three factors. ( Soeuy Sokpheng and Lin Hok Meng, 2022).

Practically the teaching process will be more varied and the potential between teaching blended learning and e-learning that uses artificial intelligence will become more conceptual when combining it with conventional teaching processes in order to achieve the formation of technology-based students' emotional character. Blended learning, e-learning and conventional learning, teaching methods can be carried out in an integrated manner so that they become a unit that complements the weaknesses of each teaching method.

## **Literature Review**

### **a. Blended learning methode**

Blended learning is a learning approach that combines instructor-led physical classroom training and online learning activities. Some of the advantages of blended learning for students: a safer learning environment, interactive learning processes, student autonomy, better student engagement, better understanding, and detailed analysis. However, this method also has weaknesses, including new skills that must be possessed. by lecturers/teachers/instructors, requires certain digital competencies, needs to create online courses, it is difficult to monitor student progress, (Helga Kolinski, 2022). Technically, blended learning is basically a combination of face-to-face learning with a computer system that is used as a medium to connect teachers and students. (Graham, C., 2006) defines blended learning as follows: “Blended learning systems combine face-to-face instruction with computer-mediated instruction” (Garrison, R. & Kanuka, 2004) define blended learning as “the thoughtful integration of classroom face-to-face learning experiences with online learning experiences. (Wang, Y., Han, X., & Yang, J., 2015) provides an important overview of all the major mixed learning theory frameworks available. The focus is on two frameworks: Complex Adaptive Mixed Learning Systems and Community of Inquiry. Blended learning “is part of the convergence of two archetypal learning environments”(Bonk, C. J. dan Graham,C, 2006) and (O’Connell, A, 2016) to be considered in blended teaching situations include:

1. Reverse class: Reverse class reverses the traditional class structure of listening to lectures in class and completing homework activities at home
2. Rotation model: In this model, students in a subject take turns between various modalities, one of which is online learning.
3. The self-blending model: While most of the blended learning models on this list are at the course level, self-blending is a programmer-level model and familiar to many students.
4. Blended MOOC: Blended MOOC is a reverse form of classroom that uses face-to-face class meetings to complement online courses, students access MOOC materials.
5. Flexible mode courses: Flexible mode courses offer all courses in different modes — in-person and online — and students can choose how to take their course.

The evolution of learning continuously experiences drastic changes from conventional learning to a digitalization system. The upheaval of human civilization to master technology is increasingly developing as a necessity, therefore the process of human and technological adaptation is increasingly becoming a major change, especially changes in the teaching methods applied. Blended learning predates modern learning technologies, its evolution will be closely tied to contemporary information communication technologies that approach several aspects of human thinking processes (Charles Dziuban, Charles R. Graham, Patsy D. MoskaAnders Norberg & Nicole Sicilia, 2018).

The application of blended learning certainly requires a special design that places more emphasis on flexibility so as to provide comfort for students when learning takes place. Implementing a flexible program of study in a mixed learning design, special attention should

be paid to the following educational design principles: adequate course structure and guidance for students, enabling learning assignments, stimulating teacher social interaction and presence, and timely feedback (Claude Müller, Thoralf Mildenberger & Daniel Steingruber, 2023). Although blended learning seems very popular, academics are often concerned about the effectiveness of blended learning for student learning. (Huang, J., Matthews, K. E., & Lodge, J. M., 2021) and educational institutions can only offer and expand blended learning formats if they are confident that students will be able to offer and expand blended learning formats. perform as they would in a conventional classroom (Owston, R., & York, D. N, 2018).

The implementation of blended learning methods is largely determined by the learning design because the learning design illustrates the level of success of this method. Therefore a good design will be an indicator of the success rate of learning with the blended method. (Müller, C., & Mildenberger, T., 2021) examines the impact of replacing class time with an online learning environment. Their meta-analysis of blended learning ( $k=21$  effect sizes) applied strict inclusion criteria regarding study design, measures of learning outcomes, and implementation of blended learning. The blended method is not only limited to its implementation, but this method is expected to adapt to the learning context so that its ability to adapt will make this method survive. (McKenna, K., Gupta, K., Kaiser, L., Lopes, T., & Zarestky, J., 2020) also stated that simply offering a blended learning course is not enough to ensure success; research on blended learning design should, therefore, differentiate specific study contexts to derive practice guidelines from it.

### **b. E-learning methode**

The application of the e-learning method is a basic concept of computer and internet-based learning so that this combination has an impact on the use of technology where students can access learning material, so this learning method is an electronic learning system or e-learning (English: Electronic learning, abbreviated as E-learning). can be defined as a form of information technology applied in the field of education in the form of a website that can be accessed anywhere. Regarding new theoretical perspectives on the concept of comparison standard preferences as well as opportunities for adaptive e-learning.(Marc P. Janson, Jan Siebert & Oliver Dickhäuser, 2022). The development of e-learning teaching systems continues to experience rapid development because it is considered easy to do in several tertiary institutions that have technological equipment so that in recent years, teaching methods at universities have developed and almost all higher education institutions use e-learning platforms to deliver learning activities, for example, developing e-learning learning by creating gamification programs. This program is considered the easiest to get feedback from students about what they have learned so that it has a simple impression of carrying out the learning process while playing. At a certain level, feedback is the most common element used to gamify e-learning systems in higher education. We're also seeing increased use of deeper elements like challenges and

storytelling (Amina Khaldi, Rokia Bouzidi & Fahima Nader, 2023). Various variations of e-learning can be done according to the needs of what will be taught.

The development of e-learning certainly makes a major contribution to the development of pedagogy with the concept of computer technology. The delivery of the e-Learning framework pedagogy with the support of computer-assisted analysis of students' reflective texts coupled with hierarchical visualization of the analysis results is considered positive. The findings of this research contribute pioneering insights into the use of computer-assisted approaches for accurate and efficient evaluation in teacher development courses in e-Learnin.(Siu-Cheung Kong, 2021). With e-learning basically it has convenience for teachers and students who are taught because all subject matter can be accessed easily so that student perceptions are very positive about the use of e-learning and it can also be said that perceived ease of use and perceived usefulness were found to be significant determinants of behavioral intention to use the e-learning system. Ease of e-learning is evidenced by several influencing factors including organizational factors, management support and user training contributing 56.6% together and 30.7 and 25.9% contributing independently to the actual use of the e-learning system learning. On the other hand, the impact of incentives on the use of e-learning systems was not significant (Abinew Ali Ayele, Worku Kelemework Birhanie, 2018).

E-learning is developing accompanied by developments in pedagogy so that we can collaborate simultaneously, so it is necessary to create various e-learning models that are adapted to the current situation and conditions. Five main packages: learner model, adaptation model, reuse facility, learner interface and pedagogical knowledge. Experiments are conducted to validate the proposed architecture. The results obtained illustrate the optimal composition of e-learning personalization components through an example.(Sameh Ghallabi, Fathi Essalmi, Mohamed Jemni & Kinshuk, 2022). Various e-learning models also aim to understand the relationship of the key factors that influence the effectiveness of being developed.

This model categorizes these factors from three perspectives: the context in which the e-learning solution is used, the artifact (the e-Learning solution itself) and the individual who uses the artifact. It was found that support and resources, individual motivation and prior experience as well as interactions between the artifacts and the individuals using them all influence effectiveness (Signe Schack Noesgaard1, and Rikke Ørnsgreen, 2015). History records that since the onset of COVI-19, e-learning has made a major contribution to the continuity of the world of education, but there is nothing wrong with the e-learning system still being used today. Closely related to the current growth in digitalization, it certainly provides an excellent collaboration to be used as a digital e-learning learning model. The eLearning sector has benefited immensely from the evolution of study habits and increased interest. The following eLearning trends will lead to new and smarter learning methods.(Manu Sharma, 2022).

### c. Conventional Learning method

The role of conventional learning still contributes to the world of education even though the development of digital technology is increasingly widespread. Even though there are many shortcomings, this conventional learning model is still needed, considering that this model is quite effective in providing understanding to students at the beginning of learning activities. Conventional learning basically remains the main foundation for the development of other learning methods. This shows that conventional is still needed in certain contexts. Increased interest in learning by using conventional learning media. The use of conventional media is applied because modern learning media cannot be done. Even so, student learning interest in participating in education learning improved. (T Heru Nurgiansah, 2022).

The transformation of conventional learning continues along with digital developments. Digitization is a socio-technological process that is based on the application of digital techniques in a wider institutional social form than just converting analog information into digital information. (Bican, P. M., & Brem, A, 2020) The development of technology and communication has influenced various industrial sectors, one of which is the education sector. The provision of education continues to develop, where after a long time being introduced to conventional face-to-face learning methods, it is currently developing and transforming towards online or virtual education..(Rita Dewi Risanty, Jumail, Muhaemin, Muhammad Kheamal, 2022). In higher education, one commonly used teaching approach intended to foster deep learning is the 'Oxford' tutorial—a personalized Socratic approach in which an instructor discusses course-related issues with a handful of students.

Although this conventional tutorial model is well supported in the literature, it may be neglected by research-oriented academics and is expensive to operate.(Paul Tristen Balwant andRoshnie Doon, 2021). Advantages of conventional learning methods: 1. Various information that is not easily found elsewhere 2. Conveys information quickly. 3. Arouse interest in information. 4. Teach students the best way to learn is to listen. 5. Easy to use in the learning process. Several advantages of conventional learning can be used as a basic foundation for developing conventional to digital transformation. Conventional and modern learning techniques will produce tactical, technical and practical learning methods in the form of expository methods, demonstrations, panel discussions and debates, role playing techniques and simulation techniques. The efficacy, efficiency and quality of modern and traditional learning methods can be measured from these three factors.(Soeuy Sokpheng and Lin Hok Meng, 2022b)

## Method

The use of MANCOVA in this research is two independent variables, one with a qualitative data scale (category) and the other with a quantitative (numerical) data scale. This test is part of parametric statistics where the assumptions of normality and homogeneity must be met. The

purpose of MANCOVA is to determine whether there are differences in the means. Statistically reliable means can be demonstrated between groups then modifying the newly created variable. When random assignment of samples or subjects to groups is not possible, multivariate analysis of covariance (MANCOVA) provides statistical matching of groups with adjustment of the dependent variable as if all subjects received the same score the same on the covariates (G Mokesh Rayalu, J Ravisankar and G Y Mythili, 2017). Data management using the MANCOVA technique with the SPSS program. 26 provides accurate results. Multivariate Analysis of Covariance (MANCOVA) and Analysis of Variance (ANOVA) were applied to test the primary and secondary hypotheses, respectively. The data obtained was analyzed using statistics such as mean and standard deviation, as well as Multivariate Analysis of Variance (MANCOVA) in SPSS (Zeinab Hajikhaniyan, Ali Nazeri Astaneh, Gita Sadighi and Reza Koushkestani, 2020). The population is 120 students in English language training and then selected based on the results of grouping students who have an IQ category between 111-118. The data collection technique calculates all grammar, reading and speaking scores using the respective learning methods of blending learning, e-learning and conventional learning by controlling student IQ. These values are the post test and pretest scores for both the experient class and the control class. All data have been confirmed to be normally distributed and homogeneous, so data calculations can be continued with the Multivariate Analysis of Variance test using the SPSS program.26.

## Result and Discussion

This research is part of parametric statistics, so the normality and homogeneity assumption tests must be fulfilled. The number of samples in this study was 30 students so it was  $<50$ , so the guidelines for determining normality use Shapiro-Wilk as shown in table 1 below.

Table 1. Test of Normality

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Residual for Grammar	,054	90	,200*	,990	90	,746
Residual for Reading	,079	90	,200*	,982	90	,265
Residual for Speaking	,087	90	,086	,982	90	,235

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the table above it can be concluded that data is normally distributed. 3. It is concluded based on the Tests of Normality table: - Residual value for Grammar sig = 0.746 means that sig value  $0.746 > 0.05$  means normal distribution. - Residual value for Speaking sig

= 0.51 means sig value 0.265 > 0.05 means normal distribution - Residual value for Reading sig

= 0.235 means that sig value 0.235 > 0.05 means normal distribution. Then, to fulfill the homogeneity assumption test or not, you can use the guidelines from . Levene's Test of Equality of Error Variances as depicted in table 2 below

Table 2. Levene's Test of Equality of Error Variances<sup>a</sup>

Levene's Test of Equality of Error Variances				
	F	df1	df2	Sig.
Grammar mark	5,267	2	87	,07
Reading Mark	2,567	2	87	,083
Speaking mark	1,979	2	87	,144
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.				
a. Design: Intercept + Methode + IQ				

Based on the table above, it shows that the grammar score using the three learning methods, namely blended learning, e-learning and conventional learning, has a total average of 79.62 with a total standard deviation of 4.284. Likewise, the reading value has an average value of 76.99 with a standard deviation of 10.721. Then the average value of Speaking is 76.86 with a standard deviation of 3.701

Table.3 Descriptive Statistics

Descriptive Statistics				
	Learning Method	Mean	Std. Deviation	N
Grammar Mark	Blended Learning	81,27	3,513	30
	E-learning	82,63	2,553	30
	Conventional learning	74,97	1,691	30
	Total	79,62	4,284	90
Reading Mark	Blended Learning	80,83	11,603	30
	E-learning	73,93	8,820	30
	Conventional learning	76,20	10,711	30
	Total	76,99	10,721	90
Speaking	Blended Learning	79,80	3,605	30

Mark	E-learning	76,43	2,738	30
	conventional learning	74,33	2,412	30
	Total	76,86	3,701	90

Based on the table above, it shows that the grammar score using the three learning methods, namely blended learning, e-learning and conventional learning, has a total average of 79.62 with a total standard deviation of 4.284. Likewise, the reading value has an average value of 76.99 with a standard deviation of 10.721. Then the average value of Speaking is 76.86 with a standard deviation of 3.701.

**Table 5. Multivariate Tests<sup>a</sup>**

Multivariate Tests <sup>a</sup>						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	,174	5,907 <sup>b</sup>	3,000	84,000	,001
	Wilks' Lambda	,826	5,907 <sup>b</sup>	3,000	84,000	,001
	Hotelling's Trace	,211	5,907 <sup>b</sup>	3,000	84,000	,001
	Roy's Largest Root	,211	5,907 <sup>b</sup>	3,000	84,000	,001
IQ	Pillai's Trace	,160	5,338 <sup>b</sup>	3,000	84,000	,002
	Wilks' Lambda	,840	5,338 <sup>b</sup>	3,000	84,000	,002
	Hotelling's Trace	,191	5,338 <sup>b</sup>	3,000	84,000	,002
	Roy's Largest Root	,191	5,338 <sup>b</sup>	3,000	84,000	,002
Learning Method	Pillai's Trace	1,001	28,407	6,000	170,000	,000
	Wilks' Lambda	,212	32,785 <sup>b</sup>	6,000	168,000	,000
	Hotelling's Trace	2,707	37,443	6,000	166,000	,000
	Roy's Largest Root	2,262	64,087 <sup>c</sup>	3,000	85,000	,000
a. Design: Intercept + IQ + M_Learning						
b. Exact statistic						
c. The statistic is an upper bound on F that yields a lower bound on the significance level.						

Based on the results of the Multivariate Test calculation, the test criteria are: if the significant value is  $<0.05$  then it can be interpreted that there is a significant influence and if the significant value is  $>0.05$  then it is interpreted that there is no significant influence on the learning method used on the grammar value , student reading and speaking by controlling the student's IQ between 111 and 118. Based on table 5, the output from the Multivariate test table can be seen in Wilk's Lambda where the value is 0.212 with a significance level of 0.00. The data shows that the significance value is  $0.00 < 0.05$ , meaning this value is less than 0.05, so it can be interpreted that there is a significant influence of the application of blended learning, e-learning and conventional learning methods on grammar, speaking and reading scores overall simultaneously or together after controlling for IQ.

## Conclusion

The results of calculations on the Multivariate test which can be seen on Wilks'Lambda show that the significance value is 0.00, so this significance value is less than 0.05, thus proving that blended learning, e-learning and conventional learning methods have an effect on grammar, Speaking scores and students' reading simultaneously after controlling for IQ.

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