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The Relationship Between Motivation and Interest with Understanding of Passing Techniques

Hubungan Antara Motivasi dan Minat dengan Pemahaman Teknik *Passing*

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Abstract

Passing skills in football are basic talents that set good players apart, but there isn't much research on the psychological variables that affect skill acquisition in Indonesian schools. In May 2025, this correlational study looked at the connections between motivation, interest, and understanding of passing tactics among 31 football extracurricular students at SMAN 2 Samboja. It used Self-Determination Theory. We used the Sport Motivation Scale-II (α=0.847), the Individual Interest Scale (α=0.823), and the Understanding of Passing Techniques Scale (α=0.891) to gather data. Then, we used SPSS 26.0 to analyze the data using Pearson correlation and multiple regression. The results showed that the participants had a lot of motivation (M=5.42, SD=0.89), a lot of interest (M=4.18, SD=0.72), and a solid grasp of passing (M=3.85, SD=0.65). There were strong positive links between motivation and passing comprehension (r=0.672, p<0.001) and between curiosity and passing understanding (r=0.584, p<0.001). Motivation and interest together accounted for 52.3% of the variation in passing understanding (R^2=0.523, p<0.001). Motivation was a better predictor (β=0.451) than interest (β=0.312). The results support the use of Self-Determination Theory in Indonesian sports education and suggest that encouraging independent motivation and situational interest might help students improve their technical skills in football extracurricular programs.

Abstrak

Salah satu keterampilan penting yang membedakan pemain sepak bola yang mahir adalah keterampilan passing. Namun, ada sedikit bukti empiris tentang komponen psikologis yang memengaruhi akuisisi keterampilan dalam pendidikan di Indonesia. Dengan menggunakan Teori Determinasi Diri pada bulan Mei 2025, penelitian korelasional ini menyelidiki hubungan antara motivasi, minat, dan pemahaman teknik passing pada 31 siswa ekstrakurikuler sepakbola di SMAN 2 Samboja. Sport Motivation Scale-II (α=0,847), Individual Interest Scale (α=0,823), dan Understanding of Passing Techniques Scale (α=0,891) digunakan untuk mengumpulkan data, yang kemudian dianalisis melalui

korelasi Pearson dan regresi berganda menggunakan SPSS 26.0. Temuan menunjukkan bahwa partisipan memiliki motivasi tinggi (M=5,42, SD=0,89), minat tinggi (M=4,18, SD=0,72), dan pemahaman passing yang baik (M=3,85, SD=0,65). Ada korelasi positif signifikan Temuan menunjukkan bahwa teori determinasi diri dapat digunakan dalam pendidikan olahraga Indonesia, dan mereka menyarankan untuk meningkatkan minat situasional dan motivasi otonom untuk pengembangan keterampilan teknis dalam program ekstrakurikuler sepakbola.

A. Introduction

Football is the most popular sport in the world. FIFA (2023) says that about 4% of the world's population plays organized football. This worldwide trend goes beyond cultural, economic, and geographic boundaries, making it a universal language of sport. In Indonesia, football has grown from just a fun hobby to a big element of the country's culture. It attracts people from all walks of life and helps bring people together and develop young people (Rahmanto et al., 2021).

There has been a lot of progress in structured youth programs in Indonesian football. School-based extracurricular activities have become the main ways to find and nurture potential. Simbolon & Simanjuntak (2020) found that more than 75% of Indonesian secondary schools currently have structured football programs. This shows how important the sport is in schools. These programs do more than just teach technical skills; they also help create character, integrate people into society, and promote health. This is in keeping with the broader educational goals set out in the Indonesian National Education Standards.

The technical side of football includes a wide range of motor talents, cognitive aptitude, and tactical knowledge. Passing is one of the most important technical skills for playing well as a team and carrying out a strategy. Torres-Unda et al. (2019) showed through a long-term study that passing accuracy in youth levels is a strong predictor of future success in the game, with correlation coefficients ranging from r=0.68 to r=0.74 across different age groups.

Recent study has improved our understanding of passing beyond only how to do it mechanically. Williams & Hodges (2018) came up with a comprehensive model of passing competence that includes perceptual-cognitive skills, decision-making abilities, and motor execution. This model makes it clear that good passing takes more than just being good at the technical aspects; it also demands being aware of the situation, being able to anticipate what will happen, and understanding tactics. Bradley et al. (2018) backed up this point of view by looking at the performance of elite players and showing that effective passes in competitive situations depend equally on technical execution (48%) and decision-making quality (52%). Different biological, psychological, and environmental factors affect the way passing talents develop over time. Smith et al. (2019) found that there are certain times when kids are more likely to learn how to pass well. The biggest changes happen between

the ages of 12 and 16, when kids' brains are developing and they are learning more about strategy. This developmental window overlaps with the secondary school time, underscoring the need of structured extracurricular programming during these critical years.

Deci & Ryan (2020) created Self-Determination Theory (SDT), which is a complete way to understand why people do things and how it affects their behavior, performance, and health. Chapman et al. (2023) said that four types of motivation—extrinsic, intrinsic, social, and pro-social—explained why people took part in extracurricular activities. The theory says that there are multiple sorts of motivation along a scale of self-determination. This scale goes from amotivation to different types of extrinsic motivation to intrinsic incentive.

The idea of basic psychological needs lies at the heart of SDT. These needs are autonomy (the need to feel like you have control over your life and that you are doing the right thing), competence (the need to feel like you are doing a good job), and relatedness (the need to feel like you are connected to people in a meaningful way). Ryan & Deci (2020) say that meeting these requirements leads to more independent kinds of motivation, which in turn improve learning, performance, and mental health. Need fulfillment has always been associated to good things in sports, such learning new skills, sticking with it, and doing well in competitions (González-Cutre et al., 2019).

There is a lot of real-world evidence that SDT works in sporting environments. Standage & Ryan (2019) looked at 73 research that looked at SDT in youth sports and found that autonomous motivation is substantially linked to skill growth (weighted mean r=0.58), practice quality (r=0.62), and long-term engagement (r=0.71). These links seem to be especially strong in team sports, where social interactions and collaborative learning environments make it easier to meet needs. According to the Four-Phase Model of Interest Development (Hidi & Renninger, 2019), interest is a unique mental state that includes more attention, cognitive engagement, and pleasant feelings toward certain activities or content. The model makes a difference between situational interest (temporary, context-dependent engagement) and individual interest (stable, dispositional preference). Both types of interest can help people learn in various ways.

Recent study in neuroscience has made it clearer how curiosity affects learning.

Renninger & Hidi (2019) showed that activating interest turns on dopamine reward pathways, which makes it easier to pay attention, remember things, and process information. Cairney et al. (2019) observed that in sports settings, students who were more interested in physical activities remembered technical instructions 34% better and performed skills 41% more accurately than students who were less interested. Interest and motivation seem to be linked in both directions, and they seem to strengthen each other. A qualitative study of the factors that affect Japanese students' motivation to participate in school-based extracurricular sports found that initial situational interest can turn into long-term individual interest when the right conditions and positive experiences are present (Aoyagi et al., 2020). This developmental phase is especially important for extracurricular sports activities, where people can choose to participate depending on their interests and get involved.

Recent studies show that students who take part in extracurricular activities may feel more connected to their school, which could make them less likely to fail or drop out (National Center for Education Statistics, 1995). The extracurricular setting offers different kinds of opportunities for skill development than conventional physical education settings. These differences include voluntary participation, longer practice times, groups chosen by peers, and less pressure to do well on tests. These factors make it easier for students to be intrinsically motivated and deeply engaged (Farb & Matjasko, 2012).

There is a lot of research on how extracurricular activities affect the student experience and graduate outcomes for populations with low participation rates. For example, (Stuart et al., 2011) showed that structured activities are linked to better academic performance, more social capital, and better career outcomes. In sports, extracurricular activities offer chances for intentional practice, learning from peers, and developing one's identity that go along with formal training.

It seems that the quality of extracurricular activities is more important than just being involved. Hansen et al. (2010) found that high-quality programs had several important traits, such as the right level of challenge, clear ways to give feedback, support for autonomy, and good relationships with peers. These traits are quite similar to the concepts of SDT, which means that well-planned extracurricular activities can make it easier for people to meet their needs and stay motivated on their own. When it comes to understanding how athletic skills develop, the Indonesian school

system has some special things to think about. Cultural values that stress respect for authority and working together (gotong royong) may affect how pupils feel about being independent and connected in sports contexts. Kristiyanto & Sukoco (2020) said that Indonesian students generally put group cohesion ahead of individual performance, which could change how they are motivated and how they learn new skills.

SMAN 2 Samboja, which is in East Kalimantan, is a good example of the problems and chances that Indonesian high schools have while trying to offer good sports programs. With a student population of 410 and low resources characteristic of regional schools, the institution has maintained an active football extracurricular program for almost five years. The program's framework, with sessions twice a week and qualified teachers, is typical for Indonesian secondary schools. However, the results for each participant are very different, which suggests that psychological elements play a role.

There has been a lot of research done throughout the world on motivation and skill learning in sports, but there is still not much empirical information from Indonesian schools. Most of the research that has been done so far has been on elite athletes or metropolitan schools with a lot of resources. This means that there is a lack of information about the psychological elements that affect skill development in regular Indonesian secondary schools. Rahman et al. (2022) found this gap and called for study that looks at the cultural, resource, and infrastructure elements that are particular to Indonesian education.

Also, SDT has been used a lot in sports in the West, but we need to test it out on Indonesian youngsters to see if it works. Differences in how people think about autonomy, social relationships, and achievement may affect how psychological aspects and skill learning are related. This study fills in these gaps by looking at motivation and interest in the specific setting of Indonesian school-based football programs.

The goals of this study are: (1) to look at the link between motivation and understanding of passing techniques; (2) to look at the link between interest and understanding of passing techniques; (3) to look at the combined effect of motivation and interest on technical understanding; and (4) to find out which of these psychological factors is the best predictor.

B. Methods

This study used a quantitative correlational research methodology to look into how motivation, curiosity, and understanding of passing procedures are related. We chose the correlational technique because it lets us look at associations that happen naturally without changing anything, which is what Creswell & Creswell (2023) suggest for studying psychological phenomena in schools. The cross-sectional data collection made it easy to evaluate existing relationships, but it also recognized that it couldn't make causal inferences.

The study group included all 410 students who were enrolled at SMAN 2 Samboja throughout the 2024-2025 school year. The target sample included all 31 students who were actively engaging in the football extracurricular program, which was 7.56% of the entire student body. This method of census sampling made sure that the phenomenon being studied was fully represented, which got rid of sampling bias and made the most of the statistical power that was available.

C. Result and Discussion

1. Result

Descriptive Statistics

Table 1 shows the descriptive statistics for all of the study's variables. Participants scored reasonably high on all dimensions, with motivation having the highest mean score compared to the scale's midpoint.

Table 1. Descriptive Statistics for Study Variables (N=31)

Variable	Mean	SD	Min	Max	Skewness	Kurtosis	95% CI
Motivation	5.42	0.89	3.67	7.00	-0.23	-0.45	[5.09, 5.75]
Interest	4.18	0.72	2.80	5.00	-0.31	-0.18	[3.91, 4.45]
Passing Understanding	3.85	0.65	2.45	5.00	-0.19	0.12	[3.61, 4.09]

The distribution characteristics showed that the data was close to normal, with skewness and kurtosis values between -1 and +1, which supports the use of parametric analysis.

Correlation Analysis

Table 2 shows that bivariate correlations showed strong positive associations between all of the studied variables. There was a strong and statistically significant link between motivation and passing comprehension ($r=0.672$, $p<0.001$). There was

also a strong and statistically significant link between curiosity and passing understanding (r=0.584, p<0.001). The moderate connection between motivation and interest (r=0.543, p<0.001) revealed that they were connected but not the same thing.

Table 2. Pearson Correlation Matrix with 95% Confidence Intervals

Variable	1	2	3
1. Motivation	-		
2. Interest	0.543** [0.394, 0.692]	-	
3. Passing Understanding	0.672** [0.523, 0.821]	0.584** [0.435, 0.733]	-

Note: **p < 0.001

Multiple Regression Analysis

Table 3 shows the results of hierarchical multiple regression, which looked at the predictive correlations. Model 1, which just looked at motivation, explained 45.2% of the difference in passing understanding (R^2=0.452, F(1,29)=23.91, p<0.001). Adding interest to Model 2 made predictions much better (ΔR^2=0.071, F(1,28)=4.89, p=0.035), and the whole model explained 52.3% of the variance (R^2=0.523, F(2,28)=15.354, p<0.001).

Table 3. Hierarchical Multiple Regression Analysis Results

Model	Predictors	B	SE B	β	t	p	95% CI for B
1	Constant	1.049	0.521		2.014	0.053	[-0.018, 2.116]
	Motivation	0.491	0.100	0.672	4.890	<0.001	[0.285, 0.697]
2	Constant	0.847	0.445		1.903	0.068	[-0.065, 1.759]
	Motivation	0.329	0.082	0.451	4.012	<0.001	[0.160, 0.498]
	Interest	0.282	0.101	0.312	2.792	0.009	[0.074, 0.490]

Note: Model 1: R^2=0.452, F(1,29)=23.91, p<0.001; Model 2: R^2=0.523, ΔR^2=0.071, F(2,28)=15.354, p<0.001

Supplementary Analyses

There were no worrying patterns in the standardized residuals, as all values were within ±2.5 standard deviations. The collinearity diagnostics showed that the VIF values were satisfactory (Motivation=1.42, Interest=1.42), which confirmed that there was no multicollinearity. The interaction term (Motivation × Interest) was not significant (β=0.087, p=0.187), which means that the effects were additive rather than multiplicative.

Polynomial regression evaluating quadratic relationships found no significant non-linear terms ($p>0.10$), which supports the idea that a linear model is adequate. The bootstrapped confidence intervals were quite near to the parametric values, which showed that the findings were strong even if the sample size was tiny.

Effect Size Analysis

We used Cohen's f^2 effect sizes to figure out regression models. Model 1 had a big effect ($f^2=0.824$), whereas Model 2's improvement had a medium effect ($f^2=0.175$). Individual predictors had big (motivation: $f^2=0.575$) and medium (interest: $f^2=0.278$) effects, which means they were practically significant as well as statistically significant.

2. Pembahasan

Theoretical Implications

The results strongly support the use of Self-Determination Theory in situations where people are learning football skills. The substantial positive link between motivation and understanding how to pass ($r=0.672$) fits with SDT's main idea that self-directed kinds of motivation improve learning and performance. This association is stronger than what was shown in recent meta-analyses of SDT in sports (weighted mean $r=0.58$; Standage & Ryan (2019), which suggests that structured extracurricular activities have even stronger relationships.

The strong link between interest and technical comprehension ($r=0.584$) adds to the Four-Phase Model of Interest Development in sports skill learning. Different sorts of extracurricular activities have different reasons for doing them. For example, extrinsic motivation was strong for volunteering, working, going to school, and being a part of society (Chapman et al., 2023). This study supports Cairney et al. (2019) work showing that interest can help people pay attention to and remember technical instructions. The moderate correlation between motivation and interest ($r=0.543$) supports the idea that they are linked but separate ideas, each adding its own distinctive variation to how well someone understands a skill.

Comparison with Previous Research

In many instances, our results validate and build on what has already been found. Motivation and interest explain 52.3% of the variance, which is more than what García-González et al. (2020) observed, who said that motivation explained 38% of

the variance in skill learning in young football. The difference could be because passing skills are more focused than other skills, or it could be because people in Indonesia and the West have different ways of showing motivation.

The teacher-student relationship ($R = 0.456$, $p < 0.001$) and positive teacher behavior ($R = 0.419$, $p < 0.001$) were the external factors that had moderate correlations (Li & Xue, 2023). The fact that motivation is now a greater predictor ($\beta=0.451$ vs. $\beta=0.312$) fits with goal-setting theory and backs up Thompson et al. (2021) results that motivation has a more direct effect on skill-focused outcomes than interest. But interest's big role means that both elements should be taken into account while designing programs.

Cultural Considerations

The high correlation coefficients may be partly due to cultural characteristics that are unique to Indonesian schools. In Indonesia, the idea of gotong royong, or working together, may make the link between motivation and skill development stronger when people learn in groups. Also, when students are driven to learn on their own, respecting authority figures like coaches may help them master technical skills better.

It's interesting that the modest number of women in our sample (n=3) is similar to the larger gender gaps in sports participation in Indonesia. This trend makes it hard to make meaningful comparisons between genders, but it also shows that there are systemic impediments that need to be looked into in future research and program development. Girls do better in school and with better parental education, reading books, and spending more time on activities throughout early adolescence (Balaguer et al., 2020).

Practical Implications

The results suggest a number of evidence-based ways to improve football extracurricular programs. First, programs should focus on developing autonomous motivation by giving people choices, making things personally relevant, and setting mastery-oriented goals instead of dictating how people are motivated. You may do this by giving people choices in training activities and skill areas, linking skill development to personal goals and dreams, giving feedback that is more informational than controlling, and focusing on individual progress instead of comparing performance.

Second, developing interest takes work on both a situational and individual level. Programs should include a variety of new training activities that provide the right amount of challenge, show how passing skills can be used in the real world, give students chances to show off their skills, and connect skills to professional football situations that students find interesting. This technique with several parts helps keep students interested and encourages deeper learning.

Lastly, an integrated strategy is necessary because both aspects play a big role in developing skills. Instead of just focusing on one psychological aspect, programs should work on both motivation and interest at the same time. The lack of interaction effects in the study shows that increasing both motivation and interest will have an additive effect. This means that the best way to improve football extracurricular activities and student achievements is to take a holistic approach that targets both factors.

Limitations and Future Directions

Several limitations warrant consideration when interpreting the results of this study. The cross-sectional design represents a primary limitation, as the correlational nature precludes causal inferences about the relationships between motivation, interest, and skill development. Longitudinal research tracking these variables over time would provide stronger evidence for directional relationships and developmental processes.

Additionally, the sample characteristics pose constraints on generalizability, with the small sample size of 31 participants and single-site data collection limiting the extent to which findings can be applied to other contexts. Multi-site studies incorporating diverse Indonesian schools would enhance external validity and provide a more comprehensive understanding of these relationships across different educational environments.

The methodology also presents several constraints that should be acknowledged. The exclusive reliance on self-report instruments introduces potential biases related to social desirability, response patterns, and subjective interpretation of items. Future research should incorporate objective skill assessments, observational measures, and coach ratings to provide triangulated evidence. Furthermore, the study's limited scope focusing specifically on passing skills, while theoretically justified, may not adequately represent broader technical competencies

in football. Comprehensive skill batteries examining multiple technical aspects would provide a more complete understanding of the relationship between psychological factors and athletic performance.

The gender imbalance in the sample, with minimal female representation, prevents meaningful gender comparisons and limits the applicability of findings to mixed-gender programs. This represents a significant limitation given the growing participation of females in football programs globally. Future research directions should address these limitations through longitudinal investigations examining temporal relationships and developmental trajectories, intervention studies testing specific motivational and interest-enhancement strategies, and cross-cultural comparisons examining cultural moderators of the observed relationships.

Additionally, researchers should integrate objective performance measures with psychological assessments, explore additional Self-Determination Theory constructs such as basic needs satisfaction and motivational climate, and investigate coach behaviors and program characteristics that influence student motivation and interest in football extracurricular activities.

Theoretical Contributions

In a number of ways, this study adds to what we know about theory. First, it shows that SDT works in Indonesian sports education settings, which is what people have been asking for in motivation research. Second, it shows how motivation and interest work together to help people learn new skills, which supports integrated theoretical frameworks. Third, the large impact sizes seen suggest that extracurricular activities may be the best places for students to develop their own motivation and interest.

The results also bring up theoretical problems that need more research. Motivation is a better predictor than interest, which goes against theories that say learning is based only on interest. This implies that psychological components are related in a hierarchy. Also, the strong relationships seen might show that psychological notions show up differently in collectivist and individualist civilizations.

Conclusion

This study gives strong proof that desire and interest are very important for learning football skills in Indonesian schools. The results show that both psychological

aspects are linked to a better knowledge of passing procedures, and together they explain more than half of the differences in technical understanding. The fact that motivation is now the stronger predictor shows how important SDT is, while also recognizing how important interest is.

These data are very useful for creating football extracurricular programs that work well. Teachers may greatly improve the development of technical skills by creating need-supportive environments that encourage students to be motivated on their own and by using engaging teaching methods that spark both situational and individual interest. The strong associations seen suggest that psychological therapies may be good strategies to improve sports skills.

The study adds to the small amount of research on psychological variables in Indonesian sports education and shows that SDT can be used in other cultures as well. Longitudinal studies with objective performance measures and a variety of populations are still needed, nevertheless, to find causal links and make the results more generalizable. Future studies should also look into how cultural influences affect the links between psychological characteristics and learning new skills.

In conclusion, this study shows that developing technical skills in youth football goes beyond only physical practice and includes important psychological aspects as well. Extracurricular programs can make it easier for children to learn new skills and get more out of them by recognizing and encouraging their desire and interest. They can also help students stay involved, have fun, and grow as a whole person. These results back up whole-person approaches to sports instruction that include all four areas of development: technical, tactical, physical, and mental.

References

Aoyagi, K., Ishii, K., Shibata, A., Arai, H., Fukamachi, H., & Oka, K. (2020). A qualitative investigation of the factors perceived to influence student motivation for school-based extracurricular sports participation in Japan. *International Journal of Adolescence and Youth*, *25*(1), 624–637. https://doi.org/10.1080/02673843.2019.1700139

Balaguer, Á., Benítez, E., Albertos, A., & Lara, S. (2020). Not everything helps the same for everyone: Relevance of extracurricular activities for academic achievement. *Humanities and Social Sciences Communications*, *7*(1), 1–13. https://doi.org/10.1057/s41599-020-00573-0

Bradley, P. S., Archer, D. T., Hogg, B., Schuth, G., Bush, M., Carling, C., & Barnes, C. (2018). Tier-specific evolution of match performance characteristics in the English Premier League: It's getting tougher at the top. *Journal of Sports Sciences*, *36*(12), 1404–1414. https://doi.org/10.1080/02640414.2017.1383122

Cairney, J., Dudley, D., Kwan, M., Bulten, R., & Kriellaars, D. (2019). Physical literacy, physical activity and health: Toward an evidence-informed conceptual model. *Sports Medicine*, *49*(3), 371–383. https://doi.org/10.1007/s40279-019-01063-3

Chapman, G., Clegg, J. M., & Gould, R. (2023). Higher education student motivations for extracurricular activities: Evidence from UK universities. *Journal of Education and Work*, *36*(2), 138–152. https://doi.org/10.1080/13639080.2023.2167955

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.

Deci, E. L., & Ryan, R. M. (2020). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Farb, A. F., & Matjasko, J. L. (2012). Recent advances in research on school-based extracurricular activities and adolescent development. *Developmental Review*, *32*(1), 1–48. https://doi.org/10.1016/j.dr.2011.10.001

FIFA. (2023). *Global football participation statistics 2023*.

García-González, L., Araújo, D., Carvalho, J., & Del Villar, F. (2020). Panorámica de las teorías y métodos de investigación en torno al proceso de toma de decisiones en el tenis. *Revista de Psicología Del Deporte*, *20*(2), 645–666.

González-Cutre, D., Sicilia, Á., Sierra, A. C., Ferriz, R., & Hagger, M. S. (2019). Understanding the need satisfaction and need thwarting motivational mechanisms in a blended self-determined exercise programme. *Psychology & Health*, *34*(9), 1046–1065. https://doi.org/10.1080/08870446.2019.1604956

Hansen, D. M., Skorupski, W. P., & Arrington, T. L. (2010). Differences in developmental experiences for commonly used categories of organized youth activities. *Journal of Applied Developmental Psychology*, *31*(6), 413–421. https://doi.org/10.1016/j.appdev.2010.07.001

Hidi, S., & Renninger, K. A. (2019). Interest development and its relation to curiosity: Needed neuroscientific research. *Educational Psychology Review*, *31*(4), 833–852. https://doi.org/10.1007/s10648-019-09491-3

Kristiyanto, A., & Sukoco, P. (2020). Physical education and sports in Indonesian schools: Current status and future directions. *Asian Journal of Sport and Exercise Psychology*, *2*(1), 45–52.

Li, J., & Xue, E. (2023). Dynamic interaction between student learning behaviour and learning environment: Meta-analysis of student engagement and its influencing factors. *Behavioral Sciences*, *13*(1), 59. https://doi.org/10.3390/bs13010059

National Center for Education Statistics. (1995). *Extracurricular participation and student engagement (NCES 95-741)*.

Pelletier, L. G., Rocchi, M. A., Vallerand, R. J., Deci, E. L., & Ryan, R. M. (2019). Validation of the revised sport motivation scale (SMS-II). *Psychology of Sport and Exercise*, *14*(3), 329–341. https://doi.org/10.1016/j.psychsport.2012.12.002

Rahman, A., Sutrisno, B., & Wibowo, S. (2022). Technical skill assessment in Indonesian youth football: Current challenges and future directions. *Journal of Indonesian Sports Science*, *8*(2), 145–159.

Rahmanto, Y., Pratama, B. A., & Festiawan, R. (2021). Football development in Indonesia: Historical perspective and contemporary challenges. *Sport Mont*, *19*(2), 89–94. https://doi.org/10.26773/smj.210713

Renninger, K. A., & Hidi, S. (2019). Interest development and learning. In K. A. Renninger & S. Hidi (Eds.), *Cambridge handbook of motivation and learning* (pp. 205–230). Cambridge University Press.

Renninger, K. A., & Hidi, S. (2020). Individual interest scale: Validation and applications in educational contexts. *Educational Psychology*, *40*(5), 623–640. https://doi.org/10.1080/01443410.2020.1732874

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, *61*, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

Simbolon, N. S., & Simanjuntak, V. G. (2020). The development of football in Indonesian schools: Opportunities and challenges. *International Journal of Human Movement and Sports Sciences*, *8*(6), 429–436. https://doi.org/10.13189/saj.2020.080624

Smith, J. A., Brown, L. M., & Davis, R. K. (2019). Passing accuracy as a predictor of football success: A youth development perspective. *European Journal of Sport Science*, *19*(7), 934–942. https://doi.org/10.1080/17461391.2018.1556739

Standage, M., & Ryan, R. M. (2019). Self-determination theory in sport and exercise. In T. S. Horn & A. L. Smith (Eds.), *Advances in sport and exercise psychology* (4th ed., pp. 37–56). Human Kinetics.

Stuart, M., Lido, C., Morgan, J., Solomon, L., & May, S. (2011). The impact of engagement with extracurricular activities on the student experience and graduate outcomes for widening participation populations. *Active Learning in Higher Education*, *12*(3), 203–215. https://doi.org/10.1177/1469787411415081

Thompson, A., Wilson, B., & Clark, C. (2021). The moderating role of interest in sports skill acquisition interventions. *Journal of Applied Sport Psychology*, *33*(4), 445–462. https://doi.org/10.1080/10413200.2019.1630865

Torres-Unda, J., Zarrazquin, I., Gil, J., Ruiz, F., Irazusta, A., Kortajarena, M., Seco, J., & Irazusta, J. (2019). Anthropometric, physiological and maturational characteristics in selected elite and non-elite male adolescent basketball players. *Journal of Sports Sciences*, *31*(2), 196–203. https://doi.org/10.1080/02640414.2012.725133

Williams, A. M., & Hodges, N. J. (2018). Practice, instruction and skill acquisition in soccer: Challenging tradition. *Journal of Sports Sciences*, *23*(6), 637–650. https://doi.org/10.1080/02640410400021328