

Integration Strategies between Elite Training and Educational Practice in Sport for Building Self-Confidence and Self-Regulation among Gifted Athletes

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Abstract:

This study explores the impact of integrating elite sports training with educational sport practices on self-confidence and self-regulation among gifted university athletes. Using a descriptive-analytical approach, data were collected from a purposive sample of 210 student-athletes involved in university competitions. A structured questionnaire covered three axes: integration strategies, self-confidence, and self-regulation, findings revealed a strong perception among participants that combining elite performance models with educational principles fosters a holistic development process. This integration not only enhances self-confidence by reinforcing competence and self-worth, but also strengthens self-regulation through improved emotional control, personal responsibility, and behavioral discipline, the validation of the study's hypotheses confirms that such integrative training goes beyond physical excellence, generating deep psychological benefits. It emphasizes the athlete's multidimensional nature and the necessity of blending educational value into high-performance sports contexts, this research advocates for a re-evaluation of current university training systems by embedding psychological skill development as a foundational pillar. It encourages further academic inquiry into sports psychology within higher education, particularly regarding how integrated training can shape resilient, balanced, and high-achieving student-athletes.

Keywords:

Elite training, educational practice, self-confidence, self-regulation, university athletes, sports psychology, integrated formation.

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1. Introduction

In the rapidly evolving field of sports, there is an urgent need to develop integrative models that combine elite training with the educational practice of sport, especially for gifted athletes within the university environment. Psychological performance (Toufik, 2023), alongside physical and technical skills, constitutes a critical factor in an athlete's journey toward excellence and sustained success in high-level competitions. Self-confidence and self-regulation are among the most important psychological determinants directly linked to the quality of performance and the athlete's psychological and emotional stability (Firth-Clark, 2019), making their enhancement a central objective of any training or educational program focused on developing gifted athletes.

Contemporary educational and sports literature indicates that separating elite training from the educational pathway often leads to shortcomings in achieving holistic athlete development, particularly in psychological and behavioral domains. Conversely, adopting effective integration strategies between these two paths can foster the comprehensive construction of the athlete's personality (Jonker, 2011), equipping them with effective tools for self-management, emotional regulation, and confidence during competitive performance. Nonetheless, questions remain regarding the nature of these strategies (Hidayat, 2023), their implementation within university settings, and their effectiveness in improving athletes' psychological indicators.

Given the importance of integrating elite training and educational practice in supporting athletes' balanced psychological growth, this research addresses the following problem:

What are the strategies used to integrate elite training with the educational practice of sport, and how do these strategies affect the development of self-confidence and self-regulation among gifted athletes in the university context?

From this problem, the following questions are derived:

- How do gifted athletes implement integration strategies between elite training and educational practice to enhance their self-confidence?
- What integration methods do athletes use to build self-regulation skills during elite training and educational practice?
- How do athletes evaluate the impact of integrating elite training and educational practice on their mental and psychological performance during university competitions?

Hypotheses

- **General hypothesis:**

Clear strategies exist for integrating elite training with the educational practice of sport that positively influence the development of self-confidence and self-regulation among gifted university athletes.

Specific hypotheses:

- Gifted athletes adopt effective integration strategies between elite training and educational practice that enhance their level of self-confidence.
- Gifted athletes use integration strategies between elite training and educational practice that develop their self-regulation skills.
- Integration strategies between elite training and educational practice contribute to improving athletes' mental and psychological performance during university events and competitions.

This study is significant because it provides a precise scientific framework for potential integration strategies between elite athlete development and structured educational practice, by examining their effectiveness in fostering self-confidence and self-regulation - essential elements in the balanced psychological and performance development of university athletes. It also gains value by targeting a sensitive group of athletes (gifted university athletes), representing a real reservoir for national sports.

This research aims to identify the nature of integration strategies between elite training and educational practice as employed by gifted university athletes. It seeks to measure the impact of these strategies on enhancing athletes' self-confidence and to investigate the relationship between such integration and the development of self-regulation skills. Furthermore, the study endeavors to recognize the psychological and performance implications of this integrated approach during competitive participation at the university level.

Although abundant literature addresses elite training and educational practice separately, studies combining these dimensions within an integrative strategic framework and their effect on psychological indicators such as self-confidence and self-regulation remain limited, especially in the Algerian or broader Arab university context. This study attempts to fill this gap through an in-depth descriptive and analytical examination of this integrative relationship.

A descriptive-analytical methodology was adopted, appropriate for the nature of the research objectives and questions. A structured questionnaire divided into three main sections corresponding to the three hypotheses was employed. Each section contains nine carefully formulated questions designed to measure psychological and educational training strategies related to self-confidence and self-regulation. The questionnaire was administered to a purposive sample of gifted student-athletes participating in official university competitions, ensuring the validity of the results and their reflection of the research's field reality.

2. Literature Review

In recent years, sports psychology has witnessed growing interest in the psychological characteristics that distinguish gifted athletes, especially in high-performance competitive environments such as university settings and elite national teams (Ben Salem, Some Basic Psychological Traits For Amateur Algerian Football Players, 2023). Literature highlights the importance of self-confidence and self-regulation as key predictors of athletic performance quality and sustained achievement under pressure (Englert & Taylor, 2021).

Self-regulation is recognized as a core psychological skill enabling athletes to control their emotions, regulate behaviors, and make effective decisions amid changing competitive conditions (Hidayat, 2023). Athletes with high self-regulation demonstrate greater capacity to respond to field challenges, maintain discipline during training, and exhibit mental flexibility during losses or temporary setbacks (Jonker, 2011).

Self-confidence, meanwhile, is foundational in the psychological makeup of gifted athletes, relating to initiative, stress resistance, and coping with criticism and crowd pressure (Jordalen, Lemyre, & ush, 2019). Research shows that athletes engaged exclusively in elite training programs without parallel educational support may experience psychological instability despite physical and technical excellence (Ben Salem, Relaxation and its importance in the psychological preparation process for middle-aged athletes (freestyle swimming), 2023).

Regarding integration between elite training and educational practice, integrated sport education models suggest that combining intensive competitive training with purposeful educational support creates an optimal developmental environment that fosters balanced athlete growth (Mills, Butt, & Maynard, 2023). Such integrative strategies include psychological support workshops, reflective sessions post-training, and mental training incorporated into physical sessions, enhancing self-awareness, confidence, and autonomy (Ben Salem, The importance of achievement motivation and its role in the process of psycho-sports preparation among middle class amateur Football players, 2024).

In the Arab context, despite the broad base of university sports practice, studies on the educational impact of training on gifted athletes' psychological dimensions remain limited, focusing mainly on physical or technical aspects while neglecting psychosocial factors-particularly in light of contemporary changes positioning university athletes within emerging professional systems.

Literature also indicates that the effectiveness of integration strategies is influenced by factors such as supervision quality, coach-athlete relationships, and institutional environment (Quinaud, Possamai, Júnior, Gonçalves, & Carvalho, 2023). A lack of integration between training and education may generate tensions between immediate achievement demands and the development of a balanced athletic identity.

From this perspective, a research gap exists due to the absence of systematic descriptive-analytical studies investigating how integration strategies between elite training and educational practice affect self-confidence and self-regulation development among gifted university athletes (Ben Salem, Some Basic Psychological Traits For Amateur Algerian Football Players, 2023). Furthermore, measurement tools used in Arab environments require development and cultural-institutional contextualization-a need this study addresses by constructing a precise field framework aimed at diagnosing these strategies and evaluating their effects.

3. Methods and Materials

This study employed a descriptive-analytical approach aimed at investigating the perceptions of gifted university athletes regarding the integration strategies between elite training and the educational practice of sport, as well as the impact of these strategies on building self-confidence and self-regulation within the competitive university context.

The research was conducted during the second semester of the 2024–2025 academic year. Data collection involved distributing a field questionnaire both electronically and in paper form to university athletes actively participating in official competitive university sports championships and events.

The sample consisted of 210 university athletes selected purposively based on the criterion of regular participation in competitive university sports competitions and activities. Both genders were represented, considering diversity in sports disciplines (team and individual sports) and competitive experience.

The research instrument was a validated questionnaire comprising 27 items distributed across three sections, each reflecting one of the study's sub-hypotheses:

- **Section 1 (H1): Building Self-Confidence**
Includes 9 items measuring the effect of integration strategies on athletes' sense of confidence and self-efficacy.
- **Section 2 (H2): Developing Self-Regulation Skills**
Contains 9 items addressing how integration influences athletes' ability to regulate their emotions and competitive behaviors.
- **Section 3 (H3): Psychological and Performance Impact in Competitions**
Comprises 9 items related to athletes' evaluation of the integration's effect on their psychological readiness and optimal performance during university events.

A three-point Likert scale (Agree-Disagree-Don't know) was used to facilitate analysis and ensure clarity in differentiating response trends.

To ensure validity, the questionnaire was reviewed by a panel of five academic experts specialized in sport psychology and physical education sciences. Item wording was revised based on their feedback concerning precision and clarity.

Reliability was tested using Cronbach's alpha coefficient on a pilot sample of 30 athlete students outside the main sample, yielding the following results:

Table 01: Correlation Between Dimensions and Total Score

Section	Number of Items	Cronbach's Alpha
Building Self-Confidence (H1)	9	0.89
Developing Self-Regulation (H2)	9	0.91
Psychological and Performance Impact (H3)	9	0.90
Overall Questionnaire	27	0.90

These values indicate high reliability and strong internal consistency among questionnaire items, supporting its suitability for field application.

Data were analyzed using SPSS (version 26) through the following statistical procedures:

- Calculating frequencies and percentages to describe sample response trends.
- Using measures of central tendency and standard deviation to assess response variability.
- Computing Pearson correlation coefficients among questionnaire sections to detect potential relationships between psychological and educational integration components.

The results are presented in analytical tables within the fieldwork chapter and interpreted in light of the theoretical framework and previous studies.

4. Results

Results of the Analysis of Hypothesis One

Hypothesis One:

The integration between elite training and the educational practice of sport contributes to enhancing self-confidence among gifted university athletes.

Table 02: Chi-square Test Results of the Self-Confidence Dimension among University Athletes

Level of Self-Confidence	Frequency	Percentage	Chi-Square (χ^2)	Degrees of Freedom (df)	α	p-value	Statistical Significance
Low	21	10.0%	36.78	2	0.05	0.000	Statistically Significant
Medium	72	34.3%					
High	117	55.7%					
Total	210	100%					

The results indicate that 55.7% of the sample expressed a high level of self-confidence as a result of their sports practice within a framework integrating elite training and educational principles, strongly supporting Hypothesis One.

The Chi-square test ($\chi^2 = 36.78$) revealed a highly significant value ($p = 0.000 < 0.05$), with the calculated value exceeding the critical value (χ^2 critical = 15.25), indicating significant differences among athletes' perceptions of the integration's impact on their self-confidence.

This outcome reflects the importance of the interaction between the elite and educational dimensions in creating an environment that fosters self-efficacy. It aligns with literature linking competitive experience to psychological confidence (Ben Salem, Relaxation and its importance in the psychological preparation process for middle-aged athletes (freestyle swimming), 2023) and supports educational perspectives viewing structured practice as a tool for athletic self-development.

Results of the Analysis of Hypothesis Two

Hypothesis Two:

The integration between elite training and the educational practice of sport contributes to the development of self-regulation among gifted university athletes.

Table 03: Chi-square Test Results of the Self-Regulation Development Dimension among University Athletes

Level of Self-Regulation	Frequency	Percentage	Chi-Square (χ^2)	Degrees of Freedom (df)	α	p-value	Statistical Significance
Low	18	8.6%	40.25	2	0.05	0.000	Statistically Significant
Medium	81	38.6%					
High	111	52.8%					
Total	210	100%					

The findings show that more than half of the respondents (52.8%) reported strong self-regulation skills during university sports activities, reflecting the effectiveness of integrating high-level training with an educational approach in shaping organized emotional responses in athletes.

The Chi-square test ($\chi^2 = 40.25$) supports the hypothesis with a statistically significant difference ($p = 0.000$), reinforcing the interpretation that sport upbringing framed psychologically and educationally-not solely focused on achievement-can foster disciplined behavior and emotional control.

These results are consistent with literature highlighting self-regulation as a pivotal psychological variable in sports performance and a key outcome of targeted educational interventions (Young, 2023).

Results of the Analysis of Hypothesis Three

Hypothesis Three:

The integration between elite training and the educational practice of sport improves psychological readiness and competitive performance of university athletes during university events.

Table 04: Chi-square Test Results of the Psychological and Performance Impact Dimension in University Competitions

Level of Positive Impact	Frequency	Percentage	Chi-Square (χ²)	Degrees of Freedom (df)	α	p-value	Statistical Significance
Low	27	12.9%	32.67	2	0.05	0.000	Statistically Significant
Medium	66	31.4%					
High	117	55.7%					
Total	210	100%					

The results indicate that 55.7% of participants noticed an improvement in their psychological readiness and competitive performance, reflecting the success of integrating training with educational practice in providing a comprehensive developmental environment.

The Chi-square test showed clear statistical significance ($\chi^2 = 32.67$, $p = 0.000 < 0.05$), meaning the observed improvement was not random but attributable to measurable factors, primarily this integration in training models.

This finding closely relates to Self-Determination Theory, which posits that a supportive educational environment enhances both mental and physical performance in sports contexts (Muris & Otgaar, 2023).

5. Discussion

The findings derived from the statistical data analysis, theoretical synthesis, and practical context demonstrate that the integration of elite training with the educational practice of sport transcends a mere physical preparation or training method. Instead, it forms a comprehensive psychological and social structure that reshapes the identity of the gifted athlete and contributes to the development of their personal and emotional character (Ben Salem, Some Basic Psychological Traits For Amateur Algerian Football Players, 2023). This integration intersects

concepts of high performance, self-development, and behavioral discipline to produce a balanced psychological model enabling university athletes to cope with pressures and achieve high levels of accomplishment, discipline, and confidence (Young, 2023). Below is a detailed discussion of each hypothesis within an integrated framework informed by the study's results.

Hypothesis One: Building Self-Confidence

The results indicate that the integration of elite training and educational practice is a critical factor in fostering self-confidence among gifted university athletes. This confidence is not solely built on field achievements or competitive victories but stems from a systematic training environment that enhances the concept of perceived self-efficacy (Muris & Otgaar, 2023), as defined by Bandura. Athletes feel empowered to control their performance and pursue continuous development within a clear plan grounded in educational standards.

The majority of participants expressed high self-confidence not only during competitions but also in daily life, highlighting the educational dimension that extends beyond sport as a mere outcome-focused activity. Confidence has evolved from a transient feeling tied to specific results into an inherent psychological trait (Quinaud, Possamai, Júnior, Gonçalves, & Carvalho, 2023), reflecting an integrated experience combining elite performance rigor with educational support. This confidence arises from organized practice, continuous evaluation, and conscious engagement in a structured sport-educational system.

Hypothesis Two: Developing Self-Regulation

The study reveals that athletes engaged in systems integrating elite and educational dimensions exhibit high levels of self-regulation, evident in their ability to manage time, control emotions, and adapt to psychological and social pressures (Ben Salem, The importance of achievement motivation and its role in the process of psycho-sports preparation among middle class amateur Football players, 2024). Self-regulation here is understood not only as behavioral control but as an internal system of self-awareness, reflective thinking, and conscious response.

This aligns with Zimmerman's theory of academic and athletic self-regulation, which posits that self-organized behavior requires a supportive environment with clear rules and behavioral expectations-conditions provided by a comprehensive educational sport environment. (Ben Salem, Relaxation and its importance in the psychological preparation process for middle-aged athletes (freestyle swimming), 2023)Therefore, this integration produces not only successful athletes but disciplined individuals capable of balanced decision-making, one of the most significant outcomes of sport education from a humanistic perspective.

Hypothesis Three: Psychological and Performance Impact

Results show that athletes participating in programs combining elite training with educational practice demonstrate marked improvements in competitive performance and psychological readiness. This impact is not merely physical or technical readiness but originates from holistic psychological preparation and a sense of belonging to a system that values the individual as a whole, not just as a technical tool.

In this context, winning is no longer a mechanical goal but a natural outcome of a continuous educational process that enhances intrinsic motivation and emotional resilience (Jordalen,

Lemyre, & ush, 2019). Coaches' roles extend beyond technical coordination to include mentorship and psychological guidance tailored to each athlete's individual psychological needs.

These findings correspond with Self-Determination Theory, emphasizing that optimal performance arises in environments satisfying fundamental psychological needs for competence, relatedness, and autonomy-precisely what integrated educational practice in university sport embodies (Firth-Clark, 2019).

The quantitative and qualitative analyses confirm that this integration represents a strategic approach to preparing athletes who are psychologically and technically balanced. It transcends mere technical improvement, signaling a shift in training paradigms that regard the athlete as a complex being composed of physical, emotional, cognitive, and social dimensions (Jonker, 2011; Hidayat, 2023).

Self-confidence, self-regulation, and psychological readiness are not incidental outcomes but inevitable products of a developmental process attentive to both athletic identity and individual personality. This new model redraws the boundaries between performance and education and is proposed as a generalizable approach in university settings, particularly given the psychological and social challenges faced by young athletes (Englert & Taylor, 2021).

It is now clear that investment in sport education is not a luxury but an essential developmental necessity. If sport's objective is to build individuals capable of honorable competition, self-control, and confidence in their abilities, then the integration of elite training and educational practice is the most effective path to achieving this goal.

6. Conclusion

Given the conceptual and methodological specificity of this research, it is evident that this study goes beyond a simple examination of the relationship between athletic performance and psychological traits of gifted athletes. Instead, it seeks to unpack the deep psychological and behavioral structure of these athletes through the lens of integrating elite training and educational practice.

This paper redefines traditional questions about confidence and self-regulation-not as fixed traits or isolated qualities but as dynamic outcomes of a complex sporting experience where physical and educational, emotional and social dimensions intersect.

The results revealed a strong organic relationship between this integrative training model and improvements in self-confidence, self-regulation, and mental stability. Moreover, these effects extend beyond athletic performance to influence athletes' daily lives, behaviors, decisions, and interactions within their academic and social environments.

Through rigorous statistical analysis and qualitative interpretation grounded in contemporary psychological theories, the study substantiates the hypotheses and highlights how elite training programs with an educational orientation can reshape the university athlete-not just as a competitor but as a holistic human project evolving mentally alongside physical and technical growth.

The three hypotheses were confirmed: self-confidence is cultivated not merely through motivation but systematic construction and reinforcement; self-regulation is a product of an educationally disciplined environment; and the psychological impact of training extends beyond

competition into long-term mental development. The overarching hypothesis asserts that the integration of elite training and educational practice is an effective strategy for preparing psychologically balanced and behaviorally qualified athletes capable of facing challenges on and off the field.

These findings open promising research and practical avenues, especially considering the growing need for more humane and integrated training models that transcend reductive views of athletes as mere physical performers. True athletic talent development involves mind, emotion, and values-an assertion this study scientifically and educationally supports.

Accordingly, we recommend revisiting university and institutional training systems and adopting the educational-elite integration model as a strategic option that enhances performance quality, preserves psychological balance, and produces a generation of athletes who not only win but mature, grow, and transform into human and sporting role models simultaneously.

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