Academic Exploration and Advanced Thinking: An Ethnography in the Academic Growth of Sports Doctoral Students

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Abstract

Background *Doctoral students are quasi research-oriented scholars who should have a clear understanding of the entire process of scientific research and possess high-level academic achievements during their graduate studies. However, in reality, doctoral students still face many academic confusions, the academic community rarely pays attention to their academic thinking development process from a thematic perspective, and there is a lack of research on the impact of academic exploration on thinking development.*

Methods *Only by exploring the academic thinking training of sports doctoral students from the thematic perspective of anthropological case ethnography can we reveal the essence of academic inquiry of doctoral students and the impact of academic inquiry on the advancement of thinking.*

Results *Research suggests that the academic exploration of sports doctoral students is a complex process of thinking advancement. From the initial stage of cultivation to independent academic exploration, there will be multiple stages such as confusion, starting, transformation, and deepening of thinking; the cultivation of academic thinking exhibits different characteristics with different stages of academic exploration.*

Conclusion *In the initial stage of cultivation, academic writing is the focus, and academic exploration is equated with academic research; Gradually transitioning from academic writing to metacognition of academic thinking in the middle and later stages of training, focusing on the essence of academic research, crossing the limited thinking mode of academic writing, and nurturing professional issues; Throughout the entire training period, academic exploration and advanced academic thinking are not absolutely increasing, but gradually returning to the starting point of academic exploration and the ontological level of academic research, and ultimately forming the thinking ability to independently conduct academic research.*

Keywords Doctor of Physical Education,Doctoral Students, Academic Growth, Academic Exploration, Advanced Thinking, Ethnography

1. Introduction

Human beings are rational animals. This is the fundamental difference between humans and animals, indicating the importance of reason for human beings as beings, and the essence of reason lies in thinking. Some studies have pointed out that effective use of thinking models can improve students' academic achievements [1]. However, inappropriate use of thinking not only fails to solve problems, but also leads to some new problems [2]. Therefore, how to improve thinking ability and how to effectively apply thinking has become a problem that humans must solve in exploring their own development. However, due to the complexity and diversity of human thinking abilities, the exploration of thinking abilities is endless. In these thinking skills training, academic exploration is an effective way to have a positive impact on people's critical

thinking, creative thinking, and reflective thinking. Throughout the entire historical process of human evolution and personal life, in addition to the natural growth of the material body, human thinking is constantly changing, but change does not necessarily mean improvement. The improvement of thinking requires specialized training. Academic exploration, as a form of labor for human knowledge construction, promotes the development of human thinking in a unique way. In terms of education, doctoral students, as the highest stage of specialized training in human thinking, focus on the training of academic thinking, which will inevitably have a significant impact on the improvement of human thinking in this process. The purpose of this study is to explore the impact of academic exploration on thinking ability and reveal the subjective significance of the impact of academic exploration on thinking ability. Taking individual cases as the research object, using anthropological participation and observation, this research goal is achieved through long-term contact and communication with the research subjects. The specific exploration questions include what stages did the academic exploration of sports doctoral students go through? What are the characteristics of each stage? What do you think about at each stage? What changes have occurred in thinking during academic exploration?

2. Literature Review

The purpose of academic research is knowledge innovation, but achieving knowledge increment on human knowledge requires enormous efforts. Therefore, academic research places higher demands on thinking ability, requiring not only mastering the basic knowledge of predecessors, but also obtaining new knowledge through technological achievements. This also indicates that academic exploration is a complex and systematic thinking cultivation project, which inevitably leads to a comprehensive improvement in the thinking abilities of actors involved in academic exploration. In the international academic community, there are many studies on the improvement of thinking ability, but these studies are mainly related to specific majors. Research has shown that using the Ricosre learning model can help improve students' critical thinking abilities, and metacognitive learning strategies can also improve students' creative thinking abilities [3-4]. Academic self-efficacy in informatics can improve computing ability [5]. Some studies have also pointed out that thinking patterns, mathematical achievements, and mathematical attitudes are three important factors that affect computational thinking abilities [6]. Spatial thinking abilities can be cultivated in the fields of science, technology, engineering, and mathematics. From this, it can be seen that thinking ability is closely related to majors, and it is limited to the practical activities it engages in. In this sense, thinking ability is more about cultivating students' professional thinking ability [7]. Under this logic, academic research mainly focuses on cultivating students' academic thinking, and academic ability has become a special ability that needs to be cultivated separately. Among them, critical thinking, reflective thinking and creative thinking interact, which has a positive effect on academic ability. Some scholars have also studied the relationship between critical thinking and writing. Critical writing can improve students' thinking ability [8]. Of course, The cultivat-

ed thinking ability can also be transferred to other fields and have a certain impact on other fields. For example, design thinking is conducive to empathy, definition, conceptualization, prototyping and testing of learners' learning experience in the field of medical education [9-10]. In the domestic academic community, in the research on the improvement of thinking ability through academic exploration, Research has pointed out that "undergraduate scientific research and research method courses can significantly promote undergraduate critical thinking ability, and their different types of practice have heterogeneous effects on different students' critical thinking ability. Research participation can significantly affect the appreciation of undergraduate critical thinking ability, and the more participation, the greater the appreciation, the greater the impact on the host of research participation,"But the purpose of academic exploration is not only to improve students' critical thinking ability, but also to train academic thinking, so as to improve the overall thinking ability [11-12]. Therefore, forming academic thinking is also the ultimate goal of academic exploration.

The research on the impact of academic exploration on academic thinking mainly takes graduate students as the starting point of research, and regards academic thinking as an important aspect of graduate training. Some studies have pointed out that there is still a problem of weak academic thinking ability among academic master's students in China while doctoral students have the situation where supervisors specify paper titles and transactional thinking replaces academic thinking "The quality of course content in academic practice needs to be improved [13-15]. At the same time, studies have also pointed out that there are certain differences in the cultivation of academic thinking between the East and the West, Moreover, the cultivation of academic thinking in the West dominates[16-17]. In order to solve the problem of academic thinking, various ways can be used to improve academic thinking abilities [18]. Micro academic training classrooms can improve the daily academic efficiency of graduate students [19]. Some studies have also constructed a pyramid model for the cultivation of graduate academic literacy through qualitative research methods [20]. In summary, both the international and domestic academic communities have affirmed the importance of thinking ability, which can also have a positive impact on professional achievement. However, research is conducted from a macro level or an objective perspective. For individuals with thinking ability, how to think, what are the key issues to focus on when thinking, and how to solve them themselves, How to solve academic confusion and other issues are rarely addressed. Therefore, this study explores the impact of academic exploration on students' thinking abilities from the perspective of the subject's thematic perspective, with the aim of exploring the impact of academic exploration on students' thinking abilities from the perspective of actors.

3. Research Design
3.1 Research Subjects
The research object of this case is a sports doctoral student who was officially admitted to a professional sports college in 2020. The author and the research subject were classmates who were

admitted to the same group of doctoral programs. They were assigned to the same dormitory during their registration in October 2020 and got to know each other accordingly. The research subject has been studying and training in sports schools since elementary school, and is a national second level athlete. In 2005, he was admitted to China's professional sports colleges to pursue a bachelor's degree in the form of national sports singles. In 2009, he was admitted to a normal university to pursue a master's degree. After graduating with a master's degree in 2012, he entered his work unit. After working for 8 years, he was admitted to a sports doctoral student in 2020 (as shown in table 1 below). The research object is not an interdisciplinary doctoral student in sports, and belongs to a typical "native" sports specialty student. It can be used as a typical case for cultivating high-level talents in the field of sports. After consultation with the research subjects and obtaining their consent, this study was conducted.

Name	Gender	Age	Teaching experiences	Educational Background
HYD	Male	36 years old	8 years	1997—2005:Sports School (Primary to High School) 2005—2009:Professional Physical Education Institutions (Undergraduate) 2009—2012:School of Physical Education, Normal University (Master's degree) 2012—2020:Employment unit (physical education teacher) 2020—2023:Professional Physical Education Institutions (PhD in Physical Education)

Table 1: Introduction to the research object

3.2 Data Sources
The data for this study is sourced from the academic diaries (or insights) of the research subjects from October 2020 to April 2023. These original diaries total 27856 words and are all academic diaries spanning two years and four months since the enrollment of the research subjects. These diaries involve the first year centralized doctoral training stage, the topic selection, pre research stage, and project proposal stage. Currently, the research subjects are in the doctoral thesis writing stage. These academic diaries mainly involve the original records of the research subjects on how to conduct academic research, how to conduct academic writing, and how to think, all of which come from the first-hand information of the research subjects. During this period, the researchers had multiple exchanges of ideas with the research subjects, enabling them to better understand their thoughts and true concepts of academic exploration from a thematic perspective.

3.3 Data Analysis
Due to the fact that this study did not discuss with the research subjects in advance to use their academic diaries as the analytical text for the study, and only learned about their academic diary habits during a casual chat, the academic diaries of the research subjects did not indicate a specific recording date, which also caused some difficulty in the specific staging of this study. Therefore, considering the lack of date records in the academic diaries of the research objects, this study adopts the form of ethnography to describe without changing the recording order of the academic diaries, presents the materials comprehensively, avoids guest evaluation as far as possible, and divides the original diaries into the following stages according to the characteristics of the presentation of materials in the academic diaries, with a view to presenting the complete process of academic exploration and thinking advancement of sports doctoral students(as shown in table2 below):

The stage of academic growth	Academic exploration and advanced thinking
The Comprehensive Myth of Academic Growth	Academic topic selection, academic materials, and academic expression
The initial stage of academic growth	Academic Thinking, Theoretical Framework, and Subject Object Thinking
The Transformation Stage of Academic Growth	Academic Paradigm, Academic Argument, and Writing Practice
The Ontology Turn of Academic Growth	Research ontology, thinking mode, and thinking enhancement
The Deep Expansion of Academic Growth	Academic Essence, Scientific Essence, and Essential Analysis
Deepening the Thought of Academic Growth	Academic Theory, Academic Phenomena, and Academic Essence
Professional implications for academic growth	Academic Theory, Professional Fields, and Research Depth
Return to the Origin of Academic Growth	Problem awareness, material sources, and academic innovation
Reflections on the Essence of Academic Growth	Academic Thinking, Problem Essence, and Academic Independence

Table 2: The Stages of Academic Growth for Sports Doctoral Students

4. Academic Growth Course of Sports Doctoral Students

4.1 Comprehensive Myth of Academic Thinking Academic Topic Selection, Academic Materials, and Academic Expression

For sports doctoral students, although they have already gone through three years of training (two years of professional and master's degree) before entering the doctoral program, or some doctoral students have been working in their work units for several years, there are still many confusions about how to conduct academic research after entering the doctoral program, so the academic exploration at this stage is also in a comprehensive exploration period. In this stage of academic exploration, doctoral students in sports also have a relatively macro level of thinking about academic writing, often exploring from aspects such as "writing topic selection, theoretical application, literature management, material collection, and material application and expression". Correspondingly, the academic thinking ability at this stage is at a relatively low level. After HYD officially entered the doctoral stage in 2020, under the guidance of his supervisor, he prepared to conduct research on his major from the disciplines of anthropology and sociology, which he had never been involved in before. Therefore, for HYD, these two disciplines belong to interdisciplinary research and require a lot of relevant knowledge to be supplemented, invisibly increasing the pressure of pursuing a doctoral degree. On this basis, the initial diary focused more on how to write, rather than on how to conduct research, and only regarded academic research as writing. HYD wrote in academic diary:

Before reading the books "What is Anthropology" and "What is Sociology", my writing mainly focused on descriptive writing, infinitely expanding the content of specific descriptions. After reading the above two books, it suddenly became clear that reading and writing should focus more on the meaning behind a descriptive phenomenon, rather than simply describing what the fact is. Within the research scope of sociology and anthropology, there are millions of phenomena in society. However, in terms of topic selection, choosing a certain phenomenon may involve all the underlying meanings. Therefore, the topic selection does not need to be too large, but rather whether the significance behind this phenomenon can be discovered through this question. This is an issue that should be noted in future writing, and it is also the reason why I was unable to write high-level papers in the past. （Why should the topic of writing be small）

Insight point: Theory is to explain phenomena, without theory, there is no foundation. Have materials first, then find theoretical support. If there is a theory first, then it is necessary to collect data according to the concepts in the premise theory. It is necessary to balance the relationship between searching for materials and existing theories reasonably, and to grasp which comes first and which comes later. (Application of Thesis Writing Theory)

Problem: I know how to read materials, but I don't know how others use materials in writing. Solution strategy: Paper refactoring is to find a good paper, download all the literature in this article, review these literature, and then see how the author handles these materials. Advanced strategy: Rewrite a new paper according to the author's ideas based on the cited literature, and see how it is

written? Through multiple exercises like this, identify the gap between oneself and Daniel, and then further seek solutions to the problems in one's writing. Write by imitating one article every week. （How to understand the relationship between materials and writing）

Sort out the relevant general literature library and make a good index. Do some work every week, and make sure to have keywords for easy search. This is a crucial foundational step and also the foundation for future paper writing. The database includes books, papers, English literature, etc.Recent summary: weekly imitation, establishment of a general database, writing of small papers, and theoretical learning. (Management of Literature)

Writing a paper is a creative process, but after nearly a month of continuous exploration, a writing method has been found. Firstly, when reading, it is important to consider one's own problems and reconsider the problem when taking a break, so as not to make the reading aimless. Next is the question of what to read? Be sure to examine the author's ideas and perspectives from the perspective of others, while also considering the relevance to your own research topic. At the same time, it is necessary to combine one's own knowledge structure for association. What other aspects have not been mentioned by the author, and why? What aspects should I explain myself from, and can I explain it effectively? Why didn't the author think of it. Once again, when reading, it is important to follow the author's logic to examine whether the writing is hierarchical, whether the material is consistent with the discourse subject, and how the author uses this material. If it is a good book or paper, the viewpoint and discourse must be very consistent, and there is a progressive relationship. Here is a question of how to end the progressive end. Personally, I think it's enough to clarify the problem and not expand too far, so that I won't be able to retrieve it later. (Writing of Thesis)

This is to solve one's last problem: I have already understood how to write a question a while ago, which is to directly throw out the question, expand the word, connect sentences, and progress layer by layer based on the thrown question, until I have explained the problem clearly. Of course, I can expand infinitely, but I should combine with the problem I threw and not deviate from the topic. Regarding the issue of collecting data: It has been unclear before why and what information should be collected? When collecting data, you should collect according to your own research questions. For example, take collective consciousness as an example, you should collect data related to collective consciousness. After collection, the data should be classified, including not only some actual cases but also some author's viewpoints. Finally, let me talk about the issue of data utilization: The writing of a paper should be based on the collected data. Without data, it is difficult to write. Historical materials are indeed a good material, and interviews can also be done. If I had the corresponding information, it would be much easier to write. Innovation of the paper: The innovation of the paper first requires a review of previous research, with the main purpose of understanding the situation of previous research. Of course, the review mainly focuses on the author's conclusion, outlook, and based on this, propose one's own views. To put forward one's own viewpoint, it is necessary to collect new

data to demonstrate it, and new viewpoints can be sought from interdisciplinary perspectives. Therefore, reading and writing a paper is a whole, mainly based on the author's viewpoint, and just skim through the discussion or analysis process in the middle. (This is also someone who once said that when I look at a paper, I mainly need to look at the conclusion, and there is no need to look at the middle process.) Conclusion: After selecting a topic, conducting research is actually the process of collecting data, discussing from which perspective, and then drawing conclusions. Revising a paper also follows a process of checking if one's viewpoint is innovative, if the discussion process is based on evidence, and if the conclusion is based on the material. The existing problem is that the data collection is blind and has no theme, and the data collection is asymmetric with my own opinions. Although some opinions have been put forward, they were thought out at a stroke of the head. Of course, this is not wrong, but the arguments I have searched for are not enough. This is also the next step that needs to be corrected. The most crucial thing now is that I have only expanded and written some sentences based on the author's viewpoint, but the search for evidence is insufficient. Find evidence to connect well with what you have written. The question of framing is very simple. In fact, when determining the research field, it is best not to include framing. First, collect data according to the topic and determine the writing framework based on the data. Instead of first listing the framework when collecting data. This is very important. (Collection and application of materials)

I have been thinking about writing since I started school, and I have consulted many teachers. Today, I finally have a connection with this issue. Perhaps this is the biggest achievement in the near future and also a result being sought. Before getting admitted to the PhD, I had been struggling with writing. All writing was about writing whatever I wanted with just a slap in the head, and no matter how well the data was collected, I ended up not knowing how to write, or even unable to continue writing. Sometimes I had to search for new information, and the results were not closely related to the current topic. Although I learned to search for writing topics from other books during the summer vacation under the guidance of my teacher, this step is not a problem. However, when writing, I cannot conduct further research based on others' research. As a result, I collected two papers and started writing. However, it is very common for me to be unable to continue writing due to insufficient information. It was not until the end of this semester that I finally figured out this problem. It's actually quite simple, it's just an extra shift—— When it comes to writing based on materials, never start writing without materials, otherwise it will only be a row of ideas. Thinking about this step actually means that all the writing questions have been figured out clearly. What should I do specifically for writing? The first step is to identify the field of interest, collect information in this field, focus on research questions, continue to collect research questions, and finally determine the writing topic based on the collected data. Simply write according to the materials. Without data, there is no way to write. Collecting data is the most important thing. Don't write out of thin air. If you write in this way, you must have some theoretical guidance. This step can be used in research strategies. When the research topic is determined, whether the text data or field research data are used, they are all to collect data. The next step that needs to be improved is the issue of writing skills. It is important to pay more attention to how others write and how they use materials, which is the main method of reading papers. (Writing is a key text expression based on data collection and categorization)

From the diary of the above academic exploration, it can be seen that the researcher equates academic research with academic writing. Although he gained some inspiration while reading literature, he still cannot explore the essence of academic research. In fact, academic exploration is a research process, while academic writing is the final presentation stage of research, so the two cannot be equated. It can also be seen that for sports doctoral students who have just entered the field of academic research, they are prone to falling into a research misconception that academic research is equivalent to academic writing. Therefore, for graduate students who remain at this level, their thinking level is still in the initial stage of academic exploration. Among them, the most critical issue is the lack of exploration of problem awareness, which focuses on technical issues such as how to collect and apply materials. There are various reasons why graduate students may not be able to conduct research, but the main reason is related to the academic training before the HYD PhD, and they do not fully grasp the essence of academic research. Research has pointed out that the active elements for improving graduate students' academic abilities include academic interests, academic training systems, and academic ecology [21]. From this, it can be seen that academic training is a continuous process. Prior to the doctoral stage, it is necessary to consolidate the basic academic abilities related to academia, so as not to re supplement the basic academic abilities in the doctoral stage, which may affect the further improvement of academic thinking in the doctoral stage.

4.2 The Initial Stage of Academic Thinking Academic Thinking, Theoretical Framework, and Subject Object Thinking

After a period of academic exploration, reading relevant literature, communication among classmates, and cultivation of doctoral courses, sports doctoral students have begun to have a certain understanding of academic research, gradually stepping out of some literature, focusing on theoretical frameworks related to academic thinking, the expression of subject and object in papers, and entering the initial stage of academic thinking. The characteristic of academic thinking in this stage is the gradual transition from the external form of the paper to the exploration of one's own thinking, and the beginning of attention to theoretical issues in academic exploration. It is a transformation process from the outside to the inside, which also marks the beginning of academic thinking for sports doctoral students. HYD continued to write in his academic diary:

Writing is a process of controlling one's own thoughts, which includes how one thinks, the logic of thinking, and how to verify it. Therefore, writing, reading, or reading a paper, should be a similar process of contemplation, just two different aspects of thought. When reading, there are basically no obstacles to clearly distinguishing the following points: firstly, to distinguish the

author's viewpoint, secondly, to distinguish the arguments, and thirdly, to clearly distinguish the opinions and comments cited by the author. As long as these points are strictly distinguished, there is no problem, and the author's writing ideas can be well grasped. However, it is important to emphasize how the author comments when citing others' viewpoints, This is very helpful for writing your own paper. This is the best way to effectively combine writing and reading, which has been achieved through so many studies this semester. When the two are combined, progress will be very fast. In this way, reading is writing, and writing is reading, without any difference. Just like learning English, reaching the highest level is to only have one thing to write in English. Copying is just to see how others express themselves, and the paper also includes two parts, One is to see how others write it, and the other is to write it yourself. (What is in your mind when reading a book or paper)

No matter which subject it is, it will involve numerous theories. In just four years, there are not many theories that can be truly learned. However, how to learn numerous theories in a limited time has to be a question of deep thinking in writing metacognition. For interdisciplinary studies, learning numerous theories can be challenging. However, it is possible to summarize all theories in a skeleton manner through a knowledge graph, summarizing the main theoretical elements, and memorizing unfamiliar concepts. This allows for learning more theories, as it is now clear how theories are applied in writing. Therefore, what needs to be done now is not to read books for a long time, Of course, reading books is necessary to understand how the author discusses and organizes the structure of the article, but theoretical graphs can better guide reading. English papers can also be studied in this way. (How to Learn Theory)

The construction of a paper framework directly involves the argumentation process of the paper, and how to construct a paper framework has always been a problem that troubles me. Today, I accidentally read a paper by an editor at Beijing Normal University on how to evaluate the quality of papers, which talked about how to construct a framework for the paper. Through careful reading, the author's viewpoint is that when writing a paper, the first step is to define the concepts. Only when the concepts are clearly defined can the research work of the paper be carried out. Otherwise, if one does not know how to carry out the research, the collected data will be useless. Only by defining based on one's own concepts can one better collect data. Regarding the construction of the paper framework, the author believes that it is based on understanding the concepts and developing the framework on the basis of the concepts, that is, to develop the paper framework through a generic+species approach. The concept is the species of the paper, and the title below is the concept of genus. Each title is constructed in a framework based on this species+genus approach. This short article basically exposed my confusion about framework development. So when conducting any research, it is important to first have a clear understanding of the concepts, define them clearly, and then develop a framework. This approach is worth a try. In addition, the author also discussed the process of argumentation. Firstly, the situation where there is data but no viewpoint can lead to; The accumulation of paper materials, second is the lack of data support for viewpoints, which emphasizes the quality of the data. (How to Build a Framework)

Thomas S. Kuhn has systematically explored the paradigm of scientific research, emphasizing that there is a standardized research model in scientific research. Abandoning norms is equivalent to no longer studying the science prescribed by norms. However, he quickly negated the irreversibility of scientific norms. As academic research, the starting point of scientific research is firstly problem consciousness, which is for the innovation of knowledge [22]. However, from HYD's diary, it can be seen that although thinking about how to think has already begun in the early stages of academia, there are still significant misunderstandings about how to conduct research, especially in the construction of the paper framework, where the issue of genus and species has not yet been fully understood. The relationship between genus and species is not a necessary condition for constructing a paper framework. The construction of a paper framework starts with the problem, rather than exploring the concept exploration as the starting point for constructing the paper framework. The purpose of the concept is also to accurately grasp the problem. Under the guidance of this erroneous thinking, HYD has always discussed concepts as the starting part of the paper for a period of time, and written them in the paper. This completely misunderstands the function of concepts, and concepts do not necessarily need to be written in the paper. Instead, they should first understand the connotation of concepts in problem exploration, so as not to misunderstand concepts in writing. Because concepts are a form of historical construction, only with a clear understanding of the history of concepts can we better understand the definition of this concept. Otherwise, we cannot achieve effective dialogue with the academic community, and the academic system cannot be established. Therefore, there is still a certain thinking bias in the understanding of academia among sports doctoral students at this stage, and they are still exploring what constitutes academia, and academic thinking is still in its initial stage.

The question here is, why is it still the beginning of the academic stage when it is clear that a doctoral student in sports has already passed through the undergraduate and graduate stages? This is because the talents cultivated during the doctoral stage need a spirit of free exploration, rather than relying solely on academic groups and mentors. Doctoral students should be able to independently identify, analyze, and solve problems. The talents cultivated during this stage pay more attention to the independence of academic research. After entering the doctoral stage, it also means that graduate students independently carry out research. This stage is more accurately the starting stage of independent academic research, rather than the usual initial stage of academic research. This phenomenon is just like Thomas S. Kuhn's discussion on the essence of the Scientific Revolution, the old research paradigm has been unable to meet the needs of effectively exploring the natural world, and the old research paradigm should be transformed through the Scientific Revolution to change this state [23].

4.3 Transformation Stage of Academic Thinking Academic Paradigm, Academic Argumentation, and Writing Practice

Thesis writing is the final presentation form of the achievements of sports doctoral students, and it also represents the academic level of the doctoral training stage. However, it is not easy to truly express the thinking of doctoral students through written form. Accurately expressing one's own thoughts has become a problem that troubles sports doctoral students. Therefore, after preliminary academic exploration, doctoral students in sports begin to think about the issue of paper writing, that is, how to express their ideas. They also start to think about writing paradigms in their field and how to demonstrate their viewpoints in the paper, in order to apply their previous knowledge of materials, theories, and other aspects to their writing practice. Therefore, at this stage, sports doctoral students will focus on the overall layout of the paper and the writing methods of each part. This stage is more inclined to pay attention to specific writing forms, which indicates that academic thinking has begun to shift to the stage of achievement expression, which has the psychological expectation effect of academic expression, or that self-efficacy is enhanced in academic exploration. HYD truthfully recorded the ideas for writing the paper:

When writing the preface of a paper, it should be a summary of the paper. If it is your own, it should be based on the author's writing purpose discovered in the author's paper, rather than the original sentence in the author's article. If there are more literature related to your summary, you can label the author. Remember that it is not the original sentence in the paper and it is best not to expand it. This also exposes one's own question, which is why the author wrote a sentence, listing so many years and authors. Before that, it was still a question, and I didn't even understand why so many authors would say the same sentence. In fact, not so many authors said the same sentence, but the sentence summarized by the author contained the common meaning of the other authors' articles. (Writing and Analysis of Preface Literature Review)

Today is a very significant discovery. When clarifying the object of study, it is necessary to first determine which theory to use to explain the problem. After finding the theory, return to one's own field under the guidance of the theory and collect data one by one to see which problems have not been solved. Then solve the unsolved problems through specific empirical analysis, which is the entire process of using research theory. (Major Discovery: How to Find Problems and Use Theory?)

Today's writing has made a great breakthrough in how to describe the research results of others. Once this issue is exposed, the level of writing can be determined. After facing a title, the first step is to analyze these literature, not to describe what others have described or who said it, but to directly describe the results of the analysis. For example, if several people have conducted research on a certain topic at the same time, it can be directly described as "there are many researchers who have studied how to solve this problem, and then list specific references." This is not what I used to say in my previous writing, Without their own analysis. （How to describe others' achievements）

Theoretical construction is the key to success in paper writing, which is manifested in the research framework of the paper.

However, this research framework is not a rigid imitation of the original framework of existing theories, which may lead to suspicion of a set of theories. The specific process of theoretical construction is actually a specific research process. The first step is to determine the research question, that is, to determine the dependent variable of the research and clarify the research question. Secondly, to determine the independent variable of the research and what affects the dependent variable, this step is the most difficult part and is usually a process of theoretical construction. Based on the research question, certain research theories can be used to determine the research independent variable. At this time, the determination of the research independent variable should be reasonable and evidence-based, The reason for using this variable should be sufficient, either because others have already studied it and it is more suitable for this study, which can be used for reference, or it should be determined based on practical experience. Find all variables to determine the most core variable. The third step is to construct one's own theoretical framework. Under the guidance of a theoretical framework, conduct literature search or empirical research to draw one's own conclusions. (Theoretical Construction)

How to argue sometimes directly determines one's research findings, as in research, one can infer research results that one may not be able to imagine through inference. Therefore, the argument of the paper is about the depth of the research results. How to conduct argumentation is not a simple accumulation of viewpoint data, but a gradually deepening problem. In argumentation, the first step is to present one's own viewpoint based on all the facts, which are their own evidence. To reach this point, it is only a brief description, which is the level of research that most researchers can achieve. This law can be discovered through surface information collection and other methods. For paper argumentation, it is not only about describing the problem simply, but also starting from a specific problem, Even every sentence is a research question in its own field, so these arguments need to be deeply analyzed around this issue. Usually, under the guidance of macro problems, we will step by step search for the cause of this problem. Sometimes, it takes multiple paragraphs to explore this problem clearly, which is the specific process of discussion, progressing layer by layer. （How to argue）

Taking advantage of the papers retired from the Sports Journal, I downloaded all the relevant papers I have published in this journal for the past 5 years to learn. In fact, I haven't learned much, especially since I remember very little. I mainly rely on their abstracts, and then I will have to make revisions based on one person's paper. But during this study, there was also a significant discovery of how to assess the author's writing level through the title. At the same time, inspired by this, a triangular paper thinking model was also summarized. There are three essential elements. First, we should develop our own discussion framework around the research object. What are the specific contents of the framework? What are the problems we need to study? What are the contents of this problem? We should arrange it under the framework of these contents. For example, if the research question is cultural identity, we should focus on cultural identity. (Title of the structural paper)

Although I have read a writing guide on literature review, the main focus is to present all of these materials, then read them one by one, extract research related to my research topic, and summarize them into a literature review. There are no issues with this aspect. But when we write, we often encounter vocabulary that we don't know how to write, and it's often someone who says it. When I read the literature review forwarded by Liu Xichuan today, I suddenly understood how to write it. In fact, based on the previous work, it is necessary to summarize and write about one's own themes. This way, it is more clear what others have written, not simply who said it, but what work these people have done in writing about this topic, and what problems still exist in these studies. After analyzing, write down these analyses. Of course, when reading literature, you should make excerpts based on the topic you want to study, so that they are relevant to your research topic. Otherwise, it will be of no use. Of course, it is not entirely useless, as excerpts from relatively good literature can serve as a supporting material. (Writing of literature review)

After understanding how to conduct literature review, a very important task is research, and the main role of research is the use of research methods. So research methods still need to be strengthened. Empirical research mainly focuses on research design and the question of what data should be collected. Involving methods such as survey forms or statistical analysis. How to analyze the materials after they are collected. The analysis of materials is first based on the materials obtained through one's own investigation. Of course, there must be an important research question before the investigation, which is the topic of one's own research. Collect materials based on this topic, and then analyze one's own topic on this basis. This is more convenient, but there are also studies that do not require a topic, and code them later. Discover your research topic. Conduct further research on topics with insufficient information until the information on this topic is fully collected. Next is the question of writing. Actually, I had been confused about how to organize these materials before, and through these days of familiarity with Nvivo, I have already uncovered all my confusion. To make a digression, why should we attach importance to theoretical reading and how to proceed with reading? Theory is the deep reading problem we study, so theory is for later use and to explain our research problem. Therefore, when reading theories, it is necessary to record the content that interests oneself or is related to one's research topic, classify and manage it. This way, when we encounter a theoretical problem in our research, we can quickly mobilize these theories and directly explain the phenomena encountered in our research problem. Therefore, the next question for oneself is to classify the paragraphs that have already been extracted according to the topic. Named as Theory. Regarding the application of one's own writing materials, it is actually the same as the classification of theory. After coding these questions, the relevant content is classified into different themes. When writing, one can write based on this theme, and the content of these themes should be reorganized and written in a certain order according to the researcher's own words. Of course, the research topic can be written according to small themes, or these small themes can be unified into one big theme according to the big theme. Just write it out. This is research. Of course, a very important issue in analysis is the depth of the analysis, which is a theoretical issue. So, for research, in the end, it's actually a question of whether or not to do it, as long as you want to do it yourself. (How to write)

In our reading, we will encounter a large number of second-hand literature. The function of these second-hand literature is to help us understand the current research status in this field and carry out further research on this basis. Some literature can help us support our own materials, which are two important functions of references. Usually, we struggle with how to use literature. Literature is not always used, but only when needed. Of course, references can be implemented as a specialized review paper. These are no problems. In fact, literature is like the field data we collect, analyzed in the article. The key lies in analysis. But usually we can also see the specific research situation. (Handling of second-hand literature)

From the above materials, it can be seen that sports doctoral students at this stage are starting to think about how to convert research results from reading materials into papers. However, it is worth noting that this stage still belongs to low-level academic research, and the focus is still on how to apply theory and how to use second-hand literature. From this, it can be seen that doctoral students in sports at this stage still lack a clear understanding of what academic research is, and how to write papers is still a key concern for them. Although paper writing is also a form of research, there are still significant limitations in understanding academic research, and the approach to academic exploration is still limited to general issues in academic research. It is worth affirming that the thinking ability of sports doctoral students at this stage is shifting from literature reading to paper writing, with a sense of academic transformation. Therefore, the thinking of sports doctoral students belongs to the transformation stage, and in-depth thinking on what research is is needed to understand the mysteries of academic research.

How to cultivate academic awareness is a process of constantly shuttling back and forth from materials, theories, methods, etc., constantly discovering problems, and forming academic achievements. Yang Jianlong mentioned in an interview that, In the process of academic research, not only should theories and methods keep up with the times, but the selection of topics should also be the same. This requires a clear academic awareness. In grasping the current research situation and relevant materials, we should search for topics and perspectives to conduct research, clarify which topics are valuable and which fields are worth exploring. In research that is rooted in history and profound, and in the process of discovering and analyzing problems, we should express our own uniqueness Insights. It can be seen that the cultivation of academic awareness is developed through academic exploration. The academic exploration of doctoral students in sports conforms to the general path of cultivating academic awareness, and is not different from scholars in other fields [25].

4.4 The Ontological Turn of Academic Thinking Research on Ontology, Mode of Thinking, and Improvement of Thinking

After several stages of academic exploration and a certain understanding of academic research and paper writing, doctoral students in sports will become interested in what research is. Regarding what academic research is, what is the focus of academic research, and the essence of paper writing, there will be relevant issues. Based on this, we will start to focus on our own metathinking, that is, how we think in academic exploration and pay attention to logical thinking ability in writing. From this, it can be seen that the academic thinking of sports doctoral students is gradually opening up, not only focusing on specific writing forms, but also on the logic of thinking and how to demonstrate one's own ideas. As a result, this way of thinking inevitably defines academic research and compares it with the ideas of the entire scientific community to uncover what academic research is. However, although the thinking form at this stage has a certain breadth, there is still insufficient in-depth thinking on academic issues. HYD wrote in her diary:

The research object is the specific content to be studied in this paper, and this object can also have a more detailed problem. To study this problem, there must be a specific object or scope of investigation, and the theory is to explain these problems. (How to conduct research?) After solving all the confusion about writing, the previous discussions were actually formal discussions, and the most important thing for academia is a deep question of thinking. Today, I am also very grateful to the teacher for his inspiration. After every communication with the mentor, there will be a lot of thinking, although the essence of the problem has not yet been fully achieved. Although my supervisor has not yet given me an affirmation of academic thinking, every time my ideas do change. Now let's review the entire process to avoid any interruption in the process of thinking. In the previous exchanges, my own problems were actually not knowing how to conduct scientific research, lacking problem awareness, not knowing how to think deeply, and not knowing how to read books. And through today's communication and a recent reflection. We have achieved the following goals: once we know what a good problem is, how to find it. It's about discovering a phenomenon and returning to a literature to find an explanation for the problem, looking at the contradictions in these explanations, in order to find the problem you want to study. Once you find this problem, you need to think about the reasons behind it. Of course, this reason is hierarchical, and it is necessary to continuously infer the cause of this problem from a sociological perspective until the root of the problem is found. Another lesson from reading today is that any book is not meant to be picked up and read, but to grasp the core idea of the book. All the arguments in the book are concrete expressions of this problem. It is all related to this idea. For example, the teacher's question about circle of friends. Why does it go from QQ to WeChat to Tiktok, as well as other things in the future. These questions are pushed into sociology as a question of transitioning from personal space to public space. Why is the transition from personal space to public space actually a question of modernity, and how does modernity arise? Why is there a question of modernity. Just like

this layer by layer of deliberation. This situation also has great inspiration for my own paper writing, and the structure of the paper is designed according to this progressive format. This kind of communication is too necessary, we will continue to discuss with the teacher later. This kind of thinking immediately made me feel uneasy. The design of the paper progresses layer by layer from phenomena to causes. Thinking is also constantly advancing towards deeper reasons. Is the concept of intangible cultural heritage short-lived due to the need for its protection? This need is caused by modernity. （How to think）

Why should we care about the issue of argumentation? A scholar who does not consider argumentation as an important issue will not have good research results or achievements. Why? In fact, scientific research is a process of discovering problems and finding answers to them. For example, when we discover a phenomenon in our daily lives, we need to go back to the literature and look for the question. Has anyone done this research? If so, it depends on their explanation? Can this explanation persuade us? When it cannot persuade us, the problem arises, and we need to think about why this explanation cannot persuade us, where are its shortcomings, and what better explanation we have. This better explanation is a result of our research. After discovering this problem, we need to give it a better explanation. This explanation requires us to present facts to demonstrate the rationality of our explanation during the argument. After we explain this issue clearly, our research is considered to have ended. The process of finding explanatory answers is scientific research. Of course, a very important issue is how to be more persuasive in argumentation. This is the question of argument. This is also the issue of the depth of the paper. When we argue very clearly, the depth of our thinking also becomes apparent. Of course, when arguing, we should stand from our own theoretical perspective. Therefore, finding a good question is crucial. (How to conduct the argument?)

The writing method and training of reflective notes: Step 1: Summarize the background of the book, the writing ideas, main viewpoints, and main conclusions. Step 2: Contact similar questions related to this book? method? Ideas? Conclusion? Is the connection between this book and other books consistent with the views of other books by the same author. Step 3: Think, do you agree with the author's viewpoint of this book? Why don't you agree? How would you write (concept, method, perspective)? Step 4: Essay on the idea in your heart (without citing or imitating, just your own viewpoint); Using words and sentences (imitating the expression, logic, and language of others); Add citations (citing relevant viewpoints from other books)

For any research, it should first be the issue of one's own interest or long-term concern. Otherwise, there will be a lack of understanding of the entire direction. For example, the research on the inheritance path of physical education in my current school. In fact, what we are studying is a problem in the inheritance path of schools. So how should we study it? Now we will summarize the research we have been thinking about recently, and once we understand this program, we will have a clear understanding of the entire research. Firstly, it is necessary to identify a research question, which is usually referred to as a field. Of course, other books also ask people to identify their

research fields first, and then choose their own research questions from these fields. Of course, this is not wrong, and often many students do not immediately communicate with this issue. Because the problem is more specific, it is the key issue to be solved in this field. Other problems in this field form a problem structure, and what one needs to study is only a part of the structure. After determining the problem you want to study. We need to understand the significance of this issue. I personally believe that meaning is usually related to national policies, and should also be a long-standing issue that this discipline should address. The meaning is relatively simple, and then we need to conduct a literature search on this issue. Of course, when studying this problem, it can be decomposed into multiple categories, usually classified based on previous research. Then, literature review can be conducted on these categories, starting from the overall situation of the problem, and then conducting separate reviews from each category. The ultimate purpose of the review is to identify the problem, including the overall summary of the review. Take a look at how others have studied, whether this problem has been solved, why it has not been solved, and if it has not been solved, it is the problem that one needs to solve next. Then, based on these problems, find solutions to them on your own. Just enter the research design. Research and design should take into account methodological issues and the use of specific operational tools. Ultimately solve these problems. Of course, the ultimate purpose of both qualitative research and quantitative research is to solve problems. Quantitative research usually focuses on testing a certain theory, putting theory first, constructing hypotheses, and collecting data. Test this theory. Qualitative research usually collects data through observation based on their own problems. To obtain a solution to the problem. However, many of the current research is limited to theoretical construction without practical operation, or the writing is not standardized. This reduces the credibility of the research. So far, I have read many papers, especially in writing, and found that a big difference between quantitative and qualitative research is that, for example, Feng Xiaotian and Chen Xiangming, they are very different in writing, which can be said to be the opposite. Especially in literature review, Feng first reviews the literature, while Chen reviews the literature after the research results are available. The former is mainly for searching for research questions, while the latter is for direct theoretical dialogue, whether it is different from previous studies. I personally think that the former has a stronger problem awareness, while the latter has a more pioneering spirit, but it also faces the risk of previous research. Once done, it is groundbreaking research. (Complete academic research program) Academic exploration is not an overnight mode of thinking, but a continuous process of contemplation and exploration. In the process of thinking, gradually transition from peripheral issues to thinking about the essence of the problem, focusing on the essence of academic issues. From the characteristics of the doctoral student stage in sports, it can be seen that they have already focused on what research problems are, and have taken problem awareness as an aspect of thinking. Exploring academic problems will have a deeper understanding of academic research and even reshape their research concepts. When starting to think about what research is,

it has entered a larger scope of thinking, and it has also enhanced one's consciousness of subjectivity in thinking, which helps them to think about academic exploration from the perspective of scientific research. This is also an important stage for improving academic thinking through academic exploration. Therefore, when thinking from the perspective of what is research, sports doctoral students are concerned not only with their own discipline, but also with the research of the whole history of science.

Metacognition is the process of thinking, which enables the thinker to understand how they think. When researchers understand their own thinking process, it accelerates the development of their thinking abilities. Some researchers believe that metacognitive skills, metacognitive knowledge, and metacognitive experience are the three elements of metacognition. Metacognitive skills are the fundamental conditions, metacognitive knowledge is the knowledge background, and metacognitive experience is the intermediary. The three elements work together to promote the thinking activities of metacognition. At this stage, sports doctoral students begin to focus on their metathinking abilities, which also marks a period of rapid development in their thinking abilities [25]. Research has pointed out that metacognition is a highly conscious and arbitrary part of human self-awareness and self-monitoring, indicating that a person's psychological level is gradually advancing and becoming increasingly complex.Therefore, this stage indicates that the thinking ability of sports doctoral students is becoming more complex, and their psychological level is gradually improving, enabling them to think from multiple perspectives [26].

4.5 Deep Expansion of Academic Thinking Academic Essence, Scientific Essence, and Essential Analysis

With the continuous deepening of academic exploration and the increase in academic literature reading for doctoral students in sports, they have gained sufficient understanding of the paradigm of academic papers, and thus have a basic understanding of the basic structure of academic papers, that is, they have mastered the research paradigm of their own discipline or the basic paradigm of academic research. Therefore, these basic academic frameworks can no longer meet the basic needs of academic growth for sports doctoral students, nor can they stimulate their interest. This stage also means that there will be new breakthroughs. On the basis of the basic framework of academic research, the thinking ability of sports doctoral students will develop towards a higher level and more challenging direction, naturally leading to further thinking about what academic research is, in order to determine the highest level that academic research needs to reach. Therefore, sports doctoral students are gradually thinking about the ontological knowledge of academic research and the differences between academic research and scientific research, which also indicates that the academic thinking of sports doctoral students at this stage has begun to expand in depth. HYD has reflected on relevant issues such as what academic research is and the significance of academic research in its academic diary:
I have been pondering and searching for this question for a long

time, but I was finally awakened by the teacher during today's regular meeting. The so-called academic is like the technology in sports, it includes a lot of content, which is actually a discussion around the structure of an article. This includes how to write an abstract, how to write a preface, how to write a research review, how to construct a research framework, how to locate research ideas, key concepts in research, how to choose research methods, how to express research results, how to write analysis, and how to use references. Once these issues are clarified, it means the degree of improvement in academic level. Teacher Feng Xiaotian once said that research is actually about how to communicate with peers through writing, which means that writing should also be like discussing a problem with scholars in person. This is academia. Of course, one of the core tasks that determines academic level is one's theoretical level, in other words, the amount of books one reads. Only in this way can we delve deeper into the problem. Why are some scholars unable to understand their articles, but because their thoughts are more profound. This means that one should continue to improve their theoretical level. The question of academic level should be based on the question being discussed. Usually, the main focus is to explore the cause or explanation of the problem. The essence of academia is to solve problems. At first, we didn't know how to solve the problem, but when we explain the problem we want to explore clearly, it means that our problem has been solved. We can provide suggestions or not. The key is to find the cause of the problem. But often our research is not about exploring the causes of problems, but about exploring other issues. This does not mean that others' academic level is not good, and cannot be said in this way. The ultimate essence of academia is actually problem-solving. This is the ultimate destination of academia. In fact, it's about finding the reason, publishing it, and letting everyone see it. This is an academic issue, and proposing one's own explanation. By the way, my research framework is also clear. If there is a disciplinary framework, it can be explained according to this framework. Through our understanding of academia, when we read someone else's article, we should follow this requirement to review their article and assess its academic level. In fact, when we are at the threshold of academia, we focus more on the improvement of basic academic abilities, while true scholars or experts truly focus on the depth of theory. It depends on the choice of the problem, whether it is an urgent and urgent issue for the discipline. General scholars focus on imitation of articles, while top scholars focus on problem-solving. So, the common academic problem now is that scholars do not settle down to think about deeper issues, but simply imitate others' styles. This reminds me of another sentence the teacher said, in fact, the article is not about the style, the key is whether it solves a real problem. However, it is still necessary to follow the norms of academic papers. The writing of literature review must be thorough, and to find out whether this problem truly needs to be solved from the literature review. To what extent has this problem been solved, and from what perspective can one explain it better to help solve this problem. In order for later generations to have some new ideas when reading this article, it will be helpful for solving problems. Academic issues may not be useful at the moment, but they will become useful later on. The

key to academic problems is to find the reasons. Through today's understanding of academia, I should pay more attention to the depth of theoretical issues. Instead of some academic style and superficial. This is also the direction that I need to work towards in the future. Although I am also focusing on theoretical and research methods, I have not fully understood the deep-seated issues of theory. In fact, the most important issue is the theory. When you see a theory, you should think about how to solve the problems in your own discipline, and it is best to form your own theoretical system. （What is academic）

Today, I had a lot of discussions with my supervisor about how to conduct research, which was very inspiring and I had to record it in advance. Since my supervisor asked me to think about the purpose of my research yesterday, why did I do this research and what significance does it bring? After yesterday's reflection, my supervisor sent me a long message. I suddenly understood the significance of studying this problem and why I want to do this research. Actually, it's a problem that I can't solve for a long time. Simply put, it is a matter of inference. It is a more meaningful thing obtained from one's own research. The mentor's approach is to first search for information online based on their own problems, such as social interaction and educational anthropology. The mentor first checks these keywords to see how they describe, why social interaction is necessary, and what is the ultimate purpose of social interaction? What does educational anthropology do? What does it mean to humans? Then the research significance of this study, also known as inference, is derived, which is what needs to be studied. It's also the final thing to come up with. It is also a matter of more universal significance. This is a problem that I cannot solve for a long time. Then there are some specific questions about how to implement research, especially research design. The rest are some technical issues. But there is another issue that must be understood, such as personality, that is the keyword. Firstly, it is necessary to have a very clear understanding of personality, take a look at how these studies study personality, how one should conduct research, and how sports can shape personality. When encountering specific research problems, you need to search for them. Another research issue is macro and case studies. Firstly, it is about the research on the entire survey situation, which schools are selected, but rather a macro analysis. Then, it is about the specific shaping of personality by a certain school, which constitutes the entire research process. Other academic issues are minor, such as how to describe and cite them. But these small problems also need to accumulate slowly. The most crucial issue now is to organize intangible cultural heritage books, anthropology books, and other books. （How to conduct scientific research）

This is a long-standing problem, which is not knowing how to analyze, mainly influenced by theory. Today I read a paper from Teacher Teng Xing's perspective on educational anthropology. He mainly attributes the low academic achievements of the Lahu ethnic group from an ecological perspective, attributing them to the educational ecology. The main analytical framework is to first present the fact of low academic achievement. Then look for local explanations for this issue. Finally, by briefly reviewing previous theoretical studies on the explanation of this issue, he

believes that this issue cannot be explained by a single theory, but is a systemic problem, an ecological problem. He explained the specific situation of this theory and linked it to educational issues. Finally, an explanation of the low academic performance of the Lahu ethnic group was provided from several aspects involved in this theory, and optimization strategies were proposed from these aspects. In fact, the inspiration that reason analysis gave me is that if we use theory to explain, we should have a deep understanding of the theory and then explain from these aspects of the theory, which is the role of theory. However, theory is actually the cause of the problem. In fact, sometimes it doesn't necessarily require theory, but rather based on specific problems. But there is a better theory to explain. However, no matter how arranged, the facts of this problem should be presented, followed by a theoretical explanation, and finally, countermeasures should be provided from several aspects involved in the theory. Solve the problem. At the beginning, the main reason for this confusion was not knowing how to arrange the structure of the article in theory, but now it is quite clear. Of course, when explaining, it is not necessarily a complete presentation of the facts, but rather a certain extension. Try to enrich the content as much as possible. (Cause analysis)

For every researcher engaged in field work, especially for a beginner, it is a very difficult problem to combine field materials with existing theories. After thinking and studying in the past few days. Discovering that field materials are just the object of our analysis, for example, today I read an article about Chen Xuejin's impact on his daughter's family. He first describes the situation he sees, which is a basic fact. Then we began to explain this phenomenon through other theoretical works. Formed their own analysis and also made people aware of the specific process of this phenomenon. Thus combining existing theories with field materials. Field research is actually a process of expressing the phenomena one sees and then beginning to explain the specific principles behind these phenomena. This explanation requires theory. Otherwise, I don't know why this situation occurs. It should be added that in our research, different questions, not only attribution issues, can any phenomenon be asked why? When describing these field notes, we can guide such things from a theoretical perspective, then introduce field fragments, and finally summarize them. This is a writing technique. Alternatively, describe this phenomenon first, and then gradually elevate it to a higher level of explanation. Anyway, it's all about explaining the phenomena we see. How to combine field materials for analysis? Through these two years of learning, I am very happy to be able to think about writing with advanced writing skills, but at the same time, I can also answer why so many graduate students no longer engage in scientific research after graduation. This is a very important reason, as it has not yet entered the academic realm. So, when it comes to writing, one doesn't know how to write or think. In fact, writing is ultimately a question of reflection. How to write down the thoughts you perceive. And this is a very crucial issue. In fact, speaking better than writing is a common phenomenon in writing, and to put it bluntly, this phenomenon is that one does not yet know how to think. I don't know how to do scientific research. Ultimately, it is still a matter of thinking. Or it could be a question of

scientific thinking. At the beginning, I also faced the same problem of how to raise questions and how to delve deeper. Although I still don't know how to delve deeper, I think I have become very clear by reading some recent books or writing materials. After receiving a problem, one should first think about it, break it down into several small problems that one can solve, and once these small problems are solved, one can solve their own problems clearly. Problem decomposition is very important. There are three methods for decomposing problems. One is the theoretical leading method, or deduction. However, in this case, it is often necessary to consider whether two similar problems are similar, otherwise it cannot be used as a reference for problem solving. Alternatively, there is no problem with decomposing and adjusting on this basis. The second method is the inductive method, which involves finding a problem, thinking out all the relevant solutions to these problems, abstracting and categorizing them based on these specific solutions, and then searching for similar concepts on the basis of classification, which can develop into multiple concept groups. This method belongs to the inductive method, but one problem is that this method cannot exhaust everything. But try to exhaust all solutions as much as possible. It can also only solve some decisive small problems. Cancel those unimportant small issues. Or when we don't know the classification of these problems, we can use the network to classify them, helping us think and form problem-solving methods. The third method is the pyramid like decomposition of problems, which essentially seeks the sufficient or necessary conditions for the problem. Social research usually cannot have only one reason, so these conditions cannot have only one reason, often a structural reason. Tracing logic is more suitable for this approach. Of course, one can also use existing theories to choose sufficient conditions. The most important thing is to have ideas. There are many sources of ideas, such as books, consultations, etc., that can generate problem-solving methods. After saying so much, the ultimate goal is to clarify your thinking. Thinking is the way we think about problems. Or called consciousness or reason. The quality of thinking is related to a person's ability to process materials, and different people exhibit different thinking outcomes. The materials for thinking can be books you have read, or experiential materials can be sources of thinking. The process of abstracting, judging, and forming concepts based on materials. The key to thinking lies in the books and experiences one has read and experienced. Of course, there are many factors that affect thinking, and what we see, hear, and touch can all serve as our thinking materials. Experts often show a direct approach to the essence of the problem when dealing with materials, eliminating some minor details. Solving problems is more straightforward. The quality of thinking is also higher. (Advanced Reading and Writing)

After referring to a large number of doctoral thesis designs in other majors, this is also a part of the content that I am not sure how to do. Finally, the framework of the paper is divided into three categories: the first category is the deductive approach, which logically divides the paper into several chapters based on specific themes. The purpose of these chapters is to focus on macro theoretical issues, and should not be limited to the connection with the following cases. Material sources can be as long as they are related to the

theme. In the following section, a specific case will be selected for analysis based on the theoretical analysis above. Finally, based on theoretical analysis and case verification, the research topic will be elaborated. The second classification is to directly analyze according to the research topic, but it is necessary to have a framework structure in mind. After the analysis is completed, theoretical improvement can be carried out, and multiple case studies can be conducted for comprehensive analysis. The third classification is to allocate one or more individual cases to the entire paper and ultimately draw conclusions. （How to design a paper）

Experimental research papers are based on the needs of the research, sorting out the existing problems, and then designing improvement plans based on a certain theory to address these problems. Afterwards, experiments are conducted to evaluate the situation after the experiment. This is the path of experimental research. This is also a type of research. (Type analysis of experimental research) Through reading the writing skills of social science papers in the past two days, I have learned several structures of the paper: the first is the total score total structure, which is to first discuss the paper as a whole, then discuss it according to the arguments, and finally summarize it. The second type is to discover, analyze, and solve problems. This structure involves first discovering the problem, which is equivalent to a preface, then analyzing the problem through several aspects, and finally providing a solution. Another type is the question of what, why, and how to do it. First, explain what the problem is, then analyze the various factors that constrain it, and finally explain how to do it. Another approach is to propose hypotheses, verify them, and ultimately prove or falsify them. The third type is the argumentation method of parallel structure. But these modes should be flexibly applied and not too rigid. It can also be embedded with each other inside. The structure of the paper should also be arranged in this way, and the paper structure should be designed according to each structure. Additionally, it should be noted that the title of the paper should have clear viewpoints, rather than a title without any viewpoints. (Research framework design)

With the deepening understanding of the essence of academia, doctoral students in sports have gained a new understanding of academic research and begun to focus on the analysis of academic writing. From the above materials, it can also be seen that the graduate student has read knowledge about formal logic and has paid more attention to how to analyze and argue. The focus on logical thinking and argumentative logic also indicates that there has been more reflection on current scientific research, starting from scientific thinking to think about problems. Therefore, at this stage, sports doctoral students not only think about what academia is, but also actively consider the problems existing in the sports academic community, and the latitude of thinking begins to return to the professional field. The attention and reflection on these issues can further open up the research ideas of sports doctoral students and guide them towards larger academic goals from the perspective of values. This is also an inevitable process in the academic exploration of sports doctoral students. What is in their minds is not only the matter of writing papers and conducting

scientific research, but also the entire sports discipline. This is an essential academic mindset for every successful scholar, which has risen from the world of phenomena to the world of ideas. This reflection on research ontology can help researchers delve deeper into academic issues and improve the level of thinking. The unique value of philosophy lies in its ability to deepen human understanding of the relationship between thinking and existence in the process of reflecting on the premise of theoretical thinking, thereby continuously updating human thinking methods, values, and aesthetic consciousness, and guiding humans to realistically change their own survival state and way of life. It plays a positive role in promoting the development of its thinking ability, thereby changing the thinking mode, values, and aesthetic awareness of academic thinking, and changing its research attitude towards academic research [28].

4.6 Deepening of Academic Thinking Academic Theory, Academic Phenomena, and Academic Essence

The purpose of academic research is to discover new knowledge, but discovering new knowledge is not a phenomenon level problem. Its highest level is to see the essence of the problem through the phenomenon, and to find the fundamental attributes, root causes, and basic laws behind the phenomenon, in order to find the root cause of solving the problem. Therefore, academic research needs to train this ability. However, for academic research, truly being able to see the essence of things through phenomena means deeper thinking abilities. Based on this, doctoral students in sports face the challenge of improving their thinking from the perspective of phenomena to the essence. From the perspective of the thinking characteristics of sports doctoral students at this stage, they have never deviated from the relationship between theory, phenomenon, essence, and the three. This is a deepening training of thinking that sees the essence of problems through phenomena. From the following academic journals, we can see how HYD handles the relationship between these three:

A very important ability in academic papers is how to see the essence through phenomena. In fact, the essence of this problem is the problem of epistemology. Simply put, when we see a phenomenon, we need to think about its reasons. In other words, it is to find the basis for this phenomenon. Of course, different people's thinking will involve epistemology. It is through which theoretical perspective to think, and then under the elements of this theory to think about the reason for this problem. In fact, to put it more simply, when we see a phenomenon, we need to find the independent variable of the phenomenon. Then, from the perspective of independent variables, analyze the process of drawing conclusions. In the process of argument, phenomenon is a dependent variable, and reason is an independent variable. However, the independent variable is also a result, and a thorough analysis of the reasons for the independent variable is necessary to form a process of deep thinking. It is necessary to ensure the correctness of the premise in order to draw a conclusion. The reason for deep thinking is to ensure the correctness of the premise. Only in this way can we delve deeper into the discussion one by one. The so-called "seeing essence through phenomenon" is to discuss

from which epistemology level. (How to see the essence through phenomena)

In our writing process, regardless of which type of writing is based on a phenomenon or problem. At the beginning, the problem mainly comes from real scenarios, followed by theoretical problems that can be solved by reading literature. However, in current papers, there is often a problem of unclear problem awareness. In fact, many times it is impossible to find the practical problem that the author wants to solve. Or even if the author's writing is highly academic but disconnected from real-life issues, he doesn't know why he wants to write on this topic. So in writing, the first step is to clarify three questions. One is what the real problem is, which is the problem you need to solve yourself. Secondly, what is the research object, whether research can be conducted, and what determines the source of data? Or the scope of thinking? The third is epistemology. It is the issue that one truly needs to write about, which is also an academic issue. The issue of epistemology is discussed from the theoretical level, which can be more universal. It's actually the reason for the real problem. In a paper, research can only be conducted after these three issues are determined. Otherwise, research cannot be conducted, or there will be descriptions at the phenomenal level. The research object may be too macroscopic to conduct research, or there may be a disconnect between theory and practice, without practical problems. Only after these three questions are clarified can research be conducted, otherwise do not start writing. Only after these three issues are clarified can the paper have theoretical and practical significance. In fact, the most important issue of the three is epistemology, because epistemology is a main thread throughout the paper. That is a theoretical issue. According to this epistemology, both deductive argument and inductive argument can be carried out. It can be used to solve both theoretical and practical problems. Of course, academic research mainly solves problems from a theoretical perspective. In the usual paper reading, we often encounter such forms of papers: first, humanities papers. Humanities papers often have what problem to study from a certain perspective. So this type of article can only be studied in a deductive way, why? Firstly, it is necessary to clarify the perspective (theory) before explaining the relationship between this perspective and the research problem. Otherwise, it can only be empty talk or just research based on one's own experience. When there is a theory to guide, it has more credibility. This is the solution to practical problems. It can be simplified as: theory first, then solution. In fact, this form can be used to solve practical problems. For the problem of theoretical construction, it is necessary to have a clear description of a particular case and then refine it. It can be divided into rooted refinement and refinement guided by theory. But the research on theoretical construction must ultimately engage in a dialogue with existing theories, otherwise one may not know what their research is like? What are the advantages compared to other studies? Of course, it is also possible to modify a certain theory. When using a theory for research, it is best to modify it, otherwise it is just a simple verification without any significance. At most, it's just a test of the theory. Of course, there is another way to directly discuss theoretical issues separately, but only analyze them. Now

let's think about empirical theory, we can only think about this form while writing. In fact, empirical theory also has two methods: deduction and induction. The data only needs empirical content. The research object here is very important. Epistemology should be sorted out in advance, otherwise it is just another argument of others. Repetitive research has been conducted. If we directly adopt grounded research, we also need to extract features. One solution to solving whether to repeat research and extract features is to have a thorough understanding of the literature review in order to know how one's research achievements are. (The relationship between theory, phenomenon, and writing)

From the above materials, it can be seen that sports doctoral students are more concerned with exploring problem awareness and the essence of problems, and will begin to shift all research towards studying the problem itself. What it wants to explore is how to discover and study problems from the complex world of phenomena, and how to explore the essence of these problems. At this stage, doctoral students in sports have a sense of returning to the starting point of the problem. Because the academic starting point is to have a problem awareness, whether it is a phenomenon or a theoretical problem, academic problems are the starting point of research, which is also the starting point for thinking. For academic exploration, it ultimately returns to the exploration of problems. Only by rethinking academic research from the perspective of problems can we have a direction for thinking and truly find the essence of the problem. From this, it is also found that at this stage, sports doctoral students think the most about academic issues, academic theories, and the essence of problems, as this is the most crucial step in improving their academic thinking ability. As scholars such as Ouyang Dongfeng believe, the research of doctoral dissertations is different from general questions. Questions such as what, how many, and where are they often cannot be considered as appropriate research questions for doctoral dissertations. Researchers can only reflect the height and depth of doctoral thesis research by studying what they see, discover, and think about This also fully demonstrates that academic research has a discourse system that focuses on academic issues, not general or general issues, but rather theoretical and professional issues [28].

4.7 Professional Implications of Academic Thinking Academic Theory, Professional Exploration, and Research Depth

For doctoral students, after experiencing undergraduate, master's, or even several years of work experience, they will have a deeper understanding of both practical and theoretical issues in their major. Therefore, when doctoral students enter the doctoral stage, it is important to carry out innovative research in their field and solve theoretical and practical problems in their field. However, without a clear and clear understanding of academic research, even if one delves into a professional field, it is difficult to achieve innovative results, and sports doctoral students are not interested in delving into their own professional knowledge. So, only after sports doctoral students have a thorough understanding of academic research will they return to their major for exploration, and there will be a qualitative change in professional exploration at this time. In other words, only by understanding the true essence of

academic research can one achieve professional success. Therefore, when sports doctoral students rethink the academic issues of their major, they often focus on exploring the theoretical depth of their major. This also indicates that after a thorough understanding of academic thinking, sports doctoral students will consciously return to the academic field of their major. This fully demonstrates that without a deep understanding of academic research, sports doctoral students will not truly focus on the issues of their major, and even if they focus on the issues of their major, they can only be superficial. Returning to their major means having a different perspective on their major. This phenomenon is worth pondering on the cultivation of sports doctoral students.

After understanding a paper with practical, theoretical, and writing questions, how should it be combined with one's professional knowledge? Firstly, it should be understood that the meaning of research is that analysis can only be conducted based on existing literature materials, and without materials, there is no way to analyze. So here comes the question...? Where do the materials come from? This involves the issue of how to obtain materials. For an academic research, do we prefer to utilize existing data or innovate. If you want to innovate, you need to use quantitative survey research, experimental research, text analysis, secondary statistical analysis, and other materials. If it is qualitative research, it should use Grounded theory, field research, qualitative text analysis, case study and other methods. It is better to have figured out what epistemology knowledge to use before conducting research, otherwise it will only be a phenomenal level material collection work. And many studies mainly use existing materials for analysis, which is not a literature review, but rather based on what ideas existing professional materials can provide for oneself. When it is determined to use second-hand literature, it is necessary to determine which perspective to use, otherwise there is no way to analyze. For example, the educational value of martial arts - human social adaptability. We should analyze the existing literature according to this epistemology. When conducting specific analysis, it is necessary to constantly seek the basis for the title and obtain the support of professional knowledge.(How to combine theoretical and professional analysis)

In terms of the depth of research, academic research can be divided into Exploratory research, descriptive research and explanatory research. The key to academic research is to conduct academic theoretical research, which is to use theory to analyze a phenomenon and explain its reasons. Research in education mainly focuses on theory, while research in sports starts with descriptive research. For example, in the education investment of Wudao, the thinking in sports mainly focuses on why education investment is carried out, what the investment situation is, and what inspirations it has. Expressing oneself too superficially. In the field of education, research mainly focuses on theory, as well as practice. For example, an analysis of the pros and cons of self-concept formation in left behind children. In education, the main focus is on studying the influencing factors that affect the formation of self-concept, and then conducting strategy analysis. For example, the study of the influence of university teachers analyzes how

to exert their influence from three factors: knowledge, irrational spirit, and social field. Although there are no specific suggestions, the theory is very thorough. This is theoretical research. (What is theoretical analysis? Also on the difference between sports writing and educational writing)

Recently, I have gained some new insights from reading. Firstly, there is a clearer understanding of academia. Secondly, I have gained a further understanding of the specific research papers. The so-called research is to study the relationship between different variables, which can be comprehensive or univariate. (This is just my experience). But for me, it's best to conduct a single factor study, so that I can delve deeper and have more time. In fact, case studies can be analyzed from more factors, which is the holistic view of anthropology, which is the influence of multiple factors. Of course, in research, it is necessary to first determine what the research object is. For example, to study inheritance, then inheritance is the dependent variable. This is the path of natural science. Then identify various variables that affect inheritance. Of course, research can also be conducted from a single factor perspective, but the adequacy of the data needs to be determined. It also depends on the specific path of the research. For example, if it is to study inheritance, it can also be studied from a historical perspective, which requires a lot of information. But many materials in sports are difficult to find. From anthropology, this can be achieved. This is the first point, determining the research object (dependent variable), and then the perspective from which to conduct the research. This step is what we call the research hypothesis (which is a hypothesis, and hypothesis is the process of determining the independent variable. This independent variable is one's own hypothesis, which can be found from existing literature or choose a theoretical perspective, which can help to better reduce one's difficulty. It can also improve one's research feasibility.) Regarding the writing method of literature review, it is actually based on one's own research questions. For example, when studying the mechanism of inheritance, it is necessary to sort out the independent variables that affect inheritance and sort out the relationship between various variables and inheritance. Literature review is mainly related to one's own research questions. The construction of a paper framework is actually based on one's own research object and assumptions. Of course, we can use the structure of the research object itself and analyze it using hypotheses, or we can directly construct it using the factors in the hypotheses. However, this form is not recommended because we are not trying to prove a certain theory, but rather using this existing theory for in-depth analysis. Realize an understanding of the research object. That's enough. So, the purpose of theoretical research is to clarify the relationship between two variables from a knowledge perspective. There is no need for policy recommendations, etc. Of course, some suggestions can be provided in the end, which will be helpful for application. Another very important revelation is how to discover problems. In fact, discovering problems is to find specific problems in practical problems, and to perspective theoretical problems is to perspective academic problems. For example, the problem of fake masters may be due to a lack of clear understanding of martial arts ethics. So limiting the research object

to martial arts ethics may be influenced by Confucianism. Finally, it is sufficient to directly study the influence of Confucianism on martial ethics. There are both practical and theoretical issues. In fact, there is another aspect, such as Durkheim's discovery of the disintegration of French society, but his research question is how to integrate society. Social integration is the problem he studies and also his ideal. It is to think about the problem from the opposite side. Identify the influencing factors of positive issues. (How to discover problems, theoretical and practical problems, analyze and assume)

Why read books? Reading is to find breakthroughs in theory, such as why we should read anthropology books, because anthropology has various elements related to the impact on people, and sports can be studied from cultural, archaeological, linguistic, and physical elements. That is to say, when reading, it is important to look at whether these elements can have an impact on sports, that is, to see if specific evidence can be found in sports, because this is a hypothesis. After reading this point, it is necessary to combine it with the actual situation of sports, otherwise reading is useless. The so-called combination is to think about whether there is such a situation in sports when seeing an element, and if so, how to say it, and whether specific cases or discussions can be found. This is the verification process. If not, why not take a look? Is the theory wrong or is there no research in sports? Just do it over and over again. Of course, verification can be found from existing data or from fields. Of course, this is only a theoretical basis or hypothesis that combines theory with practice. Only through verification in martial arts can one find the test that affects sports. Of course, this is a theoretical learning technique. On the other hand, it is the skill of reading sports monographs. When reading a sports monograph, it is necessary to practice gender theory when it comes to the situation of male transmission but not female transmission, so that a dialogue can be conducted from theories in sociology or anthropology. For example, when a student says they have studied physical education before and it is difficult to change it now, it can be linked to Bourdieu's habits, so that relevant theories can be used to explain it. It can also improve one's theoretical level. This allows for research on the impact of gender on sports. The above two techniques are not decisively divided, but rather interact with each other. Of course, sports can also be used as an independent variable to study the impact on other things. For example, the impact on mental temperament. You can directly find relevant research from sports. In fact, reading is just these two processes, the influence of the outside world on martial arts, and the influence of sports on other things. Of course, we also need to grasp the issue of extension. For example, sports include various elements that can be studied. How to read and take notes? (How to use notes)

The purpose of academic research is to examine the reasons why an object is influenced by a perspective or factor. Once the research results are available, recommendations should be made based on the research findings. Of course, if direct advice is needed, it should be based on the influencing factors of these factors. For example, the impact of gender on sports. If studied, gender factors can be constructed from the perspective of influencing or ensuring gender. Improving gender is more conducive to improving the research subjects. In scientific research, we often collect emotional materials through history, fieldwork, research, etc. However, the materials we collect are all individual cases, so they do not have a certain universality. Because the purpose of scientific research is to study general problems. So we need to make rational improvements, which requires the expression of higher-level concepts. This makes the empirical materials more representative. This allows for a dialogue with the theory. And now many of our research starts with assumptions, so we need to have some theoretical knowledge. For example, the issue of who influences who. This requires us to return these rationality to specific research subjects. So, perception and rationality are not conflicting, but interrelated. (Relationship between Sensibility and Reason)

If we want to study, for example, the impact of gender on the development of martial arts, and summarize the impact of gender on the development of martial arts, for example, how can we conduct in-depth research? We should further explore the influencing factors of gender. The influencing factors of gender will be a more complex issue. This can ensure in-depth research. The same goes for suggestions, such as gender having a certain impact on martial arts. So how can we construct gender as an independent variable? Many papers do not delve further into the independent variables, but rather serve as a starting point for analysis. The study of anthropology (depth and surface) is the study of the impact of human nature and its environment on humans. Usually, it is the study of a person's surrounding environment. For example, in policy anthropology, it is necessary to study the environmental impact of policies on people, and then the impact on people. (What is anthropological research)

From this, it can be seen that in the continuous academic exploration of sports doctors, there has been a qualitative leap in their understanding of academic research at this stage, and they have become more mature when thinking about problems. More importantly, at this stage, sports doctoral students are able to understand what others are writing and how to write, which is an essential thinking stage for producing high-quality academic research. Therefore, it can be said that this stage has achieved the docking with the ideas of the academic community, and can criticize academic papers from a higher perspective, that is, the formation of critical thinking. What is critical thinking? Ye Fei gave an answer in education research, "It is an internal thinking ability different from criticism and criticism. It reviews various educational problems with rationality as the standard, and also reflects on itself." Although it is mainly aimed at critical thinking in education research, it also has certain significance for understanding critical thinking. This also fully demonstrates that in the upcoming academic research, doctoral students in sports will make rapid academic progress, as they master thinking codes rather than just academic skills. The academic thinking of sports doctoral students at this stage is close to mature scholars, but critical thinking still lacks stability and is still in a semi-automatic and semi conscious stage [29].

4.8 The Original Starting Point of Academic Thinking Problem Awareness, Material Sources, and Academic Innovation

In the process of academic exploration, there is no absolutely correct logical thinking, and the key lies in constantly solving one's own academic confusion or doubts during the process of academic exploration. After the academic thinking of sports doctoral students reaches the above stage, they still need to rethink the process of academic research, so they will start to think about the most basic issues of academic research, namely problem awareness, material sources, and other starting points. At this stage, although the objects of thought are completely the same, the understanding of academic issues is more profound. That is to say, the cognitive level of doctoral students in sports is one level higher than before, and the problem is still the same. However, their understanding has been improved, which is also the basic law of thinking from lower to higher levels. Especially for the problem awareness of scientific research, there will be a clearer understanding and thinking about the issue of academic innovation. At this stage, academic innovation is no longer the original concept of academic innovation, but a substantive academic innovation, and the purpose of this innovation will be directly implemented in subsequent academic research.

This is a cliché d question and one that is not fully understood by others. After listening to Teacher Cheng Zhili's lecture today, I finally understood what problem consciousness is. The first step is to distinguish what is a phenomenon or problem. The answer to this phenomenon and question, that is, the reason for answering this phenomenon or question, is the question. The next task is to find a way to prove this conclusion. Simply put, the problem is the cause of this phenomenon. For example, why does physical exercise (A) lead to happiness (B)? It is answering the relationship between variables, which is a deep-seated question. The question of how to assume is to first assume the cause of a phenomenon, and then go back to the literature to search for the relationship between A and B. For example, what substances can physical exercise produce and what substances are needed for happiness. First, search for answers from relevant literature, and then verify them firsthand. Or go to the field to verify. Today, Teacher Cheng Zhili's lecture, like an article he saw, answered what question consciousness is. The simplest way is to summarize one's own question in one sentence. In this article, several steps of research were also clarified: raising questions, analyzing problems, and solving problems. Asking a question is making assumptions about a certain problem. When analyzing a problem, it is proving the hypothesis and analyzing the relationship between two variables. However, when analyzing, one can use a parallel method to analyze what it is, and the reason is why. However, each title is the reason, and tracing the cause is what to do. Dialectical analysis can also be conducted. (What is problem awareness)

Why go to the fields? This is a question that my supervisor once criticized me during my initial doctoral studies. It wasn't until today that I finally understood. Because whether it's going to a book or a field trip, the ultimate goal is to find an answer. Sometimes a problem can be solved in a book, and there's no need to go to the field. The purpose of going to the field trip is to better supplement one's own problems. That is to broaden the explanations in books. Instead of simply searching for existing answers from the field. Of course, relevant things can also be found in books from the field. The key is what your problem is. In fact, whether in books or in field research, the ultimate goal is to understand various human activities. Understanding the answers to research questions related to oneself. Therefore, when there is an answer in the book, you don't need to go to the fields, even if you go to the fields, you just need to prove it. Or there may be some expansion. (Why go to the fields? Also on book fields and field fields) Academic problems are solved through theory. For example, the dilemma of intangible cultural heritage inheritance. What are the reasons and influencing factors for theoretical problems. If it is a problem with teaching methods, what changes have occurred in teaching methods in history. In order to identify the reasons for improper methods, and finally propose solutions. (Academic issues?)

Reading is an input process, while writing is an output process. This process may be well understood by many people, but many people are not clear about how to read and how to connect reading and writing. In fact, there are three levels of reading. The first is simple reading, which is to pick up a book and start reading, agree with the author's viewpoint, and then associate with one's own academic background and practical experience to make certain verifications. This is a type of verification reading, but it is only a process of accepting existing knowledge, but innovation is difficult. The second method of reading is to start with a question, such as how sports centered around the people are possible. By reading with this question, one can obtain interpretive answers to their own questions. But this way is to ask oneself and find answers from books. Of course, this method is mainly academic, and the key is to have one's own thoughts. The more important way is to find problems from books and read with critical thinking. Look at how these authors answered the same question, and when there are inconsistencies, provide a new answer yourself. Of course, this kind of answer already had a certain preset for this question before, and then reading may lead to innovative answers. It is necessary to have both ideological and academic qualities. (Integration of Reading and Writing)

Problem and problem awareness are a major deficiency in current academic research, and for some studies, they are just a summary of literature and there are no problems at all. I don't know what the problem is. Today, I revisited Teacher Liu Xichuan's WeChat and revisited the issues and awareness. The so-called problem is the gap between the explanation of a new or old phenomenon and the actual situation. That's the problem. Actually, it can be understood as a phenomenon. Of course, there are both good and bad phenomena in this phenomenon. For example, cultural identity and inheritance are all problems. The purpose of literature review is to sort out this phenomenon and see how others explain the two phenomena. Compare the explanations of others to see if they are correct. Then propose another hypothesis on your own, and the combination of the two constitutes a problem. Finally, demonstrate one's own hypothesis. The awareness of problems is related to one's own level of knowledge. So it's important to read

more books in order to ask good questions. (Reviewing Problem Awareness)

I haven't written any records in this area for a long time, and although there are intermittent experiences and inspirations in the middle, I still haven't understood how to think, which is also the problem I have been searching for since I started my doctoral studies. Of course, the article will definitely be written, but being able to write is not a concern for me, but rather a question of how to solve disciplinary problems through thinking. In other words, it's not about solving a problem given by a mentor, delving deep into finding materials, and then compiling them into a paper. It's about truly experiencing this process from the depths of one's thinking, pursuing a form of thinking training. Although my supervisor reminded me early on, it was a question of deep thinking that was accidentally raised during a meeting. I also attach great importance to the issue of thinking, so I have read a lot of knowledge about logic and have specifically discussed how to think in group academic meetings. But it can never be linked to one's own paper or the problem one needs to solve. So, I've been thinking about how I should think. This is also the reason why I haven't written these again during this period, as they haven't been found yet. Until recently, I was only listening to courses on deep thinking. On February 23rd, after finishing dinner at the staff cafeteria, I went to the park to listen to a class. Suddenly, I saw an article in the sports journal about the value shift of school sports under the background of double reduction. Suddenly, my thinking suddenly started. Combining the thinking class I listened to the previous two days, I realized that the background of double reduction was used as a starting point, and then I predicted the value of sports and made my own research. In fact, when thinking about a problem, moving forward is to think about its reasons and influencing factors, while moving backward is to think about its future effects. This article takes double reduction as the background and a policy to consider the effect of this double reduction on sports value, and how to achieve it from now on. This is the result of these two days of listening, which is to know how to think. Next, we need to continue our efforts to understand how to read such articles. In fact, writing a paper is about tracing back to the current problems, finding the reasons, and then solving them. This kind of paper is the problem of the reasons and countermeasures. Current and historical papers can be written in this way. Predictive writing can be done from a theoretical perspective. (How to think)

There is no unique theme for today's writing comprehension. Since listening to the thinking class, I have developed a certain sense of paper writing, at least knowing how to think deeply. Of course, once you know how to think deeply, you also need to know how to write. From a recent paper on skill acquisition, I think I know how to write or have matured. The more I do this, the less I dare to write like before. Whether it's the preface, literature review, or the content inside, including conclusions, I dare not write because I know what a good paper is and what is not. Recently, I have read some papers. Let's start writing from the topic of the paper. The title of the paper actually determines the specific content you write. In fact, regardless of the form of the title, it is about

the relationship between two variables, and more importantly, the relationship between independent variables. For example, in a paper I am currently reading, I may not remember all the specific topics. It is the dual dilemma and reasons of the township government in township governance - taking X as a case study. In fact, when you see a topic, you should analyze its independent and dependent variables. The independent variable in this question is the township government, and the dependent variable is rural governance. In other words, it is to explore the issue of township government as the independent variable. Therefore, in the literature review, it is only necessary to focus on the township government in rural governance. The author did indeed do so in the article. Summarize the literature on township governments. This paper actually explores two types of dilemmas, which are the problems of the current situation. Just express or describe this dilemma. That is the question of what the dilemma is. But this paper is using interview materials. Then analyze the reasons, which are also based on the interview materials used, but you need to extract this reason yourself and use the interview materials to support it. The writing principle in the preface is to first discuss the importance of the township government in rural governance, as it serves as a bridge connecting the people and the country. Then start talking about the existing problems. But this issue has also been raised by other authors. Then we will conduct specific research on how to do it. And the problems to be solved. The literature review focuses on the research of township governments. However, there is still a bias towards explaining the township government. The result is to express the dilemma according to the obtained results, and the reason is also. This is a way of writing, the question of what and why. But there was no question of what to do. There is also a type of paper, such as Professor Chen Baoxue. He wrote about the understanding of Chinese martial arts. The structure of his paper is to write down the process of realization, which is a question of mechanism. Mainly the premise and conditions of enlightenment. It actually explains the process of the emergence of enlightenment. There is another type, which is Teacher Wang Zhihui's. Actually, it's also this way of writing, such as memory issues. With the help of a theory, it has been clarified. It is also a mechanism and function of martial arts memory. But the difference between the two is that one borrows theory to explain, and the other is entirely based on martial arts materials. Now I have also understood some other papers, which are papers for testing. Pass a hypothesis and then test it. Now I have also seen some medical papers that focus more on problem-solving. For example, nearsightedness. Regarding myopia, although it is a literature review, the author focuses on the causes or mechanisms of myopia. Then there are treatment methods, followed by clinical effects, and finally, a summary of several aspects of drug development. Another type of paper is to first explain the mechanism and then construct something. Therefore, it is now very clear that the framework of a paper is what aspects one is prepared to write about a certain problem. For example, the common ones are the current situation, problems, and countermeasures. In fact, I saw a type of paper that day, which is A and B. This kind of paper is actually about what A is, the

relationship or mechanism between A and B, and how it works. (Recent insights, no theme)

The innovation of the paper includes many aspects, including method innovation, theory or perspective innovation, material innovation, etc. The most important aspects are actually these. The innovation of methods can refer to other methods, but there are mainly three types of innovation in this method: qualitative, quantitative, and mixed. In fact, sometimes it is manifested in the aspect of mining data. Of course, historical data is a way to mine data, oral history is also a way, interviews are also a way, life history is also a way, and observation is also a specific method. Above all, these are methodological issues. Epistemology is also a kind of knowledge. Of course, all research is about mining knowledge, so is epistemology. Of course, there are also various computer data mining methods, mainly depending on which method one adopts to mine materials. In fact, I just adopted the way of anthropological field research. I won't say much about the methods, mainly the specific application. Secondly, there is a theoretical perspective. This is a very important issue. Adopting different perspectives leads to different conclusions. Mainly from a theoretical perspective. At the top is the theory of philosophy, followed by the theories of various disciplines. Of course, the intersection of various disciplines is very serious. This also provides the possibility for innovation from a theoretical perspective. For example, studying intangible cultural heritage sports can be studied from different disciplines. Different theories can also be used for analysis. But the most important thing is to conduct research through deduction and induction. In terms of materials, there are both historical and quantitative data, as well as many field data. And field data is mainly first-hand information discovered by researchers themselves. Historical, data, and other materials are all surveys conducted by others. These can be referred to as second-hand data. In fact, first-hand information is more valuable. New data can be expanded. From the perspective of the historical construction of knowledge, people's ways of thinking vary in different eras, so the data mined also varies. And historical data is dead data. (Innovation of the paper)

Although there is currently some experience in scientific research, it is actually necessary to think differently about how to write a good paper and re-examine what constitutes a good paper. We should start from the perspective of how to read and use literature to write a paper again, so that we can have a different understanding of how to write a paper. This change in mindset was not something I had in mind before preparing to write this article, but rather something I came up with during the writing process. How to read literature. I think the way to read literature should be to have a thought in my mind about the literature to be read. First, consider the following questions. Although this issue was once reminded by a teacher during our class, his words have given me great inspiration now. He said that when he gets a paper, he will look at the topic and think for a day or half, and he will first think about how to write the topic. Then let's look at how the author of this paper wrote it. This is the primary task of reading any literature, otherwise one would blindly read it. Having the idea of thinking first, and then

determining the following question: who wrote the paper here, that is, who is the research object. For example, the inheritance of intangible cultural heritage sports in universities. The first topic is about intangible cultural heritage sports. This is the research object, which can discard many related objects. Obviously, this topic is still very big. Of course, there are many problems, including development, protection, inheritance, innovative protection, innovative development, cultural ecology, cultural symbols, etc. Then choose a specific question, which is inheritance. There are also many areas of inheritance, which are limited to university inheritance. There are also many aspects regarding the inheritance of universities, such as the mechanism of inheritance and the cultural space for inheritance. Inherited symbolic imagery. The educational value of inheritance. For example, the mechanism and educational value of university inheritance. It is the influencing factors and values. Alternatively, it can be determined from the perspectives of independent and dependent variables. Inheritance is the dependent variable, followed by the independent variable. Finally, start with the independent variable. When the research object is determined, the research variables. Finally, there is literature synthesis, such as mechanisms and values. Usually, it is the current situation, problems, and countermeasures. These aspects. Or problems, causes, and countermeasures. Or the current situation, and then the countermeasures. For example, cultural ecology can be expressed as the current situation, problems and countermeasures of cultural ecology. Alternatively, simply write a process, such as historical generation, dividing it into several historical stages, and then look forward to this stage. So when reading literature, it is important to first clarify the author's question and what research aspects are mainly provided to address this issue. In the discussion of the results, the main focus is on the author's argument structure, whether it is induction or deduction, or what method. Provide reasons for the argument. When reviewing literature, the main focus is on the author's research on this issue, such as inheritance, what aspects are studied, what methods are adopted, and what perspective is adopted. Then identify your own innovation. Nowadays, especially theoretical articles, they seem quite annoying and lack unified norms. Some of them are not very proficient in using. In fact, to put it bluntly, reading a paper depends on which questions it is prepared to write. (How to read literature)

Academic research is a strict system, and no matter what research one engages in, questions are the starting point of research. Therefore, when sports doctoral students become familiar with the procedures of academic exploration, they have to return to the level of problem awareness, which is also the first step in academic research. It is precisely at this stage that academic exploration must return to problem consciousness and the original starting point of academic exploration, that is why academic thinking has a strengthening effect on problems or proposing good questions. Through accurate understanding of problems in academic exploration, good questions can be proposed. In this sense, academic inquiry ultimately plays an important training role in thinking, not only in the answer to the question, but also in the training of what is a good question and how to ask good questions.

Being able to ask a good question also requires a high level of thinking ability. This stage precisely strengthens thinking ability by returning to problem consciousness. Some studies have pointed out that lack of problem awareness is a common problem in Chinese graduate education. However, in terms of personal growth of sports doctoral students, doctoral students have already realized this problem. Therefore, the cultivation of problem awareness is not only a matter of the education system, but also the key lies in the individual academic consciousness of graduate students [30]. Only when students individually realize the importance of problem awareness can they consciously cultivate this ability, in order to cultivate graduate students with independent thinking abilities. Some scholars even view problem consciousness as the soul of academic research, running through the entire process of academic research. Therefore, it is also evident that problem consciousness is important for cultivating academic thinking [31].

4.9 Essential Thinking of Academic Thinking Academic Thinking, Problem Essence, and Academic Independence

The essence of academic exploration, or further put, the ultimate goal of academic exploration is to promote the improvement of researchers' thinking abilities, emphasizing the training of researchers' thinking abilities. In the process of academic exploration for doctoral students in sports, no matter how many twists and turns they have taken, they will ultimately focus on exploring the essence of thinking, and how to improve thinking will be the necessary path to improve academic exploration. Only by improving academic thinking ability, enhancing metacognition of thinking, or enhancing understanding of thinking, can one truly master academic research. However, understanding the essence of academic thinking requires researchers to take proactive actions, which is an academic growth strategy that researchers make active choices. For sports doctoral students, their main focus is on the essence of academic thinking and the operational rules of academic thinking. When reaching this stage, one will also actively consider the essence of the problem. HYD wrote in his academic diary:

In today's direct learning of essence, I have understood a very important way of thinking. When doing everything, it is first necessary to understand the essence of the thing. In academic terms, it is about what it is. It is necessary to find the essence of this problem through various materials. Of course, different people have different understandings of this issue. They need to make their own judgments based on the information they have searched for, and elevate existing judgments. For example, when it comes to what inheritance is, they need to find the essence of inheritance from various sources. If you agree with the opinions of other authors, use this concept directly. If you do not agree, put forward your own viewpoint, but this viewpoint needs to be argued, which is equivalent to broadening the understanding of this concept and allowing others to further think on your basis. Is this the essence. If others do not agree, they can also correct and make arguments for you. Academic development also goes forward in this way, constantly correcting deviations, and then sublimating this matter. Despite what is being said here, which is the essence of writing the problem, everything else is the same. For example, when it comes to why, such as the factors that affect inheritance, such as why inheritance difficulties arise, different people will have different research and thinking, and have conducted arguments. If you do not agree, you can use your own research to propose your own opinions, and why is it also a theoretical explanation for the reasons behind this matter. The same goes for how to do it, whether it's how the research object does it or whether the author proposes a strategy. This provides guidance for subsequent work. Today, I also understood a question that is why we need theory when writing. I haven't thought much about this question, but I have been thinking about what theory is, even though what theory is is already very thorough, which is thinking about the reasons for a problem or why a phenomenon occurs, and this is theory. But why use theory? Why should I use theory when writing? I haven't thought about this question before, I'm just thinking about how to use this theory. See how others use it. It also seems that many papers have not fully understood, but in fact, there has been a deviation in their thinking. The real question to consider is why theory should be used when writing a paper. The essence of today's direct attack tells me that when solving problems, it is necessary to have a theoretical foundation, a theoretical foundation, and not just random speculation. Theory means that this is a public issue that everyone is paying attention to. Helps to find the answer to this question. Explain the phenomenon. (Further sublimation of thinking? - Thinking directly after essence)

What is essential thinking is actually thinking about what things are, the fundamental reasons for this phenomenon, and the general laws presented by this phenomenon. The thinking of what can be done through a defined form, while the root cause can be done through a five why approach. The general rules are not yet fully understood. Of course, there are many ways of thinking, as well as ecological methods. In fact, studying a problem is to solve it and develop it in a better direction. Therefore, problem-solving thinking methods have a more important guiding role. For example, Teacher Wang Guanghu studies the generation of sports from the perspective of historical generation. Then it is believed that there is a lack of value or philosophical thinking in the generation of history. He thought from three aspects: epistemology, epistemology and methodology. It is also the future development of sports in the future. Just like the essence of thinking I heard earlier, there is a strong emphasis on the hierarchy of thinking. Of course, there are also borrowing methods or theories to solve problems. Inspiration is one of the important research methods. The three levels of problem-solving thinking are that specific behaviors belong to the lowest level, such as fitness making oneself thinner, values being the vision of the future, and what one wants to become in the future, belonging to the middle level. And values exist for what reason, such as why Jack Ma's company exists. Belonging to values. So there are also these three levels of research. (Thinking upgrade?)

What writing is, and how to see the research topic and problems from the phenomena seen or transcribed texts seen or heard, directly determines the level of a researcher, and is also a significant difference between mature and immature researchers. For researchers of maturity, they can discover a new phenomenon from the diverse and complex phenomena, extract it, and find the

topic to study. This is an effective way to discover problems from the field. This ability requires the ability to connect key concepts. For example, Teacher Chen discovered the term 'invisible sense of ceremony' in my description of on-site teaching, which is the theme to be studied. That is to say, studying is a problem. That is, the process from phenomenon to essence, from phenomenon to research topic. Everyone will extract a keyword based on their knowledge and experience, and this keyword is the research topic. What researchers need to do is to study specific issues based on this keyword, such as the classification, formation, influencing factors, characteristics, impacts, etc. of the topic, which can be used as an observation and research object. At the time of writing here, it becomes clear the relationship between key concepts and phenomena. The two are interconnected, not disconnected, and in fact, this concept has always existed, just a problem discovered for a long time. In order to gain a deeper understanding of the relationship between the two, let me give an example of how a male speaker downstairs can extract a metaphor for a sound, and then explore the meaning of sound, what kind of sound is expressed at what time, and the differences between men and women. After discovering this topic, the next step is to pay special attention to its situation and continuously deepen it. If you cannot understand this phenomenon, you can go back to book knowledge to find an answer and construct your own explanation. In fact, research is about finding the research topic from the subject and then writing it out. Of course, this theme needs to be meaningful. Otherwise, writing it out is of no use and others will not read it. But now many people actually use old materials for writing, which is to discover a research topic from old materials and then write about it. But many of them are second-hand materials. It is best to discover the topic from first-hand sources and then write about it. The Relationship between Phenomena (Text) and Writing (Theme)

Although sports doctoral students have begun to think about the essence of academic issues and have confidence in winning academic research, this does not mean that sports doctoral students need to stop exploring academic activities, but rather need to actively engage in their own disciplines and majors, and even freely explore all academic issues, under the thinking mode of mature scholars, This also means that doctoral students in sports will have more academic achievements. This is the ultimate result of academic exploration in training academic thinking, learning to explore knowledge. It can also be seen from the above materials that sports doctoral students have mastered the basic elements of ontology, epistemology and methodology, and can independently explore the academic world. Research has pointed out that the cultivation of top-notch innovative academic talents can be divided into three stages: undergraduate, master's, doctoral, and academic career. The first two stages focus on cultivating academic interests, while the doctoral stage mainly focuses on cultivating independent academic abilitiesFrom this, it can be seen that the main task of the doctoral stage is to cultivate academic abilities to independently engage in scientific research. In other words, independent academic research marks the maturity of academic thinking [32].

5. Conclusion

Academic exploration or activities, as a form of labor for human knowledge exploration, not only require hands-on practice, but also the ultimate questioning of various issues, and ultimately presented in the form of academic papers to broaden human cognitive world. However, academic inquiry ultimately promotes the progress of human thinking and opens up human wisdom with new academic achievements, which is the significance of academic inquiry. Although compared to other social activities, the results of academic exploration can make people feel "ethereal", and sometimes even make people feel less fulfilled. However, it is exploring unknown fields in a different way. This study conducted an in-depth exploration of the academic exploration activities of a sports doctoral student, and demonstrated the following characteristics in the advancement of academic thinking in academic exploration:

5.1 The Advancement of Academic Thinking is a Continuous Cycle of Negation and Affirmation.

Academic exploration plays an important role in the advancement of academic thinking. However, the process of its research is not linear growth, but a process of constant negation and affirmation, and it is a process of constant growth in the ambivalence of negation and affirmation. In the initial stage of academic exploration, the advancement of academic thinking exhibits certain intuitive characteristics, focusing on specific academic work, mainly focusing on paper writing and material use, equating academic exploration with paper writing, showing a strong state of academic confusion. In the mid-term stage of academic exploration, the training of academic thinking began to focus on the relationship between theory and writing, and began to think about how theory can be applied and other issues. In the later stage of academic exploration, although we are constantly thinking about the same problem, the level of thinking shows significant differences. The vision of academic thinking is broader, and critical thinking is significantly improved. Instead of blindly referring to other people's literature, we are able to make theoretical judgments based on our own knowledge, and ultimately form a scientific research procedure to cultivate innovative thinking awareness.

5.2 Academic Thinking Advancement is a Metacognitive Process from Writing Form to Thinking Enhancement.

In the process of academic exploration, the advancement of sports doctoral students' academic thinking follows a metacognitive process from focusing on writing forms to improving their thinking. This process is also an evolutionary process from focusing on external paper formats to focusing on self thinking. In the initial stage of academic advancement, using the academic achievements of others as a reference, the main focus is on the external format of the paper, with a focus on imitation. This is a necessary stage for forming academic norms and the lowest form of thinking advancement. At this stage, doctoral students do not form academic ideas, stay in the stage of following others, and there will be no cutting-edge academic achievements. In the middle and later stages of academic exploration, sports doctoral students began to

focus on their own thinking improvement, with how to improve their thinking level as a key focus, and this state continued until they fully understood the essence of academic research. It is worth noting that in the process of metacognition in academic thinking, it does not necessarily follow the progression from focusing on paper form to theoretical improvement, nor does it necessarily focus on the gradual improvement of problems, materials, applications, writing, and theoretical application. However, in the process of metacognition thinking, these aspects permeate each other and constantly reflect. The obvious characteristic of the process of metacognition in academic thinking is that although the subjects of thinking are the same, the depth of thinking is constantly improving.

5.3 Advanced Academic Thinking is a Process of Knowledge Innovation That Revolves around the Fundamental Issues of Academic Exploration.

Knowledge innovation is the primary purpose of academic research and the highest interest of academic inquiry. It is the process of gradually clarifying academic writing in academic inquiry and thereby improving thinking ability. Therefore, in the process of academic exploration, doctoral students in sports always focus on how to write, study, and think, and train their thinking ability by constantly repeating the above questions. In the initial stage of academic exploration, the most focused issue is academic writing, but in the advanced stage of academic exploration, it completely shifts to focusing on the improvement of thinking, making it an inevitable path for academic research. At the same time, the issue of academic writing has gradually been diluted, with a focus on improving academic thinking. Paper writing is no longer specifically discussed as an academic issue, but rather as a means of expressing ideas, gradually clarifying the boundary between academic research and academic writing. However, in the process of knowledge innovation, academic exploration, academic writing, and academic thinking are effectively integrated into a unified process, where thinking training is placed at the highest level and ultimately knowledge innovation is attributed to the improvement of thinking ability.

Authors' Contributions
Manuscript is completed by the author alone.The author is responsible for the final approval of the version to be published.

Availability of Data and Materials
All data generated or analyzed during this study are included in this published article.The datasets used and/or analyzed during the current study shall be available from the corresponding author upon reasonable request.

Declarations
Ethics Approval and Consent to Participate
This study was approved by the Research Ethics Committee of China West Normal University. Participants were informed regarding the purpose and methods of the study in writing, and their written informed consent for participation was obtained. All methods were carried out in accordance with relevant guidelines and regulations.

Consent for Publication
Written informed consent was obtained from the participant for publishing the data. Written informed consent from all subjects and/or their legal guardian(s) for publication of identifying information/images in an online open-access publication.

Competing Interests
No potential conflict of interest was reported by the author(s).

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