

Analysis Hybrid Learning on Learning Motivation Students and Mental Disorders as Moderator Variables During COVID-19

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Received: June 29, 2023
Revised: August 12, 2023
Accepted: August 25, 2023
Published: August 31, 2023

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DOI: [10.29303/jppipa.v9i8.4847](https://doi.org/10.29303/jppipa.v9i8.4847)

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Abstract: Social distancing and physical distancing because off COVID is impact on education policy to implementation hybrid learning. Due to activities and interactional social relationships during COVID causes students sustain mental disorders and low learning motivation. The purpose is analyzing the effect of hybrid learning on learning motivation and mental disorders as moderator variables. Research subjects is 68 students of Daruul Hijri SDIT and use purposive sampling. The method used is MRA analysis through interaction, absolute difference and residual tests. The results are (1) $T_{value} > T_{table}$ $3,439 > 1,996$ and sig $0.001 < 0.05$ which means hybrid learning has significant effect on learning motivation (2) $-2.203 < -1.996$ and sig $0.031 < 0.05$ which means hybrid learning (after added mental disorder) has negative and significant effect. (3) $2.624 > 1.996$ and sig $0.011 < 0.05$ which means hybrid learning has significant effect on mental disorders, (4) $-2.354 < -1.996$ and sig $0.022 < 0.05$ which means mental disorder has negative effect and significant, (5) $R^2 X \text{ on } Y = 0.152$ while $R^2 X \text{ on } Y, Z$ as moderator variable = 0.331 means variable Z strengthens the influence dependent and independent variables, (6) On absolute difference test, coefficient ZX-ZZ is (-0.441) which means variable Z moderates X and Y, (7) On residual test, $(-3.687) < (-1.996)$ and sig $0.000 < 0.05$, which means variable Z moderates between X and Y. The conclusion is based on results hybrid learning that runs effectively can reduce the risk of mental disorders and increase learning motivation.

Keywords: Hybrid learning; Learning motivation; Mental disorder

Introduction

The pandemic outbreak that has hit the world has caused activities outside the home to be limited. The global health system and economy are governed by comprehensive and unified policies (Campos & Reich, 2019). The government policy which requires social and physical distance in community activities both economically and in the whole line of life. For example, religious activities are limited, work activities are limited, and learning activities must adapt to new patterns online. Therefore, the presence of COVID-19 has formed a new pattern in learning, working and other activities based on the use of technology. Learning is an important aspect in the Human Development Index (DPI) by paying attention to fundamental aspects like

emosional until spiritual Another policy is SE No. 4 of 2020 as a problem solving in maintaining the quality of the nation's next generation (Kartikasari et al., 2018). The effective way is online learning that collaborates between HR and technology (Baety & Munandar, 2021). Thus, quality of education can be maintained with collaborative steps.

This online learning is considered an effective measure in the transmission of COVID-19 (Maria et al., 2021). Various communication media platforms are used to transmit knowledge from teachers to students (Batista et al., 2021). For example, learning by teleconference through Google Meet, Zoom and other social media applications. Even both teachers and students create knowledge content that is uploaded to the youtube channel as a learning medium (Saurabh & Gautam,

How to Cite:

Haetami, H. (2023). Analysis Hybrid Learning on Learning Motivation Students and Mental Disorders as Moderator Variables During COVID-19. *Jurnal Penelitian Pendidikan IPA*, 9(8), 6648-6658. <https://doi.org/10.29303/jppipa.v9i8.4847>

2019). Online learning is able to provide a balance of quality with the era of technological disruption (Gopal et al., 2021). Even both teachers and students create knowledge content that is uploaded to the youtube channel as a learning medium. Online learning is able to provide a balance of quality with the era of technological disruption (Wargadinata et al., 2020). Thus, the world of ICT-based education has provided massive convenience for students, teachers and parents.

Kemdikbudristek issued a limited face-to-face learning (PTM) regulation for the 2021/2022 academic year. The conditions that must be met are that the school must be in a green zone (safe). Face-to-face learning as an evaluation of online learning which is considered less effective. In this adaptation process, several schools apply a hybrid learning method (Mucshini & Siswandari, 2020). One example is SD IT Darul Hijri in Dramaga, Bogor. Hybrid learning activities have been carried out since the beginning of the 2021/2022 school year. So, the application of hybrid learning is an effective step to maintain the quality of knowledge transfer.

The reduced activities and interactional social relationships during the learning process cause students to be less motivated to learn, to lose enthusiasm for learning, and to be disciplined in their responsibility tasks from school (Dewantara & Nurgiansah, 2020). Online learning eliminates time and distance with technology without any physical interaction done at home and lack of absorption of subject matter (Garlinska et al., 2023). Other problems that arise are access to electricity, internet access, availability of mobile phones, computers, managerial ability to stack tasks, facilities and infrastructure (Kumar et al., 2019). So, hybrid learning affects students' learning motivation during the COVID-19 pandemic.

Based on previous research, it was explained that the hybrid learning and blended learning models showed a positive influence on students's learning motivation (Ibrahim & Nat, 2019). This research is supported by the application of a hybrid learning model at SMP PGRI 2 Denpasar that can increase motivation and learning outcomes by changing the average motivation score and student learning outcomes tests (Ross et al., 2018). Subsequent research shows the effect of hybrid learning on student learning outcomes in science subjects. Hybrid learning has a significant effect on learning outcomes (cognitive) in Islamic religious subjects. Another study stated that there was a significant effect of Hybrid Learning on Islamic Religious Education learning outcomes for students of class XI OTKP SMK Muhammadiyah 1 Kalianda. The process of implementing hybrid learning is running effective.

The environment and policies that continue to adapt to COVID-19 emergencies, students experience

mental health problems due to stress (Schwartz et al., 2021). As an illustration, the limitation of students to do activities outside will reduce the opportunity to socialize and play which results in an uncomfortable feeling. An expert in Child and Family Science, that 47% of Indonesian children feel bored at home, 35% are worried about missing lessons, 15% of children feel insecure, 20% of children miss their friends, and 10% of children are worried about the family' economic. The same thing happened in China, in the JAMA Pediatrics Journal, 2.33 students who were quarantined due to COVID-19 showed symptoms of emotional stress as much as 22.6% were depressed and 18.9% suffered from anxiety disorders. One of the cases that occurred in Gowa, South Sulawesi, a 16-year-old student with the initials MI committed suicide after complaining of poor internet signal for online learning and piling up assignments. Therefore, students are a vulnerable group that must be considered for mental health problems that affect their learning motivation (Campbell et al., 2022).

As it is known that policies in the field of education have been revised many times (Bagwasi, 2019). The existence of restrictions and the process of adapting to new values during the COVID-19 pandemic requires efforts for student resilience and resistance so that learning motivation is maintained (Pokhrel & Chhetri, 2021). Previous research describes how hybrid learning affects students's learning motivation. While this study shows analysis and novelty on the trend of problems that occur in students, namely mental disorders. Thus, this study aims to analyze the effect of hybrid learning on learning motivation and mental disorders as a moderator variable and to find novelty.

Method

This study aims to investigate the phenomena and realities that occur in educations using quantitative research methods. Based on the background, this study emphasizes the education adjustment to changes in implementation of the hybrid learning system during COVID-19 and the projection of changes stakeholders. The involvement of the identification of attributes and the meaning of phenomena that occur based on observations and correlates the relationship between two or more phenomena (Bradshaw et al., 2017). The data analysis technique used is narrative analysis which refers to the study of the humanities through information from informants processed briefly and scientifically in the form of narrative writing based on chronological systematics.

The Moderated Regression Analysis (MRA) method is a regression model that uses a moderator variable. According to Söderlund (2023), the moderating variable is the variable which will strengthen or weaken

the relationship between the variables independent of the dependent variable. Then, to find out whether there is a moderator variable, there are 2 methods which is often used, namely the analysis of sub-groups (sub-groups). This method is used to determine impact hybrid learning and learning motivation where mental disorder is a moderating variable during the COVID-19 pandemic at SDIT Daruul Hijri Dramaga, Bogor. By using purposive sampling method, grade 4 of 20 students, grade 5 of 20 students and grade 6 of 28 students, so the total sample is 68 students. The reasons for choosing grade 4, grade and grade 6 are: cognitive abilities aged 10 years/ grade 4 are in C3 or apply, have

the ability to analyze, connect theory with existing facts in order to draw a conclusion. While children aged 11 years or grade 5 are in the phase of the C5 cognitive domain where children are able to evaluate and assess. And finally, children aged 12 years or grade 6 are in the C6 cognitive domain (creating). The formal operational phase where the child is able to think about something that might happen or an abstract hypothesis. Data collection techniques using questionnaires, interviews, literature review and observation. The data analysis technique used the MRA statistical method which was processed through the SPSS version 26.0 system.

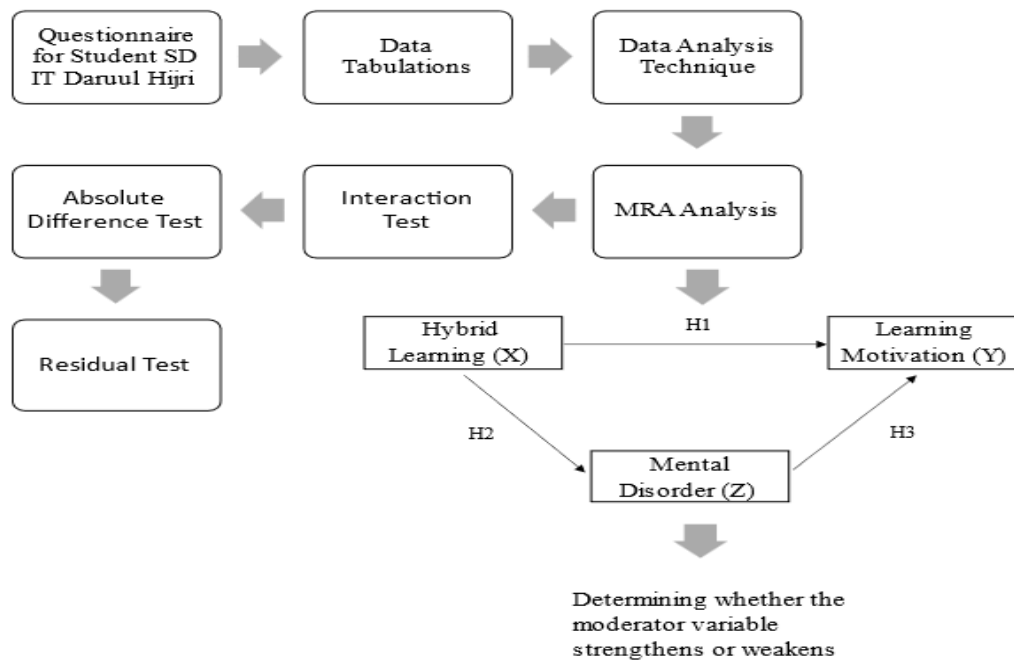


Figure 1. Research flow, Source: Data Processed by Researcher (2022)

Figure 1 describes the research flow starting from distributing questionnaires to 68 students who were declared as research subjects. After the questionnaire was completed, the researcher then carried out the input process into the data tabulation. The instrument used in this research is a questionnaire and SPSS version 26.0 application. The next step is the Interaction Test to find out whether or not there are similarities from the interaction elements by multiplying two or more independent variables as Equation 1.

$$Y = a + b1X1 + b2X2 + b3X1X2 + e \tag{1}$$

Pattern:

a : Constant Value

b : variable coefficient value

X1 : independent variable 1

X2 : independent variable 2

X1X2 : moderating variable (interctin between X1 and X2)

Variable the absolute difference test is used to test The moderation by using the difference model of the independent variables as Equation 2.

$$Y = a + b1ZX + b2ZZ + b3 | ZX - ZZ | + e \tag{2}$$

Pattern:

Y : Bound Variable

ZX : Standardized Independent Variable

ZZ : The hypothesized variable is the standardized moderating variable

ZX-ZZ : The absolute difference of the hypothesized variables as standardized moderating variables.

Table 1. Residual Test (MRA) (Ghozali, 2012)

Definetion	Moderation testing using residuals is used to test the deviation of a model. The focus is the lack of fit resulting from the deviation of the linear relationship between the independent variables. The assumption: if there is a match between two independent variables (low residual value or zero), then the two independent variables are high, the dependent is also high. If there is a mismatch between the two independent variables (high residual value), then the two independent variables are low, the dependent is also low. The basic concept of this residual test is
Basic Concept	Regression analysis of moderating variables with the residual method is doing by regressing the dependent variable to the absolute value of the residual from the regression of the independent variable to the hypothesized variable as the moderator variable. Basic Concept If the results of the regression between the dependent variable on the absolute value of the independent variable regression on the hypothesized variable as a significant moderator variable and the regression coefficient is negative, it can be concluded that the hypothesized variable is really able to moderate the relationship between the independent variable and the dependent variable. This method is relatively more complicated than the method of interaction and absolute difference. However, this method has the advantage of being free from multicollinearity interference because it only uses one independent variable
Equation	$Z = a + bX + e$ Equation (3) $ e = a + bly$ (4) e = absolute residual value

The use of quantitative research methods with the MRA analysis approach is due to the trend of hybridlearning, learning motivation and mental disorders that occurred massively during COVID-19. The causality relationship can be determined by MRA

analysis with the hypothesis to weaken or strengthen the relationship between variables. Researchers will determine moderator variables in the following classifications:

Table 2. Determination of Moderator Variables (Alpon Sarianto, 2020)

X*Z On Y (in the second equation)	Z on Y (in the first equation)	
	Significant	Not Significant
Significant	Quasi Moderation	Pure Moderation
Not Significant	Predictor Moderation	Homologiser Moderation
		Explanations
Quasi Moderator (Pseudo Moderator), if the influence of Z on Y in the first estimate and the effect of X2*Z interaction on the second estimate is equally significant on Y. Quasi moderation is a variable that moderates the relationship between the independent variable and the dependent variable where the variable pseudo-moderation interacts with the independent variable as well as being the independent variable.		
Pure Moderator (Pure Moderator), if the effect of Z on Y in the first estimate is not significant effect on Y while the X2*Z interaction in the second estimate has a significant effect to Y. Pure moderation is a moderating variable that moderates the relationship between variables independent and dependent variable where the pure moderating variable interacts with the variable independent without being an independent variable		
Predictor Moderation (Moderated Predictor), if the influence of Z on Y in the first estimate significant and the effect of X2*Z interaction on the second estimate is not significant. It means this moderating variable only acts as an independent variable in the relationship model that is formed.		

Results and Discussion

Research Subject Description

Based on Table 3, it is known that the number of research subjects was 68 students consisting of 33 females or 48.5% and 35 males or 51.5%. In grades 4 and 5 showed the same percentage of 29.4%. In Class 4 there were 8 females (11.8%) and 12 males (17.6%). Meanwhile, class 5 consisted of 15 females (22.1%) and 5 males (7.4%). Total of 41.2% or 28 students came from

grade 6 consisting of 10 females (14.7%) and 18 males (26.5%).

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Table 3. Characteristics of Research Subject

Explanations	Amount			Percentage (%)		
SD IT Daruul Hijri Class 4	8	12	20	11.80	17.60	29.40
SD Daruul Hijri Class 5	15	5	20	22.10	7.40	29.40
SD Daruul Hijri Class 6	10	18	28	14.70	26.50	41.20
Total Respondent	33	35	68			
Percentage	48.5	51.5		55.90	44.10	100

Source: Data Processed by Researchers, 2022

Categorization of respondent response scores is based on the range of maximum and minimum scores divided by the number of desired categories using the following formula. Respondents' responses to each statement item were categorized into 5 categories of very good, good, sufficient, not good and not good with the following calculations: distance Interval = [maximum value - minimum value]: 5 = (5 -1): 5 = 0.8. So that the following criteria are obtained:

Table 4. Guidelines for Categorizing Respondents Response Scores (Ating Somantri, 2006)

Mean Index	Categorisation
4.21-5.00	Very High
3.41-4.20	High
2.61-3.40	Medium
1.81-2.60	Low
1-1.80	Very

The following are descriptive statistics that explain the minimum, maximum, mean data in this study:

Table 5. Descriptive Statistics Test

	N	Min	Max	Mean	Std Deviation
X	68	15.00	24.00	19.42	1.83
Y	68	17.00	25.00	19.76	1.93
Z	68	14.00	25.00	19.19	2.63
Valid N (Listwise)	68				

Source: Data Processed by Researcher, 2022

Table 5 descriptive statistical tests above can be described as follows: From 68 respondents, it showed that hybrid learning had a minimum score of 15 with a total of 5 questions in the questionnaire, so that an average result was 3. It means that respondents have an interest in doing medium hybrid learning. While the maximum value is 24 so that the average result is 4.8, which means that respondents have a very high interest in doing hybrid learning. With a mean value of 19.42 and a standard deviation of 1.83. This shows that the mean > standard deviation value means that the X value has good data quality (unbiased) or the data is homogeneous. From 68 respondents who indicated that mental disorder had a minimum score of 14 with a total of 5 questions in the questionnaire, the average was 3.22. This means that the respondent has a mental disorder in

the normal category. While the maximum value is 25 so that an average of 5, means that the respondent has a very high mental disorder. Mean 19.19 > standard deviation 2.68.

This shows that the mean > standard deviation value, so it can be indicated that the Z value has good data quality (unbiased) or the data is homogeneous. On the dependent variable, from 68 respondents showed learning motivation has a minimum value of 17 with the number of questions in the questionnaire of 5, so that the average result is 3.4. This means that respondents have learning motivation in the medium category. While the maximum value is 25, so that the average result is 5. It means that the respondents have learning motivation in the very high category. The mean value is 19.76 > the standard deviation is 1.93. This indicates that the mean > standard deviation value so that it can be indicated that the Y value has good data quality (unbiased) or the data is homogeneous.

The Effect of Hybrid Learning on Learning Motivation

From the results of the regression test conducted with the SPSS instrument and statistical methods, it was obtained that $T_{value} > T_{table}$ 3,439 > 1,996 with a significance (P) of $0.001 < 0.05$, which means that hybrid learning has a significant effect on learning motivation. The coefficient of determination (R^2) is 0.152 or 15.2%, meaning that hybrid learning contributes 15.2%, while 84.8% is influenced by factors not examined in this study. In the implementation of learning with the hybrid learning model, the teacher's attention is at two different times. For example, when hybrid learning is oriented to materials, materials and resources are delivered through technological media such as zoom, webinars, and google meet so that students can learn more easily and can do the tasks given by the teacher at home. Meanwhile, when face to face, the teacher will carry out a system of confirmation and clarification of student understanding during the independent study process at home. This research is supported by Li et al. (2023) that hybrid learning can be implemented effectively with interactional goals, students are active in learning activities, and students are supported with complete facilities to support learning.

Prior to hybrid learning, the established online learning was considered ineffective because it caused

psychosocial problems in students. Students sustain learning loss or lose their enthusiasm for learning, are not responsible for assignments, are not disciplined and are lazy to learn. This causes a decrease in learning motivation (Mayudana et al., 2020) Hybrid learning is an effective step in overcoming these problems. However, its implementation requires preparation and adjusting to school conditions and student residences (Daniel et al., 2019).

The process of implementing hybrid learning at SDIT Daruul Hijri started with coordination meeting to determine strategies and task arrangements for teachers, socializing to parents so they can collaborate in the hybrid learning implementation process, providing supporting facilities and infrastructure such as zoom and google meet applications, as well as learning modules. To maintain the health protocol, there are also thermometers, sinks, hand sanitizers, body temperature gauges, oximeters, protective care applications and UKS rooms during offline learning. The implementation of hybrid learning at SDIT Daruul Hijri has succeeded in increasing learning motivation. This is evidenced by diligently working on assignments, being tenacious in the face of difficulties, showing interest in a field, and being able to learn independently.

The implementation of hybrid learning is able to increase learning motivation with interactive learning indicators, effective two-way communication, enthusiasm for learning, responsibility for tasks, discipline, understanding the information conveyed by the teacher, active in learning, and looking for other references from the internet to help the process study. This is supported by findings from internet browsing trends regarding google classroom and learning quotas as the most popular search categories. hybrid learning that runs effectively can increase learning motivation. This is due to interactive learning media. The methods used are interactional learning by combining online and traditional learning methods, face to face learning can improve the sustainability of the material, communication media and technology are faster in presentation, multilinear communication provides opportunities in setting learning and time flexibility, the socialization process between friends and teachers can run well. Some of the obstacles in hybrid learning are varied communication media, incomplete facilities owned by students such as mobile phones, computers, laptops and internet networks, lack of coordination between parents and school examples: crowds after school hours (I Wayan Madiya, 2020).

The Effect of Hybrid Learning on Learning Motivation with Mental Disorder as Moderator Variable Interaction Test

Based on Table 2, it is known that $F_{\text{value}} > F_{\text{table}}$ $10,562 > 3,140$ and a significance level (p) of $0.000 < 0.05$, which means that the effect of hybrid learning on learning motivation with mental disorders as a moderator variable has a significant effect. It is known that the value of hybrid learning $T_{\text{value}} < T_{\text{table}}$ $-2.203 < -1.996$ with a significance (p) of 0.031 which means that hybrid learning after the moderator variable (mental disorder) has a negative and significant effect. The value of mental disorder (Z) on learning motivation (Y) is known to have $T_{\text{value}} < T_{\text{table}}$ $-2.354 < -1.996$ and a significance (p) of $0.022 < 0.05$, which means that mental disorder has a negative and significant effect. While hybrid learning and mental disorders are known to have a value of $T_{\text{value}} > T_{\text{table}}$ $2,624 > 1,996$ and a significance of $0.011 < 0.05$, which means a significant effect. The coefficient of determination (R²) shows a value of 0.331, meaning that hybrid learning and learning motivation have an effect of 33.1% and 66.9% is influenced by other factors not examined in this study. The value of the coefficient of determination on X on Y is 15.2%, after the existence of mental disorder as a moderator variable it increases to 33.1%. This shows that the presence of a moderator variable strengthens the effect of hybrid learning on learning motivation. As equation.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_1X_2 + e \quad (5)$$

$$Y = 52.450 + (-1.973) + (-2.146) + 0.125 + 17.029$$

$$Y = 65.486 \quad (6)$$

From the regression equation above, it can be summarized that: The constant value of 52.450 means that if all the independent variables are equal to zero units, then the learning motivation will be worth 52.450 units. The value of the hybrid learning coefficient (-1.973) can be interpreted if the hybrid learning decreases by one unit, then the learning motivation will decrease by (1.973) units, and vice versa. The value of the mental disorder coefficient is (-2.146) which means that if the mental disorder is reduced by one unit, the learning motivation will decrease by (-2.146) units, and vice versa. And the coefficient value of hybrid learning and mental disorder is 0.125, which means that if hybrid learning and mental disorder simultaneously increase by one unit, learning motivation will increase by 0.125 units, and vice versa.

Based on graphic 1 obtained from the results of interviews and questionnaires, it is known that grade 4 experienced FoMO as many as 9 respondents (13.2%) consisting of 4 females (5.8%) and 5 males (7.3%); respondents experiencing depression amounted to 4 respondents (5.8%) consisting of 2 females (2.9%) and 2

males (2,9%); 7 respondents (10.2%) experienced gaming disorder consisting of 2 females (2.9%) and 5 males (7.3%). While the 5th grade students who experienced FoMO were 10 (14.7%) with 10 female respondents (14.7%); respondents who experienced depression were 7 respondents (10.29%) consisting of 5 females (7.3%) and 2 males (2.9%); 3 respondents (4.4%) with gaming disorder experienced 3 male respondents (4.4%). Respondents from grade 6 who experienced FoMO were 10 (14.7%) consisting of 6 females (8.8%) and 4 males (5.8%); 5 respondents (7.3%) experienced depression, consisting of 3 females (4.4%) and 2 males (2.9%); 13 respondents who experienced gaming disorder (19.1%) consisted of 1 female (1.4%) and 12 males (17.6%).

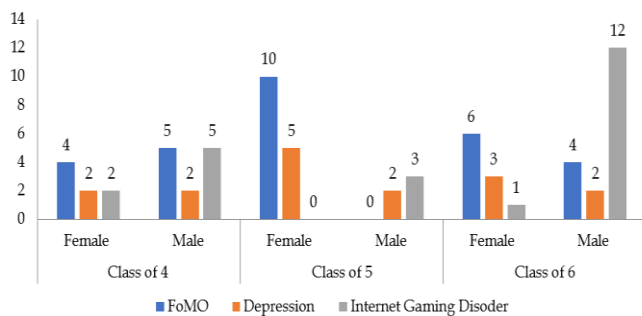


Figure 2. Interviews and questionnaires

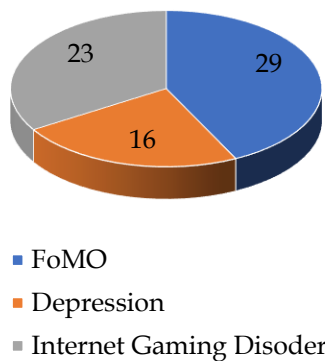


Figure 3. Mental disorder Ccategorization (Source: Data Processed by Researcher, 2022)

Trend Mental Disorder of Student SDIT Daruul Hijri Graphics 1

Based on Figure 2, it concluded that the respondents who experienced mental disorder with FoMO categorization were 29 students or 42.6%, depression was 16 students or 23.5% and gaming disorder was 23 students or 33%. The majority of the mental disorders experienced by respondents are FoMO which means Fear of Missing Out. According to research conducted by JWT Intelligence (2012) as many as 40% of internet users in the world experience fear of missing out (FoMO). Fear of missing out (FoMO) is referred to as a

social anxiety that is born from advances in technology, information and the increasing presence of social media. Internet communication media is used to access information and facilitate human social relations without having to meet in person (Clark et al., 2018). Based on the results of questionnaires and interviews, it is known that the FoMO indicator of SDIT Daruul Hijri respondents causes: symptoms of emotional fear such as being threatened when not connected to the surrounding environment such as experiences, events and socialization, worry when not joining a group, anxiety about not being connected to certain events with their playmates, feeling lost, feeling distant when they don't know information.

The next category of mental disorder is gaming disorder. Where respondents who experience these symptoms as many as 23 students or 23.5%. Internet gaming disorder is a form of internet use that is continuously associated with pathological internet use and has a negative impact (Király et al., 2015). Some of the indications shown are: addiction to playing games, angry when disturbed when playing games, fatigue, lack of sleep, forgetting to eat, lack of social bonds, do not have time management, decreased academic achievement. This research is supported by (Wong et al., 2020) who explains that the trend of internet gaming disorder is experienced by most adult men aged 12 to 20 years old. BBC data in 2007 reported by Zendle et al. (2023) that the Chinese government considered the emergency department to be an epidemic and passed a ban on playing online games. The desire to isolate oneself from the social environment, entertain and make friends in cyber space is a key factor that causes the occurrence of IGD (Lee et al., 2017). Other studies have found triggering factors for ED, namely coping with daily problems and escape, online relationships, power, control, recognition, entertainment, and challenges.

The category of mental disorder experienced by respondents in this study was 16 people or 23.5% experiencing symptoms of depression. Depression is a feeling disorder that causes discomfort (low mood) due to the influence of unexpected things, where symptoms are shown from low to high levels. Symptoms experienced by respondents are: mood changes all the time (approximately 2 weeks), decreased interest in learning activities, insomnia every day, ability to think and digest lessons reduced, difficult to concentrate on the subject matter, loss of motivation to learn. After an in-depth interview was conducted, the triggering factors for depression included; a lot of school assignments, an unstable internet network, a cell phone used for studying with younger siblings, a school assignment deadline that was too short, family economic pressure. This is supported by a survey conducted by the Indonesian Child Protection Commission (ICPC) on the

implementation of online learning in 20 provinces and 54 districts. The result is that 73.2% of students from 1,700 respondents, or 1,244 students, explained that they felt burdened by the task of the teacher. In addition, 1,323 students from all respondents could not complete the assignments from the teacher because the task deadline was very short. This research was supported by the PEKA U-report (Peduli Mental Health) volume 1 between UNICEF Indonesia and CIMSA Indonesia on 13-16 August 2020, involving 638 respondents in 32 provinces. The result is that 38% of 15-19 year olds are depressed by their parents; 14% pressured by teachers; 13% pressured by friends; and 5% depressed by relatives.

Absolute Difference Test

Based on Table 6, it is known that the value of the standardized hybrid learning variable (ZX) $T_{value} > T_{table}$ $3.375 > 1.996$ and a significance of $0.001 < 0.05$, meaning that it has a significant effect. Value of standardized mental disorder variable (ZZ) $T_{value} > T_{table}$ $3,163 > 1.996$ and a significance of $0.002 < 0.05$ which means that it has a significant effect. While the absolute difference (ZX-ZZ) shows the value of $T_{value} > T_{table}$ $-1.652 > -1.996$ with a significance of $0.104 > 0.05$, meaning that the absolute difference has no significant effect.

$$Y = a + b_1ZX + b_2ZZ + b_3|ZX - ZZ| + e \tag{7}$$

$$Y = 20.229 + 0.699 + 0.651 + (-0.441) + 0.3464$$

$$Y = 21.4839$$

From the regression equation, it is known that: The constant value of 20.229 means that if all the independent variables are equal to zero units, then the learning motivation will be worth 20.229 units. The standardized X coefficient value of 0.699 can be interpreted if the standardized hybrid learning increases by one unit, then the learning motivation increases by 0.699 units, and vice versa. The value of the standardized Z coefficient is 0.651, which means that if the standardized mental disorder increases by one unit, the learning motivation will increase by 0.651 units, and vice versa. And the value of the absolute difference coefficient between ZX-ZZ is (-0.441) or has a negative effect and moderate the variable.

Residual Test

Based on Table 6, it is known that the $T_{value} < T_{table}$ $-3.687 < -1.996$ and the significance (p) $0.000 < 0.05$ and the beta value of -0.355 which means that mental disorder is able to moderate the effect of hybrid learning on learning motivation.

$$Z = a + b_1X + e \tag{8}$$

$$|e| = a + b_1Y \tag{9}$$

$$Z = 9.077 + 0 + 8.722$$

$$Z = 17.798$$

$$|e| = 9.077 + (-0.355)$$

$$|e| = 8.722$$

Based on the residual test, the resulting regression equation is a constant value of 9.077 which means if the independent variable and dependent variable are equal to zero units, then the moderator variable (mental disorder) will be worth 9.077 units. Based on table 3, it is known that the coefficient value on the residual test shows (-0.355) which means it has a negative effect, $T_{value} < T_{table}$ $(-3.687) < (-1.996)$ and sig $0.000 < 0.05$ which means it has a negative and significant effect. Therefore, the researcher concludes that the moderator variable is able to moderate the independent variable and the dependent variable.

In addition, the interaction test shows the results of $XZ = 2.624 > 1.996$ $T_{value} > T_{table}$ and a significance of $0.011 < 0.05$, which means that hybrid learning multiplied by mental disorder has a significant effect. Meanwhile, Z on Y shows a value of $-2.354 < -1.996$ and a significance of $0.022 < 0.05$, which means that mental disorder has a significant effect on learning motivation. Based on table 2, it can be concluded that Z is a Quasi Moderator (Pseudo Moderator).

Based on these results obtained novelty, SDIT Daruul Hijri teacher implements the following learning methods:

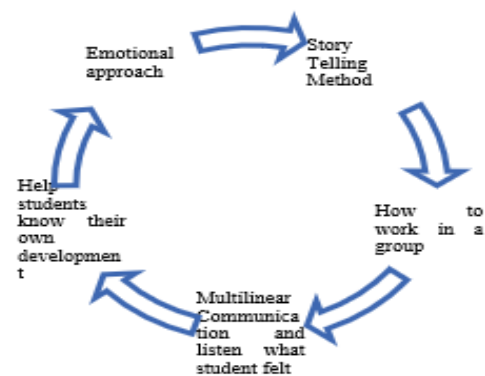


Figure 4. Social emotional learning SDIT Daruul Hijri (Source: Data Proceeded by Researcher, 2022)

This method is done by increasing collaboration between teachers, students and parents. Where teachers at school as roleplayer models substitute parents and parents at home help learning methods and monitoring the psychological and mental conditions of their children. Here's how it is applied: Emotional approach This emotional approach is needed so that students feel more comfortable when learning and facing various problems and challenges. When students feel close to the

teacher, they are treated humanely and lovingly. Then students will devote their attention to what is conveyed by the teacher well (Zhang, 2023). The way the teacher does face-to-face learning is asking how the health condition is both physically and psychologically, giving haptic touch as nonverbal communication to give encouragement, greetings, chat to students. This is done on online learning and every 5 minutes before learning starts. Story Telling Method This method is used to reduce boredom and improve students' thinking skills both logically and contextually. How to work in a group Group learning is to improve social relations with friends. During hybrid learning, group assignments tend to lead to the way students divide tasks that are done independently. During face-to-face learning, a series of tasks for each member are combined into a unified group task.

Multilinear Communication and Listen What Student Felt

This learning method focuses more on psychological consultations conducted by teachers who are appointed as psychological consultants. This consultation scheduling is done once a week for 15 minutes during face-to-face learning. In addition, in student learning sessions at home, the teacher also provides opportunities for students to express their feelings, opinions and thoughts.

Help Students to Know Their Own Development

SD IT Daruul Hijri teachers in each session always review or repeat the lessons that have been delivered. Even to know the students' self-development, the teacher allows them to write what they understand based on the information conveyed. If the level of understanding is still low, the teacher helps provide ways that are easy to understand and provide moral support.

Conclusion

Based on the results of the study, the following conclusions were obtained that hybrid learning had a significant effect on learning motivation. The implementation of hybrid learning is able to increase learning motivation with interactive learning indicators, effective two-way communication, enthusiasm for learning, responsibility for tasks, discipline, understanding the information conveyed by the teacher, active in learning, and looking for other references from the internet to help the process study. Hybrid learning has a significant effect on mental disorders. The classification of mental disorders experienced is Fear of missing out (FoMO) as much as 42.6%, depression 23.5% and internet gaming disorder as much as 33.8%. Mental

disorder on learning motivation has a negative and significant effect. This is because the symptoms experienced by respondents such as feelings of discomfort, fear, anxiety, worry, burnout, physical and mental fatigue can reduce students' sense of responsibility and commitment to increase learning motivation. The existence of the moderator variable of mental disorder is able to moderate the influence of the independent variable on the dependent. The existence of a mental disorder variable strengthens the effect of hybrid learning on learning motivation from 15.2% to 33.1%. Preventive and curative steps taken by teachers and parents of SDIT Daruul Hijri students are emotional approach, story telling method, how to work in a group, Multilinear communication and listen to what students feel and Help students to know their own development.

Acknowledgments

Acknowledgments thank you very much to all colleagues who were involved in this research, especially the campus and fellow lecturers and until the end of this research all with satisfactory results.

Author Contributions

Conceptualization.; methodology; validation; formal analysis.; investigation; formal analysis, investigation; resources; data curation: writing—original draft preparation.; writing—review and editing: visualization.; supervision; project administration; funding acquisition: H. H.

Funding

In terms of funding, the author uses personal funds, but later, when it is published, I hope that this research can be submitted for funding or that the research fee will be charged by my campus or will be included in research costs from the Indonesian government.

Conflicts of Interest

Then in this study no one felt disadvantaged, all purely with existing data and in accordance with existing research procedures.

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