

## Capacity Building for the University Volleyball Student Activity Unit through Lecturer–Student Collaborative Coaching

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**Abstract.** This community service initiative aims to enhance the university's Volleyball Student Activity Unit (UKM) through a collaborative coaching model involving sports lecturers and talented student athletes. The program was developed in response to the limited participation and low performance levels of collegiate sports particularly volleyball stemming from the scarcity of qualified coaches, structured training programs, and adequate practice facilities. The implementation adopts a participatory approach, beginning with an assessment of UKM needs, followed by training sessions on game strategies and tactics, improvement of fundamental physical and technical skills, and strengthening of UKM organisational management. Coaching activities are jointly conducted by sports lecturers and highly motivated students with strong volleyball capabilities. Evaluation is carried out through observations of technical skills, member engagement, and internal tournament results held after the coaching program. The findings indicate significant progress in student discipline, teamwork, and essential volleyball techniques such as serving, passing, smashing, and blocking. Additionally, UKM has experienced an increase in membership across faculties and the emergence of a more dynamic and sustainable organisational structure. Beyond improving student performance, this program contributes to shaping a replicable coaching model and reinforces a positive sports culture within the university. Overall, the development of the Volleyball UKM through the collaboration of sports lecturers and talented students has successfully fostered a competitive, productive, and sustainability-oriented sports ecosystem.

**Keywords:** Community service; volleyball UKM; sports development; talented students; Nusa Cendana University

### 1. Introduction

University sports programs play an important role in shaping students' character, discipline, and sense of community (Bailasha et al., 2020; Price et al., 1995; Stevens et al., 1999). One of the platforms that facilitates this development is the Student Activity Unit (UKM), which serves as a space for nurturing interests and talents beyond academic routines (Gita et al., 2020; Jariono, Nurhidayat, et al., 2021). However, many sports UKMs

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including volleyball have not reached optimal development due to limited coaching support, inadequate training facilities, and the absence of continuous development programs. Consequently, sports activities on campus often run sporadically, and the potential of talented volleyball players is not fully explored.

The initiative to strengthen the Volleyball Student Activity Unit (UKM) through community service is grounded in theories of achievement development, sports management, and physical education (Jariono, Nugroho, et al., 2021; Putri & Fajar, 2020). According to Law No. 12 of 2012 concerning Higher Education (Adhari et al., 2023; Paramitha et al., 2021), student activities are an integral part of the educational ecosystem designed to enhance student potential, creativity, and overall character. As a centre for extracurricular engagement, UKM plays a strategic role in developing students' competencies, including athletic skills.

Effective sports and athletic development requires a structured approach that covers mental readiness, technical mastery, tactical understanding, and physical conditioning (Burgess & Naughton, 2010; O'brien et al., 2021). This approach is particularly relevant for the growth of Volleyball UKM, where students need systematic and well-planned coaching to refine their performance. In the context of higher education, sports development should not only aim to improve ability but also cultivate character and create a healthy competitive environment.

In addition, building a strong UKM requires not only coaching but also sound organisational management. As noted by Petitpas et al. (2005), program planning, resource allocation, and continuous evaluation significantly influence the performance of sports clubs and organisations. In this regard, the sports instructor or supervising lecturer acts as a motivator, trainer, and facilitator. Collaboration between lecturers and talented students can result in a coaching model that promotes autonomy, responsibility, and active participation among UKM members.

From the perspective of character education, volleyball contributes not only to physical and technical skill development but also to the cultivation of values such as sportsmanship, discipline, integrity, and teamwork. Through social interaction and competitive activities, volleyball provides opportunities for students to strengthen their soft skills (Amir et al., 2022; Prasetyo & Handayani, 2020; Sujarwo et al., 2021). Therefore, empowering a volleyball UKM at the university level supports both character formation and overall campus well-being.

As a team sport that embodies responsibility, cooperation, and fair play, volleyball aligns with the broader goals of higher education. When managed systematically, Volleyball UKM can become an effective medium for enhancing students' physical fitness, shaping character, and fostering a sense of belonging. For this reason, a development program is required, one that not only improves technical skills but also emphasises managerial competence, leadership, and ongoing organisational growth.

This literature foundation reinforces the importance of community service projects that integrate technical training, managerial development, and character building, ultimately contributing to a sustainable sports development ecosystem in higher education. In this project, sports instructors (as supervising lecturers) collaborate with gifted students as core partners in advancing the Volleyball UKM. Such synergy is expected to produce a development framework that is both effective and sustainable. Beyond improving performance, the program aims to position Volleyball UKM as a platform for positive student engagement and to strengthen campus culture that is



healthy, competitive, and productive. This initiative also aligns with the university's mission to develop students with excellence, strong character, and competitiveness in both academic and non-academic aspects.

## 2. Methods

This community service program adopts a collaborative and participatory approach in which sports instructors act as facilitators and lead coaches, while talented students participate actively and are prepared to become future UKM trainers (Frisby et al., 2005; Garamvölgyi et al., 2022; Kolotouchkina, 2018). The activities are implemented in several stages over a three-month period, with a focus on enhancing technical, tactical, and physical volleyball skills as well as strengthening the administrative and organisational capacity of the Volleyball Student Activity Unit (UKM). The initial stage consists of a needs assessment conducted through interviews and observations involving UKM leaders and members. This process identifies core problems such as limited coaching support, irregular training schedules, and weak coordination among members.

The second stage involves technical and tactical volleyball training aimed at mastering basic skills including serving, passing, smashing, and blocking. These sessions are carried out through intensive practices and sports clinics facilitated by experienced senior students together with sports lecturers. The third stage focuses on organisational and managerial development to ensure that UKM can operate independently and sustainably. This includes guidance in leadership, program planning, administration, and scheduling. To cultivate a competitive mindset, internal tournaments and match simulations are also organised as part of the coaching process.



**Figure 1** Flow of community service activities



The figure 1 illustrates the sequential flow of the community service activities designed to strengthen the Volleyball Student Activity Unit (UKM). It begins with a needs analysis, where issues related to coaching availability, training schedules, and internal coordination are identified. The process then moves to technical and tactical training, focusing on essential volleyball skills supported by lecturers and skilled senior students. Following this, the program transitions to organisational and management development, which includes leadership training, administrative support, and work program planning to ensure UKM's long-term sustainability. The flow ends with a monitoring and evaluation phase, where students' technical progress, training effectiveness, and overall UKM performance are continuously assessed. Together, these stages form an integrated and systematic pathway for building a stronger and more sustainable volleyball UKM.

The final stage consists of continuous monitoring and evaluation to measure improvements in students' technical performance, the effectiveness of the training program, and the sustainability of the UKM activities. Evaluation methods include direct observation, satisfaction surveys, and documentation of activity outputs. Through this structured approach, the program is expected to produce significant enhancements in game quality, organisational performance, and overall student engagement in campus sports.

### 3. Results and Discussion

#### 3.1. *Enhancement of Students' Technical Skills in Volleyball*

The implementation of this community service project resulted in notable progress in students' volleyball skills, organisational readiness, and overall participation in campus sports. After undergoing a structured three-month coaching program, significant improvements were observed in basic volleyball techniques. Skills tests and practical evaluations showed that students demonstrated better mastery of serving, passing, smashing, and blocking. Regular match simulations further strengthened their tactical understanding and their ability to apply team strategies during gameplay.

This community service program was conducted from July to September 2025, involving sports instructors, talented student athletes, and UKM administrators as key facilitators. Following the initial needs assessment which identified issues such as inconsistent training routines and suboptimal organisational structure, the implementation team designed an integrated coaching plan. The program covered game strategies, physical and mental conditioning, and fundamental technical training sessions held twice a week under the supervision of experienced senior students and lecturers.

Throughout the training period, student engagement showed a significant rise. UKM membership increased from 25 to 48 active participants. Evaluation data indicated that improvements in movement precision and mastery of basic techniques reached an average of 25–35%. This demonstrates that the coaching intervention effectively nurtured student athletes' technical capabilities and readiness for competitive play.

In addition to measurable skill improvements, the increased student participation also reflects a growing sense of motivation, teamwork, and belonging within the Volleyball UKM. Many new members reported joining because they saw visible progress among their peers and felt encouraged by the structured training environment and supportive coaching approach. Senior students who acted as assistant coaches played a crucial role in creating an inclusive and motivating atmosphere, helping beginners build confidence while offering advanced players opportunities to refine their skills. This positive team





culture, combined with consistent training schedules and clear development goals, contributed to a stronger commitment among members to attend practices, engage actively in drills, and prepare seriously for competitive events. As a result, the UKM evolved into a more dynamic and cohesive community, where students not only improved technically but also developed essential soft skills such as communication, discipline, and resilience.



**Figure 2** Volleyball Training Activities

Figure 2 illustrates the volleyball training activities conducted throughout the community service program, showcasing a series of structured practice sessions designed to enhance students' technical and tactical abilities. The image captures students actively engaging in drills such as serving, passing, smashing, and blocking under the supervision of lecturers and skilled senior players, reflecting a hands-on coaching approach that emphasizes direct guidance and skill refinement. The setting portrays an organized training environment where participants practice both individual techniques and coordinated team formations, demonstrating the program's emphasis on holistic athlete development. Overall, the figure highlights the dynamic interaction between coaches and trainees, the disciplined practice atmosphere, and the collaborative spirit that contributed to the significant improvement in students' volleyball performance.

### *3.2. Strengthening Organisational Management and Increasing Student Participation*

Alongside technical improvements, substantial progress was also made in organisational and managerial aspects of the Volleyball Student Activity Unit (UKM). Based on the results of organisational diagnosis in the initial stage, the UKM developed a more structured management system, including a new cadre formation mechanism, routine practice schedules, and an annual work program. Training in organisational leadership further enhanced the committee's ability to manage operations, improve communication, and establish internal and external partnerships.

The culmination of the program was the organisation of an inter-faculty tournament, which served as a platform to assess and strengthen students' competitive mindset. The



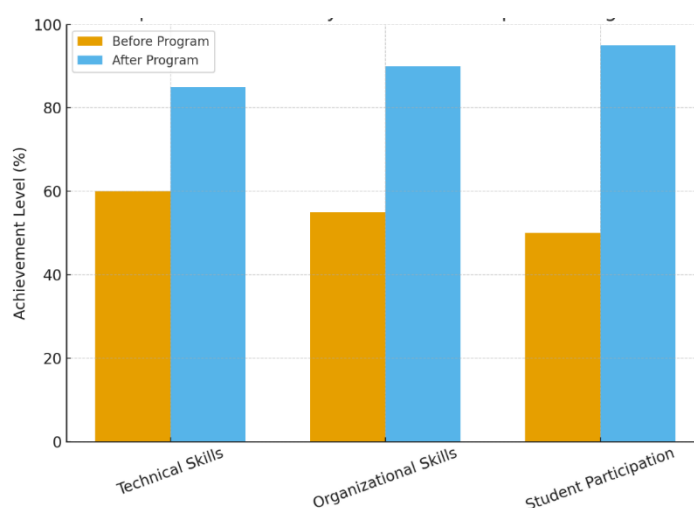
event received strong enthusiasm and has been adopted as a recurring agenda in the UKM calendar. Monitoring and evaluation results indicated that more than 90% of program targets were achieved, including improvements in playing skills, organisational coordination, and student engagement in sports activities.



**Figure 3** FKIP Inter-Campus Championship

Figure 3 presents the FKIP Inter-Campus Championship, which served as the culminating event of the community service program and functioned as a platform to evaluate students' competitive readiness after undergoing structured training. The competition brought together teams from various faculties, showcasing improved technical skills, teamwork, and game strategies developed during the program.

The project succeeded in transforming the Volleyball UKM into a more dynamic, active, and competitive student organisation. The increased student participation evidenced by the membership growth from 25 to 48 reflects the strengthened motivation and commitment of students to engage in practices and tournaments. With enhanced managerial capacity and improved technical performance, the Volleyball UKM is now better prepared to compete at both internal and inter-university levels, contributing to a sustainable and supportive sports development environment on campus.



**Figure 4** Results of Community Service Activities

Figure 4 highlights the overall results of the community service activities, illustrating



significant progress in students' technical mastery, increased UKM participation, and strengthened organizational management. Together, these figures demonstrate the successful implementation and impact of the program in fostering a more dynamic, competitive, and sustainable volleyball Student Activity Unit at the university.

### *3.3. Strengthening Skills and Community Engagement Through Volleyball Training and FKIP Cup Participation*

The PKM results confirm that structured and consistent coaching plays a crucial role in improving students' fundamental volleyball skills. Over the three-month intervention, participants demonstrated measurable progress in serving, passing, smashing, and blocking showing an average improvement rate of 25–35%. This aligns with Bompas' theory of periodization, which states that systematic training cycles enhance athletes' technical and physical performance through progressive skill development. The consistent training schedule, combined with hands-on guidance from lecturers and experienced senior students, validates that higher education sports programs require disciplined, repetitive, and well-planned practice sessions to achieve significant technical growth.

The project's findings support theories of experiential learning by highlighting the effectiveness of student involvement as co-coaches (Bresolin et al., 2022). Kolb (2022) asserts that learning becomes deeper when individuals actively engage in concrete experiences and reflective practice. In this PKM, talented students acted as assistant coaches, which not only improved their own understanding of volleyball concepts but also enriched the learning environment for newer members. Their participation created a peer-supported coaching model that fostered greater confidence, faster skill acquisition, and a more collaborative team culture demonstrating how experiential engagement enhances both technical competence and leadership potential.

The strengthening of UKM's management structure reflects the relevance of Chelladurai's Multidimensional Leadership Theory in sports organizations (Garland & Barry, 1990; Maby & Brady, 1996; Nixon, 2020). The introduction of leadership training, administrative guidance, routine scheduling, and program planning resulted in a more organized and sustainable UKM structure. According to Chelladurai, effective sports leadership must combine task-oriented guidance, relationship-oriented communication, and the ability to meet situational demands. The PKM successfully integrated these components by enabling lecturers to guide organizational governance while empowering students to coordinate activities. As a result, UKM transitioned from a passive student group into a dynamic, well-managed unit able to support continuous improvement.

Increasing membership from 25 to 48 students illustrates the project's alignment with Self-Determination Theory (SDT), particularly the principles of autonomy, competence, and relatedness (Chiu, 2022; White et al., 2024). The PKM fostered a supportive environment where students felt competent through skill mastery, connected through teamwork, and autonomous through opportunities to take leadership roles. These conditions enhanced intrinsic motivation and attracted broader participation from various faculties. According to Deci and Ryan, environments that fulfill these three psychological needs lead to higher engagement and sustained involvement precisely what occurred as UKM evolved into a more attractive and active campus sports community.

The introduction of inter-faculty tournaments demonstrates how competition can strengthen character formation, supporting the principles of sports pedagogy (Choi, 2022; Roe, 2021; Žnidarec Čučković, 2022). The FKIP Cup served as a platform for applying



technical skills in real-game situations, while also cultivating sportsmanship, discipline, responsibility, and emotional resilience. These character aspects are essential outcomes of sports education, as emphasized by Lickona's framework of character development, which promotes moral action, moral feeling, and moral reasoning. The tournament not only evaluated the effectiveness of the training program but also contributed to shaping students' values, reinforcing the broader educational mission of university sports programs.

#### 4. Conclusions

The community service program demonstrated that structured volleyball training and participation in the FKIP Cup significantly enhanced students' technical skills, teamwork, and motivation to engage in campus-based sports activities. Training sessions were shown to improve not only physical abilities such as agility, coordination, and game strategy but also students' confidence and discipline, reflecting the overall success of the program's implementation. The championship event further strengthened social cohesion by fostering healthy competition and inter-campus collaboration.

The discussion of findings indicates that these outcomes align with established theories of experiential learning and community engagement, which argue that practical, participatory activities create deeper forms of learning and social empowerment. The training model used in this program reflects Vygotsky's social interaction theory, where learning occurs through guided practice, mentorship, and peer collaboration. The results also resonate with community development perspectives, emphasizing that sports-based interventions can build social capital, enhance leadership, and promote inclusive participation within educational environments.

Despite its achievements, this program has several limitations, including a limited duration of training sessions, a relatively small number of participants, and the absence of long-term monitoring to assess sustained behavioral or skill improvements. Future research should explore longitudinal impacts of sports-based training, integrate digital coaching tools, and expand participant demographics to include broader community groups. Additionally, future PKM initiatives may incorporate interdisciplinary approaches such as combining sports, health education, and digital literacy to maximize community benefits and generate more comprehensive evidence of social impact.

#### Conflict of Interest

The authors declare no conflict of interests.

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