

THE EFFECT OF TEACHER-STUDENT INTERACTION AND FRIENDSHIP QUALITY ON ACADEMIC MOTIVATION OF MODERN ISLAMIC BOARDING SCHOOL FEMALE STUDENTS AFTER DISTANCE LEARNING

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Abstract

Distance Learning (PJJ) has been ongoing for the past two years due to the Covid-19 pandemic. As the pandemic subsided, the government decided to resume face-to-face learning in the classroom. For pesantren that have not conducted face-to-face learning for a long time, this condition requires new adaptations, especially in reviving students' academic motivation. This study aims to analyze the effect of teacher-student interaction and friendship quality on the academic motivation of modern pesantren students after PJJ. This study involved 112 modern pesantren student respondents and was conducted with an explanatory study design. Data collection was self-administered at school through questionnaires distributed directly in class. Data analysis was carried out descriptively and inferentially, including correlation tests and multiple linear regression tests. The correlation test results showed that adolescents' education level was significantly negatively related to teacher-student interaction. Family income is significantly positively related to friendship quality. Length of stay in pesantren has a significant negative effect on academic motivation. The results of the effect test show that the length of stay in pesantren, teacher-student interaction, and friendship quality have a significant positive effect on the academic motivation of modern pesantren students after PJJ.

Keywords: academic motivation, friendship quality, islamic boarding school, student-teacher interaction

PENGARUH INTERAKSI GURU-SISWA DAN KUALITAS PERTEMANAN TERHADAP MOTIVASI AKADEMIK SISWI PESANTREN MODERN PASCA PJJ

Abstrak

Pembelajaran Jarak Jauh (PJJ) telah diberlakukan selama dua tahun terakhir karena pandemi Covid-19. Seiring dengan meredanya pandemi, pemerintah memutuskan untuk melanjutkan kembali pembelajaran tatap muka di kelas. Bagi pesantren yang sudah lama tidak melaksanakan pembelajaran tatap muka, kondisi ini membutuhkan adaptasi baru, terutama dalam membangkitkan kembali motivasi belajar santri. Penelitian ini bertujuan menganalisis pengaruh interaksi guru-santri dan kualitas pertemanan terhadap motivasi akademik santri pesantren modern pasca PJJ. Penelitian ini melibatkan 112 responden santri pesantren modern dan dilakukan dengan desain studi eksplanatori. Pengumpulan data dilakukan secara mandiri di sekolah melalui kuesioner yang dibagikan secara langsung di kelas. Analisis data dilakukan secara deskriptif dan inferensial, meliputi uji korelasi dan uji regresi linier berganda. Hasil uji korelasi menunjukkan bahwa tingkat pendidikan remaja secara signifikan berhubungan negatif dengan interaksi guru-murid. Pendapatan keluarga secara signifikan berhubungan positif dengan kualitas pertemanan. Lama tinggal di pesantren berpengaruh negatif signifikan terhadap motivasi akademik. Hasil uji pengaruh menunjukkan bahwa lama tinggal di pesantren, interaksi guru-murid, dan kualitas pertemanan berpengaruh positif signifikan terhadap motivasi akademik santri pondok pesantren modern pasca PJJ.

Kata kunci: interaksi guru-siswa, kualitas pertemanan, motivasi akademik, pesantren

INTRODUCTION

The impact of the Covid-19 pandemic has been felt by various countries around the world, including Indonesia. In addition to having an impact on the health sector, this pandemic also has an impact on the education sector which causes learning to be carried out through Distance Learning (PJJ). According to research conducted by Cahyani and Listiana (2020), there was a 52,6 percent decrease in learning motivation from a group of high school students studied during the pandemic situation. During PJJ which was implemented during the Covid-19 pandemic, students had to adjust to different home conditions from school to create a conducive atmosphere that could help in learning. The study also showed that learning motivation in 61,1 percent of students decreased because they found it difficult to find the right study time at home (Cahyani & Listiana, 2020).

In 2022, the Minister of Education, Culture, Research and Technology; Minister of Religious Affairs; Minister of Health; and Minister of Home Affairs issued a Joint Decree (SKB Empat Menteri) on Guidelines for the Implementation of Learning during the Covid-19 Pandemic which is carried out face-to-face. The existence of Face-to-Face Learning (PTM) allows many students, especially in pesantren, to interact directly with both teachers and friends. This is a hope to revive the academic motivation that declined in students during the previous PJJ period. The pesantren culture as an educational institution that conditions the students to live together in the hut, provides its own challenges when returning to the pesantren after PJJ.

Academic motivation is the drive, interest or passion to learn something new. Academic motivation is important, especially in adolescence, as highly motivated adolescents will complete their tasks and put in the necessary effort to continue their learning (Çeliköz, 2009). The emergence of academic motivation in students is influenced by internal factors, including interest in the knowledge being studied and orientation in following education, as well as external factors, including the quality of teachers and learning content (Anggraini, 2011).

In the context of learning at school, the closest environment to students is their teachers and schoolmates. In the learning process, students meet with teachers and their friends so that there is teacher-student interaction and the formation of friendship relationships between students and their friends. Teacher-student interaction and friendship quality are part of the external factors that influence students' academic motivation. Teacher-student interaction is a relationship created between teachers and students. Siregar et al. (2022) stated that teacher-student interaction includes communication, gaze, and giving attention between teachers and students. This interaction will make a good teacher-student relationship for the sake of creating good learning outcomes. Teacher-student interaction is done intensely at school. Teachers who teach need to see and ask about their students' learning progress. Without interaction with students, teachers will not know what things can make students motivated in learning. The closeness of teachers and students affects how students learn at school (Rumondor, 2020). A good approach from teachers to students is also part of teacher-student interaction. This can be a good motivation for students. When teachers and students have a good relationship, there is no more fear from students to ask questions and be active in the learning process so that what will emerge is a sense of admiration that makes it a very good motivation for students (Siregar et al., 2022).

In addition to teacher and student interactions, another factor that affects students' academic motivation is the quality of friendships owned by students. Friendship quality is the level of good and bad interpersonal emotional relationships based on intimacy, openness, mutual trust and mutual support (A'yun, 2018). Rahmawati (2016) shows that friendships in students affect academic motivation for students. Friendships that have a positive influence will be able to increase students' academic motivation, on the other hand, friendships that have a negative influence make students ignore learning and tend to make students behave deviantly. According to Rahayu (2018), peer environment and learning motivation show a positive and significant influence on learning outcomes.

Based on this background, this study was conducted to determine the effect of teacher-student interaction and friendship quality on academic motivation. This study aims to: (1) identify adolescent characteristics, family characteristics, teacher-student interaction, friendship quality, and academic motivation of selected pesantren students; (2) analyze the relationship between adolescent characteristics, family characteristics, teacher-student interaction, friendship quality, and academic motivation of selected pesantren students; and (3) analyze the influence of adolescent characteristics, family characteristics, teacher-student interaction and friendship quality on academic motivation of selected pesantren students.

METHODS

This research uses an explanatory study design. Primary data collection was carried out through distributing questionnaires directly to respondents who were filled in directly by respondents with self-administered techniques. The research location was determined purposively in one of the modern boarding schools in Kuningan Regency. The boarding school was chosen based on the consideration of the large number of students and students come from many different regions so that the conditions are quite heterogeneous. The research was conducted from August 2022 to February 2023, including preparation activities, research site surveys, data collection, data processing, data analysis, and preparation of research reports.

The population in this study were female santri (female students) at the selected Madrasah Aliyah (MA) boarding school (ponpes) which amounted to 987 female students. The research sample was taken using convenience sampling technique from each of the female students' majors (PK (Religious Education), IPS (Social Science), and IPA (Natural Science)). The criteria for research respondents determined in this study were 10th, 11th, and 12th grade female students at the ponpes. When collecting data, researchers visited the class that had been determined by the teacher then students who met the criteria were asked to fill out the questionnaire that had been provided directly.

The teacher-student interaction variable in this study was measured using the Questionnaire of Teacher Interaction (QTI) instrument by Wubbles et al. (1988). This questionnaire consists of 48 statements with 8 subscales namely: 1) leadership; 2) friendliness; 3) understanding; 4) student freedom; 5) uncertainty; 6) satisfaction; 7) personality; and 8) assertiveness with each subscale consisting of 6 or 7 statements. The answer scale used is a 1-4 Likert scale. Cronbach's alpha of the QTI instrument from this study was 0,887.

Friendship quality variables in this study were measured using the Friendship Qualities Scale (FQS) instrument by Bukowski (1994). This questionnaire consists of 23 statements with 5 subscales, namely: 1) friendship; 2) conflict; 3) helping; 4) security; and 5) closeness, with each subscale consisting of 4 or 5 questions. The response scale used is a 1-4 Likert scale. Cronbach's alpha of the FQS instrument of this study was 0,861.

The academic motivation variable was measured using the Academic Motivation Scale (AMS) instrument by Vallerièse et al. (1992). This questionnaire consists of 15 questions with 3 subscales namely: 1) intrinsic motivation; 2) extrinsic motivation; and 3) amotivation. The answer scale uses a Likert scale of 1-4. The modification made by the researcher to the questionnaire used was to add time information according to the scope of the study, namely after the Covid-19 pandemic in accordance with the research objectives. Cronbach's alpha of the AMS instrument from this study was 0,776.

After data collection, data processing and analysis were carried out through the stages of editing, coding, scoring, entering, cleaning, and analyzing data. Data were processed using Microsoft Office Excel software. Data analysis was conducted using the Statistical Package for Social Science (SPSS) for Windows program. The data obtained from the variables of teacher-student interaction, friendship quality, and learning motivation were then scored and summed to get the total score of each research variable. The total score was then transformed into an index value.

The data obtained from the variables of teacher-student interaction, friendship quality, and learning motivation were categorized into three categories with cut-off points: (1) low: 0-60; (2) moderate: >60-80; and (3) high: >80-100. Data analysis conducted in this study included descriptive analysis and inferential analysis. The inferential analysis conducted was a correlation test to answer the second objective and multiple linear regression test to answer the third objective.

RESULTS

Adolescent and Family Characteristics

This study involved 112 female students aged 14 to 18 years old with an average age of 15,99 years old and educational levels of grades 10, 11, and 12 majoring in PK, IPS, and IPA. The results showed that more than half of the female students (61,60%) came from West Java Province. Most of the female students (75,90%) had school experience in pesantren with a length of stay of more than 3 years (76,80%). Almost half of the female students (43,80%) had their own desire to enter pesantren and most of them got information about pesantren through their families (51,80%). The largest proportion of female students' families had fathers and mothers in the middle adulthood range (90,20% and 77,70% respectively). In addition, most fathers and mothers have a college education level (83,00% and 79,50% respectively). In

addition, 42,00% of the students came from families with an income above IDR 10 million per month and 59,80% of the family size was categorized as medium with 5-6 members.

Teacher-Student Interaction

The range of teacher-student interaction index based on the data in Table 1 ranges from 38,52 to 87,41 with a mean of $67,61 \pm 11,00$. The results showed that more than half of the students (69,60%) had teacher-student interaction in the moderate category. A small proportion of schoolgirls (9,80%) had teacher-student interactions in the high category and as many as 20,50 percent of schoolgirls had teacher-student interactions in the low category.

When viewed by dimension, the results showed that more than half of the students (52,70%) had low leadership interactions. In addition, there are 48,20 percent of female students who have low friendliness interactions with teachers and 48,20 percent of female students have a moderate understanding interaction category. The dimension of student freedom is dominated by the moderate category (64,30%). In addition, there are three dimensions with the largest proportion in the high category in teacher-student interactions, namely the dimensions of uncertainty (65,20%), satisfaction (49,10%), and personality (40,40%). The largest proportion of the assertiveness dimension has a low category (58,90%). Meanwhile, when viewed based on the average index per dimension, the results show that the highest average belongs to the uncertainty dimension with a value of 83,99. The lowest average belongs to the leadership dimension (56,84) and the assertiveness dimension (56,55).

Table 1 Distribution of students by category as well as the minimum, maximum, average, and standard deviation of teacher-student interaction index

Dimensions of IGS	Category						Minimum-Maximum	Average \pm Standard Deviation
	Low		Medium		High			
	n	%	n	%	n	%		
KPMP	59	52,70	48	42,90	5	4,50	27,78 – 94,44	56,84 \pm 13,93
KRMH	54	48,20	46	41,10	12	10,70	27,78 – 88,89	60,07 \pm 14,33
KPMH	34	30,40	54	48,20	24	21,40	11,11 – 100,00	65,08 \pm 16,78
KBSS	23	20,50	72	64,30	17	15,20	50,00 – 91,67	69,64 \pm 9,01
KTPT	10	8,90	29	25,90	73	65,20	00,00 – 33,33	83,99 \pm 18,80
KTPS	26	23,20	31	27,70	55	49,10	33,33 – 100,00	78,37 \pm 21,00
KPRB	27	24,10	40	35,70	45	40,20	27,78 – 100,00	73,76 \pm 19,13
KTGS	66	58,90	40	35,70	6	5,40	22,22 – 100,00	56,55 \pm 16,96
IGS	23	20,50	78	69,60	11	9,80	38,52 – 87,41	67,61 \pm 11,00

Notes: IGS = teacher-student interaction; KPMP = leadership; KRMH = friendliness; KPMH = friendliness; KBSS = student student freedom; KTPT = uncertainty; KTPS = dissatisfaction; KPRB = personality; KTGS = assertiveness; n = number of examples number of samples; % = percentage.

Friendship Quality

The results presented in Table 2 show that the range of indices on the friendship quality variable is from 35,00 to 98,33 with a mean of 71,93 and a standard deviation of 14,20. The largest proportion in the friendship quality category is the medium category (50,90%), followed by the high category (33,90%), and the low category (15,20%).

When viewed by dimension, the friendship dimension has a category value that does not differ much between the low (37,50%) and high (36,60%) categories. The conflict dimension has the highest high category value of 61,90 percent. In addition, dimensions that have high categories are also found in the dimensions of helping (46,40%) and attachment (52,70%). The security dimension falls into the low category with a value of 51,80%. The minimum value is found in the conflict dimension with a value of 0,00 and the maximum value is found in the dimensions of friendship, helping, security, and attachment with a value of 100. The highest mean belongs to the conflict dimension with a value of 79,46 and the highest standard deviation belongs to the security dimension (20,52). The lowest mean belongs to the security dimension (62,72) and the lowest standard deviation belongs to the friendship dimension (17,73).

Table 2 Distribution of students by category as well as the minimum, maximum, average, and standard deviation of friendship quality index

Dimensions of KP	Category						Minimum-Maximum	Average±Standar Deviation
	Low		Medium		High			
	n	%	n	%	n	%		
PSHB	42	37,50	29	25,90	41	36,60	33,33 – 100,00	69,42±17,73
KNFL	14	12,50	29	25,90	69	61,90	00,00 – 16,67	79,46±18,44
TLML	20	17,90	40	35,70	52	46,40	33,33 – 100,00	76,01±18,61
KMNN	58	51,80	29	25,90	25	22,30	8,33 – 100,00	62,72±20,53
KLKT	20	17,90	33	29,50	59	52,70	26,67 – 100,00	74,22±18,37
KP	17	15,20	57	50,90	38	33,90	35,00 – 98,33	71,93±14,20

Notes: KP = quality of friendship; PSHB = friendship; KNFL = conflict; TLML = helping; KMNN = security; KLKT = attachment; n = number of samples; % = percentage.

Academic Motivation

The results in Table 3 show that the academic motivation index ranges from 44,44 to 100,00 with a mean of 76,65 and standard deviation of 11,56. The highest proportion in the moderate (49,10%) and high (46,40%) categories did not differ much in this academic motivation variable. The amotivation dimension has the largest proportion in the high category at 72,30% compared to the other two dimensions. This shows that only a few students have unmotivated feelings at school. Meanwhile, the largest proportion of the intrinsic dimension is in the moderate category (55,40%). The lowest minimum value is 0.00 and the highest maximum value is 100,00. The highest mean and standard deviation belonged to the extrinsic and amotivation dimensions (77,87±15,04).

Table 3 Distribution of students by category as well as the minimum, maximum, mean and standard deviation of the academic motivation index

Dimensions of MA	Category						Minimum-Maximum	Average±Standar Deviation
	Low		Medium		High			
	n	%	n	%	n	%		
INTR	16	4,30	62	55,40	34	30,40	33,33 – 100,00	73,21±13,21
EKST	9	8,00	50	44,60	53	47,30	33,33 – 100,00	77,87±15,04
AMTV	10	8,90	21	18,80	81	72,30	0,00 – 100,00	77,87±15,04
MA	5	4,50	55	49,10	52	46,40	44,44 – 100,00	76,65±11,56

Notes: MA = academic motivation, INTR = intrinsic; EXT = extroverted; AMTV = amotivated; n = number of samples; % = percentage.

Correlation between Adolescent and Family Characteristics, Teacher-Student Interaction, Friendship Quality, and Academic Motivation

The results of the relationship test (Table 4) show that the education level of female students is significantly negatively related to teacher-student interaction ($r=-0,312$, $p<0,01$). This can be interpreted that the increase in the grade level of female students in pesantren will be associated with a decrease in the level of teacher-student interaction. Meanwhile, family income has a positive significant relationship with friendship quality ($r=0,317$, $p<0,01$). This can be interpreted that the higher the family income of female students will be associated with an increase in friendship quality. The results also found that the length of stay in the current pesantren was significantly negatively related to the academic motivation of female students ($r=-0,197$, $p<0,05$). This indicates that the longer a student stays in the pesantren currently used for studying will be associated with a decrease in the student's academic motivation. Other variables predominantly had a negative relationship with teacher-student interaction, friendship quality, and academic motivation but were recorded as insignificant.

Table 4 Results of relationship analysis of teacher-student interaction, friendship quality, and academic motivation

Variable	Teacher-Student Interaction	Friendship Quality	Academic Motivation
Level of education (year)	-0,312**	-0,151	-0,163
Length of stay in pesantren (year)	0,021	0,064	-0,197*
Father's age (year)	-0,110	-0,128	-0,041
Mother's age (year)	-0,133	-0,121	-0,055

Table 4 Results of relationship analysis of teacher-student interaction, friendship quality, and academic motivation (continue)

Variable	Teacher-Student Interaction	Friendship Quality	Academic Motivation
Family income (IDR)	-0,105	0,317**	0,120
Family size (people)	0,028	-0,010	-0,004

Notes: **) significant at $p < 0,01$; *) significant at $p < 0,05$

Correlation between Teacher-Student Interaction, Friendship Quality, and Academic Motivation

The correlation test results presented in Table 5 show that, in general, teacher-student interaction and friendship quality have a positive relationship with academic motivation at 0,283 and 0,342 ($p < 0,01$), respectively. This shows that the better the teacher-student interaction and the quality of friendship, the better the academic motivation of post PJJ students. The dimensions of teacher-student interaction that are positively related to academic motivation include friendliness ($r = 0,214$; $p < 0,05$), understanding ($r = 0,249$; $p < 0,01$), dissatisfaction ($r = 0,208$; $p < 0,05$), and assertiveness ($r = 0,306$; $p < 0,01$). Meanwhile, the dimensions of friendship quality that are positively related to academic motivation include friendship ($r = 0,216$; $p < 0,05$), helping ($r = 0,371$; $p < 0,01$), security ($r = 0,219$; $p < 0,05$), and attachment ($r = 0,258$; $p < 0,05$).

Table 5 Relationship between friendship quality and teacher-student interaction with academic motivation

Variable	Dimintions of Academic Motivation			Academic Motivation
	INTR	EKST	AMTV	
Teacher-Student Interaction	0,284**	0,107	0,271**	0,283**
KPMP	0,132	0,022	0,264**	0,151
KRMH	0,260**	0,079	0,108	0,214*
KPMH	0,285**	0,110	0,131	0,249**
KBSS	0,084	-0,030	0,040	0,040
KTPT	0,113	-0,019	0,222*	0,108
KTPS	0,078	0,251**	0,119	0,208*
KPRB	0,162	-0,011	0,187*	0,130
KTGS	0,359**	0,057	0,305**	0,306**
Friendship Quality	0,349**	0,135	0,307**	0,342**
PSHB	0,228*	0,077	0,193*	0,216*
KNFL	0,172	-0,008	0,249**	0,154
TLML	0,328**	0,204*	0,317**	0,371**
KMNN	0,241*	0,053	0,230*	0,219*
KLKT	0,286**	0,106	0,173	0,258*

Notes: INTR = intrinsic, EXT = extrinsic; AMTV = amotivation; KPMP = leadership; KRMH = friendliness; KPMH = friendliness; KBSS = student freedom; KTPT = uncertainty; KTPS = dissatisfaction; KPRB = personality; KTGS = assertiveness; PSHB = friendship; KNFL = conflict; TLML = helpfulness; KMNN = security; KLKT = attachment; **) significant at $p < 0,01$; *) significant at $p < 0,05$.

The effect of adolescent characteristics, family characteristics, teacher-student interaction, and friendship quality on academic motivation

The regression model in this study is multiple linear regression which aims to see the effect of adolescent characteristics, family characteristics, teacher-student interaction, and interaction on the academic motivation of boarding school students after the implementation of face-to-face learning in pesantren. The results of multiple linear regression analysis show that the model hypothesized in this study has a significance value of 0,001 ($p < 0,01$). The model in this study also has a coefficient of determination (Adjusted R Square) of 0,226, meaning that the independent variables contained in the model have an influence of 22,6 percent on the academic motivation of boarding school students after the implementation of face-to-face learning, while as much as 77,4 percent is influenced by other variables outside the study. The model in this regression test has been tested for classical assumptions and the regression model is normally distributed and there are no symptoms of heteroscedasticity.

Table 6 shows that the length of stay in the current pesantren has a significant negative effect on students' academic motivation ($\beta = 0,273$, $p < 0,05$). Meanwhile, teacher-student interaction (IGS) and friendship quality (KP) have a positive effect on academic motivation (IGS $\beta = 0,268$ and KP $\beta = 0,295$, with

$p < 0,01$). These results indicate that these two variables have a greater influence on the academic motivation of students in post PJJ pesantren. Students who have lived in pesantren more recently, increased teacher-student interaction, and also increased friendship quality have a greater effect on increasing the academic motivation of post PJJ pesantren students.

Table 6 Results of analysis of the effect of adolescent characteristics, family characteristics, teacher-student interaction, and friendship quality on academic motivation

Variable	Unstandardized coefficient	Standard error	Standardized Coefficient	Sig.
Age (year)	0,155	1,922	0,013	0,936
Education level (year)	0,332	0,711	0,079	0,642
Length of stay in pesantren (year)	-0,171	0,065	-0,273	0,010*
Father's age (year)	0,070	0,304	0,035	0,818
Mother's age (year)	-0,023	0,358	-0,010	0,949
Family income (IDR)	1,267	1,408	0,088	0,370
Family size (people)	0,029	0,075	0,295	0,969
Teacher-student interaction	0,271	0,100	0,268	0,008**
Friendship quality	0,232	0,075	0,295	0,003**
R Square				0,475
R Square				0,226
F				3,302
Sig.				0,001**

Notes: *) significant at $p < 0,05$; **) significant at $p < 0,01$

DISCUSSION

This study further analyzed the academic motivation of female students in modern boarding schools after the reintroduction of face-to-face learning and associated with student characteristics, family characteristics, teacher-student interactions, and friendship quality. The female students who participated in this study were adolescents aged 14-18 years old who were enrolled as students in selected boarding schools. All students of the boarding school that was the research location, whether they had experience living in a boarding school or not, were required to live in the boarding school. Thus, the interactions established by students during the learning process are limited to individuals at school, especially with other students (friends) and with teachers. This is an interesting phenomenon that needs to be studied further to be associated with students' academic motivation. Cahyani and Listiana (2020) reported that during the pandemic with the implementation of Distance Learning (PJJ), students' academic motivation tended to decline. Along with the reintroduction of Face-to-Face Learning (PTM), a study to examine academic motivation, especially in pesantren and associated with interactions with teachers and peers is interesting to do.

The implementation of face-to-face learning makes teacher-student interaction possible directly at the boarding school. This condition makes teachers able to interact directly with students, ask about their learning progress, and build closeness to students. Teacher-student interaction is a factor that affects students' academic motivation. Teacher-student interactions that are fun, communicative, and build intimacy in them will make students motivated to learn (Iswardhany & Rahayu, 2020).

In this study, the measured teacher-student interaction includes 8 dimensions of interaction, namely leadership, friendliness, understanding, student freedom, uncertainty, satisfaction, personality, and assertiveness. The results of the research on teacher-student interaction in pesantren show that the satisfaction dimension has the highest mean value and the uncertainty dimension has the lowest mean value among other dimensions. This means that the interaction between teachers and students runs with certainty and students feel satisfied. Most students considered that during the teaching and learning process, the teacher was always confident and did not hesitate in providing learning. In addition, the teacher is also difficult to be fooled by students and is sure of the actions that will be taken when students fool him. This is in line with the results of Koul's research (2003) which states that teachers with low levels of uncertainty and high levels of satisfaction are considered the best teachers for students, so that teacher-student interactions are also good.

The quality of friendship between students describes the interactions between students in pesantren. The quality of friendship measured includes the dimensions of friendship, conflict, helping, security, and attachment. Overall, most respondents had moderate and high friendship quality. The results showed that

the highest average score on friendship quality was on the helping dimension and the attachment dimension. This is supported by the respondent's statement that they always receive help from friends when the respondent is experiencing difficulties and there is a feeling of longing when their friends move away because the respondent feels happy when they are with their friends. Quality friendships allow individuals to have pleasant experiences, help, comfort, and strong and positive emotional bonds (Bukowski & Sippola, 2005).

Student academic motivation is a factor that encourages students to actively participate and succeed in learning. In this study, student academic motivation measured consisted of intrinsic, extrinsic, and amotivation. The results showed that the academic motivation of pesantren students on average was at a moderate level. Students feel that they want to show their success in learning, enjoy the learning process, and are happy and excited to acquire new learning materials. However, the amotivation dimension in pesantren students is categorized as high. This is indicated by the number of students who feel that school is a waste of time and do not know the exact reason for attending class. Schwan (2021) states that students who are in an amotivated state are characterized by a lack of direction, purpose, or inspiration in students to complete learning tasks at school.

The correlation test results show that the characteristics of the students, especially at the boarding school education level, have a significant negative relationship with teacher-student interaction. This indicates that each student moving to a higher grade level is associated with a decrease in the quality of teacher-student interaction. In the quality of female students' friendship, the family characteristic that has a significant positive relationship is family income. The results of the relationship test also showed a significant positive relationship between teacher-student interaction and the quality of student friendships. Thus, the better the teacher-student interaction can help create a comfortable and conducive learning atmosphere so that students can feel comfortable to interact and make friends with other students. Teacher-student interaction and friendship quality also have a significant positive relationship with students' academic motivation. The better the teacher-student interaction, the higher the academic motivation of the students. This is in line with Damayanti et al. (2021) which states that there is a positive and significant relationship between adolescent social interaction and academic motivation. The more positive adolescent social interactions are, the higher the motivation. In other words, friendships that have a negative impact such as inviting adolescents to do bad things can reduce students' academic motivation (Rohman & Karimah, 2018).

In this study, the results of the effect test showed that the length of students' stay in pesantren, teacher-student interaction, and friendship quality had a significant positive effect on students' academic motivation. This means that good teacher-student interaction and good friendship quality can affect the quality of student learning and motivate pesantren students to actively participate in academic activities. This is in line with the findings of Iswardhany and Rahayu (2020) which show that positive interactions between teachers and students can increase student learning motivation. Good friendship quality can also increase students' academic motivation. In line with the findings of Tu and Chu (2020), good friendship relationships can increase learning motivation and learning effectiveness. Conversely, poor quality friendships or friendships that do not support students in learning activities can cause students to become lazy and low academic motivation (Santosa, 2016).

The limitation of this study is that the negative relationship between students' education level and academic motivation cannot be concluded that education level causes poor teacher-student interaction. There may be other variables that influence the relationship. Research conducted on a limited sample cannot be widely generalized to the general population of female students or female students of different pesantren.

CONCLUSIONS AND SUGGESTIONS

The average age of respondents in this study belongs to adolescence and all respondents are female. The largest distribution of education levels was in the X IPA and XII IPA classes. The respondents' regional origins were mostly from areas in West Java. The majority of respondents had lived in pesantren before entering MA Ponpes pesantren and more than half of the respondents had lived in pesantren for more than 3 years. Most of the respondents entered the pesantren on their own and received information from their families. The age of the respondents' fathers and mothers belonged to the middle adulthood category. The majority of fathers and mothers have a tertiary level of education. Most families have an income of Rp10,000,000. The family size in this study is categorized into medium families. The result of the relationship test shows that adolescents' education level is significantly negatively related to teacher-student interaction. Meanwhile, family income was significantly positively related to friendship quality. Length of stay in pesantren has a significant negative effect on academic motivation. The results of the effect test showed that the length of stay in pesantren, teacher-student interaction, and friendship quality had a

significant positive effect on the academic motivation of post PJJ pesantren students.

This study found that education level negatively affects teacher-student interaction. Therefore, this study suggests that boarding schools develop programs that can improve teacher-student interactions such as study groups according to students' interests or joint events between students and teachers. In addition, boredom may be felt by female students, which has a negative impact on academic motivation. Students can be directed to consult Counseling Guidance (BK) in order to increase their academic motivation. Meanwhile, for further research, the researcher suggests analyzing selected pesantren students so that appropriate programs can be made to overcome things that make teacher-student interaction, friendship quality, and academic motivation decrease.

REFERENCES

- A'yun, Q. (2018). Hubungan kualitas persahabatan dengan forgiveness pada mahasiswa fakultas psikologi di universitas medan area. [Skripsi]. Medan (ID): Universitas Medan Area.
- Bukowski, W. M., & Sippola, L. K. (2005). Friendship and development: Putting the most human relationship in its place. *New directions for child and adolescent development*, 2005(109), 91-98. <https://doi.org/10.1002/cd.141>
- Cahyani, A., Listiana, I. D., & Larasati, S. P. D. (2020). Motivasi belajar siswa SMA pada pembelajaran daring di masa pandemi covid-19. *IQ (Ilmu Al-qur'an): Jurnal Pendidikan Islam*, 3(01), 123-140. <https://doi.org/10.37542/iq.v3i01.57>
- Çeliköz, N. (2010). Basic Factors that Affect General Academic Motivation Levels of Candidate Preschool Teachers. *Education*, 131(1), 1357-1365. doi:10.1016/j.sbspro.2009.01.240.
- Damayanti, A. P., Yuliejantiningih, Y., & Maulia, D. (2021). Interaksi Sosial Teman Sebaya Terhadap Motivasi Belajar Siswa. *Jurnal Penelitian dan Pengembangan Pendidikan*, 5(2), 163-167. <https://doi.org/10.23887/jppp.v5i2.27576>
- Fauci, A. S., Lane, H. C., & Redfield, R. R. (2020). Covid-19 — Navigating the uncharted. *New England Journal of Medicine*, 382(13), 1268-1269. doi:10.1056/nejme2002387.
- Hendrickx, M. M. H. G., Mainhard, M. T., Boor-Klip, H. J., Cillessen, A. H. M., & Brekelmans, M. (2016). Social dynamics in the classroom: Teacher support and conflict and the peer ecology. *Teaching and Teacher Education*, 53, 30-40. doi:10.1016/j.tate.2015.10.004.
- Iswardhany, R., & Rahayu, S. (2020). Pengaruh interaksi sosial guru dengan siswa terhadap motivasi belajar di jurusan teknik gambar bangunan SMK Negeri 1 Cilaku Cianjur. *Jurnal Pendidikan Teknik Sipil*, 2(2), 78-88. doi:10.21831/jpts.v2i2.36342.
- Koul, R. B. (2003). Teacher-student interactions and science classroom learning environments in India. *Science and Mathematics Education Centre*, (December), 4-272.
- Rahayu, S. (2018). Pengaruh lingkungan teman sebaya dan motivasi belajar terhadap hasil belajar ekonomi siswa kelas X IIS SMA negeri 1 sewon tahun ajaran 2016/2017. *Jurnal Pendidikan dan Ekonomi*, 7(2), 143-151. Retrieved from <https://journal.student.uny.ac.id/index.php/ekonomi/article/view/10510>
- Rahmawati, R. (2016). Faktor-Faktor Yang Mempengaruhi Motivasi Belajar Siswa Kelas X SMA N 1 Piyungan Pada Mata Pelajaran Ekonomi Tahun Ajaran 2015/2016. *Jurnal Pendidikan dan Ekonomi*, 5(4), 326-336. Retrieved from <https://journal.student.uny.ac.id/index.php/ekonomi/article/view/4106>
- Rumondor, P., & Sineke, R. N. (2020). Pola interaksi guru PAI dengan siswa dalam meningkatkan hasil belajar di SMA Negeri 1 Belang. *AL-HIKMAH (Jurnal Pendidikan Dan Pendidikan Agama Islam)*, 2(2), 160-172. <https://doi.org/10.36378/al-hikmah.v2i2.482>
- Santosa, D. T. (2016). Faktor-faktor penyebab rendahnya motivasi belajar dan solusi penanganan pada siswa kelas XI jurusan teknik sepeda motor. *E-Jurnal Pendidikan Teknik Otomotif-S1*, 13(2). Retrieved from <https://journal.student.uny.ac.id/index.php/otomotif-s1/article/view/2896>
- Schwan, A. (2021). Perceptions of student motivation and amotivation. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 94(2), 76-82. doi:10.1080/00098655.2020.1867490.
- Siregar, S. Z., Lubis, P. N., & Humayra, L. (2022). Pengaruh Interaksi Guru dan Murid terhadap Hasil Belajar Murid dalam Pembelajaran Matematik di MAN 1 Medan. *JURNAL EDUKASI NONFORMAL*, 3(2), 623-628. Retrieved from <https://ummaspul.e-journal.id/JENFOL/article/view/5377>
- Anggraini, I. S. (2016). Motivasi belajar dan faktor-faktor yang berpengaruh: sebuah kajian pada interaksi pembelajaran mahasiswa. *Premiere Educandum: Jurnal Pendidikan Dasar dan Pembelajaran*, 1(02). <http://doi.org/10.25273/pe.v1i02.39>

Tu, J. C., & Chu, K. H. (2020). Analyzing the relevance of peer relationship, learning motivation, and learning effectiveness—Design students as an example. *Sustainability*, *12*(10), 4061. doi:10.3390/SU12104061