

Empirical analysis of LM-47 students' educational perceptions in informal learning contexts at football academies

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ABSTRACT

Youth sport is increasingly recognised as an informal educational setting that contributes to children's motor, emotional and social development, particularly in the 8-10 age group. In this perspective, football academies represent fundamental learning environments, where the educational role of adults plays a decisive role in shaping children's sporting experiences. However, empirical evidence on the educational perceptions of university students in training, particularly those enrolled in the LM-47 master's degree programme, remains limited. This study aimed to analyse the educational perceptions of LM-47 students working in informal football academy settings, focusing on the importance of movement, motivational factors, operational difficulties and the perceived quality of the educational environment. A sample of 120 LM-47 students completed a structured questionnaire consisting of 14 closed-ended questions. Descriptive statistics and chi-square tests were used to analyse the distribution of responses and associations between the role held and key educational variables ($p < .05$). 80% of participants considered movement to be essential, while 73.3% emphasised the need for a balance between fun and technical learning. Fun games emerged as the main motivational factor (65%), while repetitive or overly difficult activities were identified as the main cause of demotivation (50.8%). Two significant associations were found between the role held and the perceived causes of demotivation ($p = .049$, $V = .242$) and the evaluation of the football academy environment ($p = .048$, $V = .243$). The results highlight a shared pedagogical orientation among LM-47 students and confirm the educational value of football academies as informal learning contexts.

Keywords: Physical education, Youth sport education, Football academies, Educational perceptions.

Cite this article as:

Taleb, M., di Domenico, F., di Lascio, G., & Giardullo, G. (2026). Empirical analysis of LM-47 students' educational perceptions in informal learning contexts at football academies. *Journal of Human Sport and Exercise*, 21(2), 693-704. <https://doi.org/10.55860/0qbsda91>



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Submitted for publication January 14, 2026.

Accepted for publication February 16, 2026.

Published March 18, 2026.

[Journal of Human Sport and Exercise](#). ISSN 1988-5202.

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doi: <https://doi.org/10.55860/0qbsda91>

INTRODUCTION

In recent years, youth sport has been progressively recognised not only as an area of technical and motor skills learning, but also as a genuine informal educational context capable of influencing the overall development of children (Altavilla et al., 2024). From this perspective, youth sport contexts, including football academies, represent complex learning environments in which motor, cognitive, emotional and social dimensions intertwine, assuming a particularly important role in the sensitive stages of developmental growth (Aliberti et al., 2025a; Giardullo et al., 2024). Recent reviews emphasise motor competence as a core element of physical literacy and lifelong engagement in physical activity (Piotrowski, 2025).

Pedagogical and motor-educational literature emphasises how, in the 8–10 age group, children consolidate basic motor patterns, develop relational skills and build their first stable representations of themselves as players and as members of a group (Ceruso et al., 2019a; D’Isanto et al., 2024). Studies on children confirmed significant age-related differences in the development of basic motor skills, highlighting the importance of age-appropriate educational programmes (Hurtado-Almonacid et al., 2024). At this stage, play, intrinsic motivation and the quality of the educational environment are key elements in promoting well-being, active participation and continuity in sporting activities over time (Bailey, 2006; Raiola et al., 2022). Motor competence is strongly associated with physical activity levels and perceived competence in youth (Coe et al., 2024). Several studies show that sporting environments characterised by playful, varied and inclusive activities promote learning, cooperation and emotional engagement in children (Raiola et al., 2025a; Ceruso et al., 2019b). A recent meta-analysis confirms that sport game-based interventions significantly improve children’s fundamental motor skills (Li et al., 2022; Sun & Chen, 2024).

The educational value of motor activity has also been documented across different age groups and functional domains (Calandro et al., 2020). Conversely, contexts that are overly focused on performance, early competition or the repetition of standardised tasks can generate frustration and demotivation and increase the risk of children giving up sport (Giardullo et al., 2025; Schlesinger et al., 2018; Harwood et al., 2020). In this sense, football academies can be both powerful educational contexts and critical environments, depending on the quality of relationships, implicit rules and organisational methods adopted. Another key element concerns the role of adults involved in youth sports contexts. The quality of the child’s experience depends largely on the educational, communication and methodological skills of the operators, as well as their ability to understand developmental needs and manage group dynamics. Recent studies show that educational style, motivational climate and emotion management have a significant impact on the psychological and physical well-being and participation of young athletes (Aliberti et al., 2025b). In this context, the university education of sports professionals takes on particular importance.

The literature highlights the need for academic programmes that integrate motor, pedagogical and management skills, capable of preparing professionals who can deal with the complexity of informal educational contexts (D’Isanto et al., 2022; D’Elia, 2019). The LM-47 master’s degree course fits into this perspective, with the aim of training individuals who can interpret youth sport not only in technical terms, but also in educational and social terms (Esposito et al., 2024a; Raiola, 2025b; D’Elia et al., 2020). Despite the growing attention paid to youth sport as an educational context, the literature still offers little specific evidence on the perceptions of LM-47 graduates who work directly in informal youth football contexts regarding the psychophysical sphere of young footballers, the difficulties encountered on the pitch, the quality of the football school environment and the skills considered necessary to perform their educational role effectively.

Purpose of study

The aim of this study is to analyse and evaluate the impact of the perceptions of students enrolled in the LM-47 master's degree course who work in informal football contexts, with particular reference to four dimensions: motivation to practise sport, operational difficulties in managing the group, perceived quality of the football school environment and skills considered necessary to work with this age group.

MATERIAL AND METHODS**Study participants**

The sample consisted of 120 students enrolled in the LM-47 Master's degree course in Sports and Physical Activity Management at Pegaso Telematic University, selected through convenience sampling. The inclusion criteria were enrolment in the LM-47 course and active participation at the time of the survey in informal sports contexts related to youth football; no specific exclusion criteria were defined. To describe the composition of the sample, the question regarding the role held within the sports context was analysed. The distribution of responses shows that most participants perform operational functions in the field: coaches (30.8%), parents involved in sports activities (28.3%) and educators (16.7%) represent the largest categories. These are followed by figures such as managers, trainers, referees, former practitioners and other minor profiles, which together make up the remainder of the sample (24.2%). This heterogeneous composition allows us to gather perceptions from both technical operators and adults who experience sport in complementary roles. This diversity enriches the analysis of the educational dimensions investigated, allowing us to understand the phenomenon from different points of view.

Participation in the study was voluntary. LM-47 students were sent a link to the online questionnaire, accompanied by a brief information text containing the research objectives, instructions on how to complete the questionnaire and information on data confidentiality. Before starting to complete the questionnaire, participants gave their informed consent. The questionnaire was completed independently, using a computer or mobile device, in an average time of a few minutes. There were no potentially harmful or intrusive questions; the data was collected anonymously and analysed exclusively in aggregate form. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and current regulations on educational research.

Study design

The questionnaire consists of 14 questions (Q1–Q14), organised into macro-areas derived directly from the research problem and objectives. The macro-areas allow information to be collected on the respondent's profile, their perception of the importance of movement, motivational factors, operational difficulties in managing the group and the quality of the educational environment. This structure allows for a systematic and consistent reading of the perceptions of LM-47 students, maintaining a direct link between each question and the educational dimension investigated. All questions are closed-ended, formulated in nominal, ordinal or multiple-choice format, with between one and three options depending on the nature of the question. The absence of open-ended questions ensures uniformity in data collection and allows for clear and immediately comparable quantitative processing, while maintaining a good level of interpretative detail with respect to the participants' experiences. For greater clarity and in order to highlight the consistency between the questions and the theoretical dimensions investigated, the two tables relating to the structure of the questionnaire are presented below. The first contains the complete list of the 14 questions in their entirety; the second organises the same questions into macro-areas of reference, so as to clearly show the alignment between the tool used and the research objectives.

Table 1. List of the 14 complete questions.

N°	Code - Full question
1	Q1. What is your role in the sporting context?
2	Q2. In your opinion, how important is movement in a child's growth?
3	Q3. What motivates a child most during training?
4	Q4. When a child becomes tired or lacks motivation during training, what could be the cause?
5	Q5. What benefits have you noticed (or imagine) that a child gains from physical activity?
6	Q6. What behaviours do you most often observe in children during physical activities?
7	Q7. Have you ever noticed negative behaviour (frustration, arguments, exclusion) during matches or training sessions?
8	Q8. Do you think having fun or learning technique is more important at this age?
9	Q9. When play becomes too competitive, what can happen to children?
10	Q10. How important is it to vary the games during a sporting year?
11	Q11. What do you think is the main difficulty in working with children of this age?
12	Q12. How would you rate the environment at the football academy?
13	Q13. What do you think makes a child happy when playing football?
14	Q14. What values do you think football should convey to children of this age?

To ensure systematic data interpretation and consistency between the research objectives and the survey tool, the questionnaire questions were organised into five macro-areas, as shown in Table 2.

Table 2. Questions by macro thematic areas.

Macro area	Related questions
1. Respondent profile	Q1
2. The importance of movement and educational representations	Q2 – Q5 – Q14
3. Child motivation and factors influencing it	Q3 – Q4 – Q8 – Q9 – Q10 – Q13
4. Operational difficulties in managing the group	Q6 – Q7 – Q11
5. Quality of the educational environment/ football academy	Q12

Statistics analysis

In the first phase, nominal and ordinal variables were summarised using absolute frequencies, percentages and distribution tables, with the aim of outlining a general picture of the educational perceptions expressed by the participants. In a second phase, inferential analyses were conducted using the Chi-square test of independence to examine any association between the role held in the sporting context (Q1) and certain variables considered particularly relevant to the survey, such as the child's motivation, perceived operational difficulties, the quality of the educational environment and the values attributed to sporting practice. This approach made it possible to verify whether different participant profiles showed significantly different response patterns. The analyses were carried out ensuring that the conditions for the applicability of the Chi-square test were met (adequate number of observations per cell, independence of responses). These choices were consistent with methodological recommendations for research in exercise and sport sciences (Aliberti et al., 2023). The level of significance adopted was set at $p < .05$. In addition to the Chi-square test of independence, Cramer's V was calculated to estimate the strength of association between categorical variables. Cramer's V values were interpreted according to conventional thresholds ($\approx .10$ small effect, $\approx .30$ medium effect, $\geq .50$ large effect). Effect size estimates were used to support the interpretation of statistically significant associations, while non-significant results were interpreted with caution, especially in the presence of multiple categories and sparse contingency tables. All statistical processing was carried out using JASP

software (open-source version for statistical analysis), presenting the results in aggregate form in full compliance with ethical standards and data confidentiality.

RESULTS

Table 3 offers a detailed overview of the educational perceptions of LM-47 students working in informal football contexts in the Under-11 category. The descriptive frequencies show a strong convergence of opinions on some key aspects of child development, such as the importance of movement, the central role of play, the need to vary activities and the relevance of the educational environment. At the same time, differences emerge in relation to the roles held in the sporting context, albeit generally limited.

Table 3. Frequencies and percentages of all 14 questions.

Question	Category / Statistics	n	%
Q1. What is your role in the sporting context?	Coach	37	30.8
	Parent	34	28.3
	Other	29	24.2
	Educator	20	16.7
Q2. In your opinion, how important is movement in a child's growth?	Quite	1	0.8
	Very	23	19.2
	Fundamental	96	80.0
	Mean = 2.79; Median = 3; Mode = 3; Standard Deviation = 0.46		
Q3. What motivates a child most during training?	Fun games	78	65.0
	Coach who encourages	22	18.3
	Desire to improve	13	10.8
	Congratulations	7	5.8
Q4. When a child becomes tired or lacks motivation during training, what could be the cause?	Difficult/repetitive tasks	61	50.8
	Coach not very engaging	23	19.2
	Lack of play	22	18.3
	Overly long training sessions	10	8.3
	Too much competition	4	3.3
Q5. What benefits have you noticed (or imagine) that a child gains from physical activity?	Fun + wellbeing + social interaction	55	45.8
	Wellbeing + social interaction	14	11.7
	Wellbeing + social interaction + concentration	17	14.2
	Other combinations	34	28.3
Q6. What behaviours do you most often observe in children during physical activities?	Enthusiasm + cooperation	28	23.3
	Enthusiasm + reassurance	21	17.5
	Enthusiasm + competition	20	16.7
	Enthusiasm	20	16.7
	Other behaviours	31	25.8
Q7. Have you ever noticed negative behaviour (frustration, arguments, exclusion) during matches or training sessions?	Sometimes	81	67.5
	Rarely	28	23.3
	Often	10	8.3
	Never	1	0.8
Q8. Do you think having fun or learning technique is more important at this age?	Both in balance	88	73.3
	Fun	25	20.8
	Technique	4	3.3
	It depends on the child	3	2.5

Q9. When play becomes too competitive, what can happen to children?	Aggression/frustration	63	52.5
	Loss of motivation	36	30.0
	They help each other more	8	6.7
	They have more fun	6	5.0
	Others	7	5.8
Q10. How important is it to vary the games during a sporting year?	Fundamental	102	85.0
	I don't know	9	7.5
	Useful	9	7.5
	Mean = 2.80; Median = 3; Mode = 3; Standard Deviation = 0.50		
Q11. What do you think is the main difficulty in working with children of this age?	Game/technique balance	52	43.3
	Parental pressure	34	28.3
	Group management	21	17.5
	Communication	13	10.8
Q12. How would you rate the environment at the football academy?	So-so	63	52.5
	Quite good	22	18.3
	Very positive	20	16.7
	I don't know	9	7.5
	Not very positive	6	5.0
Q13. What do you think makes a child happy when playing football?	Belonging + fun	30	25.0
	Entertainment + creativity	17	14.2
	Freedom to move around + entertainment	11	9.2
	Belonging + creativity	10	8.3
	Other combinations	52	43.3
Q14. What values do you think football should convey to children of this age?	Loyalty + inclusion + teamwork	30	25.0
	Loyalty + teamwork	11	9.2
	Inclusion + teamwork	8	6.7
	Emotion management + inclusion	8	6.7
	Other combinations	63	52.5

Table 4. Results of Chi-square tests and Cramer's V for associations between Q1 and questionnaire variables.

Association between variables	χ^2	df	p-value	Cramer's V
Q1 – Q2	10.91	6	.091	.213
Q1 – Q3	9.634	9	.381	.164
Q1 – Q4	21.10	12	.049	.242
Q1 – Q5	23.55	30	.792	.256
Q1 – Q6	54.20	39	.054	.388
Q1 – Q7	10.59	9	.305	.172
Q1 – Q8	12.00	9	.214	.183
Q1 – Q9	38.64	30	.134	.328
Q1 – Q10	12.34	6	.055	.227
Q1 – Q11	12.72	9	.176	.188
Q1 – Q12	21.20	12	.048	.243
Q1 – Q13	125.6	120	.344	.591
Q1 – Q14	72.43	72	.464	.499

Chi-square tests reveal only two significant associations between the respondent's role (Q1) and other items in the questionnaire: Q1–Q4, relating to the causes of the child's tiredness/lack of motivation, and Q1–Q12, concerning the evaluation of the football academy environment. Both statistically significant associations

showed small-to-moderate effect sizes, as indicated by Cramer's V values (Q1–Q4: $V = .242$; Q1–Q12: $V = .243$). A detailed description is shown in Table 4.

DISCUSSION

The results emerging from the descriptive and inferential analysis allow us to outline a clear picture of the educational perceptions of LM-47 students involved in informal football contexts in the Under-11 category, largely confirming what has been highlighted in the reference literature. Firstly, the data relating to the importance of movement in child development (Q2) is particularly significant: 80% of participants consider it “*fundamental*”, while a further 19.2% consider it “*very important*”. This data indicates an almost total convergence towards a conception of movement as a central element of overall development, in line with contributions that recognise the educational, relational and socio-emotional value of motor activity (Bailey, 2006; Raiola et al., 2022). With regard to children's motivation during training (Q3), 65% of respondents identified fun games as the main motivational factor, followed by encouragement from the coach (18.3%) and the desire to improve (10.8%). This result confirms the centrality of play in youth sports contexts and reinforces the idea that intrinsic motivation is closely linked to the quality of the experience offered rather than to external or performance factors. Higher levels of motor competence have been shown to be associated with greater compliance with physical activity recommendations in school-aged children (Carcamo-Oyarzun et al., 2025; Martínez-López et al., 2024).

An analysis of the causes of fatigue or lack of motivation during training (Q4) shows that over half of the participants (50.8%) attribute this condition to activities that are too difficult or repetitive, while 19.2% point to a coach who is not very engaging and 18.3% to a lack of play. This data highlights how the design of activities and the educational style of the operator have a decisive impact on the child's involvement, confirming the importance of flexible methodological approaches adapted to developmental needs (Guo et al., 2024, 2025). In relation to the benefits of physical activity (Q5), the combinations of responses show a strong recurrence of elements related to fun, physical well-being and socialisation. In particular, 45.8% associate fun, physical well-being and the ability to be with others, while a further 14.2% also add improved concentration. These results reinforce the idea of sport as an informal educational context capable of influencing multiple dimensions of child development. Similar multidimensional benefits have been reported in school-based physical activity interventions, with sustained effects on motor competence and fitness (Bloch et al., 2025). In this perspective, improvements in motor performance are closely related to greater body awareness and functional control (Di Domenico et al., 2024). As for the behaviours observed during physical activities (Q6), enthusiasm and involvement are prevalent, often associated with spontaneous collaboration (23.3%) or the need for reassurance (17.5%). However, there are also signs of attention difficulties and a desire to compete, elements that require careful educational mediation on the part of operators.

The issue of negative attitudes (Q7) shows that 67.5% of participants observe them “*sometimes*”, while only 0.8% say they have never encountered them. This suggests that episodes of frustration, conflict or exclusion are part of the youth sports experience and must be managed within a conscious educational project. Regarding the relationship between fun and technique (Q8), 73.3% of respondents believe that the two aspects should be kept in balance, while 20.8% favour fun. This indicates a pedagogically mature view, oriented towards the harmonious development of the child rather than early specialisation. This finding is consistent with constraints-led approaches in youth football, which promote technical learning through play-based and adaptive tasks (D’Isanto et al., 2021). A particularly relevant finding concerns the perception of the effects of overly competitive play (Q9): 52.5% believe that it can generate aggression or frustration, while 30% report a loss of motivation in the event of defeat. These results confirm the critical issues associated

with sports models that focus on performance at an early age (Esposito et al., 2024b). With regard to the variety of activities (Q10), 85% of respondents consider it essential to vary the games during the sporting year, emphasising the importance of novelty and continuous stimulation to maintain high levels of engagement.

The main difficulties in working with children (Q11) mainly concern the balance between play and technical learning (43.3%) and pressure from parents (28.3%), highlighting how the critical issues are not exclusively related to the child, but also to the adult context of reference. The assessment of the football school environment (Q12) is mainly intermediate: 52.5% describe it as “so-so, could be better”, while only 16.7% consider it very positive. Regarding children’s happiness when playing football (Q13), responses predominantly emphasise enjoyment, a sense of belonging and opportunities for creative and autonomous movement, highlighting the importance of an inclusive and emotionally positive climate. With reference to the educational values that football should convey at this age (Q14), participants primarily highlight values related to inclusion, teamwork, loyalty and emotional regulation, confirming the broader educational role attributed to youth sport. This data suggests that there is considerable room for improvement in terms of organisation and education.

Overall, inferential analyses reveal a limited number of statistically significant associations between the role played by respondents in the sporting context (Q1) and the other variables investigated, suggesting a substantial homogeneity of educational perceptions among LM-47 students working in informal football contexts, regardless of the role performed (coach, educator, parent or other). In particular, most of the associations between Q1 and the other questions are not statistically significant ($p > .05$), indicating that the vision of movement, child motivation, the value of the game, competitiveness and the football school environment appears to be widely shared among participants. This data reinforces the hypothesis that LM-47 university training contributes to building a common conceptual framework, oriented towards an educational and not exclusively technical interpretation of youth sport. However, two statistically significant associations emerge that deserve particular attention.

The first concerns the relationship between the role of the respondent (Q1) and the perceived causes of the child's fatigue or lack of motivation during training (Q4), which is significant ($\chi^2 = 21.10$, $df = 12$, $p = .049$, $V = .242$). This result suggests that the interpretation of the child's attentional and motivational difficulties may vary depending on the direct experience and point of view of the adult involved. For example, those who work in the field on a permanent basis may attach greater importance to the methodological and organisational aspects of training, while those with a different involvement may focus on relational or contextual factors.

The second significant association concerns the relationship between the respondent's role (Q1) and the perceived quality of the football academy environment (Q12) ($\chi^2 = 21.20$, $df = 12$, $p = .048$, $V = .243$). The data indicate that operational issues are interpreted in a partially differentiated manner depending on the role held: group management, the balance between play and technique, and parental pressure take on different weights depending on the operator's degree of educational and organisational responsibility. This result confirms that, even within a shared value framework, concrete professional experience influences the perception of daily difficulties. Although statistically significant, these associations show small to moderate effect sizes and should therefore be interpreted with caution. Overall, these results suggest that differences between roles do not alter the general educational framework but mainly affect the interpretation of operational issues and field dynamics. This reinforces the idea that the LM-47 course promotes a pedagogically oriented view of youth sport, while leaving room for interpretative nuances linked to specific experience and the role played in informal football contexts.

Practical implications

The results of the study suggest the need to further strengthen the educational dimension of informal football contexts (Raiola et al., 2023). In particular, it highlights the importance of designing physical activities focused on play, variety and active participation, avoiding repetitive or overly performance-oriented activities. The role of the sports manager and operators trained through the LM-47 course is central in coordinating the various figures involved and ensuring educational consistency between technical objectives and training goals. Specific attention should be paid to the relationship with families, often perceived as a source of pressure, through opportunities for discussion and shared education on the values of sport. In addition, the management of emotions, conflicts and group dynamics appears to be a priority area for intervention, requiring advanced communication and interpersonal skills.

Limitations of the study

This study has some limitations that must be considered when interpreting the results. The use of a self-reported questionnaire exposes the risk of subjective bias and social desirability. The cross-sectional nature of the study does not allow us to capture the evolution of perceptions over time or to establish causal relationships. Finally, the absence of observational or qualitative data limits the possibility of exploring the educational dynamics that emerged in a more detailed manner.

CONCLUSION

This study analysed the educational perceptions of LM-47 students involved in informal football contexts in the Under-11 category, highlighting how university education contributes to developing a shared pedagogical vision of youth sport. The results confirm the importance of movement and play as privileged tools for development and show the centrality of the educational figure, called upon to manage complex dynamics, motivation, emotional climate and relationships with families. Football academies emerge as educational contexts with high potential, but they require competent coordination capable of balancing technical and recreational-relational dimensions. The few significant associations identified suggest that the role played affects some specific interpretations of the sporting experience but does not alter the overall educational vision. In summary, the study confirms the value of the LM-47 course in preparing professionals who are able to critically interpret contexts, design appropriate educational interventions and promote a sporting environment geared towards the well-being and growth of the child.

AUTHOR CONTRIBUTIONS

All co-authors have contributed to the published work equally and agree to its publication in JHSE.

SUPPORTING AGENCIES

No funding agencies were reported by the authors.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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