



**Student Athlete Achievement Development at the Youth and Sports
Department of Central Java Province**

Barda Briliand Dian Addina^{1*}, Setya Rahayu²

¹²Sports Science Study Program, Faculty of Sports Science, Semarang State University,
Semarang, Indonesia

Keywords

athlete development,
student athletes,
athletic achieve-
ments, PPLOP, De-
partment of Central
Java Provincial Youth
and Sports

Abstract

The development of student athletes is a strategic effort to improve athletic performance. However, its implementation still faces various challenges, such as fluctuating performance levels at national events, budget constraints, a lack of competitive events, limited facilities and infrastructure, and the suboptimal continuity of development following the Student Sports Education and Training Center (PPLOP) program. These conditions indicate a gap between the designed development system and the results on the ground. This study aims to analyze the role of Department of Central Java Provincial Youth and Sports in the development of student athletes through the PPLOP program. The study employs a qualitative approach using interview, observation, and documentation techniques, analyzed through triangulation. The results indicate that development has been conducted in a structured and sustainable manner through systematic training programs, objective selection, and regular monitoring. Supporting factors include budgetary support, stakeholder coordination, coach competence, and facilities. Hindering factors include budget constraints, a lack of competitions, limited facilities, and the lack of optimal sustainability in development. In conclusion, the development of student athletes in Central Java is generally good, but it requires strengthening in the areas of sustainability, facilities, and the provision of competitions to enhance the athletes' competitiveness.

✉ Corresponding author :
E-mail: bardabriliand@students.unnes.ac.id

INTRODUCTION

The Athletic development plays a strategic role in the national sports development system as the foundation for sustained success. The Long-Term Athlete Development (LTAD) approach emphasizes the importance of athlete development stages tailored to age and individual (Wulan et al., 2025). Developmentroach outlines the process of athlete development through the systematic cultivation of physical, technical, tactical, and mental aspects from an early age (Wulan et al., 2025). The concept of sports development in Indonesia focuses on improving athletes' performance while fostering discipline and a fighting spirit (Aufan & Prawitasari, 2024).

The government bears responsibility for the development of elite sports through national policies. Law No. 11 of 2022 on Sports reaffirms the government's role in the structured development of athletes. In line with this, Presidential Regulation No. 86 of 2021 on the National Sports Master Plan (DBON) guides an integrated and sustainable national sports development system. The implementation of this policy at the regional level is realized through the provision of facilities, the development of sports personnel, and the strengthening of sports institutions (Nur et al., 2023).

The performance of student athletes from Central Java Province at the National Student Sports Week (POPNAS) has shown a fluctuating trend. Central Java ranked third with 126 medals in 2017, dropped to fourth place with 81 medals in 2019, and remained in fourth place with 110 medals in 2023, before rising to second place with 153 medals in 2025. These results indicate a lack of consistency in the development of student athletes. In fact, an effective development system should be able to produce stable performance through a structured process (Muhlisin et al., 2022).

Issues in the development of student athletes reveal a gap between theory and practice. Limited facilities and infrastructure affect the quality of training for student athletes in rural areas (Badarudin & Rustriadi, 2023). Meanwhile, variations in coaches' competencies influence the effectiveness of technical and tactical training for athletes (Maharani, 2025). Meanwhile, variations in coaches' competencies influence the effectiveness of training. In addition, coordination among stakeholders is a key factor in determining the overall success of the training system in terms of athletes' techniques and tactics (Nanda Ahmad Firdausy et al., 2025). So, a sports development system requires the simultaneous integration of programs, organizational management, and policy support (Linas et al., 2022).

The Central Java Provincial Government conducts student athlete development through various integrated institutional programs. Department of The Youth and Sports manages this development through the Student Sports Education and Training Center (PPLOP) and the Student Sports Hub (PSOJP) as athlete training centers. In practice, selection criteria for the PPLOP program are established based on the targets and objectives of medium- and long-term development, while the PSOJP program focuses on long-term development as a preparatory phase before athletes enter the PPLOP program. The athlete selection process is conducted through an official registration mechanism organized by Department of Youth and Sports, with stages including physical tests, skill or technical tests, psychological tests, and health tests. Additionally, special selection for the PPLOP program is conducted periodically each year, involving third parties to support the objectivity of the assessment. This mechanism demonstrates that the student athlete development system has been implemented systematically, objectively, and transparently in identifying potential athletes for sustained development, thereby reflecting a tiered development model in accordance with the principles of long-term development; however, its implementation still requires strengthening in the areas of program integration, monitoring, and evaluation program (Bompa, Tudor O., Buzzichelli, 2018).

These conditions highlight the urgent need for an empirical study capable of thoroughly identifying the alignment between long-term development concepts and their implementation at the local level. Fluctuations in performance, resource constraints, and the suboptimal integration of development programs serve as indicators that the existing system still requires evaluation and strengthening. This research is important for providing an analytical

foundation to support improvements in policies and practices for elite sports development that are more effective, integrated, and sustainable.

The novelty of this research lies in its analytical approach, which examines the development of student-athletes not only from a programmatic perspective but also through the integration of development systems via PPLOP and PSOJP based on the Long-Term Athlete Development (LTAD) framework. Furthermore, this study combines policy analysis, development management, and the direct experiences of coaches and athletes, thereby producing a more comprehensive and contextual picture of elite sports development at the regional level.

This study aims to analyze the development of student-athletes' performance in Central Java Province, identify supporting and hindering factors, and formulate strategic recommendations to enhance the effectiveness of the elite sports development system. The findings of this study are expected to contribute to the strengthening of policies and practices for the sustainable development of student-athletes.

METHODS

This study employs a descriptive qualitative approach to gain an in-depth understanding of the process of developing student athletes' performance at Department of Central Java Provincial Youth and Sports. The qualitative approach was chosen because it allows for a holistic exploration of the meanings, processes, and dynamics at play based on actual conditions in the field (Creswell & Creswell, 2017). The descriptive method was used to systematically, objectively, and accurately describe the role of institutions, supporting and hindering factors, and the efforts made in the development of high-achieving student athletes (Muammar, 2024).

1. Research subjects and objects

The subjects of this study are those directly involved in the process of coaching student athletes, namely the Youth and Sports Department of Central Java Province, sports coaches, and student athletes participating in the PPLOP and PSOJP programs. Meanwhile, the research object is the student athlete performance development system, which includes the implementation of development programs, supporting and inhibiting factors, as well as efforts made to improve the effectiveness of development.

2. Data Sources

The data sources are people, places, and documents. Data sources were selected through purposive sampling, taking into account informants who possess knowledge, experience, and direct involvement in the development of student athletes. Research informants included staff from the Department of Central Java Provincial Youth and Sports, coaches or athletic trainers, as well as student athletes participating in development programs and competing in the POPNAS. Places include the research location at the Department of Central Java Provincial Youth and Sports as well as various training centers, sports schools, and athlete training facilities. Documents consist of official records such as laws and regulations, development programs, activity reports, and student athlete performance data relevant to the study.

3. Research location and dates

This study was conducted at Department of Central Java Provincial Youth and Sports from February 9 to March 8, 2026, and took place at the Central Java Student Sports Education and Training Center (PPLOP) from March 4–8, 2026. Additionally, data collection via interviews was conducted with coaches and student athletes participating in the PPLOP program from February 9 to 13, 2026, online via the Zoom platform. Thus, the entire research process took place between February and March 2026, with the research location and timing adjusted to meet data collection needs.

4. Data collection techniques and instruments

Data collection was conducted through in-depth interviews, observations, and documentation. Interviews were conducted in an open and flexible manner to obtain in-depth information from informants. Observations are used to directly observe the implementation of the training program as well as the condition of facilities and infrastructure. Documentation is used to obtain supporting data that reinforces and verifies the results of the interviews and observations (Putri & Murhayati, 2025).

The research instruments used in data collection included interview guidelines, observation guidelines, and documentation guidelines. The researcher used interview guidelines in the form of an open-ended question list developed based on the research focus, allowing for in-depth and flexible exploration of information according to field conditions. The observation guidelines took the form of an observation sheet covering key aspects, including the implementation of training programs, the role of coaches, and the condition of facilities and infrastructure. The documentation guidelines consist of a list of relevant documents, including activity reports, athlete performance data, and policy documents related to the development of student athletes. The use of these instruments helps the researcher maintain consistency in data collection and ensures that the data obtained aligns with the research objectives. Additionally, the combination of these three data collection techniques allows the researcher to perform data triangulation to enhance the validity and reliability of the research findings (Sari et al., 2025).

The validity of the data in this study was ensured through the use of triangulation techniques, specifically methodological triangulation and source triangulation. Methodological triangulation was conducted by comparing data from interviews, observations, and documentation, while source triangulation was conducted by comparing information from various informants. Through these techniques, the data obtained possess a high degree of validity and credibility (Putri & Murhayati, 2025).

5. Data analysis

Qualitative analysis in this study uses the interactive analysis model developed by Miles and Huberman (Miles et al., 2020), which consists of 3 main stages: 1) data reduction, 2) data presentation, and 3) drawing conclusions or verification. Data reduction is carried out by selecting and simplifying data relevant to the research focus. Data presentation is done in the form of a descriptive narrative to facilitate understanding of the relationships between categories. Next, conclusions are drawn in stages while continuously verifying the data obtained (Saldana, 2025).

RESULTS AND DISCUSSION

Data on the development of student athletes at the Central Java Student Sports Education and Training Center (PPLOP) is presented to provide an overview of the distribution of sports disciplines, the number of athletes, and the availability of coaches in each discipline. The data shown in **Table 1** serves as the basis for identifying patterns of training distribution, the level of equity among sports disciplines, and the proportion of human resources supporting the training process. Additionally, this information serves as evaluation material to assess the effectiveness of the training system, particularly regarding the coach-to-athlete ratio and the potential for sustainable performance development.

The Central Java PPLOP program has expanded to include 23 sports disciplines, with a total of 545 athletes supported by 24 coaches. This distribution reflects that the training system has been implemented extensively and in a structured manner, accommodating a wide range of sports disciplines, both individual and team-based.

Table 1. Number of Sports, Athletes, and Coaches in the Central Java PPLOP

Sport	Number of Athletes	Number of Coaches
Athletics	24	1
Pencak Silat	26	1
Men's Sepak Takraw	17	1
Archery	29	1
Football	119	1
Wrestling	16	1
Tennis Table	15	1
Beach Volleyball	16	1
Fencing	15	1
Weightlifting	20	1
Bola Basket:	21	1
Rowing	10	1
Judo	13	1
Karate	12	1
Sport Climbing	17	1
Swimming	31	2
Roller Skating	12	1
Taekwondo	32	1
Boxing	24	1
Men's Volleyball	40	1
Wushu	12	1
Women's Volleyball	14	1
Women's Sepak Takraw	10	1

Development of Student Athletes in Central Java.

The system for developing student athletes in Central Java Province aligns with the fundamental principles of modern sports development, which emphasize long-term planning, a tiered process, and the comprehensive development of athletes. The implementation of the PPLOP and PSOJP programs serves as an indicator that the development system has been systematically designed to identify and nurture athletes starting from their school years. The selection process, conducted objectively through physical, technical, and psychological indicators, reflects the application of the talent identification principle, ensuring that selected athletes possess the potential to be developed to their fullest potential. In addition, the implementation of a structured and scheduled training program demonstrates the application of the principles of training periodization in the effort to help athletes achieve peak performance.

The development approach implemented is integrated, achieved through synergy among the Department of Youth and Sports (Dispora), coaches, and athletes. Department of Youth and Sports plays a role in policy formulation, program provision, and resource support, while coaches are responsible for planning and implementing training programs. As the primary participants, athletes are expected to demonstrate commitment, discipline, and physical and mental readiness in participating in the development process. The synergy among these three elements is a key factor in creating an effective and sustainable development system.

In terms of implementation, development is carried out through routine and scheduled training programs that cover physical, technical, tactical, and mental aspects. The design of training programs is based on development guidelines and, in some aspects, has adopted a sports science approach to enhance training effectiveness. The implementation of development is supported by training facilities, athlete dormitories, and support staff such as physical trainers and medical personnel, who play a role in maintaining the quality of training and the athletes' condition. Additionally, the involvement of various stakeholders, such as the Indonesian National Sports Committee (KONI) and sports federation officials, in the selection

and development process further strengthens the objectivity and quality of the implemented system.

Monitoring and evaluation are conducted on a regular basis through a promotion and demotion system every two months to assess athletes' performance progress. This system serves not only as a tool for measuring achievements but also as a basis for decision-making regarding the continuation of training and the refinement of training programs. As a result, the training system in place is moving in a positive direction in supporting the improvement of student-athletes' performance.

Nevertheless, the research findings also indicate the presence of both enabling and hindering factors in the implementation of athlete development programs. Enabling factors include budgetary support from local governments, effective coordination between the Department of Youth and Sports and stakeholders, structured program planning, and the availability of facilities and support staff. On the other hand, the hindering factors still faced include budget constraints, a lack of competitions as a means to test athletes' abilities, and the uneven distribution of facilities across sports disciplines. Suboptimal dormitory conditions and the underutilization of infrastructure also contribute to the quality of athlete development.

In addition, another challenge faced is the suboptimal nature of the post-PPLOP development system, which indicates a gap in long-term development. This results in the absence of a clear pathway for athletes to advance their careers to higher levels. On the other hand, an evaluation system that is not yet fully based on objective data, as well as external factors such as social media distractions, also affect the consistency of training and athlete performance.

Overall, the student athlete development system in Central Java Province has been implemented in a structured manner and has proven effective in supporting athlete development. However, efforts are needed to improve program sustainability, ensure equitable access to facilities, strengthen data-driven evaluation systems, and increase the frequency of competitions so that the training programs can produce athletes who are competitive at both the national and international levels.

Efforts to Improve the Effectiveness of Development Programs

Table 2 explains the various efforts undertaken to improve the quality of student athlete development so that it is more effective and sustainable. These efforts are aimed at strengthening a coaching system that is objective, performance-based, and capable of measurably improving athletes' performance. One of the strategic measures implemented is a system of athlete promotion and demotion based on periodic performance evaluations. This system plays a role in fostering a healthy competitive environment, encouraging athletes to continuously improve themselves, and ensuring that the selection and coaching processes are conducted objectively.

In addition, the use of a sports science approach plays a crucial role in enhancing the professionalism of athlete development. This approach provides a scientific foundation for designing training programs, enabling performance improvements to be achieved in a more targeted, measurable, and individualized manner. As a result, athlete development is not merely conventional but also prioritizes scientific principles in enhancing athletes' abilities.

Additional efforts are made through regular monitoring and evaluation conducted every two months. This process allows coaches to track athletes' progress on a regular basis, identify their strengths and weaknesses, and make more precise adjustments to the training program. The availability of ongoing data on athletes' progress also serves as the foundation for improving the overall effectiveness of the development program.

From a psychological perspective, providing motivation and mental coaching for athletes is a key factor in supporting their readiness for competition. Mental strengthening plays a role in boosting athletes' self-confidence, emotional stability, and consistent performance when facing competitive pressure. This demonstrates that coaching should not only focus on physical and technical aspects but also prioritize mental readiness as an integral part of achieving success.

Table 2. Efforts to Improve the Effectiveness of Development Programs

Target Results	Efforts
The establishment of an objective, performance-based athlete development system, along with measurable and sustainable improvements in athlete performance.	Implementation of a promotion and demotion system for athletes based on the results of periodic performance evaluations
The establishment of a more professional, science-based training system and the optimal improvement of athletes' performance	The Use of a Sports Science Approach to Support Improvements in Athlete Performance
The availability of regular data on athletes' progress, early identification of athletes' strengths and weaknesses, and improved effectiveness of training programs	Conducting regular monitoring and evaluation every two months
Increased self-confidence and mental readiness among athletes, emotional stability during competition, and consistent performance in competitions	Providing motivation and mental coaching to athletes to improve their readiness for competition

Overall, efforts to enhance the development of student-athletes' performance indicate a move toward a more comprehensive approach, encompassing policy, scientific methods, technical implementation, and mental strengthening. The synergy of these various efforts is expected to result in a more effective, adaptive, and sustainable development system that supports athletes in achieving higher levels of performance.

CONCLUSION

Based on the research findings, Student Athlete Achievement Development at the Youth and Sports Department of Central Java Province has been conducted in a systematic, structured, and sustainable manner through the PPLOP and PSOJP programs, ranging from objective selection to "Train to Compete"-based training within the LTAD framework, supported by periodic monitoring and evaluation through a promotion and demotion system (Purnama & Raharjo, 2023). The success of sports development programs—supported by adequate funding, interagency coordination, the competence of coaches, and the availability of facilities—reinforces the findings of previous research, which indicate that the role of sports agencies in policy formulation, the provision of funding and facilities, and collaboration among stakeholders are key factors in the success of sports development programs (Abdilah et al., 2023; Rahmawati & Sholichah, 2022; Salsabila et al., 2023). However, challenges such as budget constraints, a lack of competition, suboptimal facilities, distractions for athletes, and the absence of a sustainable development pathway to the senior level are consistent with previous research that highlighted resource constraints, weak coordination, and suboptimal continuity in development programs (Rahmawati & Sholichah, 2022; Salsabila et al., 2023; Yudha et al., 2024). Efforts to improve effectiveness through enhanced coordination, the application of sports science, promotion and relegation systems, and regular monitoring align with modern, system-based development approaches and evidence-based practices, which emphasize the importance of integrating programs, management, and continuous evaluation. Thus, the development of student athletes in Central Java has shown positive progress, reaching second place nationally, while also providing empirical evidence that reinforces previous research findings, although further strengthening is still needed in terms of sustainability and integration across development levels to ensure consistent performance in the long term.

REFERENCES

- Abdilah, R. A., Indarja, I., & Ramadhan, D. A. (2023). Tugas dan fungsi Dinas Kepemudaan Olahraga dan Pariwisata Provinsi Jawa Tengah dalam pembinaan prestasi atlet pelajar menurut Perda Nomor 4 Tahun 2015. *Diponegoro Law Journal*, 12(1).
- Aufan, R., & Prawitasari, D. (2024). Survey sport development indeks Desa Damuli Pekan tahun 2020. *Jurnal Kesehatan Dan Olahraga*, 8(2). <https://doi.org/10.24114/ko.v8i2.63709>
- Badarudin, M., & Rustriadi, T. (2023). Survey manajemen pembinaan prestasi cabang olahraga atletik di Kabupaten Kebumen. *Indonesian Journal for Physical Education and Sport*, 4(1). <https://doi.org/10.15294/inapes.v4i1.49490>
- Bompa, T. O., & Buzzichelli, C. (2018). *Periodization: Theory and methodology of training* (6th ed.). Human Kinetics.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Firdausy, N. A., Nuryadi, Darajat, J., & Gumilar, A. (2025). The role of stakeholder in multi-event and awarding model in Indonesia. *ACTIVE: Journal of Physical Education, Sport, Health and Recreation*, 14(2). <https://doi.org/10.15294/active.v14i2.25802>
- Linas, I. O., Rasyid, W., Welis, W., Irawan, R., & Zarya, F. (2022). Evaluasi program pembinaan olahraga prestasi Wushu Kabupaten Kerinci. *Jorpres (Jurnal Olahraga Prestasi)*, 18(3). <https://doi.org/10.21831/jorpres.v18i3.53817>
- Maharani, A. (2025). Pengembangan kompetensi pelatih dalam kepelatihan olahraga. *JPKO: Jurnal Pendidikan Dan Kepelatihan Olahraga*, 3(1).
- Miles, M. B., Huberman, M., & Saldana, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE.
- Muammar, E. (2024). Pembinaan atlet-atlet muda: Peningkatan pengelolaan pembinaan sentra dan SKO melalui pelaksanaan program PPLP dana dekonsentrasi. *Jurnal Olahraga Pendidikan Indonesia (JOPI)*, 4(1), 78–89.
- Muhlisin, M., Kurniawan, R., Ardiana, P., Ardyansyah, R., & Tohir, T. (2022). Pelatihan bola tangan melalui pendekatan long term athlete development. *Jendela Olahraga*, 7(1). <https://doi.org/10.26877/jo.v7i1.10586>
- Nur, L., Sianturi, R., Giyartini, R., Pingon, L., Malik, A. A., & Nilan, F. (2023). Pengembangan dan Pembinaan Olahraga Cabang Olahraga Woodball di Kota Tasikmalaya. *Jurnal Abdidas*, 4(5). <https://doi.org/10.31004/abdidas.v4i5.842>
- Purnama, A. I., & Raharjo, H. P. (2023). Pembinaan prestasi olahraga atletik di Kabupaten Demak. *Indonesian Journal for Physical Education and Sport*, 4(1). <https://doi.org/10.15294/inapes.v4i1.51717>
- Putri, H. J., & Murhayati, S. (2025). Metode pengumpulan data kualitatif penelitian. *Jurnal Pendidikan Tambusai*, 9(2).
- Rahmawati, & Sholichah, N. (2022). Peran Dinas Kepemudaan dan Olahraga (Dispora) Provinsi Jawa Timur dalam pembinaan atlet bulutangkis. *Nihayatus Sholichah SARR*, 1(1).
- Saldana, J. (2025). *The coding manual for qualitative researchers*. SAGE. <https://doi.org/10.4135/9781036235611>
- Salsabila, A., Bahri, S., & Nurkaidah, N. (2023). Fungsi dan peran Dinas Kepemudaan dan Olahraga dalam peningkatan prestasi olahraga di Sulawesi Selatan. *Paradigma Journal of Administration*, 1(1), 7–19.
- Sari, A. S., Aprisilia, N., & Fitriani, Y. (2025). Teknik pengumpulan data dalam penelitian kualitatif: Observasi, wawancara, dan triangulasi. *Indonesian Research Journal on Education*, 5(4).
- Wulan, R. P., Tomoliyus, Sukmawati, E. R., & Alim, A. (2025). Long-term athlete development (LTAD) strategy for optimizing movement skills and injury prevention in young athletes: Literature review. *Indonesian Journal of Sport Management*, 5(4). <https://doi.org/10.31949/ijsm.v5i4.16750>
- Yudha, W. P., AS, Z. A., & Kushartono, T. (2024). Strategi Dinas Pemuda dan Olahraga dalam pembinaan atlet di Kabupaten Bandung Barat. *Praxis Idealist: Jurnal Mahasiswa Ilmu Pemerintahan*, 1(1).