



Creating a Model for the Development of Snowboarding Management in Harbin City, Heilongjiang Province, the People's Republic of China

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Received 15/08/2025

Revised 04/09/2025

Accepted 18/10/2025

Abstract

Background and Aims: This qualitative study developed a model to promote snowboarding in China based on Ridge and Roquemore's (2010) management theory. Through Delphi technique analysis of interviews with 19 experts (association leaders, instructors, champions, and enthusiasts), the research identified four key components: 1) Planning - establishing tourism cooperation, safety inspections, goal-setting, and amateur leagues; 2) Organizing - venue arrangement, skill development, and tourism integration with environmental protection; 3) Implementing - professional market management, 20-hour courses, and trainer development; 4) Controlling - inspection committees, monthly evaluations, and teaching quality assessments. The model emphasizes sports-tourism integration, safety standards, and systematic training to boost snowboarding development in Heilongjiang and beyond.

Methodology: This research is a study and creation of a Snowboarding exercise model to promote Snowboarding using the Delphi technique. A total of 21 persons were selected by purposive sampling, of whom 19 were experts. Regarding the administration of the Snowboarding association, there are 4 persons as administrators with at least 5 years of experience, and 5 persons as Snowboarding sports teaching experts with at least 5 years of teaching experience. who have experience in Snowboarding or are a Snowboarding champion with not less than 3 years of experience, 5 persons. The experts with knowledge of exercise, with not less than 5 years of experience, 5 persons. The above are the limitations in studying and creating a model to promote in the community of Heilongjiang Province, China. The above limitations are presented according to the concept of a management framework that people with experience. Interviews will be given in order to provide suggestions for creating a successful development of Snowboarding and exercise patterns, in order to be useful for the use of Heilongjiang Province, which will come to use the services in the future. next order. Using the Delphi research technique. This study uses POIC, which was invented by Bridges and Roquemore. It represents four key elements: Planning, Organizing, Implementing, and Controlling.

Results: The research on management practices of developing and creating a form of Snowball exercise for exercise in Heilongjiang Province, China, used interviews with 19 Expert



persons based on Bridge's and Roquermore's management function theory that Planning, Organizing, Implementing, and Controlling.

Conclusion: The research concludes that a well-designed snowboarding management model can significantly contribute to the growth and sustainability of snowboarding in Harbin. The proposed model incorporates strategic planning, efficient organizational structures, effective implementation strategies, and robust control mechanisms. This model can serve as a blueprint for other regions in China and beyond, promoting the development of snowboarding as a popular and professionally managed winter sport. The study underscores the importance of interdisciplinary knowledge integration from public policy, economics, sociology, and environmental studies to provide a holistic framework for sports development and management. Public Policy plays a crucial role in creating favorable conditions for snowboarding development, such as subsidies and talent introduction. Economics evaluates the direct and indirect economic contributions of snowboarding, including ticket sales, tourism revenue, and related industries. Sociology explores the social benefits of snowboarding, such as community cohesion and health improvements. Environmental Studies ensures sustainable practices, such as energy-efficient facilities and waste management. This interdisciplinary approach ensures that the snowboarding management model addresses multiple facets of sports development, providing a robust and adaptable framework. By addressing these three aspects, education, development, and interdisciplinary integration, the study aims to provide a comprehensive and actionable management model for snowboarding in Harbin, Heilongjiang Province. This model can serve as a blueprint for other regions to enhance their winter sports ecosystems and promote sustainable development.

Keywords: Development; Snowboarding; Heilongjiang

Introduction

The rapid development of ice and snow sports in China is gaining momentum and diversification. Snowboarding was introduced to the official sports system in 2003, and since then, it has been a part of China's large sports industry and the growth of winter season tourism. Furthermore, given the success of the 2022 Beijing Winter Olympics, there is interest and potential for China to further strengthen and increase public participation in snowboarding. However, so far, snowboarding's development is among the least popular sports due to systemic and structural restrictions (Smolianov, 2022). This paper is based on snowboarding's promising future in the country and its drawbacks and implications at the time. This paper takes a management and sustainable development approach to explain the barriers to snowboarding's development and possible solutions.

First of all, the snowboarding industry lacks a unified management mechanism to support snowboarding from a management and policy perspective. This is related to the

novelty of the sport, which requires specific criteria and tailored approaches to event organization. Current policies in the country are fragmented and require adjustments in the system (Armour, 2019). The second problem in the snowboarding industry is that there is a lack of professional people in terms of coaching and qualified practitioners and athletes. The restriction on training and the scale of practitioners at the grassroots level is also limited by this constraint (Bilohur et al., 2022). The last major drawback to the sport's development is the lack of public participation, which is related to various factors, such as the high cost of equipment, lack of accessibility to ski resorts, and the low social popularity of the sport in China (Wang, 2020).

In the current paper, Ridge and Roquemore's (2021) snowboarding development theory is taken as the main theoretical framework. Ridge and Roquemore's (2021) approach to snowboarding management considers the major functions, such as planning, organizing, implementing, and controlling, which allow an organization or a team to become effective in their actions. Each of these approaches is related to the management of snowboarding development in terms of planning: the development of a long-term strategic program, organization: institution building for planning and management of snowboarding, implementation: the strategic and tactical realization of snowboarding development at grassroots and top levels, and control: the performance and the proper evaluation of the development process and related activities. The case study is the theory is the sport of snowboarding in the practical application and the transitional stage from sporadic growth to long-term development.

Planning is the design of long-term developmental programs, both at the tactical and the strategic level. It is important to identify the global trends and international level of snowboarding's popularity to create a national roadmap that will follow these patterns (Shang, 2024). Organization is primarily concerned with building snowboarding institutions, creating and solidifying their independence in terms of developing sports at both levels (e.g., winter sports association or special snowboarding organizations at the provincial level (Jiang, 2020). As for implementation, it can be introduced on the grassroots level in terms of broadening the youth participation, reducing the equipment and resort's costs, and integrating the sport into regular school physical education. However, at the top level, it should include special state programs and grant distribution to promising athletes. As for control, it is important to create transparent evaluation and assessment, which will follow the set performance indicators and track the development of snowboarding. Benchmarking should also be introduced to compare China's approach with international standards.

Thus, the sustainable development of snowboarding requires systematic modeling in which snowboarding development is achieved on the example of a robust and proven management theory. Ridge and Roquemore's (2021) theory was used as a theoretical lens to

improve snowboarding's management in China and to explore its practical implications. The paper also offered insight into four main functions of the theory and its application in four cases of snowboarding's development in China. This discussion may be beneficial for scholars, policymakers, and the sports management industry in China, but it also provides a unique angle of analysis for addressing snowboarding's development, which at the moment is still a marginal sport.

This study is particularly significant for Heilongjiang Province, especially Harbin City, which boasts abundant ice and snow resources and a long-standing skiing tradition, making it an ideal venue for snowboarding promotion. The core contents are sequentially: 1) Establishing collaborative planning mechanisms to ensure safety and set development goals; 2) Organizing training venues and activity areas to improve competitive skills and integrate with tourism; 3) Implementing specialized sports market strategies and tourism strategies, developing teaching courses, and training coaches; 4) Controlling management quality by establishing an evaluation committee and conducting regular teaching quality inspections. This study references the latest theoretical achievements in recent years (e.g., Feng, 2021; Zhao, 2024) to ensure its relevance and practicality, providing a scientific basis and support for the long-term development of snowboarding in China.

Objectives

Main Objective:

To create a model for the development of snowboarding management in Harbin City, Heilongjiang Province, China.

Subsidiary Objectives:

1. To study creating a model for the development of snowboarding management in Harbin City, Heilongjiang Province
2. To create a model for the development of snowboarding management in Harbin City, Heilongjiang Province, China

Literature Review

Theoretical Concept of Management Function

The theory of the four elements of the management function system. According to the research and analysis of the management function system, Bridges and Roquemore believe that the content of management activities can be divided into four major elements: planning, organizing, implementing, and controlling (Bridges and Roquemore, 1993). Planning activities can achieve the purpose of setting goals and determining the means of achieving them, which is also the most basic and primary step in management activities. The organizing activities are mainly to ensure the implementation of the management activities by arranging the overall



system. The implementation activities aim to ensure the normal implementation of the plan and to continuously improve the means and methods of planning and organizing. Control activities are the means of feedback to enable management to carry out its management activities and include the control process, function, and standard system.

Theoretical Concept of Snowboarding Sports

The development history of snowboarding in China

Snowboarding, as an official international winter sports game, entered China in 2003. The skiing industry of Beijing had to wait until 2007 before it officially began to rise. In the early years of the opening of the training base in China, the snowboarding industry was not popular at all. The standard road to snowboarding in competition events was released in 2004 by the FIS (The International Ski Federation). Under the leadership of the relevant organizing committee of Beijing Mountain Spring Mountain Resort, in May 2007, Beijing mounted a domestic amateur competition road race snowboard project. In July 2007, Beijing successfully hosted the first Asian and Asian paraplegic winter snowboard games. At the same time, a group of young and ambitious professional teams was born in the snowboarding community, including professional organizations and project planning.

Basic knowledge and skills of snowboarding sports

Snowboarding requires long-term preparation and physical training to master such professional techniques, which involve upper body and leg strength, aerobic ability, endurance, and leg control ability, and requires a long process of training. In addition, potential damage to equipment can also increase the risk of injury (Ma, 2012). The most basic skill of snowboarding is to maintain a suitable stance, including turning skills, braking, and jumping. Practice and training in these areas are necessary to develop these skills and reduce the risk of injury.

Snowboarding Development Model

Snowboard development model purpose, dimensions, and related attributes
Snowboard development model: refers to a means of improving the training, competition, and popularization process of snowboarding so that the entire snowboarding training process will not only enrich the snowboarder but also show the good experience and effect of snowboarding to the people. It should also show the unique charm of snowboarding to the people. The dimensions of the snowboard development model are as follows: focusing on talented snowboarders, optimizing training and standard course system, conducting competitions, and promoting the entire snowboarding industry. Attributes related to the snowboard development model: the selection of professional sports team members, professional training, technical level, safety, standard snowboarding venue, standard sports event organization, and industry support.



Focus Group and Expert Consultation

Function and introduction of the focus group and expert consultation

Focus groups (FGs) are a form of interview that usually aims to explore the participants' personal views of a specific issue (Mathison, 2004). Participants are typically between six and twelve people, and the interviewers engage in conversation with them in a group rather than an individual manner. The Delphi technique interviews and results consultation methods: the main purpose is to conduct expert interviews promptly, summarize opinions, and return to interview again.

Conceptual Framework

The research on management practices of developing and creating a form of Snowball exercise for exercise in Heilongjiang Province, China, used interviews with 19 Expert persons based on Bridge's and Roquermore's management function theory that Planning, Organizing, Implementing, and Controlling.

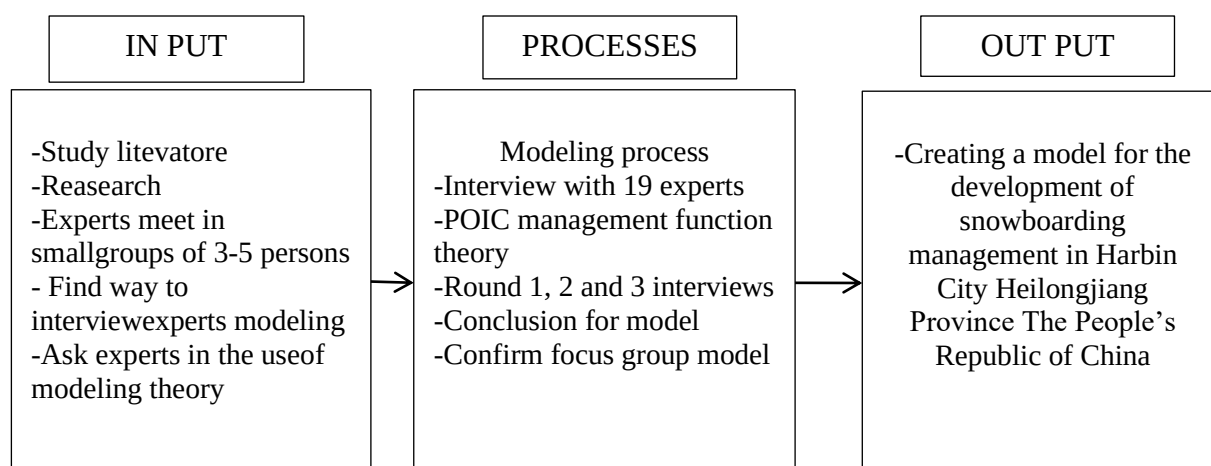


Figure 1 Conceptual Framework

Methodology

This study adopted the Delphi method and constructed a China snowboarding promotion management model through multiple rounds of expert consultations. The research selected 19 experts (15 males, 4 females), including association managers, coaches, athletes, and researchers, all from Harbin and surrounding areas in Heilongjiang Province. The study lasted four months (September to December 2023) and was conducted in three phases: the first phase used semi-structured interviews, the second phase employed a five-point Likert scale questionnaire. Data analysis utilized content analysis and statistical methods (median, interquartile range), with data processed using SPSS 26.0. The consensus criterion was $Mdn \geq 3.5$ and $IQR \leq 1.5$. The model was ultimately validated through focus group meetings to ensure ethical compliance and reliable results.



Results

Part 1: Creating a model for the development of snowboarding management in Harbin City, Heilongjiang Province, China

In data analysis, this study employed the Delphi method for two rounds of expert consultation, utilizing two core statistical indicators: Median (Mdn) and Interquartile Range (IQR). The Median was used to measure the concentration trend of experts' ratings on various management elements, with a consensus threshold set at $Mdn \geq 3.5$. The Interquartile Range reflected the dispersion of opinions, where $IQR \leq 1.5$ indicated high agreement among experts. All data were processed using SPSS 26.0 to ensure scientific validity and reliability. The research findings were systematically presented according to Bridges & Roquemore's (1996) management function theory, organized into four stages: "Planning-Organization-Implementation-Control". Only items meeting consensus criteria after three rounds of verification were retained at each stage, ultimately forming a structurally complete and highly operational management development model for snowboarding.

Part 2: Focus group designation to propose guidelines for promoting the development of snowboarding management in Harbin City, Heilongjiang Province, China. The methods are as follows:

2.1 Planning

Planning is the study emphasized establishing a collaborative mechanism involving provincial/municipal sports and tourism departments along with ski associations. This would involve conducting comprehensive evaluations of ski resort safety, equipment maintenance, and operational capacity, while defining development goals and formulating annual competition schedules and amateur league plans. A dedicated budget should be allocated for facility upgrades, alongside emergency response plans for extreme weather conditions. Service design should adopt a tiered approach, featuring beginner training zones, competitive practice areas, and family-friendly activity spaces, with continuous optimization through feedback collection. In the long term, integrating skiing with local tourism resources to develop seasonal products is crucial. These initiatives should incorporate eco-friendly concepts and establish a comprehensive management system covering operations, competitions, talent development, and safety protocols.

2.2 Organizing

During the organizational phase, it is recommended that the sports and tourism departments jointly formulate an industrial development implementation plan, clarifying responsibilities and supervision procedures. Provincial sports authorities should designate key ski resorts as demonstration sites, deploying dedicated teams for daily oversight. Ski resort executives must employ professionals with expertise in sports management, tourism operations, and safety supervision. Ski resorts should establish clear employee responsibilities,



create dedicated event coordination departments, and implement monthly performance evaluations. Coaches must pass dual assessments on practical skills and service quality to ensure professionalism. Key venues should establish management committees to coordinate operations, safety, and service standards, while optimizing environments based on participant feedback. Standardized courses should be developed to ensure beginners receive at least 20 hours of systematic training.

2.3 Implementing

During the implementation phase, managers at all levels must master ski industry policies and develop implementation guidelines tailored to regional characteristics and participant needs. Provincial governments should prioritize skiing as a key winter economic project while promoting cross-departmental collaboration. Sports authorities need to conduct regular surprise inspections to ensure safety and service quality. Resource allocation should cover venue upgrades, coach recruitment, and safety equipment configuration. Unified quality assessment standards covering facilities, services, and emergency response capabilities must be established. Venue operators should collaborate with ski schools and equipment manufacturers to optimize teaching content and create a fair coach recruitment system incorporating technical and psychological evaluations. Additionally, partnerships with the National Ski Association should introduce certified coaches and international training systems, develop beginner experience programs, recruit retired athletes as volunteer coaches, and promote university collaborations to develop management courses through online-offline integrated training platforms.

2.4 Controlling

During the regulatory phase, provincial sports bureaus should establish evaluation committees to conduct regular inspections of ski industry development and propose improvement recommendations. Skill-tiered ski clubs should be established at key venues, supervised by at least three certified instructors. Monthly safety inspections and operational evaluations should be implemented to promptly address issues and ensure stable development. Strict control over venue operation budgets must be maintained, with reasonable allocation to safety, service, and marketing. Universities should collect industry data to optimize talent cultivation and assessment systems. A teacher certification system should be established, with annual evaluations of technical and teaching capabilities. Industry operation standards should be formulated, promoting compliance through periodic assessments and incentives. Safety remains the top priority for all participants, requiring enhanced safety awareness campaigns and professional supervision. Instruction should be organized by instructors' expertise and students' proficiency levels, with quarterly reviews of operational plans to cultivate sportsmanship and achieve systematic, sustainable management cycles.



Discussion

1. Planning: As Doom, M. (2019) stated, safety management should be integrated into all aspects, such as sports and accommodation. To this end, monthly safety inspections and assessments should be conducted to address issues promptly, while budgets should be prudently controlled and allocated appropriately to safety, services, and marketing to ensure stable development. Colleges and universities should collect industry data to improve skiing talent training and evaluation systems. Effective preparation—including competition and training venue design—must prioritize both functionality and safety. Promoting skiing as an amateur sport helps foster enjoyment, equipment maintenance awareness, and environmental care. As Chan (2018) emphasizes, adapting to seasonal variations is critical, particularly within the tourism sector. Ski resorts should integrate environmental protection principles and establish comprehensive management systems that encompass operations, events, talent development, and safety.

2. Organizing: According to Bateman & Snell (2017), the essence of service excellence lies in delivering efficient and attentive customer satisfaction. Venues should optimize service environments based on feedback from participants, coaches, and tourism partners. They must develop standardized skiing courses, ensuring beginners receive at least 20 hours of systematic training while standardizing advanced programs to enhance service quality and operational accountability. Ski resorts should clearly define employee responsibilities, establish dedicated event coordination departments, and implement monthly performance evaluations. These departments must provide venue managers with training on industry standards, emergency response protocols, and service optimization techniques. As Kootz, H. (2019) emphasizes, the essence of coordinated services lies in delivering professional and efficient quality to ensure customer satisfaction, build positive impressions, and encourage repeat visits. Additionally, provincial and municipal tourism authorities should assign personnel with skiing expertise to coordinate resource integration and marketing initiatives.

3. Implementing: According to McConnell, Conrad, and Uhrmacher (2020), it is essential to prioritize the development of snowboarding courses that emphasize safety standards and hands-on learning experiences. This process requires the continuous collection, improvement, and refinement of teaching content to ensure high-quality instruction while advancing the integration of sports and tourism curricula. In addition, institutions should guarantee equipment safety and standardized maintenance protocols, strengthen inter-school collaboration in curriculum development, establish youth and family training programs, and create online platforms to complement offline training initiatives. According to Bilohur, Skrypchenko, and Nepsha (2022), safety management institutions in sport should be directed by highly skilled managers to guarantee high-quality operations. These institutions should collaborate with educational organizations to design snowboarding training programs that



foster efficient future development. Furthermore, a dedicated governing body should be established to oversee comprehensive management, including partnerships with national ski associations, the introduction of certified coaches and international training systems, the development of beginner experience programs, and the recruitment of retired athletes as volunteer coaches.

4. Controlling: According to the theories of Chen, Wei (2018), and Feng (2021) highlight, ski resort management requires efficient operations supported by systematic measurement, evaluation, and continuous follow-up. An industry assessment committee should be established to promote the development of skill-tiered ski clubs supervised by at least three certified coaches, with monthly safety and operational inspections to address issues promptly. Furthermore, venue budgets should be carefully controlled, ensuring reasonable allocation to safety services and marketing. By leveraging industry data collected from universities, ski resorts can strengthen talent development and evaluation systems.

Recommendation

1. Directions for future research

1.1 Include more research formats

This calls for studies to be conducted in research forms other than traditional. It might include combining quantitative and qualitative methods (mixed methods), longitudinal studies, experimental, or digital ethnography. Diversifying the research formats will allow for a more comprehensive view of the subject, richer data, and a more flexible response to trends in the sport.

1.2 Include more difficult playing skills

The majority of research may have involved basic or intermediate skills due to their accessibility. The studies should include more complex technical skills (e.g., advanced tricks or moves in snowboarding, gymnastics, or martial arts) to allow a more detailed insight into the development of skills and performance, risk factors, biomechanics, and ways to optimize training. This would also make the research more useful for elite-level coaching and performance enhancement.

2. Suggestions for further research

2.1 Diversify and transform research

In addition to including more research formats, future studies should also consider how they are designed. This could include interdisciplinary approaches (integrating sports science with psychology, sociology, or technology), cross-cultural studies, or creative use of statistical models. Such a transformation in research design might help to uncover the relationships between sport performance, cultural influences, or technological progress that are still not well understood.



2.2 Transfer the research method to other sports research

The research methods that have been tried in one sport (snowboarding or skiing) could be adopted in other fields. For instance, motion analysis techniques could be applied to skateboard research, surfing, or gymnastics. Cognitive training studies in skiing could also be beneficial for esports or team sports research. Transferring successful methods to other contexts can help to increase the generalizability of results and encourage innovation in sports science.

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