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Research Article

Between the Arena and the Adab: Determinants of Mobile Legends Playing Intensity and Competitive Esports Orientation on the Moral Character of Senior High School Students

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Abstract. The rapid expansion of Indonesia's mobile esports ecosystem, led by Mobile Legends: Bang Bang as the most popular title, raises an urgent pedagogical question regarding its implications for the moral character, or *akhlak*, of students. This study examined the effects of Mobile Legends playing intensity (X_1) and competitive esports interest (X_2) on students' *akhlak* (Y) among 103 students at SMA Negeri 3 Pamekasan, using a causal associative design and multiple linear regression. The X_1 and X_2 instruments demonstrated high reliability (alpha equal to 0.857 and 0.824, respectively), whereas the Y instrument showed moderate reliability (alpha equal to 0.652). All classical assumptions were satisfied. The results indicated that playing intensity significantly and negatively predicted *akhlak* (beta equal to 0.258, t equal to 2.937, p equal to 0.004), whereas competitive esports interest was not statistically significant (beta equal to 0.190, t equal to 1.857, p equal to 0.066). Simultaneously, the model was significant (F equal to 4.359, p equal to 0.015) yet explained only eight percent of the variance (R squared equal to 0.080). These findings, interpreted through Self Determination Theory,

the General Aggression Model, and Bronfenbrenner's Ecological Systems Theory, indicate that it is not competitive interest in esports itself that poses a risk to moral character, but rather unregulated patterns of gameplay.

Keywords: Gaming Intensity, Esports, Student Morality, Self Regulation, Mobile Legends.

Abstrak. Pesatnya perkembangan ekosistem mobile esports di Indonesia, yang dipimpin oleh Mobile Legends: Bang Bang sebagai judul paling populer, menimbulkan pertanyaan pedagogis yang mendesak mengenai implikasinya terhadap karakter moral, atau akhlak, siswa. Penelitian ini menguji pengaruh intensitas bermain Mobile Legends (X_1) dan minat kompetitif esports (X_2) terhadap akhlak siswa (Y) pada 103 siswa SMA Negeri 3 Pamekasan, dengan menggunakan desain asosiatif kausal dan regresi linier berganda. Instrumen X_1 dan X_2 menunjukkan reliabilitas yang tinggi (masing-masing alpha sebesar 0,857 dan 0,824), sedangkan instrumen Y menunjukkan reliabilitas sedang (alpha sebesar 0,652). Semua asumsi klasik terpenuhi. Hasil penelitian menunjukkan bahwa intensitas bermain memprediksi akhlak secara signifikan dan negatif (beta sebesar 0,258, t sebesar 2,937, p sebesar 0,004), sedangkan minat esports kompetitif tidak signifikan secara statistik (beta sebesar 0,190, t sebesar 1,857, p sebesar 0,066). Pada saat yang sama, model tersebut signifikan (F sama dengan 4,359, p sama dengan 0,015) namun hanya menjelaskan delapan persen varians (R kuadrat sama dengan 0,080). Temuan-temuan ini, yang diinterpretasikan melalui Teori Penentuan Nasib Sendiri, Model Agresi Umum, dan Teori Sistem Ekologi Bronfenbrenner, menunjukkan bahwa bukan minat kompetitif terhadap esports itu sendiri yang menimbulkan risiko terhadap karakter moral, melainkan pola permainan yang tidak diatur.

Kata kunci: Intensitas Gaming, Esports, Moralitas Pelajar, Regulasi Diri, Mobile Legends.

INTRODUCTION

When a senior high school student in Pamekasan opens a mobile phone in the late afternoon to play a single round of Mobile Legends: Bang Bang, that student is in fact stepping into one of the busiest digital entertainment arenas in Indonesia today. This phenomenon is not incidental but rather a consequence of the massive acceleration of internet penetration across the country. A survey by the Indonesian Internet Service Providers Association reported that 80.66 percent of the national population is now connected to online networks (Asosiasi Penyelenggara Jasa Internet Indonesia, 2025). Notably, this wave of connectivity has not been confined to major cities. Data from the Statistics Agency of East Java Province (2023) show that household internet penetration in Pamekasan Regency, an area widely known for its strong religious culture, has in fact surpassed the provincial average. This high level of connectivity has, in turn, opened a wide path for the expansion of the mobile gaming and esports industry, with Mobile Legends emerging as one of the principal drivers of growth in the mobile first esports market of Southeast Asia (Putri & Kuswinarno, 2024).

It is precisely at this intersection between local religiosity and global digital expansion that the pedagogical question underlying this study arises. At first glance, the question appears simple, namely whether playing Mobile Legends undermines students' moral character. Yet upon closer examination, this question conceals two phenomena that are conceptually distinct but frequently conflated in public discourse and school policy alike. The first is playing intensity, concerning how often, how long, and how deeply a student becomes absorbed in gameplay sessions. The second is competitive interest in esports, concerning the extent of a student's affective

drive to pursue esports as a genuine arena of achievement rather than mere momentary entertainment. As elaborated below, these two dimensions have markedly different theoretical roots and may therefore carry different consequences for the formation of students' moral character.

The international literature on game psychology offers strong evidence that high playing intensity tends to move in tandem with behavioral risk. Novrialdy (2019), in a review of online gaming addiction among Indonesian adolescents, noted that excessive playing patterns are consistently associated with declining academic performance and psychosocial disturbance. This pattern has also been confirmed specifically within the Mobile Legends context, where playing intensity was found to be associated with an increased tendency toward procrastination among students (Oetomo & Fahyuni, 2022), as well as with declining religious observance among students of Islamic Religious Education (Haris et al., 2021). At a more fundamental level, the General Aggression Model formulated by Anderson and Bushman (2001) explains the underlying mechanism, namely that repeated exposure to competitive and conflictual content within games has the potential to shape aggressive cognitive scripts that, over time, generalize to real social interaction beyond the screen. This mechanism is not merely theoretical speculation, for it has been empirically confirmed across cultural contexts, including among Eastern samples that differ culturally from the Western samples on which the theory was originally developed (Anderson et al., 2010).

It would nonetheless be mistaken to treat playing intensity and competitive esports interest as a single, undifferentiated phenomenon. It is precisely at this juncture that Self Determination Theory, developed by Ryan, Rigby, and Przybylski (2006), offers a contrasting lens. According to this theory, engagement in competitive gaming is fundamentally an effort to satisfy three basic psychological needs, namely competence, autonomy, and social relatedness. Read through this framework, healthy competitive interest may in fact serve as a vehicle for cultivating self discipline and teamwork rather than posing a threat to them (Przybylski et al., 2010). This proposition finds empirical support in a longitudinal study of school esports programs, which found that students participating in structured esports maintained positive youth development scores, including self regulatory capacity, that remained far more stable than those of a control group over the same observation period (Trotter et al., 2022). A similar pattern has been reported in the Indonesian context of extracurricular esports, which was found to cultivate solidarity and a strong work ethic among participating students (Lahope et al., 2024).

The complexity of the issue deepens once *akhlak* itself is understood not as a standalone variable but as the outcome of layered interaction between the individual and the surrounding environment. Bronfenbrenner's Ecological Systems Theory emphasizes that adolescent character development is always embedded within an interconnected web of family, school, and community that mutually influence one another. A contemporary adaptation of this theory has even explicitly proposed the addition of the virtual microsystem as a new layer of influence for the digital native generation (Navarro & Tudge, 2022). Consistent with this view, research on religiosity as a protective factor has shown that adolescents with a high degree of religiosity are

considerably more resilient to the adverse effects of low self control than adolescents with lower religiosity (Laird et al., 2011), a finding whose relevance is immediately apparent when connected to the strongly religious social context of Pamekasan that forms the locus of this study.

Although the theoretical framework outlined above is considerably rich, no quantitative study has, to the best of the authors' knowledge, explicitly separated playing intensity and competitive esports interest as two independent predictors within a single regression model of Muslim students' akhlak, particularly within a religious community such as Madura. Most prior studies, whether examining the impact of online games on akhlak (Amaliah et al., 2025) or examining esports achievement interest within vocational education (Rizaldi et al., 2025), tend to test only one dimension of digital engagement without comparing it simultaneously against the other. This gap constitutes the principal contribution of the present study, namely to empirically test whether playing intensity and competitive esports interest genuinely behave differently in statistical terms, as their distinct theoretical roots would predict.

Based on the foregoing discussion, this study was designed to answer three questions. First, does the intensity of playing Mobile Legends affect students' akhlak. Second, does competitive esports interest affect students' akhlak. Third, do these two variables simultaneously affect students' akhlak at SMA Negeri 3 Pamekasan.

METHODS

This study employed a quantitative approach with a causal associative design (Sugiyono, 2019). The population comprised all students of SMA Negeri 3 Pamekasan who actively played Mobile Legends and or were involved in the world of esports, a population of unknown exact size given that the school's basic education data, covering 1,063 students, did not specify individual gaming activity. The sample was determined through purposive sampling, applying the following inclusion criteria: enrolled as an active student; having played or currently playing Mobile Legends; and or having some form of involvement in school esports activities. The minimum sample size was calculated using the Lemeshow formula (Z equal to 1.96, P equal to Q equal to 0.5, d equal to 0.10), yielding a minimum of 96 respondents (Lemeshow et al., 1990), with adequacy further benchmarked against Roscoe's guideline of at least ten times the number of variables (Roscoe, 1975).

Of 160 completed questionnaires, collected both online and on paper, 103 respondents met the inclusion criteria, comprising 70 male and 32 female students, distributed across grade ten with 62 students, grade eleven with 22 students, and grade twelve with 18 students, and ranging in age from 14 to 19 years. The instrument consisted of a closed ended five point Likert scale questionnaire with ten items per variable, with unfavorable items reverse scored. X_1 was measured through indicators of frequency, duration, consistency, and psychological engagement. X_2 was measured through six internal sub indicators and two external sub indicators, following the framework of Rizaldi et al. (2025). Y was measured through six indicators, namely courtesy, time discipline, responsibility, emotional control, tolerance, and communication within peer relationships.

Data analysis included item validity testing through item total correlation, reliability testing through Cronbach's Alpha with reference to the threshold established by Cronbach (1951), classical assumption testing covering normality, multicollinearity, heteroscedasticity, and autocorrelation, and multiple linear regression with partial and simultaneous hypothesis testing at a significance level of 0.05, following the interpretive guidelines of Ghazali (2018).

RESULTS AND DISCUSSION

Before turning to the hypothesis testing results, it is useful first to consider the general characteristics of the data collected from the 103 respondents in this study. The mean score for Mobile Legends playing intensity was 27.50 with a standard deviation of 7.42, ranging from 13 to 50 out of a theoretical instrument range of 10 to 50. The mean score for competitive esports interest was somewhat higher, at 32.48 with a standard deviation of 6.37, while the mean akhlak score was 38.94 with a standard deviation of 4.82. A summary of these descriptive statistics is presented in Table 1.

Variable	Minimum	Maximum	Mean	Standard Deviation
X1, Mobile Legends Playing Intensity	13	50	27.50	7.42
X2, Competitive Esports Interest	20	50	32.48	6.37
Y, Student Akhlak	28	49	38.94	4.82

Table 1. Descriptive statistics of the study variables (N equal to 103)

As illustrated in Figure 1, the majority of respondents across all three variables fell into the moderate category, based on a mean plus or minus one standard deviation classification, at 61.2 percent for X1, 68.0 percent for X2, and 63.1 percent for Y, while the proportion of respondents in extreme categories, whether very low or very high, remained relatively balanced and did not dominate the distribution. This pattern is important to note because it indicates that the study sample broadly represents a population of students with moderate playing patterns and competitive orientation, rather than a population skewed toward extreme players that might distort the subsequent analysis.

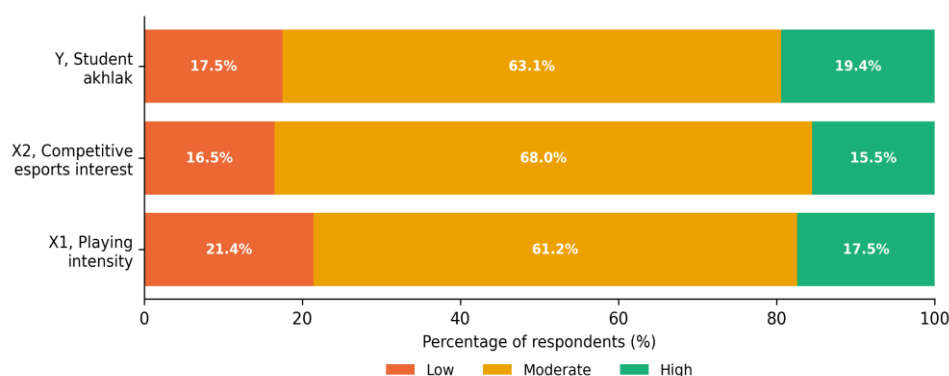


Figure 1. Distribution of low, moderate, and high categories across the three study variables

Instrument validity and reliability testing produced results that must be read carefully, as they were not uniform across variables. Using an item total correlation criterion above 0.30, eight of ten items on the X1 instrument and nine of ten items on the X2 instrument were found valid, with Cronbach's Alpha values of 0.857 and 0.824 respectively, both falling into the high reliability category according to psychometric convention. The Y instrument presented a different picture, with only six of ten items meeting the validity criterion and a Cronbach's Alpha of 0.652, below the conventional threshold of 0.70. The four weak items on the Y instrument, specifically items two, six, fourteen, and eighteen, showed item total correlations well below the criterion. A summary of these results is presented in Table 2.

Variable	Valid Items	Cronbach's Alpha	Category
X1, Mobile Legends Playing Intensity	8 of 10	0.857	High
X2, Competitive Esports Interest	9 of 10	0.824	High
Y, Student Akhlak	6 of 10	0.652	Moderate

Table 2. Summary of instrument validity and reliability

Before proceeding to the regression analysis, the four classical assumptions were examined in sequence to ensure that the data were suitable for parametric statistical analysis. The Shapiro Wilk normality test on the model residuals yielded a W statistic of 0.991 with a significance value of 0.690, well above the 0.05 threshold, convincingly indicating that the regression residuals were normally distributed. The multicollinearity test using the Variance Inflation Factor produced a value of 1.99 for both independent variables, far below the critical threshold of 10, indicating an absence of multicollinearity even though the raw correlation between X1 and X2 was fairly strong at 0.706. The Glejser heteroscedasticity test produced significance values of 0.713 for X1 and 0.999 for X2, both well above 0.05, indicating that the residual variance was homogeneous across the range of predictor values. Finally, a Durbin Watson value of 1.954, very close to the ideal value of two, confirmed the absence of meaningful autocorrelation in the residuals. With all four assumptions convincingly

satisfied, the multiple linear regression model could be interpreted with adequate methodological confidence.

The core finding of this study lies in the results of the multiple linear regression analysis, as visualized in the conceptual framework presented in Figure 2. The resulting regression equation was Y equal to 39.870 minus 0.258 X_1 plus 0.190 X_2 , meaning that if both independent variables were equal to zero, the predicted akhlak score would be 39.870, while each one point increase in playing intensity was associated with a 0.258 point decrease in akhlak score holding X_2 constant, and each one point increase in competitive esports interest was associated with a 0.190 point increase in akhlak score holding X_1 constant.

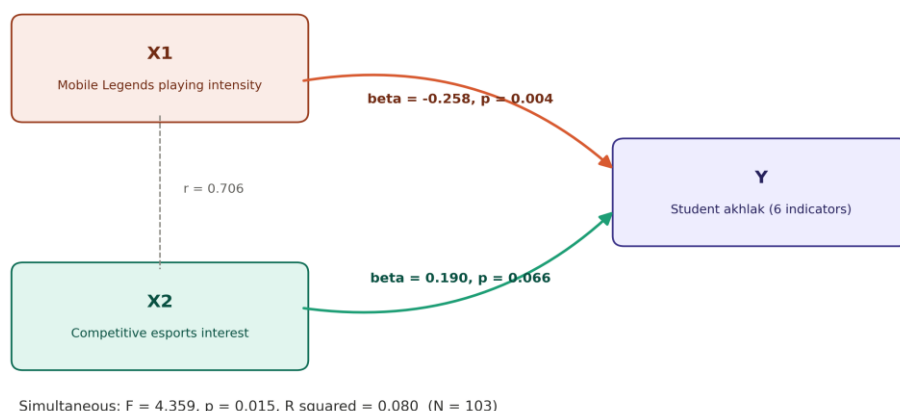


Figure 2. Conceptual framework and path coefficients from the multiple linear regression

This negative relationship between X_1 and Y is clearly illustrated in the scatter plot in Figure 3, where the regression line shows a consistently downward slope across the range of playing intensity scores, although the scatter of data points also displays considerable variation around that line, an early visual indication that this relationship, while real, is not overwhelmingly strong, consistent with the coefficient of determination discussed below.

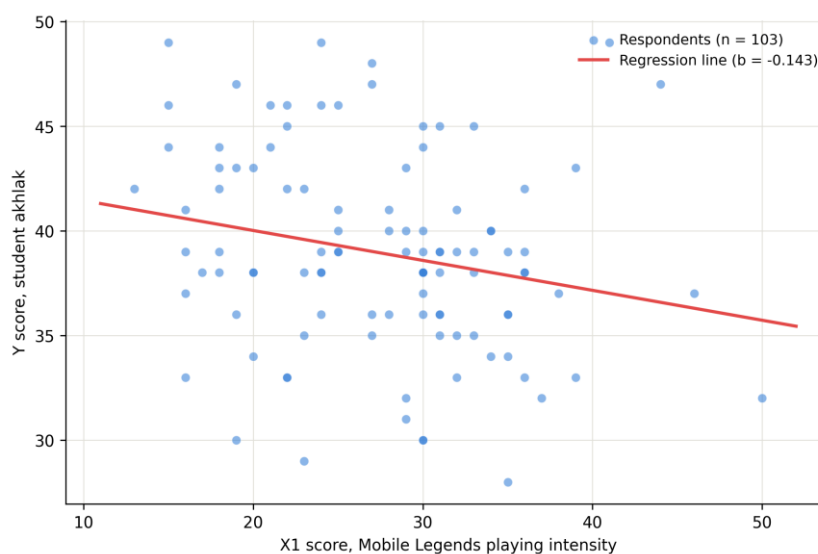


Figure 3. Scatter plot of the relationship between Mobile Legends playing intensity and student akhlak scores

A complete summary of the regression results is presented in Table 3. Partial hypothesis testing through the t test revealed a contrasting picture between the two independent variables. For X_1 , the t value of negative 2.937 with a significance of 0.004 fell well below the 0.05 threshold, so that the first working hypothesis was accepted, meaning that Mobile Legends playing intensity was shown to have a significant and negative effect on student akhlak. In contrast, for X_2 , the t value of 1.857 with a significance of 0.066 fell just above the conventional threshold, so that, strictly speaking, the second working hypothesis was rejected, although it should be noted that this significance value lay very close to the 0.05 boundary and its coefficient consistently pointed in a positive direction. Simultaneous testing through the F test produced an F value of 4.359 with a significance of 0.015, meaning that the two independent variables together were shown to have a significant effect on student akhlak, so that the third working hypothesis was accepted. Nevertheless, the coefficient of determination of 0.080 indicated that the combination of the two variables explained only eight percent of the total variation in student akhlak scores within this sample, while the remaining ninety two percent was explained by factors outside the scope of this regression model.

Variable	Coefficient B	Std. Error	Beta	t	Sig.
Constant	39.870	2.399	-	16.616	0.000
X_1 , Playing Intensity	0.258	0.088	0.398	2.937	0.004
X_2 , Competitive Interest	0.190	0.102	0.251	1.857	0.066

Table 3. Summary of multiple linear regression results (R equal to 0.283, R squared equal to 0.080, Adjusted R squared equal to 0.062, F equal to 4.359, Sig. F equal to 0.015, N equal to 103). The X_1 coefficient is reported as an absolute value; its effect on student akhlak is negative in direction.

The Negative Effect of Playing Intensity: Confirmation Across Cultural Contexts

The finding that Mobile Legends playing intensity has a significant and negative effect on student akhlak is, when situated within the broader literature, not a surprise but rather a confirmation of a pattern that has been repeatedly reported across cultural contexts. Novrialdy (2019), in a study of online gaming addiction among Indonesian adolescents, noted that high playing intensity is consistently associated with declining psychosocial functioning, a pattern that, specifically within the Mobile Legends context, was also confirmed by Oetomo and Fahyuni (2022) in their finding of increased procrastination tendencies among students who played the game intensively. Furthermore, in a domain directly relevant to the context of this study, Haris et al. (2021) found that the intensity of online gaming affected declining religious observance among students of Islamic Religious Education, a finding that directly bridges gaming behavior with the religious dimension at the core of the akhlak construct examined here.

To understand why this pattern emerges so consistently, two theoretical explanations may be proposed as complementary rather than mutually exclusive. The first is the displacement pathway, namely that, at a very basic level, time spent by a student playing is time that is arithmetically no longer available for worship, study, or face to face social interaction. This principle aligns with the concept of mujahadah in the thought of Al Ghazali, which demands active earnestness in self control so that time, the most limited resource possessed by any human being, is not consumed by activities that distract from more essential life goals (Lestari & Windri, 2025). The second pathway, which operates at a deeper level and is not always consciously recognized by the individuals involved, is the cognitive affective pathway explained by the General Aggression Model of Anderson and Bushman (2001), namely that repeated exposure to the competitive and conflictual dynamics of MOBA games, such as team battles, provocation of opponents, and the psychological pressure of chasing rank, has the potential to shape aggressive cognitive scripts that, without conscious awareness, generalize beyond the context of the game itself.

What makes this second pathway particularly relevant to discuss is that its effects are not merely theoretical speculation drawn from Western literature that cannot be applied to the Indonesian context. Anderson et al. (2010) explicitly tested and confirmed the validity of this model across cultures, including among Eastern samples that differ in social structure and norms from the Western societies in which the theory was originally formulated, so that the argument that this effect applies only in developed countries is no longer sufficient to dismiss its relevance to the Pamekasan context. Fathurrohman and Rohman (2025), in a study specifically linking Al Ghazali's thought with the habit of playing Mobile Legends among adolescents, further affirmed that Al Ghazali's three stage framework of moral development remains highly relevant for cultivating self control and digital ethics among contemporary generations, a conceptual bridge demonstrating that concern over the impact of gaming is not the exclusive province of secular Western discourse but has long been a subject of attention within the classical Islamic intellectual tradition, well before digital games existed.

A third dimension worth examining closely is how high playing intensity may specifically seep into patterns of communication and emotional control among students, two of the six akhlak indicators measured in this study, and precisely the two indicators that showed the weakest item validity on the Y instrument. Research on toxic behavior within online gaming communities has revealed the mechanism of moral disengagement, a cognitive process by which morally problematic actions such as insults, provocation, or verbal intimidation directed at opponents or teammates are rationalized as normal within the context of competition (Beres et al., 2021). This process of rationalization is reinforced by what is known as the online disinhibition effect, in which the anonymity and physical distance inherent in screen based interaction cause players to feel less bound by the social norms that typically govern face to face interaction (Suler, 2004). Zsila et al. (2022) further add that such toxic behavior does not affect only its immediate victims within the game, but also leaves a psychological trace that may influence the communication patterns of the perpetrator outside the gaming context, a finding consistent with the weak validity of

the emotional control and peer communication items on the akhlak instrument used in this study.

Interestingly, when the findings of this study are compared with the study of Amaliah et al. (2025), which specifically examined the effect of Mobile Legends on the akhlak of senior high school students in Baubau, a convincing convergence in the direction of effect emerges despite the considerable geographic distance between the two locations, namely Southeast Sulawesi compared with Madura. Such cross location convergence is important in confirming that the findings of this study are not merely a local artifact of Pamekasan, but rather reflect a pattern that tends to recur among Indonesian students who consume similar games. Even so, it is important not to fall into a deterministic conclusion. The standardized beta coefficient for X_1 in this study, at 0.398, although statistically significant, does not represent an overwhelmingly strong relationship in practical terms, but rather a moderate effect that operates probabilistically, not as a rigid causal law that applies universally to every individual student.

The overall implication of this reading is that playing intensity is best understood as one among many risk factors operating cumulatively, rather than as the sole cause of moral decline. This understanding carries important practical weight, as it shapes divergent policy directions. If playing intensity is regarded as the sole cause, the resulting policy tends toward an absolute ban on gaming, whereas if it is understood as one of many probabilistically operating risk factors that can be moderated by other factors, a more appropriate policy is proportional regulation accompanied by the strengthening of other protective factors, a direction elaborated further in the third subsection of this discussion.

In closing this subsection, it must be emphasized that the negative and significant finding for X_1 should not be read as a moral verdict against Mobile Legends itself as a digital cultural product. What this analysis reveals is that it is the pattern of intensive and unregulated engagement, not the existence of the game itself, that is associated with the risk of moral decline. This distinction in emphasis is crucial, as it forms a direct bridge to the discussion of the second variable, where competitive orientation toward esports, which notably also involves intensive engagement with the same game, is found to exhibit a statistically quite different pattern of influence.

The Non Significance of Competitive Esports Interest: Dissecting a Common Misconception That Esports Is Inherently Risky

In marked contrast to the finding for the first variable, competitive esports interest showed no statistically significant effect on student akhlak, although its coefficient consistently pointed in a positive direction and its significance value lay very close to the conventional threshold of 0.05. At first glance, this result may appear surprising to readers accustomed to equating esports with gaming addiction in everyday public discourse. Yet when read through an appropriate theoretical framework, this result is in fact highly plausible and could even have been anticipated from the outset, given the fundamental distinction between the construct of playing intensity and the construct of competitive interest already outlined in the introduction.

Self Determination Theory, formulated by Ryan, Rigby, and Przybylski (2006), offers the most direct explanation for this phenomenon. According to this framework, a person's motivation to engage in any activity, including competitive gaming, is fundamentally driven by the effort to satisfy three basic psychological needs, namely competence, or the sense of being capable of mastering a skill, autonomy, or the sense of freely choosing to engage, and relatedness, or the sense of connection with fellow players within a team. Mature competitive interest, read through this lens, is not a manifestation of compulsion or an inability to exercise self control, but rather a reflection of healthy self regulation, whereby an individual consciously and purposefully chooses to develop expertise within a competitive domain. Przybylski et al. (2010) reinforce this argument by showing that the satisfaction of basic psychological needs through gaming is in fact associated with increased short term psychological well being rather than its decline, a finding that directly contradicts the popular assumption that deep engagement with games is inherently harmful.

Empirical support for this theoretical reading comes from the longitudinal study of Trotter et al. (2022) on seven school based esports programs, which found that students participating in structured esports maintained positive youth development scores, including self regulatory capacity and growth mindset, that remained statistically stable throughout the observation period, in sharp contrast to a control group that instead showed a decline over the same period. This finding is important because it shows that engagement in structured esports, rather than constituting a risk factor, in fact functions as a protective factor against the deterioration of adolescent psychological development. Within the Indonesian context, a similar pattern was confirmed by Lahope et al. (2024), who found that school based esports extracurricular activities can cultivate solidarity, leadership, time management, and a strong work ethic among actively participating students, a list of character qualities that, upon closer inspection, overlaps substantially with several akhlak indicators measured in this study, particularly time discipline and responsibility.

This convergence of positive direction also aligns with the findings of Rizaldi et al. (2025) regarding esports achievement interest among vocational school students, which showed that the factors of attention and facilities emerged as the sub indicators with the highest scores in shaping healthy competitive interest, indicating that mature competitive interest is driven more by seriousness and structural support than by mere compulsive impulse. At the same time, on a different note, Saputra and Jannah (2025) caution that excessive competitive pressure can still trigger competitive anxiety capable of disrupting the emotional regulation of esports players, an important reminder that the non significant result of this study should not be interpreted as a guarantee that competitive engagement in esports is always and unconditionally safe for every student, but rather as a description of an average tendency at the population level under study.

The methodological implication of this non significant finding is in fact far more important than the statistical figure itself. This study empirically supports the initial assumption that playing intensity and competitive interest are two structurally distinct constructs, rather than two sides of a single, identical phenomenon.

Empirical support for this conceptual separation carries significant practical consequences. School or family policies that equate the two, for instance by imposing a blanket ban on student involvement in esports activities out of concern for the general impact of gaming, risk being counterproductive, as they would eliminate a vehicle for cultivating discipline and teamwork that has been empirically shown to be attached to esports when managed in a structured and well guided manner.

It is also worth noting that the significance value of X_2 , at 0.066, although strictly above the conventional threshold of 0.05, lies close enough to that boundary that it cannot be entirely dismissed. In statistical terms, this finding falls within what some methodologists describe as a marginal zone, a condition that calls for caution in interpretation rather than an absolute rejection of any possible relationship. It is plausible that, with a larger sample size, greater homogeneity in the structure of school esports programs, which may not yet be as well organized as the structured esports programs examined by Trotter et al., or a more precise akhlak measurement instrument, the positive relationship between competitive interest and akhlak might reach statistical significance in future research.

In closing this subsection, the non significant finding for X_2 in fact carries a message that is both more reassuring and more challenging than a simple conclusion that esports is safe. The message is that the direction of esports' influence on student akhlak depends heavily on how such engagement is managed and structured, rather than on its mere existence. Esports pursued under proper guidance, with adequate mentorship and a clear orientation toward achievement, appears to hold a different potential from gaming pursued compulsively without direction or supervision, a nuance further sharpened in the discussion of the role of the family, school, and community ecosystem in the following subsection.

Interpreting the Small Simultaneous Contribution: Akhlak as an Ecological Construct

The coefficient of determination of 0.080, meaning that the two independent variables together explain only eight percent of the total variation in student akhlak scores, requires careful and layered interpretation so that it is not misread as a failure of the research model. In purely statistical terms, this figure indeed qualifies as a small effect by social science convention, yet the significance of the F test at p equal to 0.015 confirms that this effect is not merely an artifact of sampling chance, but rather a pattern that is statistically real, albeit modest in magnitude. The more substantive question worth discussing is not whether this figure is good or bad in a normative sense, but rather what meaning lies behind the smallness of this contribution for our understanding of how student akhlak is actually formed.

The most convincing answer to this question comes from Bronfenbrenner's Ecological Systems Theory (1979), which from the outset asserted that human development, including moral and character development, never occurs in a vacuum isolated from its social context, but is always the outcome of layered interaction between the individual and the microsystems of family, school, peer groups, and the macrosystems of culture and religion that envelop them. A contemporary adaptation of this framework, which explicitly incorporates the virtual microsystem as a new

layer of influence for the digital native generation, affirms that digital behavior such as gaming never operates in isolation, but continually interacts and exchanges influence with other microsystem layers that simultaneously help shape student akhlak (Navarro & Tudge, 2022). Read through this lens, the small coefficient of determination in fact becomes indirect confirmation of the validity of this ecological framework, for if akhlak is truly a multiply determined construct as Bronfenbrenner claimed, then it stands to reason that a single type of digital exposure, however statistically significant, would be unable to explain a large share of the variance.

Additional empirical support for this ecological reading comes from the study of religiosity as a protective factor conducted by Laird et al. (2011), who found that adolescents with a high degree of religiosity and religious community involvement show considerably greater resilience against the adverse effects of low self control than adolescents with lower religiosity. This finding bears direct relevance to the context of the present study, given that the strong religious culture of Pamekasan is highly likely to function as a moderator that tempers the negative impact of gaming intensity for most students, even though this religiosity variable was not explicitly measured within the regression model of this study and thus likely contributes to the large share of unexplained variance. Consistent with this, the framework of Ibn Miskawaih regarding akhlak as a state of the soul formed through gradual and continuous habituation further affirms that akhlak is not the product of a single exposure, but rather the outcome of accumulated habits shaped over time by the various educational institutions through which an individual passes (Ridwan & Aisyah, 2022).

Relevant national findings further enrich this ecological reading by showing that the family factor consistently emerges as a far stronger determinant than digital exposure alone. Fachriza and Alfita (2025), in their study of adolescent online game players, found that family support, through supervision, open communication, and the setting of clear boundaries, is able to create healthy behavioral regulation regardless of the intensity of a child's digital engagement. Similarly, Amaliah et al. (2025), in their study of the effect of Mobile Legends on student akhlak, explicitly recommended strengthening time discipline as the primary intervention, a recommendation that implicitly acknowledges that the root of the problem lies not in the game itself, but in the capacity for self regulation and structural support surrounding the student concerned.

Taking this body of evidence together, it can be concluded that the ninety two percent of variance left unexplained by the regression model in this study is not a failure to be regretted, but rather a substantive finding in its own right that deserves a positive reading. This figure confirms that student akhlak is a far more complex and multiply determined construct than a simple function of gaming patterns, with family upbringing, the quality of religious education, teacher modeling, the cohesion of religious community, and individual self regulatory capacity likely playing a far more dominant role in shaping akhlak than digital engagement alone. Gaming intensity, within this larger framework, is more accurately positioned as one minor predictor among many factors, rather than as a standalone principal determinant.

The policy implication that can be drawn from this ecological reading is fairly fundamental and has the potential to redirect the kind of intervention commonly proposed in this area. If student akhlak is indeed determined more by the family, school, and community ecosystem than by a single digital exposure, then interventions narrowly focused on restricting gaming time, without simultaneous strengthening of that broader ecosystem, are unlikely to yield meaningful improvement in akhlak over the long term. A more theoretically promising strategy, by contrast, is a layered approach that combines proportional regulation of playing intensity with simultaneous strengthening of the quality of family upbringing, religious education at school, and the cohesion of religious community within the student's living environment.

In closing this subsection, it must be emphasized that the small coefficient of determination in this study should not undermine confidence in the validity of the earlier partial and simultaneous test findings, since statistical significance and effect size are two distinct pieces of information that complement rather than contradict one another. What deserves emphasis instead is that this small coefficient of determination enriches, rather than weakens, the theoretical contribution of the study. It helps place gaming intensity in its proper proportion within the larger map of factors that shape student akhlak, while also serving as an important reminder to educators and parents not to reduce the complex problem of character formation to a simple matter of how many hours are spent playing games.

CONCLUSION

This study of 103 students at SMA Negeri 3 Pamekasan yields three main conclusions. First, the intensity of playing Mobile Legends has a significant and negative effect on student akhlak, confirming the pattern of risk reported in the international problematic gaming literature (Novrialdy, 2019; Anderson & Bushman, 2001) as well as in similar national findings (Haris et al., 2021; Amaliah et al., 2025; Oetomo & Fahyuni, 2022). Second, competitive esports interest has no significant effect on student akhlak, a finding that, both theoretically (Ryan et al., 2006; Deci & Ryan, 2000) and empirically (Trotter et al., 2022; Lahope et al., 2024), challenges the mistaken generalization that involvement in esports is inherently risky to student morality. Third, the two variables together have a significant simultaneous effect, albeit with a small contribution, affirming akhlak as an ecological and multiply determined construct (Bronfenbrenner, 1979; Navarro & Tudge, 2022) that extends far beyond the factor of digital engagement alone.

The practical implication is clear, namely that policies for cultivating student akhlak in the digital era should draw a firm distinction between the regulation of playing intensity and duration, which must be actively managed by families and schools, and a blanket prohibition on involvement in esports, which risks eliminating a legitimate vehicle for cultivating discipline and teamwork. Strengthening the family, school, and religious community ecosystem, rather than imposing a single form of digital restriction, appears to be a more theoretically promising avenue for intervention. Future research is encouraged to adopt a longitudinal design, to

incorporate religiosity as an explicit moderator variable, and to revise the psychometrically weak items of the akhlak instrument.

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