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THE EFFECT OF HYBRID LEARNING METHOD ON THE EFFECTIVENESS OF ISLAMIC RELIGIOUS EDUCATION LEARNING

Ahmad Khumaidi*¹, Kustiana Arisanti²
 Zainul Hasan Genggong Islamic University, Probolinggo, Indonesia
 e-mail: 1adi765316@gmail.com , 2kustiana.arisanti82@gmail.com

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*Corresponding author

Abstract

Hybrid learning is a learning method that combines online and conventional learning. The initial definition of this theory was put forward by Graham, namely the combination of face-to-face learning with computer-based (online) learning. The COVID-19 pandemic that hit the world several years ago has had a significant impact on people's lifestyles, one of which is in the field of education. With the social distancing restrictions implemented by the government, distance learning (online classes) has been echoed, causing culture shock in society. Concerns about the effectiveness of home learning have also been questioned, will it provide a positive contribution to students or will it actually make learning passive and ineffective. This study aims to determine whether there is an effect of hybrid learning on learning effectiveness and how significant that influence is. Therefore, this study uses quantitative methods to obtain precise and accurate results on the relationship between hybrid learning and learning effectiveness. The benefits of this study are to add references on hybrid learning and learning effectiveness and provide input for schools to consider in making policies, especially in Islamic Religious Education (PAI) learning. The results of the questionnaire distributed to students obtained an R value (correlation) of 0.451 and an R square value of 0.203. Therefore, there is a 45.1% correlation between variables X and Y, with variable X influencing variable Y by 20.3%. Therefore, it can be concluded that the hybrid learning method has a positive and significant influence on the effectiveness of Islamic Religious Education learning at Probolinggo 1st State Senior High School (SMAN).

Keywords: *Blended learning; Hybrid Learning; Learning Effectiveness.*

Abstrak

Hybrid learning merupakan metode pembelajaran yang memadukan pembelajaran secara online dan konvensional. Definisi awal tentang teori ini dikemukakan oleh Graham, yaitu penggabungan pembelajaran tatap muka dengan pembelajaran via



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komputer (online). Adanya pandemi covid-19 yang melanda dunia beberapa tahun yang lalu berdampak pada perubahan yang signifikan pada pola kehidupan masyarakat, salah satunya di bidang pendidikan. Dengan adanya pembatasan sosial (social distancing) yang diterapkan pemerintah sehingga pembelajaran jarak jauh (online class) pun di gaungkan, menyebabkan culture shock di tengah masyarakat. Kekhawatiran tentang efektivitas pembelajaran dirumah pun di pertanyakan, akankah memberikan kontribusi positif terhadap siswa atau justru membuat pembelajaran menjadi pasif dan tidak efektif. Penelitian ini bertujuan untuk mengetahui adakah pengaruh hybrid learning terhadap efektivitas pembelajaran dan seberapa besar pengaruhnya, maka penelitian ini menggunakan metode kuantitatif untuk dapat mengetahui hasil yang tepat dan akurat pada hubungan hybrid learning dan efektivitas pembelajaran. Manfaat dari penelitian ini adalah untuk menambah referensi tentang hybrid learning dan efektivitas pembelajaran serta memberikan sumbangan pemikiran untuk pertimbangan sekolah dalam mengambil kebijakan khususnya pada pembelajaran PAI. Hasil pengujian angket yang disebar pada siswa, didapatkan nilai R (korelasi) sebesar 0,451 dan nilai R square sebesar 0,203. Jadi antara variabel X dan Y memiliki hubungan sebesar 45,1% dan variabel X mempengaruhi variabel Y sebesar 20,3%. Maka dapat disimpulkan bahwa terdapat pengaruh yang positif dan signifikan metode hybrid learning terhadap efektivitas pembelajaran PAI di SMA Negeri 1 Probolinggo.

Kata Kunci: Pembelajaran Campuran; Pembelajaran Hibrida; Efektivitas Pembelajaran.

INTRODUCTION

Hybrid in Indonesian means a combination or blending. Hybrid learning can be interpreted as a combination of two learning methods, or in this case, the combination of conventional learning methods with e-learning or web-based learning, video streaming, synchronous and asynchronous audio communication, and conventional face-to-face learning (Abualadas & Xu, 2023; Ajagbe et al., 2023; Rajaram, 2023). This method is a breath of fresh air for students who have grown weary of the passive learning environment at home and the unsupportive environment, which is thought to reduce the effectiveness of their learning.

The development of information and communication technology has brought significant changes in the world of education, especially in the learning process in schools (Darojat & Faishol, 2023; Fawaid et al., 2024). Digital transformation has encouraged the emergence of various innovative learning methods, one of which is the hybrid learning method, which combines face-to-face learning with online learning (Buhl-Wiggers et al., 2023; Gudoniene et al., 2025; Hermita et al., 2024; Qamar et al., 2024; Teoh et al., 2025). This method has become increasingly relevant

following the covid-19 pandemic, which has forced the education system to adapt to flexible learning models.

In the context of Islamic Religious Education (PAI) learning at State Senior High School (SMAN) 1 Probolinggo, the challenges faced are not only related to the delivery of material, but also the instilling of moral and spiritual values in student. So far, Islamic Religious Education learning tends to still use conventional methods that are centered on teachers, thus the providing less space for active interaction use of technology.

The implementation of the hybrid learning method is expected to increase the effectiveness of Islamic Religious Education (PAI) learning by combining the advantages of in-person and digital learning. Student not only gain cognitive knowledge but also gain flexible access to materials, increasing their learning engagement. However, the implementation of this method at the secondary school level, particularly at SMAN 1 Probolinggo, still requires empirical research to determine its impact on learning effectiveness.

This research has a high level of urgency based on several considerations, including, *firstly*, the world of education is currently required to follow digital developments so that the learning process remains relevant to the needs of the times. Islamic Religious Education learning emphasizes not only cognitive aspects but also affective and psychomotor aspect, thus requiring more effective and varied methods. *Second*, although hybrid learning methods have been widely implemented, their effectiveness in the context of Islamic Religious Education learning still requires specific study. *Third*, flexible learning models are essential to address uncertain situations, such as the post-pandemic era and the development of educational technology.

The novelty of this research is that it specifically examines the applications of hybrid learning methods in Islamic Religious Education, which is still relatively limited compared to other general subjects. This study was conducted at State Senior High School 1 Probolinggo, providing a concrete, contextual overview of hybrid learning implementation in secondary schools. This research not only measures cognitive learning outcomes but also encompasses affective aspect and student participation. This study highlights how religious values can be affectively instilled through a technology-based approach and examines how hybrid learning can be implemented in a post-Covid-19 educational context, making it relevant to current educational conditions. Therefore, this research is important to analyse the influence of the hybrid learning method on the effectiveness of Islamic Education learning, so that it can be contribute to the development of more adaptive and innovative learning strategies.

RESEARCH METHODS

The quantitative approach aims to demonstrate relationships between variables, test theories, and seek generalizations that have predictive value. Research designs using a quantitative approach are specific, clear, and detailed, firmly defined, and serve as a guide for each step of the research (Almusaed et al., 2025; Creswell, 2023; Kittur, 2023; Lim, 2025; Sugiyono, 2014, 2016). This study aims to test the effect of variable X (hybrid learning) on Y (student learning effectiveness). Simple linear regression analysis techniques were used to analyze the effect of each variable, through the following hypothetical assumptions:

Ho: There is no positive and significant influence between the hybrid method and learning effectiveness.

There is a positive and significant influence between the hybrid method and learning effectiveness. This research was conducted at Probolinggo 1st State Senior High School (SMAN 1) on Jl. Raya Maron, Dusun Krajan II, Maron District, Probolinggo Regency, East Java Province. The study population consisted of all students of Probolinggo State Senior High School in the 2021/2022 academic year. The sample used in this study was area/cluster sampling, which is a sampling technique that selects sample members from the population by selecting one area to be studied and considered representative of the population.

The sampling technique used is the Slovin formula.

$$n = \frac{N}{1 + n(e)^2}$$

With the results of this calculation, a value of 46 was obtained, so the number of respondents in this study was 64 people taken from 2 classes, namely the tenth class of Mathematics and Natural Science department one or called "X MIPA 1" with 36 people and X BB with 28 people.

RESULTS AND DISCUSSION

Validity Test

Table 1. Validity test

Variables	Item	R Table	r Count	Information
Hybrid Learning	X1	0.246	0.321	Valid
	X2	0.246	0.597	Valid
	X3	0.246	0.532	Valid
	X4	0.246	0.521	Valid
	X5	0.246	0.503	Valid
Learning Effectiveness	Y1	0.246	0.512	Valid
	Y2	0.246	0.444	Valid

Y3	0.246	0.495	Valid
Y4	0.246	0.556	Valid
Y5	0.246	0.538	Valid

Reliability Test

The instrument's reliability of this research was tested using internal consistency testing, which involved a single trial of the instrument. Cronbach's alpha was used in this study.

Table 2. Reliability test

Reliability Statistics X		Reliability Statistics Y	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
.572	5	.448	5

From the test results above, the Cronbach's Alpha X value is 0.572 and Y is 0.448, so it can be concluded that both are reliable with a moderate reliability category.

Normality Test

The normality test used in this study is the Shapiro-Wilk test. with normality testing with a significance level (α) = 0.05 with the following decision criteria:

- 1) If the significance value is 0, then the residual values of variables X and Y are normally distributed. $> 0,05$
- 2) If the significance value is 0, then the residual values of variables X and Y are not normally distributed. $< 0,05$.

Table 3. Normality test

Tests of Normality			
Shapiro-Wilk			
	Statistics	df	Sig.
Hybrid Learning	.964	64	.056
Learning Effectiveness	.939	64	.105
a. Lilliefors Significance Correction			

Based on the normality test above, the significance value of X is 0.56 and Y is 0.105, so it can be concluded that the residual values of variables X and Y are normally distributed.

Regression Analysis

The basis for decision making in a simple linear regression test can refer to 2 things, namely: comparing the significance value with the probability value of 0.05

1. If the significance value means that variable X has an effect on variable Y < 0,05
2. If the significance value means that variable X has no effect on variable Y > 0,05

Table 4. Regression Analysis

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75,494	1	75,494	15,821	.000b
	Residual	295,845	62	4,772		
	Total	371,339	63			
a. Dependent Variable: Learning Effectiveness						
b. Predictors: (Constant), Hybrid Learning						

From the output, it is known that the calculated F value = 15.821 with a significance level of $0.000 < 0.05$, so the regression model is used to predict or in other words there is an influence of variable (X) on variable (Y).

Coefficient of Determination (Adjusted R²)

Table 5. Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.451a	.203	.190	2.18442
a. Predictors: (Constant), Hybrid Learning				

The table above explains that based on the correlation/relationship value (R) which is 0.451. From the output, the coefficient of determination (R Square) is 0.203, which means that the influence of the independent variable (Hybrid Learning) on the dependent variable (Learning Effectiveness) is 20.3%.

Hypothesis Testing (t-test)

Tabel 6. Hypothesis Testing

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	8,038	1,333		6,028	.000
1 Hybrid Learning	.407	.102	.451	3,978	.000

a. Dependent Variable: Learning Effectiveness

The basis for decision making in the t test is if the significance value is less than 0.05 then it is stated that there is an influence of variable X on variable Y, if the significance value is more than 0.05 then variable X has no influence on variable Y. The second basis for decision making is if the calculated t value > t table then it is stated that there is an influence of variable X on variable Y, it can be seen in the calculated t value table: 3.978 and based on the t table for 64 respondents with a significance value of 10%, namely 2.654. then it can be concluded that there is an influence of variable X on variable Y.

Hybrid Learning

Hybrid learning is a combination of two English terms: "Hybrid" and "Learning." The word "Hybrid" means "mixed," while "Learn" means "learning." Its basic meaning is "blended learning," so it can be said combines various learning methods. The experts agree that the term "Hybrid Learning" represents a combination of conventional and online learning, also known as "Blended Learning."

An influential early definition was Graham, who proposed that "Blended learning systems combine face-to-face instruction with computer-mediated instruction (Graham, 2006). This view was then challenged by Friesen, who suggested the need to redefine 'face-to-face' (F2F) as 'co-present' or present together. For Friesen, "Blended learning" demonstrates the possibilities presented by combining the Internet and digital media with established classroom formats that require the physical co-presence of teachers and students (Lakhal & Meyer, 2020; Mintii, 2023).

Thorne describes blended learning as: "It represents an opportunity to integrate the innovative and technological advances offered by online learning with

the interaction and participation offered in the best traditional learning" (Sjukur, 2012; Thorne, 2003). Thus, it can be interpreted as an opportunity to integrate the innovation and technology offered by online learning with the interaction and participation of conventional learning.

Bagi Krasnova, hybrid learning dapat didefinisikan sebagai "Method of teaching that combines the most effective face-to-face teaching techniques and online interactive collaboration, both constituting a system that functions in constant correlation and forms a single whole" (Krasnova, 2015). From the several definitions of the experts above, it can be concluded that *Blended/Hybrid learning* is a combination of 2 learning methods, namely learning *on line* and face-to-face learning. This is expected to help students learn better and more easily, as they not only receive learning materials at school but also have the freedom to seek out other resources online or outside of school.

Graham classifies *Blended learning* into 3, namely according to dimension, level and type. According to dimension, there are 4: (Graham, 2006)

1. Space (face-to-face/virtual)
2. Time (synchronous/asynchronous)
3. Accessibility (all senses, multiple senses, text only)
4. Human (Human only, human and machine, machine only.)

Blended learning according to type are as follows; general, courses, programs, and institutions. Meanwhile, according to its category, blended learning is classified as follows (Bryan & Volchenkova, 2016):

- 1) Enabling blends (focus on access and flexibility)
- 2) Enchanging blends (focuses on combining traditional pedagogy)
- 3) Transformative blends (focus on pedagogical change).

The learning theory underlying *Hybrid Learning* is a constructivist learning theory. The concept of constructivist learning theory that guides students to construct their knowledge from their own learning experiences is seen as an active process. Students are given the opportunity to engage in activities that allow them to apply information management and understanding, as well as concepts from learning materials, in a more integrated manner. Furthermore, blended learning also adopts behaviorist learning theory, where students are expected to improve their learning abilities through practice with rapid feedback.

The following is a table of the percentage of web usage in each learning method (Yu & Peng, 2023):

Table 5. The percentage of web usage in each learning method

<i>Percentage of Web-based teaching materials</i>	<i>Method</i>	<i>Description</i>
0%	Traditional	Learning without utilizing online facilities, learning devices are brought into the classroom, and is face-to-face based.
1-29%	Web Facilitated	Utilizing the Web to improve learning comprehension and collect assignments
30-79%	Blended/Hybrid	The learning process uses a combination of face-to-face and online, the portion of online learning is larger and there are many discussions.
100%	Online class/E-learning	The entire learning process is carried out online, there is no face-to-face meeting.

Blended learning activities have advantages according to Husamah (2014):

1. Learning occurs independently and conventionally, both of which have advantages that can complement each other.
2. More effective and efficient learning
3. Improving accessibility
4. Students are free to study learning materials independently using materials available on the internet.
5. Students can hold discussions outside of face-to-face hours.

From the explanation above, we can see that the hybrid learning method holds considerable promise for the continuity of education during these challenging times of social restrictions, and even for the future development of Indonesian education in technological era demands that its people are not technologically illiterate, especially regarding education itself.. These opportunities are wide open due to rapid technological advancements and changing student learning habits.

Learning Effectiveness

Effectiveness comes from the root word "*effective*." The word "*effective*" comes from the English word "*effective*," meaning success or success. Popular scientific

dictionaries define effectiveness as appropriate use, effectiveness, or support for goals. According to the Big Indonesian Dictionary, the word "*effective*" means effect, influence, consequence, or bringing about results. Therefore, the meaning of "*effective*" is activeness, effectiveness, and the appropriateness of a person's activities to meet the intended goals.

Effectiveness is a measure of the extent to which a plan can be achieved. The more that can be achieved, the more effective the activity. Effectiveness can also be defined as the level of success achieved. Therefore, it can be concluded that a learning medium is effective when it meets the criteria of being able to influence, change, and produce results.

As for the criteria/measures regarding whether the achievement of objectives is effective or not, as put forward by Siagian (2008):

- 1) Clarity of the objectives to be achieved, so that in its implementation it can achieve organizational goals and targeted targets.
- 2) Clarity of strategy to achieve goals, in making various efforts to achieve the specified targets so as not to get lost in achieving organizational goals.
- 3) A solid policy analysis and formulation process, related to the objectives to be achieved and the strategies that have been determined, means that the policy must be able to bridge the objectives with efforts to implement operational activities.
- 4) Careful planning, preparation of appropriate programs, a good plan still needs to be explained in appropriate implementation programs because if not, the implementers will lack of guidelines for acting and working.
- 5) Availability of work facilities and infrastructure, an indicator of organizational effectiveness is the ability to work productively
- 6) Effective and efficient implementation, no matter how good a program is, if it is not implemented effectively and efficiently, the organization will not achieve its goals.
- 7) A monitoring and control system that is educational in nature, considering the imperfect nature of humans, organizational effectiveness requires a monitoring and control system.

Hamalik stated that effective learning is learning that provides students with opportunities for independent learning or extensive activities. Providing opportunities for independent learning and extensive activities is expected to help students understand the concepts being studied (Hamalik, 2001).

According to Supardi, effective learning is a structured combination that includes human resources, materials, facilities, equipment and procedures aimed at changing student behavior in a positive and better direction according to the

potential and differences that students have to achieve the learning objectives that have been set (Supardi, 2013). Based on this opinion, learning effectiveness can be interpreted as a measuring tool for success or the achievement of a learning objective.

In another opinion, Vygotsky argued that social interaction experiences are crucial for the development of thinking skills. Therefore, to support effective learning, not only providing materials and facilities but also social interaction is essential.

John Carroll, a renowned psychologist in the field of educational psychology, in his book entitled "*A Model of School Learning*", stated that instructional effectiveness depends on five factors: 1) Attitude; 2) Ability to understand instruction; 3) Perseverance; 4) Opportunity; 5) Quality of instruction (Rohmawati, 2015).

Based on the explanation above, we can see that many factors contribute to effective learning. Effective learning occurs when students demonstrate a strong desire and willingness to learn, students and teachers are prepared for learning activities, positive interactions between teachers and students, and the quality of the material presented. When these factors are met, learning activities will be effective, students will understand the material well, and their learning outcomes will improve. This will ultimately lead to the achievement of educational goals.

CONCLUSION

The implementation of hybrid learning was effective in the experimental classes, namely class X MIPA 1 and BB. They used Google Classroom, limited face-to-face learning, and various supporting media for the learning process. The implementation of hybrid learning was not without several obstacles, including the lack of socialization to students about the use of social media, limited learning time, and limited internet access. However, overall, the implementation of hybrid learning has been quite successful. This is demonstrated by the results of the questionnaire distribution, which showed positive and significant results.

The results of the t-test calculations are: 3,978 is greater than the total t table for 64 respondents with a significance of 10%, so it can be concluded that there is a positive influence *Hybrid Learning* on the effectiveness of Islamic Education learning at SMAN 1 Probolinggo

From the results of the regression calculation test, the number can be seen. The R value (correlation) is 0.451 and the R square value is 0.203. It can be concluded that there is a relationship between variables X and Y of 45.1% and variable X influences variable Y by 20.3%.

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0097

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