

Designing a Paradigmatic Model for Boxing Development in Iraq: A Grounded Theory Approach and Data-Based Analysis

Ahmed. Salah Abdulameer Nassrullah¹, Abbas. Naghizadeh-baghi^{2*}, Farzad. Nobakht², Nasrin. Azizian Kohan²

1. Ph.D. Student of Sport Management, Department of Physical Education and Sport Sciences, University of Mohaghegh Ardabili, Ardabil, Iran
 2. Professor of Sport Management, Department of Physical Education and Sport Sciences, University of Mohaghegh Ardabili, Ardabil, Iran

* Corresponding author email address: a.naghizadeh@uma.ac.ir

Article Info

Article type:

Original Research

How to cite this article:

Nassrullah, A. S. A., Naghizadeh-baghi, A., Nobakht, F., & Azizian Kohan, N. (2026). Designing a Paradigmatic Model for Boxing Development in Iraq: A Grounded Theory Approach and Data-Based Analysis. *AI and Tech in Behavioral and Social Sciences*, 4(4), 1-7. <https://doi.org/10.61838/kman.aitech.5705>



© 2026 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

ABSTRACT

This qualitative study designed a paradigmatic model for the development of boxing in Iraq. Boxing has considerable potential to support social cohesion, youth development, economic activity, women's empowerment, and sport diplomacy, yet its development in Iraq remains constrained by governance weaknesses, resource shortages, infrastructural deficits, socio-cultural barriers, weak planning, and limited monitoring systems. The study used grounded theory based on the Strauss and Corbin approach. Data were collected through semi-structured interviews with 20 participants, including boxing coaches, Iraqi Boxing Federation officials, university academics, and international boxing referees. Purposive and snowball sampling continued until theoretical saturation was reached. The interview data were coded and analyzed using MAXQDA. The analysis produced 153 open codes, 34 axial codes, and 14 selective categories. The findings showed that boxing development in Iraq is shaped by causal conditions, contextual conditions, intervening conditions, strategies, and consequences. Causal conditions included weak governance and resource deficits. Contextual conditions included socio-cultural barriers and insufficient educational and physical infrastructure. Intervening conditions included weak planning, coordination, control, and evaluation. Recommended strategies included infrastructure development, human resource development, strategic governance, international cooperation, digital systems, school-based talent identification, media campaigns, and cultural promotion. Expected consequences included social cohesion, employment generation, improved international representation, sport diplomacy, women's participation, professional league development, and better athletic performance. The model indicates that boxing development in Iraq cannot be achieved through fragmented interventions. Rather, it requires integrated, simultaneous, and coordinated action across institutional, cultural, financial, educational, and performance domains.

Keywords: boxing development; Iraq; grounded theory; sport management; sport policy; sport governance; martial sports

1. Introduction

Boxing is one of the oldest combat sports in human history and has been part of the modern Olympic

program since St. Louis 1904 (International Olympic Committee, n.d.). Beyond its competitive dimension, boxing has been associated with discipline, self-control, resilience, physical fitness, social identity, and youth

development. Evidence from boxing-based youth development programs indicates that structured boxing environments can provide meaningful social learning opportunities when they are supported by consistent organizational practices and trained staff (Gordon et al., 2021). More broadly, sport-for-development research suggests that sport can contribute to inclusion, personal development, community engagement, and social capital when programs are planned and governed coherently (Coalter, 2007, 2013; Hartmann & Kwauk, 2011; Schulenkorf et al., 2016).

In Iraq, boxing has historical roots and a potentially wide youth base, yet its development has not progressed in proportion to this potential. The sport is affected by structural, financial, infrastructural, managerial, and socio-cultural barriers. These challenges restrict athlete development, weaken competition systems, reduce public visibility, limit women's participation, and constrain the capacity of Iraqi boxers to compete consistently at regional and international levels. Similar problems have been identified in sport systems where governance fragmentation, resource scarcity, weak implementation capacity, and inadequate evaluation prevent sustainable sport development (Dowling et al., 2018; Hoye & Cuskelly, 2007; Ouyang et al., 2023; Thompson et al., 2023).

A central challenge in developing boxing in Iraq is that the relevant barriers are not isolated. Infrastructure deficits affect training quality; weak financial systems constrain coach education and competition planning; poor media coverage reduces social acceptance and sponsorship potential; and weak monitoring systems prevent decision-makers from learning from previous programs. Sport policy literature emphasizes that sport development should be understood as a governance process involving policy design, stakeholder coordination, resource mobilization, implementation, and accountability (Houlihan & Green, 2008; Ouyang et al., 2023). Consequently, a systemic model is needed to explain how the barriers and enabling mechanisms interact within the Iraqi context.

The present study responds to this need by designing a paradigmatic model for boxing development in Iraq using grounded theory. Grounded theory is appropriate when researchers aim to build an explanatory model from field data rather than test a pre-existing hypothesis (Charmaz, 2014; Corbin & Strauss, 2015; Strauss & Corbin, 1998). By integrating the views of coaches, federation officials, university academics, and international referees, the study identifies the causal, contextual, intervening, strategic, and

outcome-related components of boxing development. The resulting model contributes to sport management and sport policy scholarship by conceptualizing boxing development as an interconnected system rather than a set of fragmented interventions.

2. Methods and Materials

This study was qualitative and applied in purpose. It used grounded theory based on the Strauss and Corbin approach to develop a model from field data (Strauss & Corbin, 1998). The method was suitable because the study sought to identify categories, relationships, and mechanisms explaining how boxing development in Iraq is shaped by institutional, cultural, financial, educational, and performance-related conditions. The analytic logic also followed contemporary qualitative guidance emphasizing systematic coding, constant comparison, conceptual integration, and theoretical saturation (Charmaz, 2014; Corbin & Strauss, 2015; Creswell & Poth, 2018).

The final sample consisted of 20 participants: eight boxing coaches, five federation officials and experts, four university faculty members, and three international referees.

The inclusion criteria were at least five years of relevant experience, a valid academic or coaching background, sufficient familiarity with boxing development, and willingness to participate voluntarily. Semi-structured interviews were used for data collection. Interview questions were open-ended and allowed participants to describe their experiences, observations, and analyses of boxing development in Iraq. The interviews covered infrastructure, governance, finance, human resources, talent identification, culture, women's participation, media presence, international cooperation, competition systems, and policy planning. Interviews lasted between 20 and 50 minutes. With participant consent, interviews were audio-recorded and later transcribed for analysis.

Inter-coder reliability was assessed by having two coders independently code three interviews selected from different participant groups. The coders first coded the transcripts independently and then compared coding decisions at the open-code level. The overall agreement between coders was 86.63%, exceeding the commonly accepted 70% threshold; remaining disagreements were discussed and resolved before axial and selective coding were finalized.

3. Findings and Results

This section presents the qualitative findings obtained through grounded theory analysis. The findings include participant characteristics, the central phenomenon, causal conditions, contextual conditions, intervening conditions,

strategies, and consequences. Table 1 shows the composition of the expert panel. Table 2 summarizes the central phenomenon and the main causal, contextual, and intervening categories. Table 3 presents the strategic actions and expected outcomes. Figure 1 integrates these components into the final paradigmatic model.

Table 1

Participant Characteristics

No.	Gender	Age	Description
1	Male	43	Coach
2	Male	48	Coach
3	Female	37	Coach
4	Male	35	Coach
5	Male	41	Coach
6	Female	33	Coach
7	Male	46	Coach
8	Male	44	Coach
9	Male	51	Director of Education and Athlete Development, Federation
10	Female	46	Director of Competitions and Planning, Federation
11	Male	39	Secretary of the Talent Identification Committee, Federation
12	Male	52	Development and Infrastructure Expert, Federation
13	Female	43	Coordinator of Leagues and Age-Group Competitions, Federation
14	Male	45	University faculty member
15	Female	39	University faculty member
16	Male	47	University faculty member
17	Male	53	University faculty member
18	Male	42	International boxing referee
19	Female	35	International boxing referee
20	Male	41	International boxing referee

As shown in Table 1, the participants represented diverse stakeholder groups within the Iraqi boxing system. This diversity strengthened the richness of the data and increased the credibility of the findings. The interview data

were organized into five major components. The analysis produced 153 open codes, 34 axial codes, and 14 selective categories.

Table 2

Central Phenomenon and Conditions Affecting Boxing Development in Iraq

Component	Axial categories	Condensed open-code content
Central phenomenon	Boxing development in Iraq	The core process around which the paradigmatic model was developed.
Causal conditions	Weak governance and managerial structure; resource and infrastructure deficiencies	Nineteen open codes, including absence of integrated sport governance, lack of supportive legal frameworks, institutional misalignment, weak financial management, lack of performance-based promotion, shortage of specialized human resources, weak coach selection, absence of digital education, weak technological infrastructure, structural financing limitations, poor equipment, managerial weakness, and managerial instability.
Intervening conditions	Weak planning and coordination; weak control and evaluation systems	Nineteen open codes, including absence of boxing development policies, weak inter-institutional coordination, short-term managerial perspectives, lack of marketing strategy, poor facility maintenance, lack of accurate data, weak reporting, absence of national databases, limited monitoring technologies, weak private investment, and limited international experience among technical staff.
Contextual conditions	Socio-cultural context; infrastructural and educational context	Twenty-one open codes, including society’s preference for team sports, low popularity of boxing, weak media visibility, weak player motivation, weak sport investment culture, young demographic structure, inadequate physical infrastructure, limited access to facilities, lack of facility mapping, inability of the education system to integrate sport, absence of professional development pathways, quality gaps with modern standards, and lack of systematic talent identification.

Table 2 indicates that boxing development in Iraq is shaped by interacting structural, cultural, educational, and managerial constraints. The causal conditions generate the basic limitations of the system, while contextual and intervening conditions determine whether development

strategies are likely to be implemented effectively. In particular, the combination of weak governance, inadequate infrastructure, insufficient planning, weak media presence, and limited monitoring systems creates a reinforcing cycle of underdevelopment.

Table 3

Strategic Actions and Expected Outcomes for Boxing Development in Iraq

Strategic domain	Main actions	Expected outcomes
Infrastructure and resource development	Women-specific training halls; specialized boxing academies; standard training centers; free access for youth; low-interest loans; targeted financing; tax incentives; boxing development fund; national database; national boxing portal and application; athlete performance tracking systems.	Improved training environments; broader access; stronger accountability; increased investment capacity.
Human resource and educational development	Permanent coach and referee education institutes; international coach training; scientific programs; financial incentives; comprehensive talent identification; training camps; regular competitions; athlete support; school sport integration; university-federation cooperation; family awareness centers; former champions as role models.	Stronger coaching quality; improved talent pipeline; stronger school-to-club pathways; greater family and community support.
Strategic governance and international cooperation	High council for sport planning; scientific advisory council; national coordinating body; strengthened federation capacity; transparent governance; monitoring and evaluation committees; coach participation in planning; technical committees; international cooperation; sport diplomacy; scholarships; active membership in international organizations; regional competitions.	Improved coordination; evidence-based planning; stronger legitimacy; greater international exposure and technical learning.
Cultural promotion and development	Media content production; promotion of boxing events; national boxing brand; coverage of domestic and international competitions; new discourse around sport and investment; governmental and social support for women's participation; awareness campaigns; cultural-sport festivals.	Improved public image; higher youth participation; stronger women's participation; increased sponsorship and social acceptance.
Consequences	Socio-cultural, economic, political-diplomatic, and sport-performance outcomes.	Reduced social violence; stronger discipline and social capital; employment generation; private club development; sport tourism; foreign investment; strengthened international image; sport diplomacy; increased medal achievements; professional league development; national ranking systems; standardized refereeing and competitions.

Table 3 demonstrates that the strategies extracted from the interviews are multidimensional. They do not focus only on facilities or competitions. Instead, the strategies combine infrastructure, finance, education, governance, international cooperation, media visibility, women's participation, and cultural legitimacy. This finding is consistent with sport-for-development and sport governance perspectives that emphasize integrated institutional design rather than isolated projects (Coalter, 2013; Houlihan & Green, 2008; Schulenkorf et al., 2016; Thompson et al., 2023).

Based on the grounded theory findings, the final paradigmatic model was designed to explain the relationships among the identified components. As shown in Figure 1, causal conditions affect the central phenomenon of boxing development in Iraq. Intervening and contextual conditions shape the effectiveness of strategies, while successful implementation of the strategies is expected to generate socio-cultural, economic, political-diplomatic, and sport-performance consequences.

Figure 1

Paradigmatic model of boxing development in Iraq

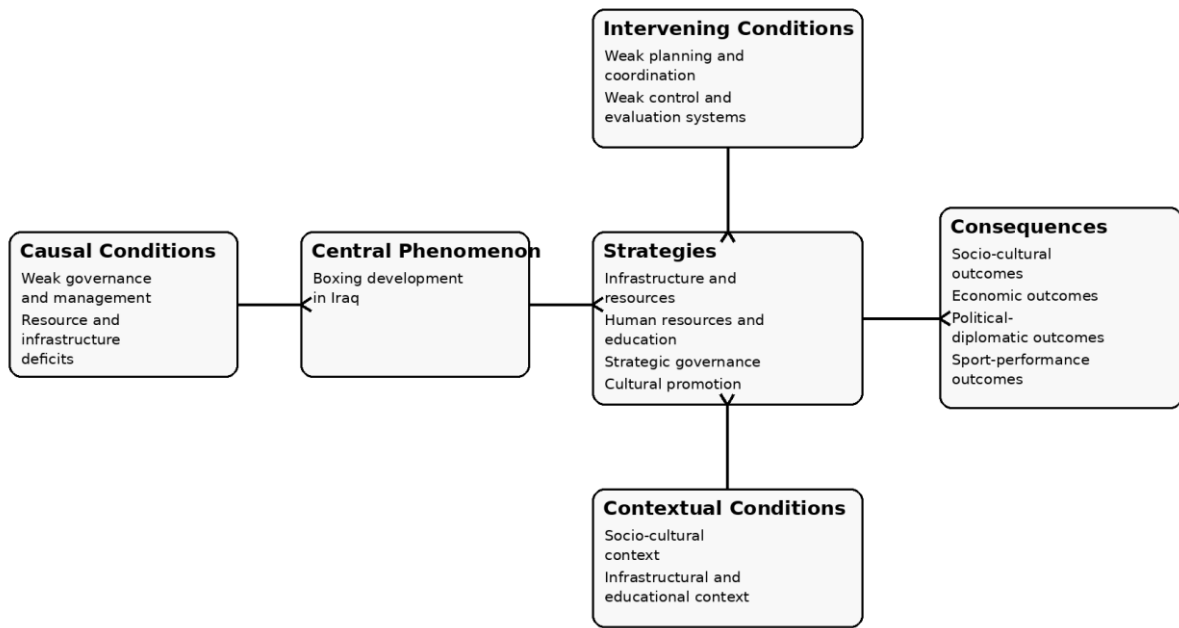


Figure 1 indicates that boxing development in Iraq is affected by a vicious cycle in which weak governance, resource limitations, weak planning, socio-cultural barriers, and infrastructural deficiencies reinforce one another. Breaking this cycle requires simultaneous intervention across the strategic domains summarized in Table 3. This systemic interpretation is aligned with research showing that sport development and sport-for-development initiatives require coherent governance, evaluation, community legitimacy, and sustained institutional support (Giulianotti, 2011; Hartmann & Kwauk, 2011; Spaaij, 2009; Svensson & Woods, 2017).

The distinctive contribution of the model is its explanation of a vicious cycle specific to Iraqi boxing: weak governance limits resources and planning capacity; limited resources weaken coaching, facilities, and competition pathways; weak cultural legitimacy reduces participation and sponsorship; and weak evaluation prevents institutional learning. The model therefore suggests that single interventions are unlikely to be effective unless governance, resources, cultural legitimacy, monitoring, and performance development are addressed together.

4. Discussion and Conclusion

This study designed a paradigmatic model for the development of boxing in Iraq using grounded theory. The model demonstrates that sustainable boxing development

depends on the interaction of causal, contextual, intervening, strategic, and outcome-related factors. The major barriers include weak governance, resource deficits, poor planning and coordination, weak monitoring systems, unfavorable socio-cultural conditions, inadequate facilities, and weak educational integration. These findings support the broader view that sport development is a governance and policy implementation challenge, not merely an athletic or technical problem (Dowling et al., 2018; Hoye & Cuskelly, 2007; Ouyang et al., 2023).

The main strategies identified in the study include infrastructure development, human resource development, strategic governance, international cooperation, digital transformation, school-based talent identification, media promotion, and cultural change. The most important conclusion is that boxing development in Iraq should not be approached through isolated projects. Building facilities or organizing occasional competitions will not be sufficient if governance, finance, education, media, talent identification, and evaluation remain weak. Sustainable development requires a coordinated national framework that connects institutions, resources, culture, and performance.

The model also has practical implications beyond boxing. It may inform sport development planning in other developing contexts where combat sports face similar governance, resource, cultural, and infrastructural challenges. If implemented effectively, the proposed model can help boxing become a driver of social cohesion, youth development, women’s empowerment, employment, sport

diplomacy, and international athletic achievement. This conclusion is consistent with broader sport-for-development perspectives emphasizing the capacity of sport to support inclusion and community-level outcomes when embedded in coherent institutional structures (Coalter, 2007; United Nations Department of Economic Social Affairs, 2009).

Several limitations should be acknowledged. The findings are based on expert interviews rather than direct observation of training centers, federation meetings, or competition structures. The model should therefore be tested in future studies using longitudinal designs, wider stakeholder samples, and comparative analyses across other combat sports and developing-country contexts.

Authors' Contributions

Ahmed Salah AbdulAmeer Nassrullah contributed to conceptualization, data collection, formal analysis, and writing the original draft. Abbas Naghizadeh-Baghi contributed to conceptualization, methodology, supervision, validation, and review and editing. Farzad Nobakht contributed to methodology, validation, supervision, and review and editing. Nasrin Azizian Kohan contributed to methodology, validation, supervision, and review and editing. All authors reviewed and approved the final manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

References

- Charmaz, K. (2014). *Constructing grounded theory*. SAGE. https://afshinsafae.ir/wp-content/uploads/2022/10/Introducing-qualitative-methods-Charmaz-Kathy-Constructing-grounded-theory-2014-SAGE-Publications-libgen.li_.pdf
- Coalter, F. (2007). *A wider social role for sport: Who's keeping the score?* Routledge. <https://doi.org/10.4324/9780203014615>
- Coalter, F. (2013). *Sport for development: What game are we playing?* Routledge. <https://doi.org/10.4324/9780203861257>
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. SAGE. https://www.researchgate.net/profile/Brad-Wuetherick/publication/277197202_Review_Basics_of_Qualitative_Research_Techniques_and_Procedures_for_Developing_Grounded_Theory_3e_Corbin_and_Strauss/links/55d44f6f08ae0a34172296a1/Review-Basics-of-Qualitative-Research-Techniques-and-Procedures-for-Developing-Grounded-Theory-3e-Corbin-and-Strauss.pdf
- Dowling, M., Leopkey, B., & Smith, L. (2018). Governance in sport: A scoping review. *Journal of Sport Management*, 32(5), 438-451. <https://doi.org/10.1123/jsm.2018-0032>
- Giulianotti, R. (2011). Sport, peacemaking and conflict resolution: A contextual analysis and modelling of the sport, development and peace sector. *Ethnic and Racial Studies*, 34(2), 207-228. <https://doi.org/10.1080/01419870.2010.522245>
- Gordon, B., Wright, P. M., Hemphill, M. A., & Sauni, P. (2021). Inside the black box of a long-term sport-based youth development boxing academy in New Zealand. *Sport in Society*, 25(10), 1912-1929. <https://doi.org/10.1080/17430437.2021.1920928>
- Hartmann, D., & Kwauk, C. (2011). Sport and development: An overview, critique, and reconstruction. *Journal of Sport and Social Issues*, 35(3), 284-305. <https://doi.org/10.1177/0193723511416986>
- Houlihan, B., & Green, M. (2008). *Comparative elite sport development: Systems, structures and public policy*. Butterworth-Heinemann. <https://doi.org/10.1016/B978-0-7506-8281-7.50004-X>
- Hoye, R., & Cuskelly, G. (2007). *Sport governance*. Elsevier. <https://doi.org/10.4324/9780080466965>
- Ouyang, Y., Lee, P. C., & Ko, L. M. (2023). A systematic review of the development of sport policy research (2000-2020). *Sustainability*, 15(1), 389. <https://doi.org/10.3390/su15010389>
- Schulenkorf, N., Sherry, E., & Rowe, K. (2016). Sport for development: An integrated literature review. *Journal of Sport Management*, 30(1), 22-39. <https://doi.org/10.1123/jsm.2014-0263>
- Spaaij, R. (2009). Personal and social change in and through sport: Cross-cutting themes. *Sport in Society*, 12(9), 1265-1268. <https://doi.org/10.1080/17430430903137803>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. SAGE.

https://moodle.znu.edu.ua/pluginfile.php/196150/mod_resource/content/1/

- Svensson, P. G., & Woods, H. (2017). A systematic overview of sport for development and peace organisations. *Journal of Sport for Development*, 5(9), 36-48. <https://jsfd.org/2017/09/20/a-systematic-overview-of-sport-for-development-and-peace-organisations/>
- Thompson, A., Lachance, E. L., Parent, M. M., & Hoye, R. (2023). A systematic review of governance principles in sport. *European Sport Management Quarterly*, 23(6), 1863-1888. <https://doi.org/10.1080/16184742.2022.2077795>
- United Nations Department of Economic Social Affairs. (2009). *Sport for development and peace*. <https://social.desa.un.org/issues/sport-for-development-and-peace>