

## Implementation of Innovation and Entrepreneurship Education in a Sports University in China

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### Abstract

The overall level of Innovation and Entrepreneurship Education (IEE) in sports universities in China is lagging and not well established. There is no known practical construct or methods to cultivate talents with innovative and entrepreneurial qualities and abilities in sports universities. In response, this qualitative case study is focused on investigating the problems encountered in implementing IEE in a sports university. One-on-one interviews and focus group discussions were employed as research instruments. The participants consisted of administrators, teachers, and undergraduates from a sports university in China. The collected qualitative data were analyzed using the thematic analysis method. The findings of this study not only revealed the common problems like other universities in implementing IEE in sports universities but also revealed their own identity. This can contribute to the current shortage of research in this field and provide real-world value to IEE implementation for sports universities in China.

**Keywords:** Innovation and Entrepreneurship Education (IEE), Sports University, educational resources, curriculum planning, cooperation

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### 1. Introduction

Innovation and Entrepreneurship Education (IEE) is guided by the transformation and the renewal of educational ideas and aims to enhance students' innovative spirit, entrepreneurial awareness, and entrepreneurial ability. IEE is based on 21st-century skills, with the same emphasis on innovation, career, and information and technology skills (Aljohani, 2015). This spirit and ability surpass the workplace, which is why IEE is vital for undergraduates majoring in various fields.

The application of IEE is gradually expanding its implementation in different types of universities, and

there is a growing trend involving various fields. However, most researchers are still focused on economics and engineering. As a result, innovation and entrepreneurship in sports science have not received enough academic attention (Ratten, 2012; Tjønndal & Nilssen, 2019), and there are fewer sports entrepreneurs than expected (Ansari & Husin, 2015). In the face of the rapid development of China's sports industry and the emergence of many new sports enterprises, innovative and entrepreneurial talents in China's sports field are obviously in short supply (Xu et al., 2019). This is because previous studies have paid more attention to the common issues of implementing IEE in Chinese universities. However, they have not touched on why the implementation of IEE in sports universities is lagging. As a result, sports universities should pay more attention to this issue as higher education institutions that comprehensively develop sports science and train high-quality sports talents. Accordingly, this paper is guided by the following research question:

What are the problems encountered in the process of implementing IEE in a sports university in China?

## **2. Literature Review**

This section provides a brief review of the literature on the development of IEE in China, innovation, and entrepreneurship in sports, as well as the implementation of IEE in Chinese sports universities.

### **A. The Development of Innovation and Entrepreneurship Education (IEE) in China**

IEE is an educational concept that aims to improve the innovative awareness, entrepreneurial spirit, and practical ability of all college students, and provide specialized training for students with entrepreneurial aspirations (Wang, 2012; Streeter et al., 2002). In 2002, the Chinese Ministry of Education designated nine universities, such as Tsinghua University, as pilot universities to carry out entrepreneurship education, marking the formal start of entrepreneurship education in China (Wang, 2018). Streeter et al. (2002) put forward university-wide entrepreneurship education theory, which means that students of all majors in universities could participate in entrepreneurship-related courses and practical activities. They also pointed out the crucial elements for understanding entrepreneurship education programs, including faculty, teaching activities, funding, administrative infrastructure, research activity, outreach activity, and alumni activity. According to Qian and Lai (2012), entrepreneurship education in China is mainly a way to alleviate the employment pressure of university graduates advocated by the central government. On the other hand, Bakar et al. (2015) emphasized that the increasing progress of science and technology, followed by the gradual reduction of the demand for human labor, is the reason for unemployment and entrepreneurship.

The development of entrepreneurship education in China ushered in a turning point of reform in 2010. The Chinese Ministry of Education replaced entrepreneurship education with innovation and entrepreneurship education, highlighting the importance of innovation and the co-existence of innovation education and entrepreneurship education (Wang, 2013; Ren & Liu, 2018). In other words,

innovation is the internal driving force of modern entrepreneurial activities, and the development and entry of innovative products into the market is the result of entrepreneurship. IEE is a kind of teaching concept and model adapted to the needs of economic society and national development strategy (Ren & Liu, 2018). Therefore, a closer look at the literature reveals that unemployment is not the only reason for implementing IEE. For example, Zhu et al. (2017) stated that IEE is an educational reform to improve the quality of higher education in China, aiming at enhancing the creative ability of college students and improving their employability and quality of employment. Qiao (2017) added that innovation and entrepreneurship are also new economic growth points for China, and the IEE system needs to be improved urgently. Hassan et al. (2020) believed that armed with a wealth of knowledge and practical skills, future university graduates will most likely be better prepared than their predecessors to meet the challenges of entering society and creating new value. Based on the policy orientation of Chinese universities to carry out IEE, Wang (2012) proposed the University-wide Innovation and Entrepreneurship Education system, which includes clarifying the guiding ideology and values for the implementation of IEE, developing the curriculum teaching system and practical education system as the core content and implementation approach, and establishing an operating system as the primary guarantee (Wang, 2012). In 2015, the Ministry of Education proposed that all colleges and universities should set up innovation and entrepreneurship education courses in 2016 and develop compulsory and elective courses for innovation and entrepreneurship education for all students (Ministry of Education, 2015). Since then, IEE has been widely implemented in all levels and types of universities in China.

The implementation of the IEE program is not an easy task. Some researchers analyzed the problems of IEE courses in Chinese universities from different perspectives, such as the form of courses and the applicability of course content (Gao et al., 2016 ; Ding, 2017). On the other hand, some researchers like You et al. (2017) recognized that the establishment of entrepreneurship platforms in many universities is still backward. A comprehensive analysis can be found in Li et al. (2016), who argued that there are some common problems in this process. These include unreasonable curriculum design, shortage of qualified teachers, imperfect educational model and insufficient support such as funds, policies, and achievement transformation bases. Furthermore, Mei and Symaco (2020) added that the challenges of IEE development also include the lack of entrepreneurship disciplines as a foundation in Chinese universities, and the lack of cooperation among stakeholders.

## **B. Innovation and Entrepreneurship in Sports**

Recent theoretical developments have revealed that innovation and entrepreneurship in sports are areas worthy of attention. Ratten (2012) stressed the importance of entrepreneurial culture to entrepreneurial opportunities in sports. Ansari and Husin (2015) pointed out that although there are great opportunities in this industry and the innovation development of sports can improve and enrich many people's daily

life, still there are fewer entrepreneurs in sports. Moreover, Potts and Ratten (2016) concluded that innovation in sports could be seen in new technologies, equipment, clothing, strategies and training, consumer products and services, media and formats, and sports development. Besides that, Ratten and Ferreira (2017) further stated that due to the increased interest in the sports business, sports education needs to be transformed to include more emphasis on entrepreneurship education. In other words, traditional sports education can no longer meet the current demand for innovative and entrepreneurial talents in China's sports industry. Zhao (2019) pointed out that sports entrepreneurship should be viewed from the perspective of innovation and development and reported that sports entrepreneurship theory research should also aim at serving the innovation and development of the sports industry. With the continuous rise in people's living standards in China, the demand for sports consumption has reached a brand-new height in both types and quantities (Yan, 2017). As one of the youngest industries, the development of the sports industry has entered a bottleneck period, and innovation drive is the inevitable form of its future development (Zhang, 2019).

### **C. Innovation and Entrepreneurship Education in Sports Universities**

According to Naia (2013), higher education should not be divorced from the needs of society, nor should it be divorced from the role of society in cultivating future talents. Facing the new situation, IEE has been implemented successively in sports universities in China. However, innovation and entrepreneurship education started relatively late in sports universities, some of which were passively implemented under the requirements of policies, and the system for developing IEE has not been well established (Chen & Guo, 2018). Meng and Wang (2019) reported that there are 144 Chinese higher sports academies (including specialized sports universities and colleges as well as faculty of physical education in comprehensive universities), among which only a few sports universities have particular IEE management institutions, offering entrepreneurship courses and training as well as setting up science parks. They still have not shown their functions for professional innovation and entrepreneurship talent training. As a result, the level of IEE in sports universities in China has not met the needs of the rapid development of the sports industry, and there is still a significant gap compared with the demand for innovative and entrepreneurial talents in sports (Meng & Wang, 2019). Previous research on the topic of IEE focused more on the common issues of implementing IEE in universities, and there are few kinds of research on specific types of universities (Zhang et al., 2016).

### **3. Methodology**

This qualitative-method case study was conducted in a specialized sports university in China. Participants in this study were selected among administrators, teachers, and undergraduates through purposive sampling method. The selection criteria, as advocated by Merriam (2009), is to involve participants from whom the most information can be obtained, which is essential for qualitative researchers. Thus, the research population included faculty members who have rich working experience

in IEE management, teaching, or counseling for at least five years in the sports university and undergraduates who have taken IEE courses and participated in innovation and entrepreneurship competitions. Using these as selection criterion, it is considered that these participants have more insights into the theory and practice of IEE to provide adequate and diverse information. From this population, a total of two administrators (A1 & A2), seven teachers (T1-T7), and five undergraduates (UG1-UG5) were purposively selected. They are from different departments of this sports university, as shown in Table 1 and Table 2:

**Table 1 One-on-One Interview Participants**

<b>Participants</b>	<b>Position</b>	<b>Department</b>	<b>Years of working experience in IEE</b>
A1	Secretary	Academic Affairs office	6+
A2	Secretary	Student Affairs office	5
T1	Lecturer& Counselor	Social Sports	5
T2	Lecturer	Sports Art	6
T3	Lecturer	School Physical Education	5
T4	Counselor	Social Sports	5
T5	Lecturer	Sports Training	6
T6	Counselor& Lecturer	Sports Human Science	6
T7	Counselor& Lecturer	Martial Arts	5

**Table 2 Focus Group Discussions Participants**

<b>Participants</b>	<b>Status</b>	<b>Major</b>	<b>Achievements</b>
UG1	Sophomore	Social sports guidance and management	IEE-related required courses scored more than 80 points. Participated in innovation and entrepreneurship competitions and was shortlisted for provincial competitions.
UG2	Senior	Sports economy and	
UG3	Sophomore	Sports rehabilitation	
UG4	Junior	Sports economy and	

UG5	Senior	Physical education	
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The research instruments employed included one-on-one semi-structured interviews and focus group discussions. Specifically, one-on-one interviews with administrators and teachers were the primary research instruments for this study, and their perceptions and viewpoints were used to answer the research question. Furthermore, five students participated in the focus group discussion, and the views gathered by this method were mainly used to supplement and triangulate the data. Finally, all the collected data were thematic analyzed to identify themes.

To ensure the trustworthiness of this qualitative research, different methods were utilized, including triangulation, member checking, and inter-coder reliability. Firstly, triangulation was adopted by combining different methods and data sources. Secondly, all participants in this study were allowed to view and verify the transcripts of their responses (original statements) and the researcher's interpretations. Furthermore, two external coders were selected to confirm the identified codes' reliability. Finally, based on the formula of Miles and Huberman (1994), the number of agreements divided by the total number of codes was followed to measure the inter-coder reliability. After calculation, the reliability results with external coders were about 0.90 and 0.88, respectively. According to McAlister et al. (2017), it is reliable when more than 95% of the coding agreement can be consistently higher than at least 0.8.

Ethical issues were also considered at every stage of the study. The researchers first applied for permission to conduct research at the university and obtained the informed consent of the participants. To protect the anonymity of participants and the institution, pseudonyms were used instead of their actual names. In addition, to protect the confidentiality of data, including audio backup, field notes, transcripts, and files, were all stored in the researchers' notebook PC, which requires a password login.

#### **4. Findings and Discussion**

The purpose of this study was to identify the problems encountered in the implementation of IEE in a sports university. This information is essential because it can be used to understand the shortcomings and challenges in its implementation and lay the foundation for putting forward more targeted suggestions to improve the development of IEE in sports universities. In this study, five main themes emerged: quantity and quality of teaching staff, curriculum planning, material for teaching and learning, diversification of cooperation, and managerial efficiency.

### **A. Quantity and Quality of Teaching Staff**

One of the main problems faced by Sports University in implementing IEE is the shortage of teaching staff and the teaching quality. This problem is described in two parts: a) "part-time status": lack of motivation and recognition, b) training shortcomings: failure to meet actual needs.

#### **a) "Part-time status": Lack of Motivation and Recognition**

Almost all teacher participants mentioned that IEE-related work is just a small or extra part of their core work, and they lack the motivation to devote more effort to IEE-related work even though these respondents are full-time teachers at this sports university and have relatively rich experience in IEE. An administrator at the university, A1, explained that there are no full-time teachers for IEE:

*"Although there are many teachers involved in IEE, we don't have full-time teaching staff for IEE ... For lecturers, whether it is guiding students to participate in the competition, it depends on their personal decisions."*

This excerpt shows that lecturers' participation in IEE is voluntary, not part of their job responsibility. Therefore, the time they can devote to IEE work is also limited. This view was supported by a teacher, T6:

*"After all, people's energy is limited, and I really don't spend a lot of thought on IEE. It may be like a part-time status, so the time I spend in this respect is limited."*

Moreover, teachers also highlighted the other reasons for their lack of motivation to participate in IEE. For example, one teacher, T1, gave the following explanation:

*"I may not have considered engaging in publishing papers related to IEE, because [pause]there are requirements for publication of papers in the process of evaluating professional titles, but IEE does not belong to my professional category at present."*

This shows that participating in IEE-related work is not directly related to teachers' professional title evaluation, which reduces teachers' motivation to participate in IEE-related research. This view was supported by another teacher, T4, who added:

*"It takes a lot of energy to guide students to participate in the innovation and entrepreneurship competition, but it is not converted into workload like guiding graduation thesis, so guiding students to participate in innovation and entrepreneurship activities is more of a passion than a task."*

Teacher T4 further pointed out that participating in IEE-related work depends more on personal interest and enthusiasm. As Zhang et al. (2016) stated, in-service teachers' enthusiasm for participating in IEE is not high, mainly because many universities have not implemented supporting policies and plans. Therefore, they thought it was more like an extra task. Consequently, most teachers lacked the motivation to participate in IEE-related work actively and continuously. As a result, it is more difficult to solve the problem of a shortage of teachers.

***b) Training Shortcomings: Failure to Meet Actual Needs***

According to Abouelenein and Mohamed (2016), there is a need for teacher training based on improving the creative ability to face their teaching and research demands, especially to adapt to the adoption of high-quality education standards in their professional fields. However, most teacher participants seemed dissatisfied with the type of training they had received, and they pointed out different problems and needs. This is made clear in the following excerpts:

*"Our university has invited experienced teachers from other universities to train and improve the quality of teachers. There is no training on specific theoretical knowledge. I think this is what I lack."*

Besides that, another teacher, T3, mentioned that the training content lacks the sports discipline content:

*"I feel that there are still a few pieces of training that can improve my innovation ability in sports. For example, how to effectively integrate sports disciplines with innovation and entrepreneurship? I'm trying, but I'd rather have the opportunity to learn from others, such as experts in related fields."*

In addition, unlike these teachers, the other two mentioned that they lacked practical experience and hoped to have practical training opportunities. Teacher T1 gave her opinion:

*"Although I majored in business management, I went to work at the university immediately after graduation. I think I need more opportunities to go out for practice and training."*

This view is further supported by another teacher, T5:

*"I think a big problem is that I don't have enough grasp of the frontier of the industry. Maybe more from the internet to get information, read some literature, and discuss with colleagues."*



The above excerpts show that teachers are dissatisfied with their training experience. In other words, the training provided does not fulfill the actual needs of the teachers. However, research to date has tended to focus on the integrity and unity of training content (Zhou & Xu,2012; Winarno,2016; Chen, 2017) rather than personalized customization. The data in this section reveals the different training needs of teacher participants because a significant feature of the teachers participating in the IEE is that they have diverse professional backgrounds and work experiences. Thus, it is evident that more than just generalized training is needed to achieve the purpose of improving teachers' quality.

## **B. Curriculum Planning**

The development of the curriculum appears to have lagged in the development of practical activities, and the design and arrangement of the curriculum may still be in the initial stage. The problems faced by the sports university in curriculum planning are reflected in the following two parts: a) lack of due recognition and b) shortcomings in systematicity and pertinence.

### ***a) Unclear Discipline Positioning: Lack of Due Recognition***

The development of the IEE curriculum needs the support of the corresponding discipline field. However, China's IEE is the product of the promotion of government policies rather than the development of universities themselves, and there is no solid disciplinary field as the foundation for IEE (Mei & Symaco, 2020). The following excerpt taken from the interview with an administrator reflects the tense situation:

*"If we want to offer face-to-face courses dedicated to innovation and entrepreneurship, we will still face many problems. Our university does not have a special IEE teaching and research section, so it is a big problem to which department or faculty the relevant courses belong."*

A1 pointed out that it is still inconclusive which teaching and research section IEE-related courses belong to. This suggests that IEE has no clear discipline orientation at this university. The development history of the IEE discipline field in Chinese universities is relatively short. As Hua (2019) stated, it has yet to have a clear professional orientation, which leads to the curriculum construction of IEE in some sports colleges and universities still in the exploratory stage. Another teacher, T6, mentioned the focus of discipline construction in sports universities:

*"Our discipline construction does not involve IEE. Moreover, there is not much economic or management content in the course, and only a few majors are involved."*

This indicates that sports universities have disadvantages compared with comprehensive universities, with a narrow scope of discipline construction and a lack of foundation for developing IEE-related courses. Many comprehensive universities first promote IEE-related courses through faculties of business or management and then further develop interdisciplinary new courses in various departments

(Z. Gao et al., 2016). However, sports universities generally do not have specialized business or management departments and focus on developing sports disciplines. Consequently, sports universities are faced with relatively more significant challenges in the process of developing IEE courses.

Therefore, IEE, which was developed without relying on the perfection of related subject knowledge in the sports university, is more like extracurricular activity in students' eyes. The following excerpt from the focus group discussion proves this point:

UG1: *"I may think of competitions first, because I feel that innovation and entrepreneurship are not like knowledge, but more like extracurricular activities."*

UG4: *"That course doesn't have much theoretical knowledge; it is more like enlightenment and encouragement."*

IEE practical activities should be based on the IEE curriculum as an extension and supplement of the curriculum. However, the development of the curriculum has not kept up with the rapid growth of practical activities. According to Chen et al. (2018), if the IEE only relies on competitions, lectures, and other Second-Class activities to publicize and carry out, it will be challenging to become a part of the mainstream education system to benefit all students. Thus, this will probably make IEE only at the edge of disciplines and make it challenging to promote curriculum construction.

#### ***b) Shortcomings in Systematicity and Pertinence***

The setting of IEE-related courses in the sports university first manifested problems in systematicity. For example, teacher T7 thought that the online course Innovation and Entrepreneurship Foundation was related to the lessons she taught because both involved the entrepreneurial part. However, the two courses had not yet connected regarding time and course content. Thus, the order and content of courses related to IEE need to be further adjusted and improved.

Another teacher, T1, mentioned the lack of relevant practical courses. *"For some interested students, there is a lack of systematic guidance and follow-up, so their ideas are usually not put into practice."* The present content of IEE courses is more at the primary level, but students who are interested and have ideas need professional courses that can further improve their innovation and entrepreneurship ability, which reflects the lack of content integrity of IEE courses. In line with previous studies on IEE-related courses, emerging courses in Chinese universities generally have the problem that the courses are independent and scattered and are not well-structured (Lin, 2016; Ding, 2017).

In addition, the pertinence issue of the IEE curriculum was manifested in how to better apply IEE courses for students in sports-related majors. Another teacher, T2, pointed out this issue:

*"IEE courses should be oriented to students of different majors. But there are some majors that I know less about, such as martial arts or sports training, so there are also relatively few cases that*

*can be taught in the entrepreneurship part. Sometimes I feel that I can't provide more specific guidance."*

As a result, if the teaching content of the course is not targeted, the teaching effect and practicality will probably be affected. For instance, an online elective course related to IEE has similar problems. Student UG2 had this to say, *"I also took the course of Innovative Thinking Training online, but to be honest, I don't think it is beneficial because I still don't know how to combine it with my professional knowledge."* Similar findings have been reported by Lin (2016), who stated that IEE courses are mainly in the form of elective courses or general courses, so there is often no clear distinction in teaching objects. The result of this is the teaching effect of the courses may not be guaranteed.

### **C. Material for Teaching and Learning**

The teaching and learning material for a university to implement IEE refers to the provision of corresponding teaching hardware facilities as well as the guarantee of funds. The sports university seems to have problems with inadequate teaching and learning material in implementing IEE. It is embodied in two aspects: a) teaching and learning facilities for IEE, b) funds source.

#### ***a) Insufficient Supply of IEE Equipment and Infrastructure***

Several teachers and student participants pointed out that the university did not provide adequate teaching equipment and space dedicated to IEE. For example, teacher T1 said:

*"Innovation and entrepreneurship courses are in great need of professional equipment, such as simulation facilities for students to experience and simulate training, but [pause] all these are lacking."*

This appears to indicate that hardware equipment is not provided for implementing IEE. Previous studies have shown that the cultivation of innovative and entrepreneurial talents requires the optimization of teaching facilities in colleges and universities since modern laboratories and intelligent teaching equipment can provide students with a more intuitive experience of the situation and increase the acceptance of knowledge (Wang et al., 2018; Hu et al., 2019). Besides that, there is a lack of venues for teachers and students to discuss their innovative and entrepreneurial projects:

UG1: *"If we want to discuss the project, we will take turns finding an empty classroom. Sometimes the classroom is full, so we have to wait until evening."*

UG4: *"I remember one time we were in a hurry and there was no suitable place."*

UG2: *"In the past, when we discussed the project, it was delayed for a long time because we had difficulty finding a suitable place. Only after the project settled in the Innovation and Entrepreneurship Park did it have a fixed place."*

Students can only discuss their projects in unoccupied classrooms or teachers' offices. This is probably a problem in implementing IEE in this sports university.

#### ***b) Shortage of Funds: Imperfect Source Structure***

The single method of raising funds appears to bring difficulties to the long-term development of IEE. On the funding sources for IEE, administrator A2 had this to say:

*" It depends on financial allocation. Individual departments have received some sponsorship, but it can only be regarded as a case and not specifically used for IEE. How to raise special funds for IEE through multiple channels is also an issue we are considering. "*

This suggests that there is only a single source of funds for IEE in this sports university, which mainly depends on government financial allocation at present. Moreover, according to administrator A1, *"Funds have to be used for the introduction of high-quality courses, inviting experts and scholars to give lectures, organizing competitions as well as training for participating instructors."* Public universities determine their work plans according to the government's financial input budget (Luo, 2017). However, the existing IEE funds cannot meet the actual needs of students for entrepreneurial activities, which weakens the enthusiasm of students and affects the quality of IEE to a certain extent. Thus, making better use of existing educational resources for sports universities to provide good teaching and learning facilities is a problem worthy of attention.

#### **D. Diversification of Cooperation**

Cooperation among stakeholders plays a vital role in effectively promoting the sustainable development of IEE (Mei & Symaco, 2020). The theme of diversification of cooperation spontaneously emerged from the interviews as respondents mentioned the problems caused by the lack of various forms of cooperation in implementing IEE. It includes both the diversity of partners and the diversity of contents. This theme is presented in two parts: cooperation with enterprises and cooperation with universities.

##### ***a) Lack of Cooperation with Enterprises***

The partnership between the university and enterprises in IEE does not seem to be well established. This was made clear by teacher T1:

*"We have cooperative practice bases, nearly twenty enterprises, but the practice bases are only the platform for students to do an internship, and do not include cooperation in innovation and entrepreneurship teaching."*

Even though this university has a good foundation for collaboration and has established cooperative relations with many companies, the scope of its cooperation is relatively narrow. According to another

teacher, T7, the lack of cooperation made the projects lose an excellent opportunity to attract capital and technology as well as connect with the market:

*"We had no working relationship with enterprises in the design and incubation of innovative projects. Technical or financial support cannot keep up. Thus, what we may not be relevant at all to the company. "*

In addition, some student participants who have joined the enterprise internship have expressed their demands in other areas:

UG5: *"During the internship, we usually hold sales positions. Unfortunately, there are no exposures to the operation and management of the company."*

UG2: *"I am now working as an intern in XX Health Club. In the process, I have seen some problems and developed some solutions. I think it would be better if I had more such opportunities. "*

This further highlights the shortcomings in the level of cooperation between universities and industry, as there is no intelligent partnership between the university and the companies. As a result, in carrying out innovation activities, the sports university seems to have missed an opportunity to obtain funding, technology, and guidance from the industry in the past. This statement is similar to the research of Mei and Symaco (2020), which shows that the lack of communication between university staff and enterprises also means that universities often cannot understand the actual needs of enterprises.

#### ***b) Lack of Cooperation with Universities***

When it comes to cooperation in IEE, most studies focused on the relationship among universities, enterprises, and government under the Triple Helix model (Talab et al., 2020; Ferreira & Steenkamp, 2015). Nevertheless, there seems to be another cooperation that is overlooked, which is the intercollegiate cooperation among universities. Sports universities that are dominated by a single discipline should pay special attention to developing cooperation with other universities in implementing IEE. For example, teacher T5 said:

*"There is a specialized economic university so close to us, but there are not many opportunities for us to communicate. And we are located in the university district, and there are many nearby universities. Including myself, I hope to have the opportunity for more effective communication."*

This indicates that this sports university should have taken advantage of its location to strive for cooperation opportunities with neighboring universities, especially finance and economics universities. It is an ideal opportunity for students and teachers to communicate and learn from one another.

However, some student participants thought it impractical to cooperate with students from other

universities. For example, student UG1 said: *"If the project wins the prize, it will also involve the issue of bonus and certificate. Now we are all participating in the competition in the name of our university."* This shows that the partnership requires in-depth communication at the university level, such as establishing a deep integration mechanism of teachers' collaborative research and joint guidance between two universities and improving the level of innovation and entrepreneurship education.

### **E. Managerial Efficiency**

Managerial efficiency can be expressed as how well management departments or managers can use organizational resources to achieve their goals (Nwoka & Thom-Otuya, 2013). Although almost all the respondents believed that the sports university had given more attention to the IEE in recent years, some teacher respondents still pointed out the lack of coordination of the management departments in handling IEE work and the failure to take adequate measures for using the relevant resources. The problem is described in two parts: a) lack of cohesion in work, b) low efficiency of resource utilization.

#### ***a) Lack of Cohesion in Work***

The whole organization lacked team consciousness and coordination spirit, leading to inefficiency and resource waste (Gupta, 2022). To overcome such problems, this sports university has formed an IEE working mechanism jointly managed by the Academic Affairs Office, the Student Affairs Office, and the Youth League Committee, as well as various faculties. However, since IEE involves multiple departments, the work cohesion problem still exists. This was highlighted by T1:

*"...the setting up of IEE courses and the launching of competitions, as well as the management of the Innovation and Entrepreneurship Park are all independent. Therefore, I feel that the organization and development of IEE are scattered."*

T1 pointed out that the implementation of IEE involves different departments and presents an independent state in dealing with the issue of IEE. This suggests that the lack of unified management and effective connection in carrying out IEE activities is likely cumbersome and inefficient. Hence, some teachers suggested that a specific department could be established to implement IEE.

In contrast to the teachers' opinions, administrators explained that the current working mechanism has its rationality as to whether it is necessary to establish a specific department to better realize the cohesion of IEE-related activities in the sports university needs further consideration. Despite this, there are still two issues that deserve attention. First, IEE-related teaching activities involve multiple departments, so there is a need to be effectively connected to avoid red tape and inefficiency. Secondly, since IEE activities cannot wholly unify the model and the same steps in different universities (Zhang et al., 2016), sports universities should constantly improve the working mechanism and mode of IEE according to their situation to better achieve its goal.

### ***b) Low Efficiency of Resource Utilization***

The management efficiency of the organization largely depends on the practical application of resources (Cheymetova & Scherbakov, 2017). Hence, the problems of teacher resources, material, and financial resources, as well as cooperation problems encountered in implementing IEE mentioned in previous themes, also reflect the issues in the management efficiency of IEE-related matters.

Some studies have shown that the full implementation of IEE needs the support and promotion of various resources, and the acquisition of abundant resources is usually inseparable from cooperation among stakeholders (Li et al., 2016; Feng & Zhao, 2016; Jin, 2016; Dong, 2020; Qian, 2021). For the sports university, whose IEE development is still in the early stages, the big problem is that the existing educational resources need to be more effectively and fully utilized.

## **5. Conclusion and Implications**

The findings of this study provide a description and analysis of the problems encountered in implementing IEE in the sports university. This study found that the implementation of IEE in sports universities not only shows similar common issues with other universities but also shows its identity. Supporting the views expressed in previous studies, the sports university also encountered problems such as unclear curriculum planning, shortage of teachers, insufficient funds, and lack of cooperation with enterprises in the process of implementing IEE. However, sports universities also need to recognize their own identity. The lack of cooperation is also reflected in the need for more collaboration with other universities that have implemented IEE, especially universities specializing in finance and economics. Besides that, the inefficiency of resource utilization and the lack of cohesion in work all reflect the problem of the managerial efficiency of the sports university in dealing with IEE-related issues. Consequently, sports universities should fully recognize their shortcomings, grasp their existing advantages, and take more targeted measures to implement IEE.

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