

Comparative Analysis of Sport Program Management, Implementation, and Sports Performance in State Universities and Colleges in the Cordillera Administrative Region

May Josefa S. Buslig¹

Adviser: Dr. Lornaa Espeso

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ABSTRACT

This study examined the level of management and implementation of sports programs and their relationship to sports performance among State Universities and Colleges (SUCs) in the Cordillera Administrative Region (CAR). Using a descriptive-comparative - correlational design, data were gathered from 141 coaches through convenience sampling during Academic Year 2024–2025. A structured questionnaire measured program management across eight domains (program planning and policy development; organizational structure and leadership; budgeting and financial management; facilities and equipment management; athlete development and support; coaching and staff development; community and stakeholder engagement; and evaluation and continuous improvement), program implementation across three domains (program implementation and execution; monitoring and supervision; evaluation of implementation), and sports performance indicators. Data were analyzed using frequency and percentage, weighted mean and standard deviation, one-way ANOVA with Tukey's HSD, and Pearson product-moment correlation. Results indicated that the overall level of sports program management was rated "High" (overall mean = 3.06), with Organizational Structure and Leadership as the highest domain (mean = 3.31) and Budgeting and Financial Management as the lowest (mean = 2.89). Program implementation was rated "High" (overall weighted mean = 3.25), with Monitoring and Supervision as the lowest implementation domain (weighted mean = 3.20). Sports performance was rated Very Satisfactory (composite mean = 3.00), characterized by stronger outcomes at local and regional levels and weaker outcomes at higher levels, particularly international performance (weighted mean = 2.31). Significant group differences were observed primarily across competition exposure and coach training, while years of coaching experience and accreditation showed limited or no consistent differences across key measures. Correlation analysis revealed strong, significant positive relationships between overall sports program management and sports performance ($r = .778, p < .05$) and between overall sports program implementation and sports performance ($r = .772, p < .05$). The findings support a regionally coordinated, evidence-based program focusing on strengthened budgeting systems, standardized monitoring and supervision, and a targeted high-performance pathway to improve national and international competitiveness. Limitations include the use of convenience sampling, reliance on coach perceptions, and the cross-sectional design, which constrain generalizability and causal inference.

Keywords: *Sports Development Programs; Program Management and Implementation, Sports Performance Outcomes, Coach Training and Accreditation, Athlete Development and Support, Higher Education Sports Programs.*

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CHAPTER ONE INTRODUCTION

Sport participation in higher education is increasingly treated as an institutional strategy to strengthen student health, psychosocial well-being, and transferable competencies such as teamwork, discipline, leadership, and resilience (Cipriano et al., 2024; Llona, 2020). Recent empirical evidence supports sport's broader developmental role: systematic reviews and intervention studies published in the early 2020s report that sport and structured physical activity are associated with mental health, quality of life, and social outcomes in university-age populations. At the same time, research consistently indicates that athletic outcomes and sustained participation are not explained by athlete effort alone; they are shaped by program conditions such as coaching quality, institutional support services, facilities, resourcing, and the organization of training and competition exposure (Capinpin & Estella, 2022; Salino et al., 2022; Santiago, 2023).

In the Philippine context, sports development in education is guided by policy priorities and institutions' capacity to manage structured programs that support both participation and performance (Tuliao & Carag, 2020). This policy direction aligns with national frameworks that position sport as a tool for human development and recommend programmatic approaches that broaden access while supporting athlete development. Within higher education, State Universities and Colleges (SUCs) operationalize sports development through athlete recruitment and training, coaching provision, use of facilities and equipment, participation in competitions, and administrative systems for planning, funding, monitoring, and evaluation (Almazan, 2023; Paghubasan, 2023). Recent Philippine studies further argue that evaluating SUC sports programs should extend beyond medal counts to include governance, accessibility, institutionalization, support systems, and linkages—components that shape both program quality and competitive outcomes (Paghubasan, 2022; Defensor, 2021).

Nationally, SUCs participate in intercollegiate competitions under the Philippine Association of State Universities and Colleges (PASUC), culminating in the State Colleges and Universities Athletic Association (SCUAA) National Games, where regions are typically compared through medal tallies and rankings. In the Cordillera Administrative Region, SUC sports participation is coordinated through the Cordillera Administrative Regional Association of State Universities and Colleges (CARASUC), which includes Abra State University, Apayao State College, Benguet State University, Kalinga State University, Ifugao State University, and Mountain Province State University. Based on the SCUAA results cited in this study, CARASUC has repeatedly placed in the lower tier of national outcomes across multiple national games, including years where the region recorded limited or no medal haul.

This sustained pattern is problematic because it raises a program-level concern: whether the management and implementation conditions across CAR SUCs are sufficiently aligned with the requirements for athlete development and competitive success beyond the regional stage. Elite sport policy research provides a clear rationale for examining this question; contemporary evidence indicates that higher-level sport success is associated with system-level factors such as governance and leadership, coaching systems, athlete support services, facilities, and funding, rather than any single intervention. When performance outcomes remain persistently low, it becomes necessary to examine the institutional “inputs” and delivery mechanisms that shape athlete development pathways—particularly in educational settings where sports programs also serve broader student development aims.

However, a key gap remains: there is limited region-specific empirical evidence describing which domains of CARASUC sports development are perceived by coaches as strong or constrained (e.g., leadership and governance, budgeting, athlete development and support, coach development, facilities, monitoring and evaluation), and whether these perceptions vary systematically across coach-related factors such as years of coaching, competition exposure, training, achievements, and accreditation. Without such evidence, recommendations risk becoming general and may not address the most relevant levers for improving implementation quality and competitive outcomes (Defensor, 2021; Paghubasan, 2022).

Despite sustained participation in regional and national intercollegiate competitions, CARASUC's competitive outcomes—based on the SCUAA results cited in this study—remain consistently lower than those of other regions, raising concern about whether current sports development systems are sufficiently supporting athlete progression and competitive success. The core research problem is the lack of region-specific empirical evidence identifying which aspects of sports program management and implementation are perceived as strong or constrained across CAR SUCs, and how these conditions relate to perceived sports performance outcomes. Accordingly, this study (1) describes the profile and professional preparation of coaches, (2) determines coaches' assessments of the level of management of sports development programs across key domains, (3) determines coaches' assessments of the level of implementation of sports programs, and (4) assesses perceived sports performance outcomes of SUCs in the Cordillera Administrative Region. It also tests whether these assessments differ significantly across coach-related variables (e.g., years of coaching, competition exposure, achievements, training, and accreditation). Findings are intended to guide evidence-based recommendations and inform either a proposed regional sports development program or an enhancement plan for existing regional arrangements, depending on current practice.

➤ *Background of the Study*

Sports development is commonly described as a multidimensional system that expands opportunities for participation while enabling progression across performance levels—from entry-level engagement to high-performance pathways—alongside broader aims such as health promotion, inclusion, and community development. In educational institutions, this multidimensionality creates a practical tension because sports programs are expected to deliver both (a) broad participation and wellness outcomes and (b) competitive athlete development outcomes. Contemporary evidence supports the argument that sport participation contributes to student well-being and psychosocial outcomes, with recent reviews and higher education intervention studies reporting measurable benefits for mental health and quality of life among university populations (Donnelly & Kay Penny, 2024). These benefits align with education-centered claims in the local literature that sports participation contributes to holistic development (Llona, 2021; Cipriano et al., 2024), yet the same body of research also suggests that competitive success typically requires additional institutional capacities—coaching quality, structured training systems, appropriate competition exposure, and integrated support services—beyond simply increasing participation.

This distinction matters because the dominant “sports-for-all” framing—often summarized as “getting more people to play more sports”—prioritizes recruitment, retention, access to facilities, and community engagement. In contrast, the performance-oriented framing emphasizes structured athlete pathways, progressive competition exposure, and specialized coaching and support mechanisms. The challenge for higher education institutions is that they are frequently expected to pursue both aims simultaneously, which can create strain when governance arrangements, resources, and implementation systems are not sufficiently aligned to support inclusive participation and sustained high-performance development. In practice, the literature suggests that participation benefits and elite outcomes do not automatically move in tandem; instead, they depend on how programs are designed and managed over time and on whether program components function as a coherent system.

Philippine empirical evidence increasingly supports the view that sports development outcomes reflect system-level conditions more than isolated athlete attributes. (Tuliao and Carag ,2020) identified multiple interacting factors influencing elite sports development, implying that performance is shaped by institutional and policy conditions rather than by individual effort alone. In SUC settings,(Almazan ,2023) likewise reported that sports performance is significantly related to implementation strategies, support systems, incentives, and coaching competencies, reinforcing the argument that management and delivery quality are central determinants of athlete outcomes. Consistent findings appear in program assessments in school and public sports contexts, where performance is linked to facilities, program support, and the quality of coaching and training environments (Salino et al., 2022; Santiago, 2023). At the international level, elite sport systems research similarly emphasizes that sustained high-level success is associated with coordinated pillars such as governance, funding, facilities, coaching provision and development, competition systems, and performance support—suggesting that a multi-domain evaluative lens is appropriate when competitive outcomes are persistently low.

Policy developments reinforce the importance of examining sports development through management and implementation systems rather than through outcomes alone. The Philippine policy environment has long established sports and physical education as public priorities (e.g., RA 5708; Constitutional provisions). More recently, CHED Memorandum Order No. 08, series of 2022, formalized the Tertiary Sports Development Program (TSDP), framing sports development in higher education as a structured institutional responsibility with expected components such as a sports organizational structure, education and skills training, career pathways, long-term athlete development planning, and reporting. This policy direction challenges institutions to demonstrate coherent governance and measurable program outcomes, thereby strengthening the rationale for evaluative research assessing whether these systems are visible and functional in practice from the perspective of implementers, such as coaches.

However, the existing research base also reveals unresolved issues that motivate the present study. First, many studies focus on “predictors” of performance (e.g., training frequency, incentives, facilities, administrative support) but do not consistently examine sports development as an integrated set of management and implementation domains. This makes it difficult to determine which specific program components (e.g., leadership, budgeting, facilities, coach development, athlete support, monitoring and evaluation, stakeholder engagement) are most constrained within a given institutional or regional context. Second, while Philippine SUC research has produced valuable evidence about factors associated with outcomes (Almazan, 2023; Santiago, 2023), fewer studies directly connect domain-level assessments of management and implementation to patterns of performance across competition tiers (local–regional–national–international), even though international systems research suggests that advancing to higher levels typically depends on deeper and better-coordinated system supports. Third, the literature remains limited in region-specific evidence for contexts like CARASUC, where geographic and resource constraints may plausibly shape program functioning differently than in more resourced regions—yet without systematic evaluation, these contextual differences remain largely assumed rather than empirically documented.

These limitations become more consequential when performance concerns persist over time, because program improvement efforts risk becoming generic rather than targeted. Evidence-based program strengthening requires identifying which management domains are functioning well, which are consistently rated lower, and whether differences in perceptions are patterned by coach-related factors such as years of experience, level of training, accreditation, and—importantly—competition exposure. This is particularly relevant in SUC settings because coaches are central implementers of training and competition plans, and their

perspectives can provide applied insight into whether institutional systems (planning, leadership, budgeting, facilities, athlete support, coach development, stakeholder engagement, and evaluation) translate into workable delivery conditions.

Accordingly, the present study builds on existing Philippine and international scholarship by treating sports development in SUCs as a system that can be assessed through multiple, interrelated domains of management and implementation and by linking these domains to perceived sports performance outcomes. In doing so, it responds to the research gap left by outcome-focused analyses and single-factor explanations: it generates region-specific empirical evidence on how coaches in CAR SUCs evaluate the functioning of sports program systems, whether these evaluations vary across coach profile variables, and how these perceptions align with reported performance patterns across competition levels. By situating coach perceptions within both policy expectations (CHED TSDP) and systems-based sport development research, the study aims to produce evidence that can support either the creation of a regional sports development program or the enhancement of existing regional arrangements, grounded in identified strengths and constraints rather than broad assumptions.

➤ *Theoretical Framework*

This study is anchored on Bandura's Social Learning Theory and the complementary social-cognitive position advanced by Walter Mischel, both of which explain behavior and performance as products of continuous interaction between individuals and their environments. The common support these theories provide—and the central rationale for anchoring the study on both—is their shared assumption that learning and performance in applied settings are shaped through (1) structured environmental conditions, (2) observational and cognitive processes, and (3) feedback and reinforcement mechanisms that sustain or change behavior over time. In sports development programs, these shared assumptions provide a coherent basis for examining how institutional management and implementation conditions translate into athlete behaviors, skill acquisition, motivation, and competitive outcomes.

Bandura's Social Learning Theory explains learning as a function of observation, imitation, and reinforcement, emphasizing four core constructs: observational learning, reinforcement, self-efficacy, and reciprocal determinism. Reciprocal determinism is especially relevant to this study because it frames athlete performance not as an individual attribute alone, but as the outcome of interactions between athletes' beliefs and capabilities (e.g., confidence and self-efficacy), their behaviors (e.g., training adherence and performance routines), and the sports environment (e.g., coaching practices, program structure, and support systems). In this study, the sports environment is represented by the level of management and level of implementation of sports development programs—domains that include planning, leadership, budgeting, facilities, athlete support, coaching development, stakeholder engagement, monitoring, and evaluation. These domains shape what athletes consistently observe (e.g., coach modeling, standards, routines, and role expectations) and the kinds of reinforcement that are made available (e.g., structured feedback, recognition, competition exposure, and support services), which are central mechanisms through which learning and performance develop in Bandura's framework.

Mischel's social-cognitive position strengthens this framework by emphasizing that behavior is systematically influenced by situational features and by the cognitive processes individuals use to interpret and respond to those situations. This perspective supports the same core logic as Bandura—namely, that performance is shaped by the environment—but it clarifies why athletes and coaches may respond differently under different institutional conditions. In practice, sports development programs differ in the clarity of expectations, consistency of supervision, availability of resources, and stability of support services. Mischel's emphasis on situational structure and cognitive appraisal helps justify why the study examines whether assessments of program systems vary across coach-related characteristics (e.g., training, accreditation, and competition exposure): these characteristics plausibly influence what coaches attend to, the standards they apply, and the expectations they bring when evaluating how well a program is managed and implemented.

The shared explanatory link between the two theories is therefore direct. Bandura explains how learning and performance develop through modeling, reinforcement, and self-efficacy within an environment, while Mischel reinforces why the quality and consistency of the environment matters by highlighting the role of situational structure and cognitive appraisal in shaping behavior. Together, these theories support the study's central proposition that the management and implementation conditions of sports development programs constitute the institutional environment that can enable or constrain athlete learning and performance, and that coaches' experience and exposure may be associated with differences in how these conditions are assessed (Horsburgh & Ippolito, 2018).

In operational terms, this theoretical anchorage aligns directly with the study variables. The program environment is operationalized through the level of management and level of implementation of sports development programs across key domains (planning, leadership, budgeting, facilities, athlete support, coaching development, stakeholder engagement, monitoring, and evaluation). These program conditions are expected to influence athletes' opportunities for observational learning, the consistency of feedback and reinforcement, and experiences that strengthen self-efficacy, which collectively correspond to improved sports performance outcomes. Coach-related characteristics (years of experience, competition exposure, achievements, training level, and accreditation) are treated as grouping variables because they may shape how coaches interpret program situations and judge implementation quality—consistent with Mischel's situational emphasis and Bandura's reciprocal determinism.

Figure 1 shows the research paradigm of the study.

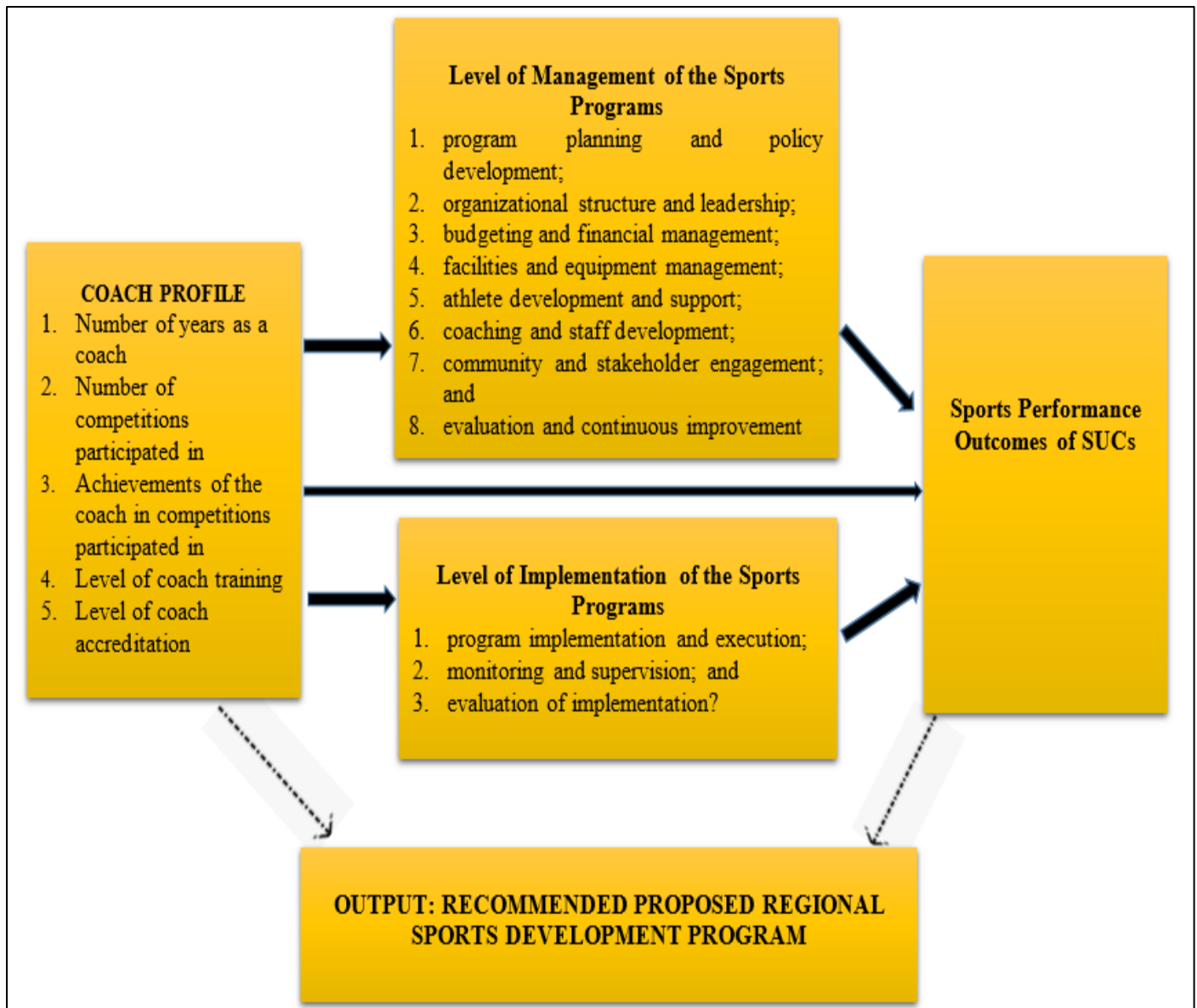


Fig 1 Research Paradigm

This framework illustrates the relationship between the respondents' profile, the management and implementation of sports development programs, and the sports performance of SUCs in the CAR. The framework also shows how the findings will serve as the basis for proposing a sports development program.

The research paradigm is anchored on the idea that the profile of the respondents (years of coaching, competitions participated in, achievements, training, and accreditation) influences the management and implementation of sports programs in SUCs. The management and implementation process, in turn, affects the sports performance of athletes and coaches within the institutions.

The framework follows a logical flow: the respondents' profile provides background characteristics that may shape program management and implementations; management and implementation represents the institutional mechanisms and practices in sports programs; sports performance reflects the effectiveness of management and implementation in terms of athlete development and coaching quality; and feedback (proposed program) - based on the findings, a sports development program will be proposed to enhance future management, implementation, and performance outcomes.

➤ Statement of the Problem

This study examines the level of management and level of implementation of sports programs and their sports performance outcomes among State Universities and Colleges (SUCs) in the Cordillera Administrative Region (CAR). Specifically, it seeks to answer the following questions:

- What is the profile of the respondents in terms of the number of:
 - ✓ Number of years as a coach;
 - ✓ Number of competitions participated in;
 - ✓ Achievements of the coach in the competitions participated in;
 - ✓ Level of coach training, and
 - ✓ Level of coach accreditation?
- What is the level of management of the sports program at the state universities and colleges in the Cordillera Administrative Region, in terms of:
 - ✓ Program planning and policy development;
 - ✓ Organizational structure and leadership;
 - ✓ Budgeting and financial management;
 - ✓ Facilities and equipment management;
 - ✓ Athlete development and support;
 - ✓ Coaching and staff development;
 - ✓ Community and stakeholder engagement; and
 - ✓ Evaluation and continuous improvement?
- Is there a significant difference in the level of management of the sports program in the State Universities and Colleges in the Cordillera Administrative Region when the profile of the respondents is taken as test factors?
- What is the level of implementation of the sports program in state universities and Colleges in the Cordillera Administrative Region, in terms of:
 - ✓ Program implementation and execution;
 - ✓ Monitoring and supervision; and
 - ✓ Evaluation of implementation?
- Is there a significant difference in the level of implementation of the sports program among State Universities and Colleges in the Cordillera Administrative Region when the profile of the respondents is taken as a test factor?
- What is the level of sports performance of the State Universities and Colleges in the Cordillera Administrative Region, in terms of:
 - ✓ Athlete performance and development; and
 - ✓ Coaching effectiveness and training quality?
- Is there a significant difference in the level of sports performance of state universities and colleges in the Cordillera Administrative Region when their profile is taken as test factors?
- Is there a significant correlation between the level of management of sports program and the level of sports performance of State Universities and Colleges in the Cordillera Administrative Region?
- Is there a significant correlation between the level of implementation of sports program and the level of sports performance of State Universities and Colleges in the Cordillera Administrative Region?
- Based on the result of the study, what sports development program can be proposed?

➤ *Hypothesis*

The researcher tested the following hypothesis in this study at a 5% level of significance:

- Ho1: There are no significant differences in the level of management of the sports development program among State Universities and Colleges in the Cordillera Administrative Region when the profile of the respondents is taken as a test factor.
- Ho2: There are no significant differences in the level of implementation of the sports development program among State Universities and Colleges in the Cordillera Administrative Region when the profile of the respondents is taken as test factor.
- Ho3: There is no significant difference in the sports performance of State Universities and Colleges among Cordillera Administrative Region when the profile of the respondents is taken as test factor.
- Ho4: There is no significant relationship in the level of management of sports program and the level of sports performance of State Universities and Colleges in the Cordillera Administrative Region.
- Ho5: There is no significant relationship in the level of implementation of sports program and the level of sports performance of State Universities and Colleges in the Cordillera Administrative Region.

➤ *Significance of the Study*

This study provides region-specific empirical evidence on the management and implementation of sports programs and their association with sports performance outcomes among State Universities and Colleges (SUCs) in the Cordillera Administrative Region (CAR). The results are expected to inform targeted improvements and support either the formulation of a regional sports development program or the enhancement of existing regional arrangements.

- **Student-Athletes.** Findings may guide improvements in training environments and support services by identifying which program components are perceived as comparatively strong or constrained (e.g., facilities, athlete services, scholarship support, and competition exposure). These insights can help institutions strengthen conditions that are linked to sustained athlete development and competitive readiness, particularly when aiming to improve outcomes beyond the regional level.
- **Coaches and Trainers.** The study provides evidence on how coaches' professional preparation (training and accreditation) and exposure (e.g., number of competitions participated in) relate to their assessments of program systems. This can support more responsive coach development pathways (e.g., mentoring, certification access, continuing professional development) and help align coaching support with the practical needs identified by coaches themselves.
- **Sports Directors and Program Administrators.** By presenting domain-specific ratings of management and implementation, the study offers a diagnostic basis for refining program governance, strengthening monitoring and evaluation routines, and improving coordination mechanisms among coaches, athletes, and administrative units. The evidence can help administrators prioritize interventions with the greatest perceived need (e.g., budgeting processes, coach development systems, or athlete support services) rather than applying broad, non-targeted reforms.
- **SUC Leadership and Institutional Decision-Makers.** For presidents, vice presidents, deans, and other institutional leaders, the study provides an empirical foundation for decisions on policy alignment, resource allocation, and accountability systems. Since the study identifies areas of relative strength and constraint across domains, it can support strategic planning and justify resource mobilization or reallocation consistent with program improvement goals.
- **Higher Education Institutions (HEIs) and Policy Implementers.** The findings can support HEIs in operationalizing tertiary sports development expectations by documenting how program systems are functioning at the institutional level from the perspective of implementers. This evidence is particularly valuable in guiding improvements in program consistency, monitoring frameworks, and stakeholder partnerships, and in aligning institutional initiatives with broader policy frameworks that emphasize holistic sports development.
- **Cordillera Administrative Region Association of State Universities and College.** The study generates a region-specific evidence base that can inform a proposed Regional Sports Development Program. By clarifying which domains require strengthening to improve performance outcomes—especially at higher competition levels—the findings can support CARASUC in developing more coherent regional strategies for coaching development, competition exposure, resource sharing, partnerships, and continuous improvement.
- **Future Researchers.** This study contributes to the growing body of literature on sports development and sports management in Philippine SUCs by providing data that can be used for comparison, replication, or extension. Future studies may build on these findings by triangulating coach perceptions with objective indicators (e.g., budget utilization records, facility audits, competition logs, and documented evaluation outputs) and by incorporating additional stakeholder perspectives (e.g., athletes and administrators) to strengthen explanatory power.

➤ *Scope and Delimitation*

This study assessed the levels of management, implementation of sports programs, and sports performance among State Universities and Colleges (SUCs) in the Cordillera Administrative Region (CAR). It also examined whether coaches' assessments differed when grouped according to coach profile variables (years of coaching experience, number of competitions participated in, coaching achievements, level of coach training, and level of coach accreditation), and whether statistically significant relationships existed between (a) program management and sports performance and (b) program implementation and sports performance.

The study was delimited to coaches officially affiliated with the CAR SUCs during Academic Year 2024–2025. This timeframe was selected to ensure that the assessments reflected current program conditions (e.g., leadership arrangements, resource availability, implementation routines, and monitoring and evaluation practices) rather than conditions that may have changed in earlier years. The study did not include private higher education institutions or SUCs outside CAR to keep the findings specific to the institutional setting for which recommendations and a proposed/enhanced regional program were intended.

The study employed convenience sampling, resulting in a sample of 141 coach-respondents. This approach was used because access to coaches depended on institutional availability, schedules, and willingness to participate during the data-collection period, particularly given the workload and time constraints typically associated with training and competition responsibilities. The obtained sample size was considered sufficient for the study's descriptive and inferential objectives, including estimating domain means and conducting group comparisons and correlational tests, provided that assumptions and minimum subgroup sizes required by the selected statistical procedures were met. However, because convenience sampling is a non-probability method, the study's results are best interpreted as reflective of the participating coaches rather than automatically generalizable to all coaches in CAR or other regions.

- *Coach-Respondents were Included if they:*

- ✓ Were current coaches officially assigned/recognized by their SUC sports program during AY 2024–2025;
- ✓ Had direct involvement in athlete training and/or competition participation under the institution's sports program; and
- ✓ Consented to participate and completed the questionnaire.

These criteria ensured that responses were based on recent and direct experience with the sports program systems being evaluated.

The study relied on self-reported perceptions, which introduces several plausible sources of bias that should be acknowledged when interpreting results. First, selection bias may arise from convenience sampling because coaches who were more accessible or more willing to respond may differ from those who did not participate (e.g., coaches with heavier workloads, those less engaged, or those with stronger dissatisfaction may be underrepresented). Second, social desirability bias may lead some respondents to rate management and implementation more positively to reflect well on their institution or to avoid appearing critical of program administrators. Third, acquiescence bias (a tendency to agree with statements) may inflate mean ratings, particularly in Likert-type instruments. Fourth, institutional loyalty or perceived risk—even when anonymity is emphasized—may discourage negative responses. Fifth, experience-based response differences may occur when coaches with greater competition exposure or higher training apply stricter standards, while less-exposed coaches may rate the same conditions more positively due to fewer comparison points. To strengthen credibility, the study ensured voluntary participation, emphasized confidentiality/anonymity, and reported results in an aggregated form. These procedures help reduce response pressure and support more candid assessments, although they do not fully eliminate the inherent limitations of non-probability sampling and perception-based measurement.

➤ *Definition of Terms*

The following key terms are operationally defined for clarity and consistency in this study.

➤ *Sports Programs*

- **Athlete Development.** The enhancement of an athlete's physical, technical, tactical, and psychological capacities through structured training, competition exposure, and appropriate support mechanisms.
- **Athletic Scholarship.** Financial assistance granted to student-athletes (e.g., tuition support, stipends, or allowances), subject to institutional policies and participation requirements.
- **Recruitment (Sports).** The process of identifying, attracting, screening, and selecting potential student-athletes to participate in institutional sports programs.
- **Regional Sports Development Program.** A coordinated set of policies, systems, and initiatives designed to strengthen sports participation and competitive performance across institutions within a defined geographic region.
- **Skill Development.** The progressive improvement of sport-related abilities through structured coaching, repeated practice, and planned training progression.
- **Sports.** Organized physical activities or games performed according to established rules for recreation, participation, and/or competition.
- **Sports Competition.** A structured contest involving individuals or teams in which performance is evaluated and winners are determined based on established rules and standards.
- **Sports Development Program.** A structured institutional initiative implemented by SUCs to enhance athletes' skills, fitness, and performance through training, competition participation, and support systems (e.g., coaching, facilities, and athlete services).
- **Sports Equipment.** Tools, materials, apparel, and gear used for sports training and competition.
- **Sports Facilities.** Physical infrastructure (e.g., gyms, courts, tracks, and fields) used for training, practice, and competition.
- **Student-Athletes.** Students who participate in organized collegiate sports and represent their institution in training and competitions.
- **Training.** A planned process of developing athletic knowledge and skills through instruction, practice, and guided performance activities to improve effectiveness.
- **Training Program.** A structured sequence of training activities designed to develop athletes' competencies and prepare them for competition demands.
- **Wellness.** The active pursuit of behaviors and conditions that support holistic health, including physical, psychological, and social well-being.

➤ *Management of Sports Programs*

- **Budgeting and Financial Management.** Institutional processes for planning, allocating, disbursing, and tracking sports program funds to support operations (e.g., training, competition participation, equipment, and athlete services).
- **Coach.** An individual formally assigned or recognized by an institution to plan, facilitate, and supervise athlete training and competition preparation.

- **Coach Accreditation.** Formal recognition of coaching competency granted by relevant accrediting bodies or recognized sports organizations, indicating an official level of coaching qualification.
- **Coach Training.** Professional development activities intended to enhance coaches' knowledge, skills, and competencies for athlete development and program delivery (e.g., certifications, seminars, clinics, mentoring).
- **Community and Stakeholder Engagement.** Institutional efforts to build partnerships and collaboration with internal and external stakeholders (e.g., alumni, LGUs, national agencies, private organizations) to support sports development initiatives.
- **Evaluation and Continuous Improvement.** Institutional processes for assessing program performance and using findings to guide policy updates, planning adjustments, and program enhancements.
- **Facilities and Equipment Management.** Systems for providing, maintaining, upgrading, scheduling, and ensuring safe use of sports facilities and equipment to support training and competitions.
- **Organizational Structure and Leadership.** The arrangement of roles, responsibilities, communication lines, and decision-making authority that guides the delivery and oversight of sports development programs.
- **Program Planning and Policy Development.** The development of program goals, plans, and policies—including alignment with institutional and external priorities—to guide sports development implementation.

➤ *Implementation of Sports Programs*

- **Contingency Measures.** Prepared plans and procedures used to manage delays, disruptions, or unexpected challenges during sports program implementation (e.g., weather-related changes, scheduling conflicts, facility limitations).
- **Evaluation of Implementation.** Post-activity or periodic assessment of implementation processes and results, including feedback gathering and reporting, used to identify areas for improvement.
- **Monitoring and Supervision.** Ongoing oversight activities used to track implementation (e.g., attendance monitoring, documentation of activities, supervision during events, use of monitoring tools) and address issues during execution.
- **Program Implementation and Execution.** The delivery of planned sports development activities, including training, competitions, scheduling, role assignment, adherence to guidelines, and dissemination of information.
- **Implementation Reports.** Formal documentation submitted to administrators or stakeholders summarizing implemented activities, outputs, and observations during program delivery.
- **Informed Consent.** The ethical process of providing adequate study information to participants so they can voluntarily decide whether to participate.
- **Feedback Mechanism.** A structured process for collecting and using input from coaches, athletes, and stakeholders to improve program execution and outcomes.

➤ *Sports Performance*

- **Athlete Performance and Development.** Athlete outcomes reflected in competitive results (e.g., podium finishes, records) and indicators of progression (e.g., improvement across seasons, meeting benchmarks, selection/scouting for higher-level training).
- **Coaching Effectiveness and Training Quality.** The extent to which coaching practices and training delivery are perceived as organized, appropriate, and supportive of athlete development and performance outcomes.
- **Sports Performance.** Measurable outcomes of athletes or teams in competitions, including rankings, medals, and records at local, regional, national, and international levels, as reflected in the indicators used in this study.

➤ *Acronyms and Institutional/Policy References*

- **CAR (Cordillera Administrative Region).** A Philippine region comprising Abra, Apayao, Benguet, Ifugao, Kalinga, Mountain Province, and Baguio City.
- **CARASUC (Cordillera Administrative Region Association of State Universities and Colleges).** The association of SUCs in CAR, including Abra State University, Apayao State College, Benguet State University, Ifugao State University, Kalinga State University, and Mountain Province State University.
- **CHED-TSDP (CHED Tertiary Sports Development Program).** A CHED policy framework under CMO No. 08, s. 2022 that outlines inclusive and holistic sports development in higher education, including program structures, athlete pathways, partnerships, and reporting requirements.
- **LGU (Local Government Unit).** A local administrative unit (e.g., province, municipality, city, barangay) that may serve as a partner or stakeholder in sports development initiatives.
- **PASUC (Philippine Association of State Universities and Colleges).** The national association of state-funded higher education institutions that coordinates academic, cultural, and sports initiatives, including inter-SUC competitions.
- **SCUAA National Games (State Colleges and Universities Athletic Association National Games).** An annual national-level multi-sport competition where SUCs from different regions compete in various sports disciplines.
- **SUCs (State Universities and Colleges).** Public higher education institutions in the Philippines are funded and regulated by the government.

CHAPTER TWO METHODOLOGY

This section presents the research design, locale and participants, sampling method, research instrument, data collection procedure, statistical treatment of data, and ethical considerations employed in the study.

➤ *Research Design*

The study utilized a descriptive comparative-correlational research design. The descriptive component documented the current levels of (a) management of sports programs, (b) implementation of sports programs, and (c) sports performance among State Universities and Colleges (SUCs) in the Cordillera Administrative Region (CAR). The comparative component examined whether statistically significant differences existed in these variables when respondents were grouped according to selected profile characteristics (e.g., years of coaching experience, training, and accreditation) and whether there statistically significant correlation in the level of management and implementation of sports programs and sports performance. This approach is appropriate for studies that aim to describe existing conditions and compare groups without manipulating variables (Creswell & Creswell, 2022).

The study's emphasis on management and implementation is consistent with contemporary literature indicating that athlete outcomes and institutional performance are influenced by program conditions such as leadership and governance, implementation strategies, coach competence, incentives, and support systems (Almazan, 2023; Paghubasan, 2022, 2023; Santiago, 2023). Program evaluation studies in Philippine university sport similarly highlight the value of systematic assessment to identify constraints in policy, organization, and resource provision (Defensor, 2021).

➤ *Sampling Method*

This study employed purposive sampling technique commonly used in education and social science research when members of the target population are accessible within a defined timeframe and setting, and when the study aims to describe perceptions and attitudes using survey data (Nicolopoulou, 2022). Purposive sampling was appropriate for the present study because the population of interest—SUC sports coaches in the Cordillera Administrative Region—has variable availability due to training and competition schedules, and access is often mediated through institutional offices.

To ensure that participation remained aligned with the objectives of the study, the researcher established the following inclusion criteria: respondents must be current SUC sports coaches in the Cordillera Administrative Region during SY 2024–2025. With the assistance of the SUC sports directors, the researcher identified and approached coaches who met the inclusion criterion and were available during the data collection period. Participation was strictly voluntary. Coaches who expressed willingness to participate were provided with the study information and consent form; those who provided consent were then given the questionnaire. Completed questionnaires were collected and included in the final dataset.

Given the nature of purposive sampling, the study recognizes potential selection and response biases, including the possibility that coaches who were more available, more engaged, or more willing to respond may be overrepresented, while those with heavier workloads or more substantial dissatisfaction may be underrepresented. To reduce these risks, recruitment was conducted across the participating SUCs through coordination with sports directors, and participation was solicited without coercion. The researcher also emphasized confidentiality and the use of aggregated reporting to encourage candid responses and to minimize social desirability effects.

➤ *Respondents of the Study*

The study was conducted across six (6) SUCs in the Cordillera Administrative Region. The respondents were current sports coaches affiliated with these SUCs during Academic Year 2024–2025. Coaches were selected because they play a central role in program implementation through training delivery, competition preparation, athlete supervision, and performance monitoring, and therefore possess relevant firsthand knowledge regarding management practices, implementation realities, and performance outcomes (Santiago, 2023).

➤ *State Universities and Colleges (SUCs)*

| Name of SUC | Coaches |
|--------------|------------|
| SUC 1 | 18 |
| SUC 2 | 28 |
| SUC 3 | 13 |
| SUC 4 | 25 |
| SUC 5 | 28 |
| SUC 6 | 29 |
| Total | 141 |

State University and Colleges (SUC) 1 has two (2) campuses. The SUC provides wide range of programs across graduate, undergraduate and senior high level.

SUC 2 has one main campus and a satellite campus. The main campus houses the offers Agriculture, Education, Information Technology, Biology and Math courses. The satellite campus houses the Engineering and Industrial Technology courses.

SUC 3 is the biggest SUC in CAR, it has 3 regular campuses. It also has 2 satellite campuses. It offers a broad range of programs – both undergraduate and graduate – across multiple fields.

SUC 4 began as the Nayan Settlement Farm School establish during the American regime. Over time it transformed into Pilot Opportunity School of Agriculture, Agricultural and Technical College, State College of Agriculture and Forestry and finally converted into a university in 2009. There is one main campus and six other campuses

SUC 5 is the only state-run higher education institution in the province of Mt. Province. It was established in 1992, converting the former Mt. Province Community College and integrating the tertiary programs of selected secondary schools in the province. CHED approved its conversion into a full state university in August 2024.

SUC 6 was established via RA 10584, which converted the state college into a state university. There is one main campus and two other campuses.

➤ *Research Instrument*

Data were gathered using a researcher-developed questionnaire designed to measure three key variables: (1) program management, (2) program implementation, and (3) sports performance. A 4-point Likert scale was utilized. A forced-choice format without a neutral midpoint was used to encourage clearer directional judgments regarding program conditions.

Part I of the questionnaire gathered data from respondents' profile in terms of: Number of years as a coach, number of competitions participated in, achievements of the coach in competitions participated in, level of coach training, and level of coach accreditation.

Part II of the questionnaire focused on the management of the sports programs at the state universities and colleges in the Cordillera Administrative Region along the following domains: Program planning and policy development, Organizational structure and leadership, Budgeting and financial management, Facilities and equipment management, Athlete development and support, Coaching and staff development, Community and stakeholder engagement and Evaluation and continuous improvement.

Part III of the question dealt with the level of implementation of the sports programs in state universities and Colleges in the Cordillera Administrative Region along the following domains: Program implementation and execution, Monitoring and supervision,

➤ *And Evaluation of Implementation.*

Part IV of the questionnaire focused on the sports performance level of the State Universities and Colleges in the Cordillera Administrative Region along: Athlete performance and development and Coaching effectiveness and training quality

The performance components align with the literature, which emphasizes that competitive and developmental outcomes in sport are linked to training quality, coach competence, structured support, and program delivery systems (Capinpin & Estrella, 2022; Santiago, 2023).

To establish content and face validity, the instrument was reviewed by three (3) experts in relevant areas (e.g., sports administration, coaching, physical education, and research). The experts assessed item relevance, clarity, and coverage of the construct domains. Suggested revisions were incorporated into the instrument. An English-language specialist further reviewed the questionnaire to improve wording, sentence structure, and clarity.

To determine reliability, a pilot test was conducted in a SUC located in a neighboring region using twenty (20) coach-respondents who met the same inclusion criteria. The instrument produced a Cronbach's alpha coefficient of 0.947, indicating excellent internal consistency.

➤ *Data Gathering Procedure*

Prior to survey administration, the researcher secured written permission from the Presidents or duly authorized officials of the participating State Universities and Colleges (SUCs). Upon approval, the researcher coordinated with the campus sports directors to facilitate access to the coach-respondents and to support the orderly distribution and retrieval of questionnaires.

With the assistance of the sports directors, questionnaires were distributed to eligible coaches. Before any questionnaire was administered, the researcher obtained informed consent using language that was clear and reasonably understandable. Coaches were provided adequate information about the study's purpose, procedures, expected participation, and their rights as participants. They were informed that participation was voluntary, that they could decline participation or withdraw at any point without penalty or negative consequences, and that they could ask questions before deciding to participate. For documentation, the researcher used a written informed consent form containing the essential elements of consent and a signature line for the participant.

After consent was obtained, the researcher briefly explained the study objectives and instructions for completing the instrument. Respondents were given sufficient time to answer the questionnaire, and clarifications were provided only on procedural concerns (e.g., how to mark responses), without influencing answers. Completed questionnaires were retrieved by the researcher through the coordinated process with sports directors to ensure timely collection.

After retrieval, responses were checked for completeness and consistency, then coded and encoded for statistical analysis. To protect confidentiality, no personally identifying information was included in the analysis file, and findings were reported in aggregated form. All physical questionnaires and electronic datasets were securely stored and were accessible only to the researcher and authorized personnel involved in data processing and statistical treatment.

➤ *Statistical Treatment*

The study employed both descriptive and inferential statistics to analyze the data gathered from the coach-respondents. Responses were coded and encoded for statistical processing using appropriate software. Statistical decisions were guided by a conventional level of significance (e.g., $p < .05$), consistent with standard practice in the social sciences.

➤ *Descriptive Statistics*

- *Frequency and Percentage.*

These were used to describe the respondents' profile characteristics, including years of coaching, number of competitions participated in as a coach, coaching achievements, level of coach training, and level of coach accreditation.

- *Weighted Mean and Standard Deviation*

Weighted means were computed to determine the level of management of sports programs, implementation of sports programs, and sports performance of SUCs, as assessed by coaches.

Standard deviation values were used to describe the variability of responses around the mean.

- *The Following Mean Ranges Guided Interpretation:*

| Mean Range | Qualitative Description / Interpretation |
|-------------|--|
| 3.51 – 4.00 | Strongly Agree / Very High |
| 2.51 – 3.50 | Agree / High |
| 1.51 – 2.50 | Disagree / Low |
| 1.00 – 1.50 | Strongly Disagree / Poor |

➤ *Inferential Statistics*

- *One-Way Analysis of Variance (ANOVA)*

One-way ANOVA was used to determine whether there were statistically significant differences in coaches' assessments of the level of management, the level of implementation, and the level of sports performance, when respondents were grouped according to profile variables such as years of coaching, number of competitions participated in, coaching achievements, level of coach training, and level of coach accreditation. ANOVA was appropriate because it tests mean differences across three or more independent groups.

- *Tukey's Honestly Significant Difference (HSD) Post Hoc Test*

When ANOVA results were statistically significant, Tukey's HSD was conducted to determine which specific group means differed significantly. This post hoc procedure is appropriate for pairwise comparisons while controlling the familywise error rate, thereby limiting Type I error inflation.

- *Pearson Product–Moment Correlation (Pearson r)*

Pearson r was used to determine whether there were statistically significant correlation between the level of management of sports programs and sports performance, and the level of implementation of sports programs and sports performance.

➤ *Ethical Considerations*

To adhere to the study's ethical standards, the researcher kept participants' personal information confidential. Before conducting the survey, the researcher explained the research topic and objectives to the participants and obtained the necessary permissions and approvals from the university and the participants (including other third parties) to collect the required data to address the problem statements.

➤ *Conflict of Interest*

The researcher ensured that all relevant parties, particularly educational institutions and respondents, were notified and provided with pertinent information on the study. The researcher provided participants with a comprehensive overview of the study's subject matter, research goals, the questionnaire completion process, and the necessary information to encourage them to offer accurate data. The researcher assured the respondents of the confidentiality of the information included in the letter and the introductory section of the questionnaire.

➤ *Privacy and Confidentiality*

Participant privacy was protected and confidentiality strictly maintained. Questionnaires did not require identifying information beyond what was necessary for analysis. Responses were anonymized through the use of codes, with any linking file stored separately and securely. Results were reported only in aggregate form.

The researcher strictly maintained and observed the participants' right to privacy and maintained the confidentiality of the data obtained from the respondents. Confidentiality ensures that no names or other identifying information appear on data records and that the researcher will maintain the confidentiality and privacy of the information obtained from research participants. The researcher ensured that participants' records were kept anonymous. No personally identifiable information was disclosed in this research, and the processing of the provided data complied with RA 10173, also known as the Data Protection Act of 2012 (DPA of 2012) and its Implementing Rules and Regulations. Anonymity means that the participant's name is not associated with the information and measurements obtained from each participant. Only the code name or code number identifies the actual data, and the researcher kept a separate, secure list to connect the participants with the codes. Thus, anyone accessing the data has only the codes and cannot associate a participant with any particular data. The researcher assured that the gathered material will only be used for the purposes of this dissertation and academic pursuits within the context of this study.

➤ *Informed Consent Process*

The participation of respondents in this study was voluntary. The researcher obtained informed consent before the commencement of the research and ensured that participants had all the necessary information to make an informed decision regarding their participation. After obtaining consent, the researcher personally discussed the study's objective and purpose. The researcher ensured that the respondents acknowledged that they had read and understood the purpose of this research and voluntarily agreed to participate. Participants may withdraw at any time without consequence. The researcher guided the respondents through completing the questionnaires and provided them with sufficient time to do so in the same environment. The researcher likewise kept all information gathered confidential. After collecting the data, the researcher tallied and recorded needed data, sent it to the statistician for data analysis and interpretation. The researcher also ensured the safekeeping of all questionnaires.

➤ *Vulnerability and Assent*

There were no vulnerable groups or minors in the study, as the participants are coaches from different state universities and colleges in the Cordillera Administrative Region. The participants were adults capable of making informed decisions and providing relevant information about the research topic.

➤ *Recruitment*

Participation in the research study was voluntary, and non-participation did not affect the benefits currently enjoyed by university employees.

➤ *Risk*

The researcher provided the selected respondents with a concise overview of the study, including its goals and relevant details. Moreover, the researcher clearly explained to them that the survey would solely serve academic interests and would not compromise their safety or privacy. Furthermore, the researcher fully informed the participants that the study would serve solely academic objectives, posing no risks to their safety or privacy.

➤ *Benefits*

The researcher provided the selected respondents with a concise overview of the study, including its goals and relevant details. Moreover, the researcher clearly explained to them that the study would solely serve academic interests and would not compromise their safety or privacy. Furthermore, the researcher fully communicated to the participants that the study would solely serve academic objectives, posing no risks to their safety or privacy.

➤ *Incentives or Compensation.*

The researcher made no commitment to provide financial incentives to participants and reserves the right to withdraw from the study in the event of unforeseen circumstances, such as expenses, accidents, or similar situations. The researcher also refrained from providing the respondents with any form of incentive or remuneration, whether monetary or otherwise, to motivate their participation in the study. Lastly, the researcher informed the participants that the study was conducted solely for the objective of this research, for academic use only, and would not in any way jeopardize their safety or privacy.

➤ *Community Considerations.*

The study acknowledged the significance of community engagement. The researcher took extensive measures to engage and obtain consent from community leaders or authorities actively. Additionally, the research recognizes and takes into account the beliefs, conventions, and cultural sensitivities of the community. The objective is to engage in a cooperative and considerate manner with community members to ensure that the research is in line with their expectations and goals.

Moreover, the researcher treated any material that could reveal the identity of the respondents with extreme caution and maintains confidentiality. Ultimately, the researcher also disseminated the research findings to the community in a comprehensible and easily accessible manner, if they are relevant. This may include community gatherings, lectures, or other relevant methods.

CHAPTER THREE RESULTS AND DISCUSSION

This section presents the study's findings, interpretation, discussion, conclusion, and recommendations on the management and implementation of sports programs in State Universities and Colleges (SUCs) in the Cordillera Administrative Region. The findings are organized according to the research problems and supported by relevant literature to contextualize and validate the results.

➤ *Part I: Profile of the Respondents*

This study gathered data from 141 coaches from various state universities and colleges in the Cordillera Administrative Region. The respondent profile established a foundation for interpreting the subsequent findings, as categorized by years as a coach, years of participation, competition achievements, level of coach training, and level of coach accreditation.

Table 1 The Coaching Profile of the Respondents

| | Category | Frequency | Percentage |
|---------------------------------|---------------------------------------|------------|-------------|
| Number of Years as Coach | 1–3 years | 91 | 64.5% |
| | 4–6 years | 26 | 18.4% |
| | 7–9 years | 10 | 7.1% |
| | 10 years and above | 14 | 9.9% |
| | Total | 141 | 100% |
| Number of Years Participated In | 1–5 | 95 | 67.4% |
| | 6–10 | 27 | 19.1% |
| | 11–15 | 7 | 5.0% |
| | More than 15 | 12 | 8.5% |
| | Total | 141 | 100% |
| Achievements in Competitions | Regional level awardee | 68 | 48.2% |
| | National level awardee | 10 | 7.1% |
| | No awards received | 63 | 44.7% |
| | Total | 141 | 100% |
| Level of Coach Training | Basic Training Certification | 39 | 27.7% |
| | Advanced Training Certification | 8 | 5.7% |
| | Elite/National Coaching Certification | 8 | 5.7% |
| | No formal training | 86 | 61.0% |
| | Total | 141 | 100% |
| Level of Coach Accreditation | Local | 30 | 21.3% |
| | Regional | 11 | 7.8% |
| | National | 11 | 7.8% |
| | International | 1 | 0.7% |
| | No accreditation | 88 | 62.4% |
| | Total | 141 | 100% |

Table 1 shows the coaching profile of the respondents. Across the five variables, the most common observation is that the coaching group is predominantly early-career and largely non-credentialed. Nearly two-thirds of respondents have 1–3 years of coaching experience (64.5%), and a similar proportion have participated in only 1–5 competitions (67.4%), indicating limited tenure and relatively modest competitive exposure.

A notable and consistent pattern is the high prevalence of limited formal professional preparation. Most coaches report no formal training (61.0%) and no accreditation (62.4%). Among those who hold training or accreditation, representation is concentrated at introductory or lower levels (e.g., basic training and local accreditation), while advanced, elite/national, and international credentials are comparatively rare (each $\leq 5.7\%$ for higher training categories; 0.7% for international accreditation). This suggests constrained progression into higher-tier certification pathways.

In terms of outcomes, competitive achievement appears mixed. While regional-level awards are relatively common (48.2%), national-level awards are infrequent (7.1%), and a substantial share report no awards (44.7%). Taken together, the findings suggest a coaching cohort that is mainly composed of newer practitioners with limited competitive involvement and generally low levels of formal training and accreditation. At the same time, the comparatively strong presence of regional awards indicates that measurable success is occurring despite limited formal credentialing. However, advancement to higher competitive recognition (national level) remains uncommon.

➤ *Part II: Assessment of the Level of Management of the Sports Program*

This study examined the management of the CARASUC sports program across eight domains, namely: program planning & policy development, organizational structure & leadership, budgeting & financial management, facilities & equipment management, athlete development & support, coaching & staff development, community & stakeholder engagement, and evaluation & continuous improvement.

Table 2 Level of Management of the Sports Program in Terms of Program Planning and Policy Development.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|-------------|-------------|-------------------------|----------------|------|
| 1. The university has a clearly defined vision, mission, and objectives for its sports program. | 3.05 | 0.22 | Agree | High | 3 |
| The university's sports program aligns with national and regional sports policies. | 3.33 | 0.65 | Agree | High | 1 |
| The university conducts annual sports planning and stakeholder consultations for sports development | 3.03 | 0.61 | Agree | High | 5 |
| 4. The university involves coaches and stakeholders in planning the sports program. | 2.99 | 0.51 | Agree | High | 6 |
| 5. The university regularly updates its sports program policies and strategies. | 3.12 | 0.75 | Agree | High | 2 |
| The university has established policies on recruiting and training athletes. | 3.04 | 0.68 | Agree | High | 4 |
| Composite Mean | 3.09 | 0.60 | Agree | High | |

The composite mean ($M = 3.09$) falls within 2.52 – 3.50, corresponding to Agree/High. this indicates that, overall, coaches perceive program planning and policy development practices as generally evident within the university sports program. From a governance perspective, such findings are consistent with the view that planning and policy functions are central instruments through which sports organizations structure decision-making, clarify priorities, and coordinate implementation (Thompson, et al, 2022)

The highest-rated indicator – alignment with national and regional sports policies ($M = 3.33$) – suggests that coaches most strongly recognize the program's vertical coherence with external policy frameworks.

The lowest-rated indicator – involving coaches and stakeholders in planning ($M = 2.99$) – remains within Agree/High, but it is the weakest element relative to other planning indicators. This pattern is meaningful because stakeholder participation is widely regarded as a key condition for implementing policies to local conditions. Hendricks (2021) strategic planning literature and stakeholder-engagement frameworks emphasize that when stakeholders who execute or experience programs are meaningful engaged, plans are more likely to reflect operational realities and gain sustained commitment.

Table 3 Level of Management of the Sports Program in Terms of Organizational Structure and Leadership

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|-------------|-------------|-------------------------|----------------|------|
| 1. The university clearly defines the roles and responsibilities of sports administrators, coaches, and staff. | 3.29 | 0.58 | Agree | High | 5 |
| The university ensures that program leaders are accountable and transparent in their management of the program. | 3.32 | 0.64 | Agree | High | 3 |
| 3. The university ensures clear communication between management, coaches, and athletes. | 3.23 | 0.63 | Agree | High | 6 |
| The university encourages a culture of teamwork and sportsmanship. | 3.43 | 0.65 | Agree | High | 1 |
| 5. The university promotes participatory and inclusive decision-making in sports management. | 3.28 | 0.64 | Agree | High | 4 |
| The university fosters a shared vision and mission in sports development. | 3.33 | 0.67 | Agree | High | 2 |
| Composite Mean | 3.31 | 0.64 | Agree | High | |

Table 3 shows a composite mean ($M = 3.31$), which corresponds to Agree/High. The table suggests that coaches perceive organizational structure and leadership to be managed at a high level.

The highest-rated item – “The university encourages a culture of teamwork and sportsmanship” ($M = 3.43$) – indicates that coaches most strongly recognize the program’s emphasis on positive team culture. This pattern is consistent with research by Shanmugaratnam et al (2024) showing that leadership behaviors and the motivational climate shaped by coaches and leaders are associated with team cohesion, athlete well-being, resilience, and psychological safety, which are central features of constructive team environments.

The lowest-rated item – “The university ensures clear communication between management, coaches, and athletes” ($M = 3.23$) – still falls within Agree/High, but its rank suggests a comparative area for strengthening within an otherwise favorable leadership profile. Communication is frequently treated in sports leadership literature as a practical mechanism through which policies, expectations, and support are translated into day-to-day operations and relationship quality. Davis et al (2023) indicate that communication strategies and communication skill are meaningfully associated with coach-athlete relationship quality, psychological needs satisfactions, and indicators of team functioning.

Table 4 Level of Management of the Sports Program in Terms of Budgeting and Financial Management.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|-------------|-------------|-------------------------|----------------|------|
| The university provides adequate financial support for sports programs. | 2.77 | 0.55 | Agree | High | 5 |
| 2. The university appropriately allocates funds for equipment, training, and competitions. | 2.81 | 0.52 | Agree | High | 3 |
| 3. The university ensures transparency and accountability in sports-related financial management. | 3.19 | 0.76 | Agree | High | 1 |
| 4. The university seeks external funding and sponsorships to support sports development initiatives. | 3.01 | 0.64 | Agree | High | 2 |
| The university plans its budget in consultation with key stakeholders. | 2.74 | 0.51 | Agree | High | 6 |
| 6. The university has a contingency fund for emergencies and unforeseen sports-related expenses. | 2.79 | 0.49 | Agree | High | 4 |
| Composite Mean | 2.89 | 0.60 | Agree | High | |

Table 4 shows that respondents generally agree/high level in budgeting and financial management practices are present across the sports program($M=2.89$ and $SD=0.60$), but the means indicate uneven strength across sub-areas. The highest mean is for statement 3 – transparency and accountability in sports-related financial management ($M=3.19$), suggesting comparatively stronger perceptions of financial integrity and control systems. This aligns with sport governance principles that support trust and effective performance in sports organizations (Thompson et al, 2022). However, the lowest-rated item concerned budget consultation with key stakeholders, implying that participatory budgeting mechanisms may be less emphasized.

Additionally, relatively lower means for the adequacy of financial support and allocation for equipment, training, and competition, $M=2.77$ and $M=2.82$, respectively, may reflect typical resource trade-offs faced by higher education institutions in balancing athletic investment with other institutional priorities.

Table 5 Level of Management of the Sports Program in Terms of Facilities and Equipment Management.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|-------------|-------------|-------------------------|----------------|------|
| The university has adequate sports facilities that meet athletes' needs. | 2.84 | 0.51 | Agree | High | 6 |
| The university ensures that training facilities are regularly maintained and upgraded. | 3.01 | 0.75 | Agree | High | 4 |
| The university has sufficient sports equipment for training and competition. | 2.92 | 0.38 | Agree | High | 5 |
| The university has safety measures that are strictly followed in maintaining sports facilities and equipment. | 3.21 | 0.66 | Agree | High | 1 |
| The university ensures facilities are accessible to all athletes, including persons with disabilities. | 3.18 | 0.71 | Agree | High | 2 |
| 5. The university regularly maintains and updates equipment inventory. | 3.14 | 0.65 | Agree | High | 3 |
| Composite Mean | 3.05 | 0.64 | Agree | High | |

Table 6 indicates that respondents generally "agree/high" as per mean ($M=3.05$). This suggests that coaches generally perceive facilities and equipment management practices as present and functioning at a high level. At the same time, the ranked means identify specific areas of relative strength and relative constraint within the domain.

The highest-rated indicator – strictly followed safety measures in maintaining sports facilities and equipment ($M = 3.21$) - suggests that coaches most consistently recognize safety governance and risk-control practices in facility and equipment operations. This pattern is aligned with recent sports-organizational literature emphasizing that risk management has become a central operational requirement due to legal, health, and operational exposures in sports settings, making systematic safety controls as core marker of effective management (Genovard et al, 2025).

The lowest-rated indicator – adequacy of sports facilities that meet athletes' needs ($M = 2.84$) – still falls with Agree/High, but it is the weakest item relative to others. This lower rating is meaningful because adequacy of facilities is not only a matter of availability; it is also closely tied to how athletes experience the training and competition environment. (Magnusen, Marsh & Petersen ,2023) highlight that facility satisfaction is increasingly treated as a consequential component of the athlete experience, with implications for program attractiveness and retention-related outcomes.

Table 6 Level of Management of the Sports Program in Terms of Athlete Development and Support.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|-------------|-------------|-------------------------|----------------|------|
| The university has an effective process for recruiting and selecting athletes. | 3.09 | 0.66 | Agree | High | 1 |
| 2. The university offers athletes nutrition, injury prevention, and mental health support. | 2.89 | 0.78 | Agree | High | 6 |
| The university involves athletes in setting personal and team goals/ | 3.01 | 0.80 | Agree | High | 2 |
| The university offers scholarships and financial aid to student-athletes. | 2.94 | 0.84 | Agree | High | 4 |
| 5. The university ensures that athletes receive mentorship in leadership, discipline, and sports ethics. | 2.91 | 0.81 | Agree | High | 5 |
| The university offers career guidance to athletes after graduation. | 3.00 | 0.65 | Agree | High | 3 |
| Composite Mean | 2.97 | 0.76 | Agree | High | |

Table 6 indicates that coaches generally perceive athlete development and support practices as present and functioning at a high level, while the ranked means identify a clear distinction between the domain/s strongest and weakest elements. The composite mean of ($M = 2.97, SD=0.76$) falls within the range of Agree/High.

The highest-rated indicator – “The university has an effective process for recruiting and selecting athletes” ($M = 3.09$) – suggests that coaches most strongly recognize the program's front-end talent identification and selection mechanisms. This finding is consistent with recent scholarship indicating that collegiate recruitment is typically structured around multi-criteria evaluation (example: athletic ability, performance potential, and character-related factors), and that coaches often use systematic screening and prioritization in recruitment decisions (Swinney et al, 2025). A “high” perception of recruitment effectiveness can be interpreted as evidence that the institutions has recognizable procedures and decision rules for athlete entry into the program, which may contribute to clearer talent pipeline and team planning.

The lowest-rated indicator – “The university offers athlete nutrition, injury prevention, and mental health support” ($M = 2.89$) – still falls within agree/high, but its rank indicates the most salient relative gap in the athlete-support system. These results warrant emphasis because contemporary guidance and evidence increasingly treat integrated health support (nutrition services, injury risk management, and mental health care pathways) as essential. The comparatively lower mean suggests that coaches perceive this as the most prominent improvement area – particularly given the increasing expectations around mental health, injury prevention, and nutrition provision in college sports settings.

Table 7 Level of Management of the Sports Program in Terms of the Coaching and Staff Development Domain.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|------|------|-------------------------|----------------|------|
| The university provides coaches with opportunities for ongoing training and accreditation. | 2.92 | 0.70 | Agree | High | 6 |
| The university supports participation in national and international coaching programs. | 2.97 | 0.71 | Agree | High | 4 |
| The university encourages research and innovation in sports science and training techniques. | 2.99 | 0.76 | Agree | High | 2.5 |

| | | | | | |
|--|-------------|-------------|--------------|-------------|-----|
| 4. The university ensures that coaches have access to modern training tools and resources. | 2.96 | 0.76 | Agree | High | 5 |
| 5. The university provides coaches with performance reviews and feedback. | 3.05 | 0.71 | Agree | High | 1 |
| The university promotes mentoring among senior and junior coaches. | 2.99 | 0.74 | Agree | High | 2.5 |
| Composite Mean | 2.98 | 0.73 | Agree | High | |

Table 8 shows the results on the Coaching and Staff Development Domain. The overall composite mean of 2.98 suggests that coaches generally perceive the university's coaching and staff development as being managed at a "high" level with relatively small variation across indicators.

The highest-rated indicator was "The university provides coaches with performance reviews and feedback" ($M = 3.05$). Reflecting stronger agreement that evaluative feedback mechanisms are present and functioning. This pattern is consistent with evidence that performance feedback can support improvement when it is actionable, specific, and delivered in a manner that strengthens learning rather than compliance, however, the literature also cautions that feedback can be ineffective if overly punitive (Cioca and Gifford, 2022).

In contrast, the lowest-rated indicator was "The university provides coaches with opportunities for ongoing training and accreditation" ($M = 2.92$). Although still with Agree/High, this comparatively lower mean suggests that coaches perceive professional learning opportunities and accreditation support as less consistently available than performance review practices. (Leeder and Sawiuk, 2020) indicates that mentoring and reciprocal learning approaches can strengthen coach development when training opportunities are constrained, by providing more contextualized, practice-relevant pathways.

Table 8 Level of Management of the Sports Program in Terms of the Community and Stakeholder Engagement.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|-------------|-------------|-------------------------|----------------|------|
| The university partners with government agencies (PSC, CHED, LGUs) and private organizations for sports development. | 3.31 | 0.62 | Agree | High | 1 |
| The university encourages community involvement through grassroots programs and sports events. | 3.18 | 0.65 | Agree | High | 2 |
| The university promotes sports as a tool for youth development and social integration. | 3.16 | 0.64 | Agree | High | 3 |
| The university encourages alumni and former athletes to contribute to sports development initiatives. | 2.90 | 0.40 | Agree | High | 6 |
| The university invites stakeholders to sports forums or consultations. | 3.13 | 0.70 | Agree | High | 4 |
| The university incorporates stakeholder feedback into its sports program. | 3.12 | 0.69 | Agree | High | 5 |
| Composite Mean | 3.12 | 0.63 | Agree | High | |

Table 8 shows the data indicate that coaches generally perceive community and stakeholder engagement to be managed at high level ($M=3.12, SD=0.63$). The highest-rated item – partnership with government agencies (PSC, CHED, LGUs, and private organizations ($M = 3.31$) – is a substantively important strength because multi-actor partnerships are frequently identified as a practical foundation for sport development systems. In this context, coaches' relatively strong endorsement of partnerships suggests that external linkages are visible and recognized, which can be interpreted as an enabling condition for program reach and continuity – while still avoiding an over-claim that partnerships are uniformly effective in all units or sports.

The lowest-rated indicator – encouraging alumni and former athletes to contribute to sports development initiatives ($M = 2.90$) – also remains with Agree/High, but it is the most prominent relative gap in this domain. Sport-specific development and fundraising study conducted by (Hanson and Peachey, 2022) suggest that stakeholder engagement is influenced by relationship management practices and perceived value exchange, implying that alumni contributions may be less consistent when engagement channels are underdeveloped or not clearly institutionalized. Thus, the comparatively lower mean can be interpreted as indicating that alumni involvement is less systematic or less salient to coaches than external partnerships and community-facing activities.

Table 9 Level of Management of the Sports Program in Terms of the Evaluation and Continuous Improvement Domain.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|-------------|-------------|-------------------------|----------------|------|
| 1. The university conducts regular evaluations of the sports program. | 3.09 | 0.76 | Agree | High | 2.5 |
| The university employs data-driven decision-making to refine its training and competition strategies. | 3.06 | 0.77 | Agree | High | 4 |
| The university continually considers emerging trends in sports training, technology, and management to drive improvement. | 2.96 | 0.72 | Agree | High | 6 |
| 4. The university considers feedback from athletes, coaches, and stakeholders in program improvement. | 3.04 | 0.65 | Agree | High | 5 |
| 5. The university conducts annual reviews to guide improvements to its sports program. | 3.09 | 0.67 | Agree | High | 2.5 |
| The university benchmarks its sports program practices with leading institutions. | 3.13 | 0.67 | Agree | High | 1 |
| Composite Mean | 3.06 | 0.71 | Agree | High | |

Table 9 shows a composite mean of 3.06 for evaluation and continuous improvement domain, this indicates that coaches generally perceive evaluation and continuous improvement practices as being implemented as a high level. The highest weighted mean is statement 6 (M=3.13) - “The university benchmarks its sports development practices with leading institutions,” while the lowest weighted mean is statement 3 - “The university continually considers emerging trends in sports training, technology, and management to drive improvement.”

The highest-rated item is a meaningful strength because benchmarking is widely used to support governance maturity, performance comparison, and structure improvement planning. According to the American Society for Quality, benchmarking is a practical continuous improvement tool: it helps organizations identify gaps, set realistic targets, and adopt proven practices rather than “reinventing” processes. Continuous improvement resources emphasize benchmarking as a way for an organization to compare its progress and maturity with others and to guide improvement priorities.

The lowest mean indicates that respondents are least convinced the university continually monitors and applies emerging trends in training, technology, and sports management. This may be because emerging trends require dedicated staff expertise, procurement budget for tools and hardware, and training time for coaches. This aligns with (Qi et al ,2024) research, which shows that sports organizations see tangible benefits from digital technologies but also face barriers, such as uneven adoption, capability gaps, and resource constraints, that slow systematic uptake.

Table 10 The summary table for assessing the level of management of the Sports Program shows that the overall mean (M = 3.06), which indicates that coaches generally perceive the sports programs as being managed at a “high” level. The domain means cluster within the “high” level, suggesting that coaches’ ratings are broadly favorable across domains.

| Domains | Weighted Mean | SD | Qualitative Description | Interpretation | Rank |
|---------------------------------------|---------------|-------------|-------------------------|----------------|------|
| Program Planning & Policy Development | 3.09 | 0.60 | Agree | High | 3 |
| Organizational Structure & Leadership | 3.31 | 0.64 | Agree | High | 1 |
| Budgeting & Financial Management | 2.89 | 0.60 | Agree | High | 8 |
| Facilities & Equipment Management | 3.05 | 0.64 | Agree | High | 5 |
| Athlete Development & Support | 2.97 | 0.76 | Agree | High | 7 |
| Coaching & Staff Development | 2.98 | 0.73 | Agree | High | 6 |
| Community & Stakeholder Engagement | 3.12 | 0.65 | Agree | High | 2 |
| Evaluation & Continuous Improvement | 3.06 | 0.71 | Agree | High | 4 |
| Overall | 3.06 | 0.68 | Agree | High | |

Among the components, Organizational Structure and Leadership received the highest mean value , M=3.31, indicating that the roles and responsibilities of all program stakeholders are clearly defined, ensuring structure and accountability. It also suggests that there is active, effective leadership guiding the program, fostering a culture of teamwork among stakeholders, and supporting inclusive decision-making.

This aligns with the recent work of (Liu, Wang, and Li ,2025), which shows that the effectiveness of the sports development program depends heavily on leadership alignment with athlete needs. Good leadership enhances performance, improves psychological well-being, supports efficient program operation, and reduces barriers to athlete development. Coaches serve as leaders, managers, and strategists of an entire sports team. Their leadership behavior forms the foundation of organizational management, helping determine how athletes interact with leaders and how training is executed.

With a domain mean of 2.88, Budgeting and Financial Management is the lowest-rated management domain, reflecting ongoing perceptions of inadequate funding for sports programs. Respondents reported insufficient financial support for essential needs, such as equipment, training, and competitions, and minimal stakeholder involvement in budget preparation. Although transparency in financial management was rated higher, the overall results suggest ongoing challenges in securing and allocating adequate funds for equipment, training, and competitions.

These findings align with national financial patterns highlighted by the (Knight Commission on Intercollegiate Athletics, 2025), which reports similar issues in collegiate sports finances, particularly the misalignment of spending priorities. The commission notes that resources are often directed to high-cost areas, such as coaching salaries and severance packages, thereby reducing funds available for athlete development and program support. While transparency has improved nationally, the Commission emphasizes that transparency alone does not ensure equitable or development-oriented financial decisions. This point echoes the gap identified in this study between awareness of financial processes and actual budget sufficiency.

Overall, these findings indicate that the Sports Development Program is well-managed across all aspects, with consistent ratings in the strong range. However, there are areas where further improvement could elevate the program to an exceptional level of performance.

➤ *Part III. Assessment of Differences in the Level of Program Management as to Respondents' Profile Attributes*

Table 11 Presents the Overall Assessment of Differences in the Management of Sports Program Levels Across Respondent Profile Attributes.

| | Respondent Profile | | Mean Score | F-value | Sig. | Decision on Ho | Interpretation |
|------------------------------|-----------------------------------|---------------------------------------|------------|---------|--------|----------------|-----------------|
| Management of sports program | Number of Years of Coaching | 4-6 years | 3.16 | 1.759 | 0.16 | Accepted | Not significant |
| | | 1-3 years | 3.08 | | | | |
| | | 7-9 years | 2.86 | | | | |
| | | 10 years & above | 2.93 | | | | |
| | Number of Competitions as a Coach | 1 to 5 | 3.10 | 4.258 | 0.01 * | Rejected | Significant |
| | | 11 to 15 | 3.16 | | | | |
| | | 6 to 10 | 3.08 | | | | |
| | | More than 15 | 2.66 | | | | |
| | Achievements as a Coach | Regional level awardee | 3.06 | 5.397 | 0.01 * | Rejected | Significant |
| | | National level awardee | 2.67 | | | | |
| | | No awards received | 3.13 | | | | |
| | | Advance Training Certification | 3.06 | | | | |
| | Level of Coach Accreditation | Advance Training Certification | 3.06 | 1.537 | 0.19 | Accepted | Not significant |
| | | Basic Training Certification | 3.14 | | | | |
| | | Elite/National Coaching Certification | 2.60 | | | | |
| | | No Accreditation | 3.05 | | | | |
| | | Local | 3.18 | | | | |
| | | National | 2.86 | | | | |
| | | Regional | 3.07 | | | | |
| | | International | 2.58 | | | | |

Legend: 0.05 level of Significance

Table 12 presents the one-way analysis of variance (ANOVA) matrix to examine whether respondents' level of program management differed across selected coach profile attributes (years of coaching, number of competitions handled, coaching achievements, and level of coach accreditation). Statistical significance was evaluated at $\alpha = .05$. Results suggest that achievement and training-related factors, such as the number of competitions in which a coach participated, achievements or awards received as a coach, and the level of coach training, can influence a coach's perception of the management of a sports development program.

- Number of years of coaching (Not significant). Results indicated that the level of program management did not significantly differ across groups based on years of coaching experience, $F = 1.759$, $p = .16$. Coaches with 4–6 years of experience reported the highest mean score ($M = 3.16$), followed by those with 1–3 years ($M = 3.08$), 10 years and above ($M = 2.93$), and 7–9 years ($M = 2.86$). Given the non-significant result, the null hypothesis was “accepted”, suggesting that differences in project management levels across these experience groups may be attributable to sampling variation rather than actual group differences.
- Number of competitions handled as a coach (Significant). There was a significant difference in program management levels when respondents were grouped according to the number of competitions handled, $F = 4.258$, $p = .01$. Coaches who handled

11–15 competitions reported the highest level of project management ($M = 3.16$), followed by those who handled 1–5 competitions ($M = 3.10$) and 6–10 competitions ($M = 3.08$). The lowest mean score was observed among coaches who handled more than 15 competitions ($M = 2.66$). Because the omnibus ANOVA was significant, the null hypothesis was “rejected”, indicating that project management levels vary significantly across competition-exposure groups.

- Coaching achievements (Significant). ANOVA results also revealed a significant difference in program management levels based on coaching achievements, $F = 5.397$, $p = .01$. Coaches with no awards received had the highest mean score ($M = 3.13$), followed by regional-level awardees ($M = 3.06$), while national-level awardees obtained the lowest mean score ($M = 2.67$). The null hypothesis was “rejected”, confirming that project management levels differ significantly across achievement categories. As with the competition variable, follow-up post hoc comparisons are recommended to identify the specific pairs of groups responsible for the observed difference.
- Level of coach accreditation (Not significant). Finally, the analysis showed that program management levels did not significantly differ across groups based on coach accreditation level, $F = 1.537$, $p = .19$. Although coaches with local accreditation obtained the highest mean ($M = 3.18$) and those with international accreditation obtained the lowest mean ($M = 2.58$), the differences were not statistically significant. Thus, the null hypothesis was “accepted, indicating that accreditation level was not associated with substantial differences in perceived project management in this sample.

Tukey Post Hoc Test Results for Group Comparisons on Overall Assessment on Program Management vs Respondent Profile Attributes

Table 12 Shows the Tukey Post Hoc Test Results for Group Comparisons on Overall Assessment on Program Management vs Respondent Profile Attributes

| Group Comparison – Number of Competitions as a Coach | Mean Difference | Sig. | Decision on Ho | Interpretatio n |
|---|--------------------|-----------|-------------------|--------------------|
| 1 to 5 vs. 11 to 15 | 0.059 | .983 | Accepte d | Not significant |
| 1 to 5 vs. 6 to 10 | -0.0238 | .993 | Accepte d | Not significant |
| 1 to 5 vs. More than 15 | -0.4403 | .003 * | Rejected | Significant |
| 11 to 15 vs. 6 to 10 | -0.0828 | .964 | Accepte d | Not significant |
| 11 to 15 vs. More than 15 | -0.4993 | .056 | Accepte d | Not significant |
| 6 to 10 vs. More than 15 | -0.4165 | .021 * | Rejected | Significant |
| Group Comparison – Achievements as a Coach | Mean Difference | Sig. | Decision on Ho | Interpretatio n |
| National level awardee vs. No awards received | 0.4603 | .004 * | Rejected | Significant |
| National level awardee vs. Regional level awardee | 0.3946 | .015 * | Rejected | Significant |
| No awards received vs. Regional level awardee | -0.0657 | .633 | Accepte d | Not significant |
| Group Comparison – Level of Coach Training | Mean Difference | Sig. | Decision on Ho | Interpretatio n |
| Advance Training Certification vs. Basic Training Certification | 0.0837 | .953 | Accepte d | Not significant |
| Advance Training Certification vs. Elite/National Coaching Certification | -0.4583 | .122 | Accepte d | Not significant |
| Advance Training Certification vs. No Formal Training | 0.0134 | .999 | Accepte d | Not significant |
| Basic Training Certification vs. Elite/National Coaching Certification | -0.5421 | .005 * | Rejected | Significant |
| Basic Training Certification vs. No Formal Training | -0.0703 | .813 | Accepte d | Not significant |
| Elite/National Coaching Certification vs. No Formal Training | 0.4718 | .013 * | Rejected | Significant |

Post hoc comparisons using the Tukey HSD test indicated that, for the number of competitions handled, coaches with more than 15 competitions differed significantly from those with 1–5 competitions ($p = .003$) and 6–10 competitions ($p = .021$), whereas

no other comparisons were significant. For coaching achievements, national-level awardees differed significantly from both coaches with no awards ($p = .004$) and regional awardees ($p = .015$). In contrast, the no-award and regional-award groups did not differ ($p = .633$). For training level, significant differences were found between basic certification and elite/national certification ($p = .005$) and between elite/national certification and no formal training ($p = .013$); all other comparisons were non-significant. Overall, the post hoc results suggest that group differences in perceived project management are primarily driven by specific high-intensity or elite categories rather than by an even increase across all levels.

➤ *Part IV. Assessment of the Level of Implementation of the Sports Program*

This study examined the implementation of the CARASUC sports program across three domains, namely: program implementation and execution, monitoring and supervision, and evaluation of implementation.

Table 13 Assessment of the Level of Implementation of the Sports Program Based on Program Implementation and Execution

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|-------------|-------------|-------------------------|----------------|------|
| The sports program is effectively implemented at all levels (intramural, regional, and national). | 3.34 | 0.53 | Agree | High | 1 |
| The sports program is implemented according to planned schedules. | 3.30 | 0.58 | Agree | High | 2 |
| The university ensures all coaches, athletes, and staff know their roles during program implementation. | 3.23 | 0.63 | Agree | High | 5 |
| The university ensures adherence to guidelines during program implementation. | 3.29 | 0.55 | Agree | High | 3 |
| The university has contingency measures in place for delays or challenges in program implementation/ | 3.17 | 0.73 | Agree | High | 6 |
| The university appropriately disseminates training and tournament schedules. | 3.28 | 0.62 | Agree | High | 4 |
| Composite Mean | 3.26 | 0.61 | Agree | High | |

Table 13 shows the results for program implementation and execution, where respondents rated this domain highly, with a mean of 3.26 (strongly agree). This indicates the coaches generally perceive the implementation of the sports program as being managed at a “high” level.

The highest mean statement is statement 1 – “The sports program is effectively implemented at all levels (intramurals, regional and national)” with a mean of 3.34 – suggests that coaches most strongly recognize the program’s capacity to deliver activities across multiple tiers. This pattern is consistent with sport event and sports program management research conducted by Schintler et al (2020) which emphasized that multi-level delivery depends on structured coordination, defined workflows, and the application of project-management practices. Empirical work on the organization of sports events reports that the use of formal project management methods is associated with managing complexity and supporting delivery across varying event types and scales.

The lowest mean statement is statement 5 – “The university has contingency measures in place for delays or challenges in program implementation” with a mean of 3.17 – remains within Agree/High, yet it represents the domain’s most prominent relative constraint. This means that contingency plans may exist, but are not consistently communicated to coaches. Sotiriadou et al. (2025) stress that sports program delivery is increasingly exposed to disruptions, and resilient systems require contingency planning embedded into governance and operations.

Overall, the findings suggest strong routine execution and compliance with guidance, with an opportunity to strengthen formalized contingency and resilience planning to ensure program continuity in the event of disruptions.

Table 14 Assessment of the Level of Implementation of the Sports Program based on Monitoring and Supervision.

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|------|------|-------------------------|----------------|------|
| 1. Coaches regularly monitor training sessions. | 3.41 | 0.70 | Agree | High | 1 |
| 2. The sports office provides supervision during competitions and significant events. | 3.16 | 0.64 | Agree | High | 5 |
| 3. The sports office properly tracks attendance and participation in program activities. | 3.20 | 0.71 | Agree | High | 4 |
| 4. The sports office documents the implemented activities | 3.33 | 0.50 | Agree | High | 2 |
| 5. The sports office addresses challenges through regular coach meetings. | 3.21 | 0.73 | Agree | High | 3 |

| | | | | | |
|---|-------------|-------------|--------------|-------------|---|
| 6. The sports office utilizes monitoring tools in program implementation. | 3.13 | 0.67 | Agree | High | 6 |
| CompositeMean | 3.23 | 0.66 | Agree | High | |

Table 14 shows an overall mean of 3.23, indicating that coaches generally perceive the program's monitoring and supervision practices to be managed at a high level.

The highest mean is for statement 1 – "Coaches regularly monitor training sessions," and the lowest mean is for statement 6 – "The sports office utilizes monitoring tools in program implementation."

The highest-rated indicator is a substantively important strength because direct monitoring is widely treated as a practical mechanism for maintaining training quality, detecting maladaptive workload responses, and guiding adjustments to prevent overtraining and performance decline. Recent work by McGuigan et al (2020) emphasized that training progress and athlete readiness are supported by routine monitoring, often through a mix of observation and basic monitoring practices.

The lowest-rated indicator still falls within Agree/High, but it represents the most prominent relative constraint in this domain. This finding warrants emphasis because the findings of Torres-Ronda (2022) suggests that structured monitoring tools are increasingly viewed as the basis for consistent measurement, comparability over time, and data-informed adjustments in sports programs. The comparatively lower mean may indicate that while coaches observe active, person-based monitoring, they perceive relatively less emphasis on systematized tool-based monitoring. This interpretation is appropriately bounded: it does not suggest an absence of monitoring tools, but rather implies that tool use may be less consistent, less standardized, or less visible than other monitoring and supervision practices.

Table 15 Assessment of the Level of Implementation of the Sports Program Based on Evaluation of Implementation

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|-------------|-------------|-------------------------|----------------|------|
| Implementation is evaluated after significant events or activities. | 3.39 | 0.64 | Agree | High | 1 |
| The sports office gathers feedback from coaches and athletes. | 3.32 | 0.60 | Agree | High | 2 |
| 3. The sports offices submit program implementation reports to administrators. | 3.28 | 0.65 | Agree | High | 3 |
| 4. The sports office shares evaluation results with stakeholders | 3.15 | 0.61 | Agree | High | 6 |
| The sports office conducts post-activity evaluations to assess areas for improvement. | 3.23 | 0.71 | Agree | High | 4 |
| The sports office used attendance and medals in sports activities as success indicators. | 3.21 | 0.65 | Agree | High | 5 |
| Composite Mean | 3.26 | 0.65 | Agree | High | |

Table 15 shows the results of the Evaluation of Implementation. It shows a composite mean of 3.26 (Agree/High), indicating that coaches generally perceive the program's evaluation and reporting practices as being managed at a high level.

The highest mean of 3.39 is in statement 1 – "Implementation is evaluated after significant events or activities." – suggests that post-activity evaluation is a visible and routine practice. Evaluation of this kind can take the form of event debriefings, after-action reviews, incident and performance summaries, and reflective sessions that focus on what worked and what needs improvement. Post-event evaluation is widely seen as a core mechanism for organizational learning and continuous improvement, capturing lessons. At the same time, they are fresh and using them to improve future planning and execution.

The lowest mean of 3.15, although still "agree", is statement 4 – "the sports office shares evaluation results with stakeholders. This indicates that communication of evaluation results is the least strong part of the evaluation cycle. It may mean that evaluations are conducted internally, but findings are not consistently disseminated to coaches, athletes, and stakeholders. The reports can either remain at the administrative level or be summarized informally rather than systematically shared. Evaluation practice is strongest when results are not only collected, but also used and shared with relevant stakeholders in ways that support learning, accountability, and program improvement.

This is a common challenge in organizations – the sports office perceives itself as actively evaluating, but is less consistent in sharing those findings with stakeholders.

Evangelista (2020) noted that Philippine universities that perform well in intercollegiate competitions tend to have rigorous evaluation systems.

Table 16 Summary Table Level of Implementation of the Sports Program

| Variables | Weighted Mean | SD | Qualitative Description | Interpretation | Rank |
|---------------------------------------|---------------|-------------|-------------------------|----------------|------|
| Program Implementation & Execution | 3.27 | 0.61 | Agree | High | 1.5 |
| Monitoring & Supervision | 3.20 | 0.66 | Agree | High | 3 |
| Evaluation and Continuous Improvement | 3.27 | 0.65 | Agree | High | 1.5 |
| Overall | 3.25 | 0.61 | Agree | High | |

Table 16 shows the Summary table of the respondents' assessment of the level of implementation of the sports programs in their institutions.

The overall implementation mean of 3.25 falls within Agree/High and indicates that coaches generally perceive the implementation of Sports Programs as being carried out at a high level.

Two domains share the highest mean rating: Program Implementation and Execution and Evaluation and Continuous Improvement ($M=3.27$). This pairing is substantively meaningful because it suggests that coaches most strongly recognize both (a) the program's capacity to deliver planned activities and (b) the presence of feedback and improvement mechanisms.

From a program delivery standpoint, stronger perceptions of implementation/execution are consistent with sport event and sport program management research indicating that structured planning, schedule control, and coordination practices (often framed as project-management methods) support reliable delivery, particularly where activities span multiple levels and stakeholders (Schintler et al, 2020). In parallel, the equally high rating for evaluation and continuous improvement is consistent with contemporary evaluation guidance emphasizing that programs benefit when evaluation is integrated into decision-making and improvement cycles (Cioca, 2024).

The lowest-rated domain, Monitoring & Supervision likewise falls within the high category with a mean score of 3.20, but it represents the most salient relative constraint in implementation. This matters because monitoring and supervision are frequently treated as the operational backbone of implementation quality: they support consistency, early detection of implementation issues, and timely corrective actions.

(Timmerman et al ,2024) showed evidence that monitoring practices can be challenging to systematize; coaches and support staff often report barriers related to time, tool integration, and translating monitoring data into decisions – factors that can reduce perceived strength in monitoring systems even when programs are being executed effectively.

Overall, the pattern is coherent: coaches perceive the program to be strongest in doing the work (execution) and learning from work (evaluation), while monitoring and supervision emerges as the most plausible improvement priority within an overall high implementation profile.

➤ Part V. Assessment of Differences in the Level of the Implementation of the Sports Program as to Respondent's Profile Attributes

Table 17 Shows the Overall Assessment of Differences in the Level of Implementation of Sports Program as to the Respondent's Profile Attributes

| | Respondent Profile | | Mean Score | F-value | Sig. | Decision on Ho | Interpretation |
|--------------------------------------|-----------------------------------|--------------------------------|------------|---------|--------|----------------|-----------------|
| Implementation of the sports program | Years of Coaching | 4-6 years | 3.18 | 1.479 | 0.22 | Accepted | Not significant |
| | | 1-3 years | 3.07 | | | | |
| | | 7-9 years | 2.95 | | | | |
| | | 10 years & above | 3.00 | | | | |
| | Number of Competitions as a Coach | 1 to 5 | 3.14 | 5.500 | 0.00 * | Rejected | Significant |
| | | 11 to 15 | 3.16 | | | | |
| | | 6 to 10 | 2.95 | | | | |
| | | More than 15 | 2.79 | | | | |
| | Achievements as a Coach | Regional level awardee | 3.05 | 2.365 | 0.10 | Accepted | Not significant |
| | | National level awardee | 2.91 | | | | |
| | | No awards received | 3.13 | | | | |
| | Level of Coach Training | No Formal Training | 3.06 | 4.548 | 0.00 * | Rejected | Significant |
| | | Advance Training Certification | 3.19 | | | | |
| | | Basic Training Certification | 3.15 | | | | |

| | | | | | | | |
|--|------------------------------|---------------------------------------|------|-------|------|----------|-----------------|
| | | Elite/National Coaching Certification | 2.76 | | | | |
| | Level of Coach Accreditation | No Accreditation | 3.06 | 1.132 | 0.34 | Accepted | Not significant |
| | | Local | 3.13 | | | | |
| | | National | 3.01 | | | | |
| | | Regional | 3.13 | | | | |
| | | International | 3.40 | | | | |

Table 17 shows that the level of implementation of the sports program does not significantly vary by years of coaching $F = 1.479$, $p = .22$, coaching achievements, $F = 2.365$, $p = .10$, and coach accreditation level, $F = 1.132$, $p = .34$. However, it does significantly vary by number of competitions handled, $F = 5.500$, $p < .05$, and level of coach training, $F = 4.548$, $p < .05$, and level of coach training. This indicates that exposure to competition delivery and training background may be more influential differentiators of perceived implementation than years of experience, awards, or accreditation.

- Years of Coaching — Not significant. Although the means vary slightly, $p = .22$ indicates that the differences are not statistically significant enough to conclude that years of coaching are related to differences in project implementation level. In short, project implementation appears consistent across coaching experience levels. This often suggests that implementation is driven more by institutional systems and standardized procedures than by length of experience.
- Number of Competitions as a Coach — Significant. Because $p < .05$, the level of project implementation differs significantly across coaches based on the number of competitions they have handled. Implementation may improve with experience, up to a point (the learning curve). However, when competition load becomes very high, implementation quality may decrease due to workload overload, limited time, and operational strain.
- Achievements as a Coach — Not significant. Even if national awardees have a lower mean, $p = .10$ indicates that the difference is not statistically significant in this dataset. Achievement status is not a reliable differentiator of project implementation level.
- Level of Coach Training — Significant. Because $p < .05$, project implementation differs significantly by training level. The Advance and Basic training groups show higher implementation levels (3.19 and 3.15), while the Elite/National certification group shows the lowest (2.76). It may be deduced that elite-certified coaches may operate in more demanding contexts and rate implementation more critically; they may have higher expectations, expose gaps more clearly, or assume heavier responsibilities, which may lower the perceived smoothness of implementation.
- Level of Coach Accreditation — Not significant. Even though “International” looks highest, $p = .34$ shows these differences are not statistically significant. Accreditation level is not associated with meaningful differences in project implementation in this study. This may be because accreditation does not change local implementation structures or institutional rules/resources that standardize implementation across coaches.

Tukey Post Hoc Test Results for Group Comparisons on Overall Assessment on Implementation of sports programs vs. Respondent Profile Attributes.

Table 18 Tukey Post Hoc Test Results for Group Comparisons of the Overall Assessment of Implementation of the Sports Program Vs. Respondent Profile Attributes.

| Group Comparison – Number of Competitions as a Coach | Mean Difference | Sig. | Decision on Ho | Interpretation |
|---|-----------------|-------|----------------|-----------------|
| 1 to 5 vs. 11 to 15 | 0.0117 | .999 | Accepted | Not Significant |
| 1 to 5 vs. 6 to 10 | -0.192 | .155 | Accepted | Not Significant |
| 1 to 5 vs. More than 15 | -0.4744 | .002* | Rejected | Significant |
| 11 to 15 vs. 6 to 10 | -0.2037 | .658 | Accepted | Not Significant |
| 11 to 15 vs. More than 15 | -0.4861 | .073 | Accepted | Not Significant |
| 6 to 10 vs. More than 15 | -0.2824 | .212 | Accepted | Not Significant |
| Group Comparison – Level of Coach Training | Mean Difference | Sig. | Decision on Ho | Interpretation |
| Advance Training Certification vs. Basic Training Certification | 0.0575 | .985 | Accepted | Not Significant |
| Advance Training Certification vs. Elite/National Coaching Certification | -0.5417 | .054 | Accepted | Not Significant |
| Advance Training Certification vs. No Formal Training | -0.0635 | .977 | Accepted | Not Significant |
| Basic Training Certification vs. Elite/National Coaching Certification | -0.5992 | .002* | Rejected | Significant |

| | | | | |
|---|--------|-------|----------|-----------------|
| Basic Training Certification vs. No Formal Training | -0.121 | .447 | Accepted | Not Significant |
| Elite/National Coaching Certification vs. No Formal Training | 0.4782 | .014* | Rejected | Significant |

Table 18 shows the Tukey Post Hoc Test Results for group comparisons of the overall assessment of project implementation vs. respondent profile attributes.

Post hoc comparisons using Tukey's HSD revealed that the number of competitions handled differed significantly between coaches with more than 15 competitions and those with 1–5 competitions (mean difference = -0.4744, $p = .002$). In contrast, none of the other pairwise comparisons were significant.

For the level of coach training, significant differences were found between basic training certification and elite/national coaching certification (mean difference = -0.5992, $p = .002$) and between elite/national coaching certification and no formal training (mean difference = 0.4782, $p = .014$). No other training comparisons were significant, although the comparison between advanced training certification and elite/national certification approached significance ($p = .054$).

➤ *Part VI: Assessment of the Level of Sports Performance of SUCs in CAR.*

Table 19 Level of Sports Performance of the SUCs in CAR, as Perceived by Respondents
Based on Athlete Performance and Development

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|--|-------------|-------------|-------------------------|--------------------------|------|
| Athletes from our university consistently perform well, achieving podium finishes in local competitions. | 3.35 | 0.54 | Agree | Very Satisfactory | 1 |
| Athletes from our university consistently perform well, with podium finishes, in regional competitions. | 3.26 | 0.67 | Agree | Very Satisfactory | 2 |
| Athletes from our university consistently perform well, achieving podium finishes in national competitions. | 2.56 | 0.59 | Agree | Very Satisfactory | 9 |
| Athletes from our university consistently perform well, achieving podium finishes in international competitions. | 2.31 | 0.72 | Disagree | Moderate | 10 |
| The number of athletes from our university participating in national and regional meets is increasing. | 3.15 | 0.74 | Agree | Very Satisfactory | 5 |
| Athletes from our university meet or exceed the performance benchmarks for their sports. | 3.16 | 0.73 | Agree | Very Satisfactory | 4 |
| 7. Athletes from our university are often awarded MVP or equivalent recognitions. | 3.09 | 0.78 | Agree | Very Satisfactory | 7 |
| Athletes from our university improve their performance after each season. | 3.18 | 0.64 | Agree | Very Satisfactory | 3 |
| Athletes from our university are scouted for higher-level competitions or training. | 2.85 | 0.52 | Agree | Very Satisfactory | 8 |
| Athletes from our university regularly break school and regional records. | 3.12 | 0.96 | Agree | Very Satisfactory | 6 |
| Composite Mean | 3.00 | 0.74 | Agree | Very Satisfactory | |

Table 19 shows the level of sports performance of the SUCs in CAR, as perceived by respondents, for Athlete Performance and Development. It shows a composite mean of 3.00, indicating that coaches generally agree that athlete performance outcomes are very satisfactory overall, with the item means suggesting stronger perceived competitiveness at lower competition tiers and comparatively weakest outcomes at the highest tiers.

The highest-ranked statement is statement 1, with a mean of 3.35: "Athletes from our university consistently perform well, achieving podium finishes in local competitions." The highest mean suggests respondents strongly agree that athletes regularly achieve podium finishes locally. This may reflect practical school-based training and coaching routines; strong talent identification and preparation for local meets; adequate exposure to local competition; and an environment that supports athletes' development of foundational skills and competitive habits.

Talent pathways, as presented by Dunn et al. (2024), support the idea that local competition can foster performance development – athletes accumulate experience, refine skills, and improve progressively when they are repeatedly engaged in structured competitive environments. Local competitions are a strength and may serve as a solid base for the athlete pipeline.

The lowest mean rank is statement 4 – “Athletes from our university consistently perform well, achieving podium finishes in international competitions” with a mean of 2.31. This is the lowest and the only item with “disagree/moderate,” indicating that respondents generally do not perceive international podium finishes as consistent or familiar. International success typically requires higher training intensity and quality over more extended periods; advanced sports science and medical support; better funding for travel and exposure; and access to international-level competition and training camps. Research on performance pathways shows that moving from junior/local success to elite level is difficult, with limited transition rates. (Trewin et al, 2024).

SUC in CAR may be effective in producing local/regional athletes. However, there is a "development ceiling" when athletes move into international competition, suggesting a need for stronger high-performance support and exposure opportunities.

Table 20 Level of Sports Performance of the SUCs in CAR, as Perceived by Respondents
Based on Coaching Effectiveness and Training Quality

| Statement | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|-------------|-------------|-------------------------|--------------------------|------|
| 1. The coaches at our university create structures and personalize training plans. | 3.23 | 0.70 | Agree | Very Satisfactory | 1 |
| 2. The coaches at our university regularly update their technical and tactical training methods. | 3.18 | 0.69 | Agree | Very Satisfactory | 3 |
| The coaches at our university build trust and professionalism with the athletes. | 3.17 | 0.72 | Agree | Very Satisfactory | 5 |
| The coaches at our university effectively implement modern training techniques and strategies. | 3.17 | 0.74 | Agree | Very Satisfactory | 5 |
| The coaches at our university offer athletes adequate guidance and mentorship. | 3.21 | 0.73 | Agree | Very Satisfactory | 2 |
| 6. The coaches at our university design training programs based on scientific principles and best practices. | 3.17 | 0.68 | Agree | Very Satisfactory | 5 |
| 7. The coaches at our university conduct regular performance assessments to identify strengths and weaknesses. | 3.04 | 0.72 | Agree | Very Satisfactory | 10 |
| 8. The coaches at our university provide mental conditioning to help our athletes manage the pressure and stress associated with competition. | 3.12 | 0.78 | Agree | Very Satisfactory | 7 |
| 9. The coaches at our university use sports psychology and motivational techniques to effectively develop their athletes. | 3.11 | 0.75 | Agree | Very Satisfactory | 8 |
| The coaches at our university ensure athletes are well-prepared physically and mentally before competitions. | 3.09 | 0.68 | Agree | Very Satisfactory | 9 |
| Composite Mean | 3.14 | 0.72 | Agree | Very Satisfactory | |

Table 20 shows the results for Coaching Effectiveness and Training Quality. It shows a mean of 3.14 (agree, very satisfactory). Overall, respondents perceive coaching effectiveness and training quality in the SUCs as very satisfactory, suggesting that coaching practices generally support athlete preparation through structured training, updated methods, mentorship, and psychological preparation. The spread of ranks, however, shows a precise nuance: the strongest perceived area is planning/personalization, while the weakest is formal performance assessment.

This aligns with recent coaching scholarship emphasizing that effective coaching typically combines (a) structured planning and individualized training, (b) relational coaching (trust, mentorship), and (c) monitoring/assessment—yet formal assessment is often less consistently implemented due to time, resource, or knowledge constraints.

Statement 1 had the highest mean of 3.23: "The coaches at our university create structures and personalize training plans." The highest mean indicates strong agreement that coaches are good at planning and individualizing training. In practical terms, the coaching system includes structured training cycles; individualized adjustments based on athlete need; and coaching attention to

athlete roles and development pacing. This is a strong foundation for athlete development because individualized structure supports both performance progression and injury risk management when done well.

Statement 7 had the lowest mean of 3.04: "The coaches at our university conduct regular performance assessments to identify strengths and weaknesses." Even though respondents still agree, suggesting that systematic performance assessment is the least strong area of coaching quality.

(Cruz and Kwon ,2020) found that coaches were perceived as balancing technical skill development with strong emotional support and athlete involvement. (Pamittan et al. ,2025) found that coaches are highly regarded for their emphasis on technical skill development, structured practice, and constructive reinforcement. The same study also reveals that coaches offer emotional support and frequently involve players in decision-making, reflecting strong participative and supportive leadership.

Table 21 Summary Table for the Assessment of the Level of SUCs' Sports Performance

| Level of SUCs Sports Performance | Mean | SD | Qualitative Description | Interpretation | Rank |
|---|------|------|-------------------------|-------------------|------|
| Athlete Performance and Development | 3.00 | 0.74 | Agree | Very Satisfactory | 2 |
| Coaching Effectiveness & Training Quality | 3.15 | 0.72 | Agree | Very Satisfactory | 1 |
| Overall | 3.08 | 0.73 | Agree | Very Satisfactory | |

Table 21 shows the summary table for the assessment of the level of SUCs' Sports Performance. The overall mean score of 3.08, including that of each dimension, suggests that the coaches' overall sports performance is very satisfactory.

Athlete performance and development received an overall mean of 3.00 (very satisfactory), with strong perceptions of success at the local and regional levels but weaker perceptions at the national and, especially, international levels. While institutions can develop competitive regional athletes, their programs may not yet be equipped to produce athletes who excel beyond the regional stage.

This pattern is consistent with the sports development literature, which describes progression as a narrowing pathway in which broad participation and early competitive success do not automatically translate into elite performance, as higher levels require intensified inputs (e.g., advanced coaching, structured talent pathways, sports science support, and increased exposure to high-caliber competition). In particular, the sports development "pyramid" models explain how movement from grassroots to elite levels becomes increasingly selective and resource-dependent, making national and international success harder to achieve than local or regional performance (UK Coaching, n.d.).

Recent discussions of sports participation and development frameworks note that models such as the sports participation pyramid and participation pathways help explain why many programs can generate broad-based success locally, yet comparatively fewer athletes transition effectively into elite performance environments (Bruce et al., 2023). Similarly, evidence from long-term athlete development research shows that achieving higher-level outcomes often depends on sustained, well-aligned development structures and support across stages, and gaps in these systems become most visible as performance demands increase (MacNamara et al., 2025). Thus, the present results suggest that while foundational development mechanisms may be sufficient to produce positive outcomes in local and regional settings, strengthening structured pathways and long-term support systems may be necessary to improve national and international competitiveness.

Similarly, in Coaching Effectiveness & Training Quality, the mean score of 3.19 indicates that coaches are at a very satisfactory level in delivering training programs and maintaining quality standards. This implies that they are confident in their technical and coaching skills, although they can be further strengthened, as outstanding performance has not yet been achieved across all assessed dimensions. The respondents in this study show that the majority of coaches lack formal training and accreditation, suggesting that perceived effectiveness may rely heavily on experience and interpersonal skills rather than structured education.

(Cruz and Kwon ,2020) found that coaches were perceived as balancing technical skill development with strong emotional support and athlete involvement. (Pamittan et al. ,2025) found that coaches are highly regarded for their emphasis on technical skill development, structured practice, and constructive reinforcement. The same study also reveals that coaches offer emotional support and frequently involve players in decision-making processes, reflecting strong participative and supportive leadership.

➤ Part VII: Assessment on the Overall differences in the Level of Sports Performance as to the Respondent's Profile Attributes

Table 22 Assessment of the Differences on the Level of Sports Performance as to the Respondent's Profile Attributes.

| | Respondent Profile | | Mean Score | F-value | Sig. | Decision on Ho | Interpretation |
|-----------------|--------------------|-----------|------------|---------|------|----------------|-----------------|
| Level of sports | Years of Coaching | 4-6 years | 3.18 | 0.783 | 0.51 | Accepted | Not significant |
| | | 1-3 years | 3.07 | | | | |

| | | | | | | | |
|-------------|-----------------------------------|---------------------------------------|------|-------|--------|----------|-----------------|
| performance | | 7-9 years | 2.95 | | | | |
| | | 10 years & above | 3.00 | | | | |
| | Number of Competitions as a Coach | 1 to 5 | 3.14 | 2.898 | 0.04 * | Rejected | Significant |
| | | 11 to 15 | 3.16 | | | | |
| | | 6 to 10 | 2.95 | | | | |
| | | More than 15 | 2.79 | | | | |
| | | | | | | | |
| | Achievements as a Coach | Regional level awardee | 3.05 | 1.054 | 0.35 | Accepted | Not significant |
| | | National level awardee | 2.91 | | | | |
| | | No awards received | 3.13 | | | | |
| | Level of Coach Training | No Formal Training | 3.06 | 1.759 | 0.16 | Accepted | Not significant |
| | | Advance Training Certification | 3.19 | | | | |
| | | Basic Training Certification | 3.15 | | | | |
| | | Elite/National Coaching Certification | 2.76 | | | | |
| | Level of Coach Accreditation | No Accreditation | 3.06 | 0.332 | 0.86 | Accepted | Not significant |
| | | Local | 3.13 | | | | |
| | | National | 3.01 | | | | |
| | | Regional | 3.13 | | | | |
| | | International | 3.40 | | | | |

Legend: >0.05 Level of Significance

Table 22 shows that the perceived level of sports performance is generally consistent across most respondent profile attributes—years of coaching, $F = 0.783$, $p = .51$, coaching achievements, $F = 1.054$, $p = .35$, level of coach training, $F = 1.759$, $p = .16$, or level of coach accreditation, $F = 0.332$, $p = .86$, do not significantly differentiate responses. The only profile factor that produced a statistically significant difference is the number of competitions handled as a coach, $F = 2.898$, $p = .04$. This suggests that competition exposure is the main attribute linked to differences in perceived sports performance in this dataset.

- Years of Coaching — Not significant. Even though 4–6 years appears slightly higher, the p-value (.51) indicates that differences across coaching-experience groups are not statistically meaningful. In other words, respondents' perceptions of sports performance are similar regardless of years of coaching experience.
- Number of Competitions as a Coach — Significant. Because $p = .04$, perceptions of sports performance differ significantly depending on the number of competitions a coach handles. Performance ratings are highest among coaches with moderate competition exposure (1–5 and 11–15), but decline for very high exposure (>15). This may suggest that very heavy competition involvement can be associated with constraints that affect perceived performance (e.g., fatigue, limited preparation time, stretched resources, increased logistical complexity).
- Achievements as a Coach — Not significant. Although national awardees have a lower mean, $p = .35$ shows these differences are not statistically significant in the sample. Achievement level is not a reliable basis for differences in perceived sports performance here.
- Level of Coach Training — Not significant. Even with visible mean differences (e.g., elite/national appears lower), $p = .16$ indicates that overall differences are not statistically significant. This usually happens when within-group variation is high or when group sample sizes are small/unequal.
- Level of Coach Accreditation — Not significant. Despite international accreditation having the highest mean, $p = .86$ shows that accreditation level is not associated with substantial differences in perceived sports performance.

Tukey Post Hoc Test Results for Group Comparisons on Overall Assessment on Level of Sports Performance vs Respondent Profile Attributes

Table 23 Shows the Tukey Post Hoc Test Results for Group Comparisons on Overall Assessment on Level of Sports Performance vs Respondent Profile Attributes

| Group Comparison – Number of Competitions as a Coach | Mean Difference | p-value | Decision on Ho | Interpretation |
|--|-----------------|---------|----------------|-----------------|
| 1 to 5 vs. 11 to 15 | 0.0238 | .999 | Accepted | Not Significant |
| 1 to 5 vs. 6 to 10 | -0.1887 | .247 | Accepted | Not Significant |
| 1 to 5 vs. More than 15 | -0.353 | .066 | Accepted | Not Significant |
| 11 to 15 vs. 6 to 10 | -0.2124 | .702 | Accepted | Not Significant |
| 11 to 15 vs. More than 15 | -0.3768 | .322 | Accepted | Not Significant |
| 6 to 10 vs. More than 15 | -0.1644 | .736 | Accepted | Not Significant |

Tukey HSD post hoc comparisons were conducted to examine pairwise differences in perceived sports performance across competition-exposure groups. Results indicated that no pairwise group comparisons were statistically significant (all p s > .05). The most considerable observed difference was between coaches with 1–5 competitions and those with more than 15 competitions (mean difference = -0.353, p = .066), which approached but did not reach statistical significance. These findings suggest that while the omnibus ANOVA indicated an overall difference, the post hoc results did not identify a specific group pair responsible for the variation when controlling for multiple comparisons.

➤ *Part VIII: Correlation Test Between Overall Sports Program Management and Sports Performance of SUC's in CAR*

Table 24 Shows the Correlation Test Between Overall Sports Program Management and Sports Performance of SUCs in CAR.

| Comparison | Pearson Correlation | Sig. | Decision on Ho | Interpretation |
|---|---------------------|-------|----------------|----------------|
| Overall Sports Program Management vs Overall Sports Performance | 0.778 | 0.00* | Rejected | Significant |

Results showed that overall sports program management measures are positively correlated to sports performance assessment, and the associations are significant (r = .778, p = .00 < .05). This finding implies that better assessment scores in sports program management are associated with better sports performance ratings. In practical terms, higher perceived effectiveness in core management functions is associated with higher perceived performance outcomes. This supports the study's underlying assumption that program systems are not merely administrative features but are meaningfully connected to performance outcomes.

Table 25 The Correlation Test Between Overall Sports Program Implementation and Sports Performance.

| Comparison | Pearson Correlation | Sig. | Decision on Ho | Interpretation |
|---|---------------------|-------|----------------|----------------|
| Overall Sports Program Implementation vs Overall Sports Performance | 0.772 | 0.00* | Rejected | Significant |

Similarly, results also revealed a statistically significant and positive association between overall sports program implementation ratings and sports performance assessment (r = .772, p = .00 < .05). This suggests that when programs are perceived as well-executed—through clear execution routines, consistent monitoring and supervision, and evaluation of implementation—sports performance is also perceived as higher. The result reinforces the importance of moving beyond policy/plans to actual delivery quality.

CHAPTER FOUR

CONCLUSIONS

This study examined coaches' perceptions of the level of sports program management, level of implementation, and sports performance outcomes of Sports Development Programs in State Universities and Colleges (SUCs) in the Cordillera Administrative Region (CAR), based on responses from 141 coaches.

The respondents were predominantly early-career coaches, which could somehow affect their coaching and implementation of their sports program. The limited coaching experience and training affected their management rating too.

The coaches' monitoring and supervision had the lowest mean results which need improvement to improve their monitoring and supervision skills.

The coaches' year of experience affected the opportunities of their team to compete in international competitions too which hinder their athletes of international exposure or experiences.

Based on the correlational results, it can be concluded also that when there is a strong relationship between coaches' rating of overall program management and overall sports performance, a strong management systems also tend to be perceived as having better sports performance outcomes.

Lastly, the overall sports program implementation is strongly and positively associated with sports performance among CAR SUCs. Results likewise show a statistically significant, strong positive relationship between overall program implementation and sports performance, indicating that programs perceived as better executed – through effective implementation practices – are also associated with higher perceived sports performance.

RECOMMENDATIONS

In response to the findings, the study recommends the following actions to strengthen Sports Programs in CARASUC institutions and to support steady movement from highly managed and implemented systems toward stronger, more sustained performance outcomes, particularly at higher competitive levels.

➤ *Institutionalize Coach Development Pathways (Training and Accreditation)*

Given the high proportion of coaches reporting no formal training and no accreditation, SUCs should establish a structured, accessible, and progressive coach development system. This may include regular in-house capacity-building, funded participation in recognized certification and accreditation programs, and formal mentoring arrangements for novice coaches. Clear standards and pathways—from basic to advanced and elite preparation—can help ensure more consistent coaching quality across institutions.

➤ *Strengthen Resource Support Through Improved Budgeting and Targeted Athlete Services*

Since Budgeting and Financial Management was the lowest-rated management domain, institutions should review funding adequacy and strengthen budget planning processes to better align allocations with program priorities (e.g., equipment, training, competition participation, and athlete support). In parallel, athlete services should be expanded or better organized within feasible institutional capacity, particularly in areas highlighted as less robust such as nutrition support, injury prevention/rehabilitation systems, and psychosocial or mental health-related support—services that are frequently linked in the literature to athlete well-being and sustained performance progression.

➤ *Ensure Monitoring and Evaluation Results Lead to Measurable Program Improvements*

Although implementation was rated high, SUCs should strengthen the use of monitoring and evaluation outputs by standardizing tools, improving feedback loops, and requiring clear post-evaluation action plans with timelines and assigned responsibilities. Embedding these outputs into planning and budgeting cycles can increase accountability and make continuous improvement more visible and consistent across sports and campuses.

➤ *Develop a Deliberate Pathway for Higher-Level Competitive Performance*

Because performance ratings were strongest at the local and regional levels and weaker at national and international levels, institutions should adopt an explicit progression strategy for elite performance. Future directions may include increased exposure to higher-level competitions, strengthened inter-institutional training collaboration, and gradual integration of sport science-informed practices (e.g., conditioning, recovery planning, and structured performance monitoring) scaled to available resources.

➤ *Suggested Future Research Directions*

Future research should strengthen and validate the present findings by triangulating coaches' perceptions with objective program evidence, such as budget allocation and utilization records, facility and equipment audits, competition participation logs, injury surveillance data, and documented monitoring and evaluation outputs. Studies should also include additional stakeholder perspectives (e.g., athletes, sports administrators, and institutional leaders) and adopt designs that better account for context - such as stratifying analyses by sport, institution, and competition level - to clarify how competition exposure and program components relate to perceptions and to identify which management and implementation factors most strongly predict higher-level performance outcomes.

OUTPUT OF THE STUDY

➤ *Regional Sports Development Program (CARASUC)*

• *Rationale*

The proposed Regional Sports Development Program (RSDP) for CARASUC is grounded in the study's empirical findings, which indicate that sports programs in CAR SUCs are generally rated positively; however, specific constraints persist in areas that are most consequential for sustained competitive advancement. In the level of management of sports program, Budgeting and Financial Management emerged as the lowest-rated domain, suggesting that resource planning, allocation, and utilization processes may limit the timely and strategic support required for athlete development. In implementation, Monitoring and Supervision received the lowest overall rating among sports program implementation domains, indicating the need to strengthen documentation, oversight, and feedback mechanisms so that execution quality is consistently tracked and improved. In sports performance, coaches reported comparatively weaker outcomes at higher levels, most notably in international competition performance (and relatively lower national-level performance compared to local/regional results), implying that existing systems may be adequate for participation and regional competitiveness but require upgrading to sustain higher-level success.

Importantly, the correlation findings strengthen the basis for a system-focused intervention: overall sports program management and sports performance were strongly and significantly associated and overall sports program implementation and sports performance were likewise strongly and significantly associated. These results support the premise that improving program systems—particularly in funding management and implementation oversight—aligns with improved sports performance outcomes. Thus, the proposed RSDP emphasizes attainable, high-leverage actions: standardizing budgeting practices, strengthening monitoring and supervision tools and routines, and establishing a realistic high-performance pathway that concentrates resources and support on priority sports to enhance national competitiveness and initiate feasible international exposure.

• *General Objectives*

- ✓ To strengthen budgeting and financial management systems for sports development programs in CAR SUCs.
- ✓ To standardize monitoring and supervision to improve implementation quality and accountability.
- ✓ To enhance sports performance, particularly at national and international competition levels.
- ✓ To institutionalize regional collaboration mechanisms across CARASUC member SUCs.

• *Regional Sports Development Program Matrix*

The matrix assumes one academic year implementation with regional coordination through CARASUC and execution at the SUC level.

| Areas of Concern | Specific Objective | Activities / Strategies (Attainable) | Persons / Offices Involved | Proposed Budget (PHP) | Implementation Timeline | Success Indicators |
|-------------------------------------|--|--|--|---|--|---|
| 1) Budgeting & Financial Management | Strengthen budget planning, release tracking, and utilization so funding more directly supports athlete development and competition readiness. | 1) Regional budget planning workshop: harmonize minimum sports budget categories 2) Implement a standard CARASUC sports budget template Establish quarterly budget utilization review with corrective actions. 4) Introduce minimum spending protection for athlete support | CARASUC Board; SUC Presidents VP-Admin; Budget Office; Accounting; Sports Directors; Coaches' reps; Procurement | ₱150,000 (Regional) for workshops, templates, review meetings, documentation and coordination costs | Q1: workshop + template roll-out Q2–Q4: quarterly reviews | • Budget template adopted by all CAR SUCs. • Quarterly utilization reports submitted on time (≥90%). • Reduced delays in fund release • Increased proportion of spending aligned to athlete support + competition exposure |

| | | and competition exposure | | | | (target set per SUC). |
|---|---|--|---|--|---|---|
| 2) Monitoring & Supervision | Standardize monitoring so program execution is documented, supervised, and used for improvement—not only compliance. | <p>1) Develop a standard monitoring toolkit: attendance/participation tracker, training log template, competition participation log, activity documentation checklist, post-event evaluation form.</p> <p>2) Train sports directors/coaches on monitoring protocols and basic data use</p> <p>3) Conduct monthly coach coordination meetings focused on implementation issues</p> <p>4) Produce a semester implementation report per SUC with action steps</p> | CARASUC M&E Working Group; Sports Directors; Coaches; PE Faculty; Records/Documentation staff | ₱150,000 (Regional) for toolkit development, printing/digital forms, orientation sessions, and 2 regional monitoring visits. | Q1: toolkit + training Q2–Q4: monthly meetings + reporting | <ul style="list-style-type: none"> • Monitoring toolkit used in all SUCs - $\geq 80\%$ compliance in logs/form. • ≥ 1 monthly meeting conducted with minutes'/action points. • Semester reports submitted (100%). • Documented corrective actions implemented (e.g., schedule adjustments, resource requests). |
| 3) National/International Performance Gap (Lowest performance item: International podium) | Build a realistic performance pathway that increases national competitiveness and initiates an international exposure track where feasible. | <p>1) Establish CARASUC High-Performance Pathway (HPP): identify priority sports per SUC based on comparative strength and feasibility.</p> <p>2) Conduct 2 regional training focusing on conditioning, recovery, and competition simulation.</p> <p>3) Provide targeted athlete support package in priority sports: basic sports nutrition support, injury prevention protocol, and</p> | <p>CARASUC Technical Committee;</p> <p>SUC Sports Directors;</p> <p>Coaches;</p> <p>Selected Athletes;</p> <p>Partner agencies (PSC/CHED/LGUs);</p> <p>Alumni/Private partners;</p> <p>Medical/Guidance units</p> | ₱500,000 per SUC (athlete support + competition travel + priority equipment) ₱100,000 regional pooled fund for camps and shared technical support. | <p>Q1: HPP selection + camp 1 + baseline tests</p> <p>Q2: national exposure cycle 1Q</p> <p>3: camp 2 + refinementQ</p> <p>4: SCUAA prep + post-season review</p> | <ul style="list-style-type: none"> • Priority sports identified and documented in each SUC. • Two regional camps implemented ($\geq 80\%$ attendance of priority athletes/coaches). • At least one national exposure per priority sport per SUC (as feasible). • Improved performance indicators: increased |

| | | | | | | |
|--|--|--|--|--|--|---|
| | | <p>mental skills orientation.</p> <p>4) Expand national exposure: at least one national-level meet/qualifier participation per priority sport per SUC</p> <p>5) Coach capacity support tied to performance and mentorship pairing between more- and less-experienced coaches</p> | | | | <p>national podium attempts/qualifiers; improved next-cycle mean rating for national and international performance items; improved medal/placement trend over baseline.</p> |
|--|--|--|--|--|--|---|

Buslig, May S.

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