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Discussion on the Course Teaching of Textile Economics

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ABSTRACT

Textile economics is a discipline that uses the basic principles and methods of economics to study textile production, sales and international trade. Learning the course is conducive to training applied senior engineering and technical personnel who understand both technology and management. There are problems such as students have no foundation in economics, students have no enthusiasm for studying textile economics, not enough teachers in textile economics, unreasonable textbook layout, single teaching methods and means, lack of teaching experience, teaching resources and teaching conditions, etc. Therefore, the teaching of textile economics is in urgent need of reform.

1. Introduction

Under the socialist market economic system, the production of textile enterprises has been closely linked with the market, and all the economic activities of enterprises are centered on the market. In a word, production is market-oriented. The market is the result of production development, and it is also the condition of production development. With the high development of commodity production, it will inevitably become more and more prominent in the guiding role of the market. Because the purpose of socialist industrial production is to satisfy the people's consumption, and the basic task of the textile industry is to fully satisfy the social consumption needs of mankind. The ability and scope of product development is the first factor that restricts the market. The development of my country's textile industry must take the market as the axis and establish a scientific product structure, so that in the entire process of textile economic activities, it always reflects the market development of textile products^[1-2]. Textiles are an important export commodity of our

country. In 2020, textiles and clothing, as a key export commodity, withstood the huge impact of the epidemic. Driven by masks and other anti-epidemic materials, exports have achieved unexpected growth throughout the year, which has become an important driving force for the growth of national trade in goods. In 2020, China's textile and apparel foreign trade totaled US\$319.88 billion, an increase of 8% year-on-year, accounting for 6.9% of all trade in goods, of which exports were US\$296.23 billion, second only to the historical peak of US\$298.49 billion in 2014, an increase of 9.1% year-on-year. 11.4% of the country's exports of goods trade, imports of US\$23.65 billion, a decrease of 4.1%. The accumulated trade surplus was 272.58 billion US dollars, accounting for 51% of the national goods trade surplus, a year-on-year increase of 10.4%, driving the overall export of goods trade in the country to increase by 1 percentage point^[3]. The textile economics course is mainly for students in the textile college. Starting from the concept of modern textiles, combining the main economic management theories with the

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development of the textile industry, combining theoretical teaching with specific case analysis, and using different perspectives to analyze the characteristics of the textile industry, the development of China's textile industry, the characteristics and the situation of international trade. The course requires a mastery of basic economic principles and international trade theories, and an understanding of the development of the world textile industry and the status quo and characteristics of the development of China's textile industry, as well as the development trends of major domestic textile and garment enterprises ^[4-5].

2. Teaching Status of Textile Economics Course

Textile economics is a discipline that uses the basic principles and methods of economics to study the economic relations, laws of economic activities and their applications in textile production, sales and international trade. In the past, in the training of textile students in colleges and universities, the emphasis was on technology and scientific theory, while the education of economic management and other content was ignored, and it could not meet the demand for talents under the conditions of the socialist market economy. Textile economics requires students to master basic economic principles and international trade theories, understand the development status and characteristics of the international textile industry, and play an important role in the cultivation of talents. As a newly developed discipline, textile economics has many problems in the teaching of courses.

2.1 Students Have no Foundation in Economics

In order to meet the needs of talent training under the conditions of market economy, many textile colleges and universities have successively added courses such as textile economics in talent training programs. In essence, textile economics is an applied economics subject. The prerequisite for learning textile economics is to have a relatively good economic foundation. However, textile students do not have a foundation in economics, and it is difficult to understand economic theories and methods. From the perspective of teaching practice, the common problem of textile students is that it is difficult to understand many economic problems involved in the course, and it is difficult to consider, analyze and solve problems with economic thinking. Some basic concepts of textile economics, such as the time value of money, risk analysis, investment and depreciation, economic evaluation, and long-term investment decision-making analysis methods, are relatively unfamiliar to textile students. Due to

the teaching reform, some courses related to textile economics, such as international trade theory, economic and technical management, have also been cancelled, which has brought more difficulties for students to study textile economics well.

2.2 Students Have no Enthusiasm for Studying Textile Economics

The development of the textile industry urgently needs a large number of construction talents with both professional skills and economic consciousness. Because no matter what the specific major is, it will serve economic construction in the future. Since science and engineering students have almost no courses of basic knowledge of modern economics, the serious lack of economic awareness directly affects their understanding of social and economic activities. However, strengthening the cultivation of economic awareness for science and engineering students is still a weak link. To solve this weak link, it is necessary to educate science and engineering students on the basic knowledge of modern economics ^[2]. In many professional training programs of textile colleges and universities, textile economics is often offered as a professional elective course. Since it is not a professional backbone course, the status is relatively marginal, and the students' enthusiasm for learning is not high, and they will not spend more time studying. The study requirements are relatively low, as long as the pass is good. In many textile colleges and universities, because the students number of electives for this course is too small, it may not be offered to students in the end.

2.3 Not Enough Teachers in Textile Economics

Textile economics is an interdisciplinary subject, which requires teachers to have knowledge backgrounds in multiple subjects such as economics and textile engineering. Many teachers who are engaged in textile economics courses in universities do not have a background in textile economics, but are transferred from economics or textile engineering majors, and their knowledge structure is not comprehensive; many teachers also lack experience in textile business management or textile international trade. Teaching according to the textbook, can not arouse the enthusiasm of students, and can not give students practical experience guidance.

2.4 Others

Textile economics is a new subject, and its course itself has the characteristics of marginal and comprehensive. Therefore, in teaching practice, there are problems such

as unreasonable textbook layout, single teaching methods and means, lack of teaching experience, teaching resources and teaching conditions, etc. Therefore, the teaching of textile economics is in urgent need of reform.

3. Teaching Reform Measures of Textile Economics Course

The construction of students' economics foundation is a long-term process. Under the background of education and teaching reform and class time reduction, it is difficult to solve this problem in the professional training plan. Therefore, in teaching practice, on the one hand, teachers usually encourage students to learn basic knowledge of economics through general education courses, national quality course websites, etc. On the other hand, according to the content and needs of the lectures, the teacher supplements students economic theory and methods in the course of lectures. There is an overall shortage of teachers in textile economics, especially teachers with practical experience in business management and foreign trade. Some teachers have insufficient teaching ability and lack of professional practical experience, which makes it difficult to meet the practical needs of students and the improvement of their theoretical level. Strengthening the construction of the teaching staff can also promote the integration of school-enterprise teachers and help comprehensively improve the level of the teaching staff. At the same time, strengthen the construction of the practical teaching system, explore new models based on school-enterprise cooperation, and promote in-depth integration and coordinated development with industry associations and brother colleges, which will help promote the integration of curriculum construction; From the perspective of the development of textile economics textbooks, the publication time of textbooks is relatively early, and many of them are not suitable for the current social and economic development background and industry characteristics. Therefore, it is necessary to actively update the textbooks and introduce new theories and knowledge; In recent years, with the emphasis on textile economics teaching, many textbooks have been published. The teacher is the leader of the teaching process, and the students are the main body of the teaching process. At present, the education model of most colleges and universities is still based on the traditional teacher-centered classroom teaching. This model ignores the interaction and communication between teachers and students, leaving students completely in the passive learning state can't give full play to students' enthusiasm and initiative, and can't cultivate students' comprehensive analysis and judgment ability, poor practical ability, and it is not conducive to forming students' professional identity

and professional loyalty. Through curriculum teaching reform, improve teaching methods and means, establish a three-dimensional classroom body composed of teachers, students and teams, with pre-class student preview, data collection, teacher pre-class guidance, classroom lectures, and teachers comments and joint discussions, after-class tests, and teacher's effect evaluation, which consist of flipped classrooms, split classrooms and group collaborative inquiry learning. At the same time, based on different characteristics of the course content, dynamic selection of specific teaching modes and teaching methods. This teaching mode helps to mobilize students' enthusiasm and improve teaching effects; it helps to cultivate students' comprehensive analysis and judgment ability and practical ability; it helps to form career attraction and improve students' professional recognition and career loyalty^[6-8].

4. Conclusions

Textile economics is a professional course for textile majors. Through the study of the course, students can master the basic concepts, theories and methods of textile economics and get due exercise in practical operation. Learning through the course is conducive to training applied senior engineering and technical personnel who understand both technology and management. The thesis puts forward solutions in textile economics teaching to the current problems such as students have no foundation in economics, students have no enthusiasm for studying textile economics, not enough teachers in textile economics, unreasonable textbook layout, single teaching methods and means, lack of teaching experience, teaching resources and teaching conditions, etc.

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An Analysis about the Influence of Culture Transfer on Legal Translation from the Perspective of Intercultural Communication

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ABSTRACT

With the increasingly rapid social development, collusion and integration of different culture around the world, legal translation also becomes an exceedingly important tool in exchanges of laws. Legal translation, in essence, is a non-negligible aspect of intercultural communication, because legal translation is not only a transfer process from one language to another language, but also a study process of various legal cultures. In traditional researches about legal translation, most scholars only have a preference to pay more attention to the faithfulness and exactness of target language, but ignore the significance of cultural elements that are key limitations to the readiness of legal translation. Researchers can take advantage of culture transfer, which is a strategy to avoid misunderstandings in process of legal translation for the intention of improving the quality of legal texts. In this paper, legal translation refers to translation between English legal texts and Chinese legal texts.

1. Introduction

In this section, the author makes a brief introduction about intercultural communication and the relationship between legal translation and intercultural communication, which is the basis of the whole paper.

1.1 Brief History of Intercultural Communication

The conception of intercultural communication firstly flourished in the America, which was put forward by Edwar Hall in his book called *silent language* and was formally established until 1970s. After 1980s, the conception became more and more mature. Another scholar Gudykunst (2003) summarized fifteen theories of intercultural communication, which includes the reduction of uncertainty theory; the negotiation of cultural identity theory; negotiation of face theory; attribution theory; intercultural communication network theory, adaptation

theory and cultural scale theory. In china, some famous scholars such as Wenzhong Hu, Shijie Guan once made many researches about intercultural communication in the most early time.

1.2 Definition of Intercultural Communication

Chinese famous scholar Huwenzhong once defined Intercultural communication as people with different cultural backgrounds engaging in the process of communication^[1]. Some other scholars also refer to intercultural communication between people whose culture perceptions and symbol systems are distinct.

1.3 Relationship between Intercultural Communication and Legal Translation

Sarcevic once believed that legal translation is an intercultural communicative activity within the legal

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mechanism^[2]. Intercultural communication is mainly categorized as verbal communication and non-verbal communication. The author believes that legal translation is a kind of verbal communication. Besides, there are two main legal systems around the world, one is the civil law, the other is the common law. Different legal systems represent different legal cultures and time backgrounds, simultaneously, language is the most carrier and portrayal of culture. Legal translation is an important medium for communicating legal culture of different countries. The conception of legal culture was put forward by one American scholar called Lawrence in 1969, he once supposed that legal cultural refers to the public's understanding, attitude to legal system and model of legal behavior^[3], so people can fully acquire knowledge about different legal culture through legal translation. Famous scholar called Dujinbang believes the key point of legal translation is more than conversion of legal language, but a kind of important legal activity^[4].

2. Culture Transfer in Legal Translation

In this section, the author will mainly introduce the definition of culture transfer, the relationship between legal translation and culture transfer and the implication of culture transfer in legal translation. Scholar called Zuoliang Wang once pointed that translators deal with individual words, but is confronted with two completely different kinds of texts^[5]. The translator uses words, phrases sentence patterns to build a bridge of communication between different cultures, which is the basis of culture transfer^[6].

2.1 Definition of Culture Transfer

Culture transfer refers to the process of passing ideas, experiences, skills and other cultural characteristics from one society to another, from one place to another. Culture transfer also can be named after cultural diffusion or cultural transmission. The culture transfer is on the premise of producing cultural differences, which is divided into positive culture transfer and negative culture transfer. The negative transfer means that mother language will exert an adverse influence on translators, which makes translators exceedingly rely on the rules of mother language to have a wrong grasp of target language. Positive transfer means that using thinking of mother language will promote translators' understanding in target language. The author believes that one communicator may be affected by mother culture when he explores target culture, so culture transfer can be viewed as the psychological process from the mother language to target language and process of thinking and revising^[7].

2.2 Relationship between Legal Translation and Culture Transfer

Translation is one of branches of linguistic and legal translation is no exception. Language is the carrier of culture. Legal culture is a network of values and ideas related to law^[8], but most translators are ignorant of effects of culture elements on legal translation characterized by faithfulness and exactness. The author supposes translators make sense of culture transfer to deal with the balance of source language and target language. For example, when translating foreign legal texts into Chinese, translators can choose to take more Chinese culture into consideration to the intention that makes target language conform to Chinese code of thinking and habit of expression. On the contrary, when translating Chinese laws into foreign texts, translators can follow the express style of foreign legal documents. Legal translation is an important communication tool, which plays a role in exchanging and promoting legal culture from different countries and nations, so the culture transfer can be used as a strategy to improve the quality of legal translation. The relationship between legal translation and culture transfer can be viewed as the process that culture limitation or assistance to transfer in legal language^[9].

2.3 Application of Culture Transfer in Legal Translation

The key point in legal translation is how to take advantage of positive culture transfer and avoid negative culture transfer. Simultaneously, the author holds the opinion that the culture transfer has a relationship with the theory of domestication and foreignization in translation put forward by an American scholar called L. Venuti in his book *Translator's invisibility*^[10]. Arguments about adopting the domestication or adopting foreignization has existed until now. The author believes adopting domestication or foreignization is decided by concrete types of translation texts. Translators can learn lessons from the cognition of vocabulary, grammar, sentence pattern of mother language when they translate English legal texts into Chinese texts. In other words, the author can take the attitude of the ethnocentrism to adopt domestication to make source language conform to the value of target language, which is also the mirror of positive culture transfer. On the contrary, translators should choose to adopt the foreignization to accept the expressing style of source language and cultural differences when translating Chinese legal texts into foreign legal texts, which is also the mirror of the positive culture transfer.

3. Culture Transfer in Different Types of Legal Translation

In this section, the author lists some examples to introduce culture transfer in different types of legal translation, which are respectively translation of legal terms, translation of legal vocabulary and translation of legal texts. This section is the core part of the paper.

3.1 Culture Transfer in Translation of Legal Words

There are many legal English words in legal translation. The best way to apply culture transfer to the translation of legal words is to possess the sense of intercultural communication. For example, “lineup” means one person queues up, but translators shall translate it into “queue up and recognize”, because “lineup” in legal translation refers to a method by which police ask eyewitnesses to identify suspects. In this way, the police arranges a group of people to stand in a row, including the witnesses who claimed to have seen the suspect. The police ask the eyewitness to identify the suspect. For another example, “straw man” refers to dummy made of rice straw, but in legal translation, “straw man” in legal translation means the person who makes fake evidence for others. “Discover” means “find out” in common life, but in legal translation, it should be translated into “show somebody legal evidence”. “Action” means somebody takes some measures in common life, but in legal translation, it should be translated into “litigation”, which means somebody is sued for violating laws. “Exhibit” should be translated into “evidence for proving somebody’s crime instead of “show somebody something. “Maritime” should be translated into “maritime business”. In summary, the phenomenon of incorrectly translate legal English words can be attributed to cultural vacancy. There is no way avoiding affects resulting from cultural differences when meeting legal English words, so translators firstly take foreign legal system into consideration to look up specific legal implications and make some semantic complements to deal with cultural vacancy which requires translators to give full play to positive culture transfer^[11].

3.2 Culture Transfer in Translation of Legal Terms

Legal translation is a kind of very professional translation, which needs translators to have a good knowledge of legal terms. For example, the word “will” is usually viewed as model word and means “somebody has a plan to do something”, but in legal translation, it means “a legal document of one person’s disposition of his estate after his death. “Brief” is equivalent with “concise”, which means using few words can convey important informa-

tion, but in legal translation, it should be translated into lawyer’s defense document”. For another example, “slander” not only means one person says bad words behind somebody to do great damage to reputation, but also refers to oral slander instead of written slander. “Equity” refers to equivalence, but it should be translated into “a kind of legal system-common law”, in legal translation, which was oriented from Britain since the 14th century. “Guardian” should be translated into “somebody who performs the duty of raising children or looking after the old instead of “protector”. “Fruit of poisonous trees” means the evidence through unlawful approaches in legal translation instead of common fruit with poison. “Bargaining” should be translated into “plea bargaining” instead of “transaction”, which means one kind of deal including defense and action. “Next friend” refers to “agent”. “Black-letter law” should be translated into “important articles of law. “Access right” should be translated “parent’s right to visit their children” instead of “permission to enter”. “Indecent assault” refers to one kind of unlawful obscene actions instead of “rude abrupt attack”. “Fruit of the crime” is translated into “illegal income from actions violating laws”. “Baby act” should be translated “laws stipulating that minors shall not assume legal responsibility^[12]. In summary, translators are supposed to take a correct attitude to legal culture differences and break culture restrict to legal translation, making each part conform to expression habit of target language.

3.3 Culture Transfer in Translation of Legal Slang

Legal slang widely exists in foreign legal texts, which is originated from some significant and momentous legal events. Only translators firstly refer to some composition and references can make it easy and exact to deal with legal slang. For example, in the 14th century, British people put red herring in places where foxes were present to test the hunting dogs of the ability to testify if they can resist extra smells and continue to find other foxes. British at the end of the 19th century, until the 19th century, British people began to use “red herring” to refer to false clues or fake faces presented by people in order to confuse their opponents. “Fee simple” was in the background of the appearance of the system of land partition in feudal period of England, so it should be translated into “real estate of which heirs have an absolute right to dispose”.^[13] “Friend of the court” should be translated into “office of juvenile’s legal assistance” instead of “friends of court”. It is necessary for translators to have a knowledge of the background of legal allusions, which prove the necessity of mastering the culture transfer.

4. Strategies about How to Utilize Culture Transfer in Legal Translation

In this section, the author mainly introduces some strategies about how to apply cultural transfer to legal translation, which is aimed at improving the readiness and efficiency of information communication of legal translation. It is difficult to understand and translate legal language because translators not only achieve the equivalence of language function, but also achieve the equivalence of legal function^[14].

4.1 Avoidance of Excessive Culture Narcissism in Legal Translation

In any cognitive activity, people are accustomed to take themselves as criterion of judgement. Cultural narcissism refers to people usually judge everything in accordance with their opinions about certain culture. That is to say, anyone always thinks his culture is most advanced^[15]. In legal translation, the author believes the most important thing for translators is to avoid undue culture narcissism and have a respect for foreign legal culture, taking differences in two legal systems into full consideration to explore the balance between source language and target language. In legal translation, the author holds the opinion translators should avoid adopting the Ethnocentrism. Translators are not only advised to pay attention to expressing style and cultural implications of own source legal culture, but also consider the characteristics of target of target legal culture.

4.2 Adoption of Different Translation Strategies in Legal Translation

The author believes translators had better to take corresponding translation strategies according to different legal translation texts, which includes direct translation, creative translation and free translation. Directive translation keeps both the content and the type of the original text. The free translation only keeps the content of the original text and is not limited by form of content. The creative translation means that translators need to play their subjectivity. The author believes that culture transfer is presented in the creative translation and free translation, because these two translation methods are also the mirror of translator's second creation. In most cases, translators can easily find the corresponding Chinese implications in the dictionary when they meet most legal words or terms, such as evidence, arbitrator, civil and so on. Secondly, when confronted with some special foreign legal expressions with specific cultural background, such as "country agent", "halfway house", "caveat" and so on, translators

can adopt the strategy of free translation because these legal expressions are shaped in special backgrounds, which is in accordance with the function of culture transfer. Translators should take concrete contexts into consideration in legal translation to properly expand implications of legal words or terms to make some necessary cultural supplement. In summary, the core of mastering culture transfer is to flexibly adopt different translation strategies.

4.3 Improvement of the Consciousness of Intercultural Communication

Legal translation is not only a simple conversion process from one language to another language, but also a process of translators' second creation and culture communication. Translators should keep the mind that legal translation is a magnificent intercultural communication activity, translators can improve the consciousness of intercultural communication from three aspects, which are respectively elimination misunderstandings of cultural differences, breaking the stereotype of legal translation, avoidance of the ego-ethnocentrism and concentration on the culture shock in the process of legal translation.

4.3.1 Eliminate Misunderstandings in Expression Differences

Expression differences is one of cultural differences, which are the basis of any kind of translation. For example, native English speakers are accustomed to using passive sentences, which frequently exists in translation of science and technology, because these passive sentences are more objectively describe truth without translators' subjectivity. The same applies in legal translation characterized by exactness and faithfulness, but Chinese native speakers are habitual to use many verbs. Besides, there are also large amounts of complex compound sentences linked by many conjunctions, but in Chinese texts, people usually use many short sentences and four-word phrases. In any kind of English texts, people's attitude and feelings are placed in front of events, but Chinese always firstly list events and then express feelings and ideas. In English texts, there is a phenomenon that pronouns and synonyms are used to replace person or thing mentioned above^[16]. The author believes a qualified legal translator firstly has a comprehensive knowledge about these differences, which will lay a solid foundation in improving the quality of legal translation.

4.3.2 Break the Translators' Stereotype of Legal Translation

The famous scholar called Wenzhong Hu in his writ-

ings once defined stereotype as one kind of belief about attribute of personality and group. In other words, people will shape the first impression on something or somebody affected by the specific culture. In many years of legal translation practice, most translators only view legal translation as a medium of transferring foreign laws, exceedingly emphasize the mechanical equivalence between word and word, sentence and sentence, but overlook the hidden cultural implications and feedback of readers. So it is necessary for readers to break the stereotype from the perspective of intercultural communication.

4.3.3 Avoid Legal Translators' Ethnocentrism

Ethnocentrism is a phenomenon that people get used to understand and measure other cultures in accordance with concept and standard of own culture^[17]. For most legal translators, they all believe own legal culture is superior to other legal culture. It is emphasized that translators should be centered in type of legal texts and demand of target language. The author believes that any qualified translators should show enough respect for bilateral culture, trying their best to get rid of effects on legal translation derived from ethnocentrism.

4.3.4 Pay Attention to the Culture Shock in the Process of Legal Translation

"Culture shock" was firstly put forward by a scholar called Oberg and refers to people's negative feelings or unaccustomed symptoms to certain culture. In legal translation, the author believes the phenomenon of culture shock is presented in the translation of legal slang. Most translators may not make sense of these true meanings of legal slang and only adopt the direction translation according to literal meaning, which gives rise to culture shock and makes readers become confused, surprised, and even disguised, so it is a necessity for translators to improve cognition about legal translation to avoid bringing culture shock to readers.

4.3.5 Explore the Aesthetic in Legal Translation

For any translator, another task is making full use of culture transfer to explore the aesthetic in legal translation. The author believes the key point of aesthetic in legal translation is to express and communicate the principle of justice, humanistic care and feelings. Legal aesthetic covers three aspects, which are the beauty of exactness, the beauty of fuzziness, the beauty of concise^[18]. Translators can adopt different translation strategies and culture transfer to give full play to the aesthetic of legal translation.

5. Conclusions

In this paper, the author creatively supposes that culture transfer has an influence on legal translation from the Perspective of Intercultural Communication. While ensuring the accuracy of legal translation, translators can appropriate some strategies of culture transfer in order to achieve the purpose of communication between different legal cultures^[19]. Situations and contexts in culture affect people's interpretation and transmission of information, which is also suitable to legal translation^[20]. In this paper, the author respectively makes a brief introduction about the intercultural communication, relationship between legal translation and culture transfer, the concrete application of culture transfer in legal translation and strategies about how to utilize cultural transfer in legal translation. To some extent, any translation is an intercultural communication activity. The author believes legal translators should be skilled at mastering all kinds of basic translation strategies and laws of different countries. What is more important, they should gradually improve sense of intercultural communication and study to take advantage of culture transfer to improve the quality of legal translation. The accuracy of legal translation not only refers to the literal exactness, but also emphasize the validity and reliability of intercultural communication result, which is the innovation of the whole paper.

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The Pragmatic Functions of *I think* in Different Genres

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ABSTRACT

The present paper aims to examine the occurrence of *I think* in different genres. A collected data of *I think* from graduate student research interview and objectivism group study within Michigan Corpus of Academic Spoken English (MICASE) is analyzed. Both quantitative and qualitative analyses are included and the selection tool Antconc 3.4.4 are adopted in the study. By using concordance, all the context including *I think* are collected. Meanwhile, some phrases (such as *I think so*, *what I think*, *I think of*, etc.) are deleted from the analysis. It is found that *I think* in different positions and with different collocations fulfill different pragmatic functions respectively. The phrase *I think* is very frequent in GSRI and OSG, which is due to the nature of the discourse, where the participants are engaged in the communication. From the perspective of syntax and collocation, a lot of examples are analyzed in details. It is found that the interpretation of *I think* cannot be reached without exploring its linguistic context. In addition, a more detailed observation of linguistic context of *I think* in OSG and GSRI is explored. Some epistemic certainty (*certainly*, *really*, etc.) are included in research interview, with the function of emphasis and deliberation. The study might help to reconsider the functions of *I think* in different genres.

1. Introduction

In recent years, there has been increased interest in targeting lexicalized sequences in second language teaching. Lexicalized sequences have been studied under many rubrics, including ‘chunk’^[16], lexical bundles, recurrent word sequences^[3,4], formulaic sequence^[17]. The term ‘lexical bundle’ was first used in the Longman Grammar of Spoken and Written English^[2]. Among the lexical bundles, the expression *I think* has received a fair amount of attention from different perspectives and in different linguistic frameworks. From the cross-linguistic perspective, *I think* was analyzed in the context of grammaticalization and pragmaticalization^[15]. In terms of *I think*, grammaticalization and pragmaticalization are the two complex process. Polysemy of *think* are metaphoric strategies and

extensions because of conversational principles and implicatures. The function of *I think* was also analyzed in political discourse and it was found that deliberative *I think* is typical of political interviews, whereas tentative *I think* is rare^[15]. A positive relationship between the use of formulaic sequence and language proficiency was investigated from the perspective of accuracy, fluency and variation^[13,14]. Given the significance of formulaic sequence in language learning, the formulaic sequence *I think* is seldom explored in formal and informal discourse. Therefore, Michigan Corpus of Academic Spoken English (MICASE) was selected and the text types, graduate student research interview (henceforth GSRI) and objectivism study group (henceforth OSG), were chosen from the corpus. They are of relatively high interactivity in the sense that participants are constantly trying to formulate their opinions

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on the topic at hand and may as a result display a high frequency of *I think*. A comparison of its frequency and function will indicate that *I think* has a complex meaning and function when it occurs in different positions and with different collocations. The following two questions are discussed in the paper:

(1) Do we find a comparable frequency in GSRI and in OSG?

(2) Does *I think* have the same function in the two genres, and if so, what exactly is that function?

2. Literature Review

In spoken English, especially in American English speech, *I think* is the most frequently used epistemic marker^[10]. The semantic properties of *I think* are the basis of the study on its pragmatic functions. The modality and evidentiality are the two considerations when scholars first analyze the semantic meanings of *I think*. The meaning of *I think* can be classified into the belief and opinion^[1]. Aijmer argues *I think* has developed into a discourse marker or modal article and it can satisfy the communicative needs. In his study, he concluded the function of *I think* can be classified as deliberative and tentative. It may involve the speaker's attitude to the hearer or to the message. When the speaker uses *I think* in the utterances, they want to express either the certainty or the uncertainty^[11]. The use of the hedge *I think* is an important strategy of politeness and has the functions of avoiding sounding too blunt or assertive and expressing genuine uncertainty in the conversation^[5]. Simon-Vandenberghe elaborated the functions of *I think* in political discourse and concluded that deliberative *I think* is typical of political interviews, whereas tentative *I think* is rare^[15]. The expression *I think* should be considered on the levels of syntax, intonation, collocation, interactional context, etc. Karkkainen claims *I think* has the pragmatic function of on-line planning as well as the topic maintaining and the topic changing^[11]. *I think* is viewed as the expression of epistemic modality within the perspective of conversation analysis. Her data come from the Santa Barbara Corpus of Spoken American English (SBCSAE). The expression *I think* is encoded in terms of intonation units rather than its syntactic position in clauses or sentences.

The corpus-based studies were conducted in China. Among many researches the study of *I think* cannot be neglected since it is frequently used in the spoken English of EFL learners. Hu studies the pragmatic functions of *I think* in the English conversation of Chinese college students^[10]. He further analyzes the different positions of *I think* in the clauses based on the LSECCL (Longitudinal Spoken English Corpus of Chinese Learners) and discovers different pragmatic functions of *I think* when it occurs in IU-initial position or as a separate IU. It reveals the

function of *I think* may be determined with their syntactic constraints. Xu makes the research on the discourse management chunk of the college students' spoken English on the basis of COLSEC (College Learners' Spoken English Corpus) and ICE-GB-spoken^[19]. It is found that unlike native speakers of English who prefer interpersonal indirect politeness strategies, the EFL learners are lack of the chunk richness and they prefer to use the chunk including the phrase *I think*. Xu and He make a comparative study of *I think* in the two corpora from the perspective of the forms, meanings and the functions. As the British speakers, Chinese students showed a linear, incremental, dynamic and scalar use of *I think*^[18]. They find that Chinese EFL learners tend to use the tone fillers like *em*, *er*, and *erm* with *I think*. The study makes some implications to foreign language teaching.

3. Method

The paper combines quantitative study with qualitative study based on MICASE. The selection tool Antconc3.4.4 is adopted. With the help of concordance, we can get all the contexts including *I think*. To warrant the research accuracy, manual work is needed to delete the phrases such as *I think so*, *what I think* and *I think of*. Quantitative analysis examines the relative frequency of *I think* in different text types. Qualitative analysis examines the specific context where *I think* occurs. It also involves the examination of collocation of *I think* in different text types.

4. Results and Discussions

4.1 Relative Frequency of *I think* in Different Text Types

I think is a feature of speech rather than writing^[1,7,15]. Besides, the BNC search indicates that within speech, *I think* is more frequent in dialogue than in monologue: 24 instances per 10,000 words in the former as compared with only 14 in the latter^[15]. Aijmer's concluded within the London-Lund Corpus of spoken English that the frequency in informal face-to-face conversation is almost twice as many as in the non-surreptitious conversation and interview^[1]. In the present study, the relative frequencies of highly interactive and highly monologic within MICASE are 36.27 and 7.86 respectively. The proportion of *I think* in interactive dialogue is approximately 5 times more than that in monologue.

4.2 Positions of *I think* in GSRI and OSG

A relative frequency of *I think* in GSRI and OSG is given in Table 1. The texts differ in word account (5168

vs. 22416), so the absolute frequencies have been converted into the relative frequencies indicating the number of frequencies per 10,000 words.

Table 1. Relative Frequency of *I think* per 10,000 words in GSRI and OSG

Speech Event Title	Matches	Word Count	Frequency
GSRI	46	5168	89.00
OSG	127	22,416	56.65

The figures show that *I think* is very frequent in GSRI and OSG. The high frequency of *I think* in both genres is related with the nature of the discourse, in which participants are primarily involved in communication. Simon-Vandenberg's states that *I think* is more frequent in political interview than in casual conversation (61 per 10,000 words versus 24 per 10,000 words) ^[15]. Specifically, within the MICASE, GSRI shows a much higher frequency than OSG (89.00 per 10,000 words versus 56.65 per 10,000 words).

With the purpose to give a detailed analysis of *I think* in GSRI and OSG, the samples have been explored from the perspectives of syntax and collocation. The perspective of syntax alone merely gives a specific position of *I think* in the utterance. It is suggested that the interpretation of *I think* cannot be separated from the linguistic context. A distinction can be made between initial, medial and final *I think*. The relative frequency of *I think* within the MICASE is displayed as follows:

Table 2. Relative frequency of *I think* in syntactic positions

Genre	Initial	Medial	Final
GSRI	73.52	17.41	0
OSG	41.93	11.59	2.67

First, it can be shown clearly the very high proportion of initial-*I think* in GSRI and OSG. It is in accordance with the findings illustrated by Aijmer ^[1] within the LLC and Karkkainen's findings within the SBCASE ^[11]. Aijmer proposes that *I think* has been classified as "deliberative" if it has the nuclear tone and occurs first in the utterance ^[1]. However, it might be reasonable to hypothesize that the function of *I think* can be interpreted with its collocations. The present study confirms Simon-Vandenberg's hypothesis that the linguistic context might give additional clues as to the meaning and function of *I think* ^[15]. In some cases, the deliberative meaning could be enhanced by different kinds of epistemic quantifier ^[6]. In (1) and (2), *I think* is used to together with *of course* and *certainly* to show assertiveness and politeness as well. For example:

1) yeah **I think** you're right **of course**. (OSG)

2) **I think** so um I mean I **certainly**, learned a lot (GSRI)

In other cases, the deliberative meaning could be diminished. Some expressions could convey the speaker's uncertainty. For example:

3) but **I think** it could be termed a, an aid, a help, **I don't know**. (OSG)

4) **I think** he is not really sure how long he has lived in the States, but I get the impression that it's **about** two years. (GSRI: 42)

It is admitted that although *I think* in (3) and (4) indicate a tentative meaning, it gives the recipient an impression of softening the tone and making the speaker sound less powerful as well.

Second, *I think* displays a very low frequency in the final position, viz. 2.67 per 10,000 words in OSG. Surprisingly, finally *I think* is absent in GSRI. The finding confirms Simon-Vandenberg's research, which indicates that the relative frequencies of *I think* in final position in casual conversation and political interview are 7 versus 0 ^[13]. It could be plausible to ascribe the results to the nature of genres and different functions of *I think*. Final position gives the item an end focus, weakening the force of assertion. Meanwhile, the speaker's doubt is highlighted. Cases of *I think* in medial and final position have been classified as tentative even if they are prosodically prominent ^[1]. It is reasonable that in GSRI, the interviewee expresses his opinion with great conviction, intending to persuade the interviewer to consent to his opinions and to be accepted with his great effort. Finally *I think* is totally avoided by the interviewee to reach the communicative goal. However, the conversation is co-constructed among five participants in OSG, which seems to mean they could sort of speak out their positions freely. For example:

5) it's uh, **I mean** this doesn't he sh- **maybe** should have qualified this **I think**.

Besides using final *I think*, the speaker here uses the hedges *I mean* and *maybe* to avoid giving the blunt assessment. Hedges are not used in situation where the speaker either cannot or does not want to say something directly ^[5].

In terms of medial *I think*, it could be seen that the relatively lower frequencies are displayed compared with initial position. *I think* occurs between the elements the speaker is not sure about so that the hesitation is enhanced. For example:

6) S2: um **I mean** they're they're i **I think** they're supporting him [S1: right] um so he's **just sort of**, doing as much as he can [S1: mhm] to get as many experiences (OSG)

Medial *I think* could also disrupt the syntactic structure and accordingly shifts the topic directly.

7) S4: he's on the **I think** it would be **really really** hard to come up with the following [S1: yeah mm] especially

with primary and fundamental (OSG)

4.3 The Collocations of *I think*

Another item that is worth exploring is the collocations of *I think*. A more detailed observation of linguistic context of *I think* in OSG and GSRI is displayed first. The following patterns indicate some collocations which frequently occur in the same clause or clause complex in the GSRI. The following expressions of epistemic certainty are included in research interview. For example:

8) um, **I think** that's **certainly**, can be useful.

9) **Just** looking at it from that perspective, um **I think** is **really** neat um, an- and that's and that's **I think** unique.

In (9), *just* is used with a 'locative' function or maybe an emphasizing function^[12]. The credibility is enhanced when the interviewee tries to express his opinion by using *I think* and *really*, which could be considered as an expression of deliberation.

The following collocations occur more frequently in the OSG, which could reduce the assertiveness of the utterance. At the same time, *I think* in (12) seems to indicate that the speaker makes on-line planning especially when he needs to time to think about something.

10) **I think I think** I've resolved but I still have **feeling of doubt** and I don't know why but I still have them.

11) **I mean** this doesn't he she- **maybe** should have qualified this **I think**.

12) **I think** it was based on whatever, <PAUSE:04>, you wanna choose, a path, of thinking, that will_ **I don't know** if we gotta get into this.

A list of *I think* in the immediate context, i.e. for words immediately preceding *I think* is shown in Table 3. For the words immediately following *I think* do not show any regular patterns so they will not be discussed in this section.

Table 3. Relative frequency of immediate context of *I think* per 100 words

	OSG	GSRI
so I think	5 (3.93)	4 (8.69)
and I think	6 (4.72)	9 (19.56)
because I think	0 (0.00)	2 (4.34)
then I think	1 (0.78)	2 (4.34)
but I think	7 (5.51)	2 (4.34)
well I think	4 (3.14)	0 (0.00)
I mean I think	1 (0.78)	0 (0.00)

Firstly, as revealed in the table, *so*, *and*, *because*, *then*, and *but* work as a link between the preceding and the following utterances. They could be interpreted as a careful deliberation rather than a hesitation. The higher proportions of *so*, *and*, *because*, and *then* in the GSRI

indicate that the interviewee tries to clarify his stands in the conversation, demonstrating a kind of higher certainty and great confidence. The word *but* used less in the GSRI than in the OSG. It shows the interviewee will not oppose the interviewer's argument directly, which is felt to be face-threatening.

Secondly, *well I think* display a higher proportion in OSG compared with the zero proportion in GSRI. The hesitation marker *well I think* could be regarded as typical features of OSG since it is totally avoided in the research interview. As mentioned in the preceding discussion, the interviewee focuses on commitment and assertiveness in the conversation. The fact that *well* frequently precedes *I think* may indicate the explanation of *I think* as a hedge.

5. Conclusions

The present study examined the formulaic sequence *I think* in different text types. With regard to *I think*, it is clear that it has different meanings and functions in GSRI and OSG. Some conclusions can be made about *I think*. First, the relative frequency of *I think* in highly interactive text type is about 5 times more than that in highly monologic text type. It is in accordance with the previous study. Second, from the perspective of syntactic position, *I think* has different meanings. The finding of a very high proportion of initial-*I think* in GSRI and OSG is in line with the findings made by Aijmer^[1]. Sometimes, the deliberative meaning might be highlighted by using *I think* together with of epistemic quantifier (*of course*, *certainly*, etc.). For the final position, *I think* has a low frequency in OSG whereas *I think* is absent in GSRI. As regards medial *I think*, there is lower frequency compared with initial position, which indicates that the speaker is not sure about what he is going to say. Therefore, the speaker's doubt is enhanced and it may work as a tentative meaning. Thirdly, different collocations of *I think* within OSG and GSRI to be interpreted differently. In GSRI, there was a higher proportion of *so*, *and*, *because* and *then*. On the other hand, there was a higher proportion of *well I think* in OSG and *well I think* was totally avoided in GSRI. The It is because of the fact that interviewee will not argue against the interviewer's opinion directly, which is felt to be face-threatening. The word *well* is placed before *I think*, indicating that *I think* is regarded as a hedge.

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Reform Exploration for Safety Course System of Oil and Gas Storage and Transportation Facilities

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ABSTRACT

In recent years, the safety of oil and gas storage and transportation facilities has been paid more attention by the state and enterprises due to frequent accidents. The oil and gas storage and transportation facilities safety courses in China University of Petroleum (Beijing) includes "Engineering mechanics", "Strength design of pipelines and tanks" and "Safety and integrity management of oil and gas storage and transportation facilities". The three courses lack relevance and the teaching mode is too rigid, resulting in students losing their initiative in learning. If students can't use the knowledge flexibly, it will affect the achievement of the objectives of the training program. Therefore, oil and gas storage and transportation facilities safety courses are reformed, training plans are adjusted and teaching methods are improved. The practice shows that the reform enriches the teaching content, improves the teaching quality, stimulates classroom activity and gets a good evaluation of students. The reform of safety courses has a certain significance for cultivating compound talents who have the ability to solve practical problems in engineering.

1. Introduction

In 1952, China's first oil and gas storage and transportation engineering was founded in Tsinghua University. The major is the link connecting production, processing, distribution and sales of oil and gas. Oil and gas storage and transportation system is not only an important part of oil and gas industry, but also an important infrastructure of national economy, which is closely related to people's lives. As oil and gas is flammable, explosive and volatile^[1], it is subject to key state supervision. Once it is leaked, it may cause fires, explosions and other major accidents^[2]. According to GB18218-2009, oil and gas storage and transportation facilities are prone to pose major hazards. The safety of oil and gas pipelines is an important part of

environmental policy^[3] and has been paid more and more attention^[4]. In the China University of Petroleum (Beijing), the safety of oil and gas storage and transportation facilities is also one of the key teaching contents. However, the education ability in this aspect is far less than that in other directions which can meet the requirement of cultivating compound, innovative and strategic engineering talents. The specific problems are mainly reflected in the following aspects: the requirements for safety education are the same as those of other majors and not further improved. Under the latest training scheme, only three required courses are required, including "Engineering mechanics", "Strength design of pipelines and tanks" and "Safety and integrity management of oil and gas storage

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and transportation facilities”.

The strength design and the safety evaluation of in-service pipelines are introduced in different courses, which is inefficient. At present, the teaching method of the three courses is purely theoretical teaching with miscellaneous contents, so students can only learn some basic concepts of strength and safety. For many years, the assessment method of the course is only some filling in the blank, right and wrong, selection and very simple calculation. The method of engineering analysis by students is deficient, only the simplest problems can be calculated, which can't meet the requirements of complex analysis of practical engineering. There is no teaching link of strength design and check in the course design practice. Due to the above reasons, the graduates of oil and gas storage and transportation have not been well trained in the safety of facilities, which is difficult to adapt to the current safety requirements of pipeline industry. In view of the above problems, we have carried out reform and exploration in the aspects of course system, course teaching content, teaching methods, and practice links. Practice has proved that the reform method can achieve the reform goal in a relatively short time and meet the ability needs of the industry.

2. Curriculum System Reform Combined with Training Plan Adjustment

Before the reform, there were three compulsory courses related to safety in the training plan: “Engineering mechanics”, “Strength design of pipelines and tanks” and “Safety and integrity management of oil and gas storage and transportation facilities”. “Engineering mechanics” includes theoretical mechanics and material mechanics, which enables students to master the solutions to the problems of strength, stiffness and stability of equipment. The purpose of “strength of pipelines and tanks” is to enable students to have a comprehensive understanding of the strength of oil and gas pipelines and storage tanks through mastering the basic concepts, principles and methods of strength analysis of various pressure pipelines and tanks. The course includes underground pipelines, above ground pipelines, submarine pipelines, buckling analysis of pipelines, seismic design calculation of underground pipelines, and strength design knowledge of vertical cylindrical oil tanks; “Safety and integrity management of oil and gas storage and transportation facilities” has established the knowledge system of oil and gas pipeline integrity management course, including the construction of oil and gas pipeline integrity management system, the composition of oil and gas pipeline system and the identification of its hazard factors, so that students can master the relevant

technical work of integrity management as soon as possible to meet the needs of enterprises. As the main compulsory courses in the training plan, the three courses have a great impact on students. Whether the students can understand and absorb the main content of the three courses determines whether they have the basic literacy and vision and meet the needs of industry and Society for relevant talents. However, in recent years, through the questionnaire survey, we found that the students were not clear about the safety concepts, the connection between several courses was not clear and the effect of training plan was not ideal, which was contrary to the original intention of the school when making the plan. In addition to some students' lack of interest, unclear goals, slack personality and other problems, which affect the teaching quality of the course, the relevant teachers found some problems in the curriculum design during the communication. Pipeline integrity is comprehensive and integrated management^[5] for all factors affecting pipeline integrity, which is closely related to the design, construction, operation, and management of pipelines. The process is a continuous improvement process^[6] (Figure 1). It can be seen that some elements in the circulation of pipeline integrity management elements are closely related to pipeline strength design. A series of integrity evaluations will be conducted to check the design quality. They are closely related, but the close relationship between them is weakened in the actual teaching. The “strength design of pipelines and tanks” separately introduces the knowledge of stress, embedding methods and anti-seismic in the design of new pipelines, while the “safety and integrity management of oil and gas storage and transportation facilities” focuses on the management system, technical system, laws and regulations related to in-service pipelines. That is to say, the two courses don't emphasize the relationship between the two courses, resulting in the students can't establish the safety system for oil and gas storage and transportation facilities. In addition, “Engineering mechanics” is taught earlier than the other two courses. The original intention was to lay a foundation, but there was a long time between them. As a result, students can't recall the knowledge learned in previous courses and build bridges between several courses when learning new courses. The above problems lead to the unsatisfactory teaching effect.

In view of the above problems, the college has organized many exchanges between teachers and students to discuss the curriculum reform methods. Given the need to integrate the structure of the professional curriculum system^[7], we finally decided to adjust the training plan. “Strength design of pipelines and tanks” (32 class hours) and “Safety and integrity management of oil and gas

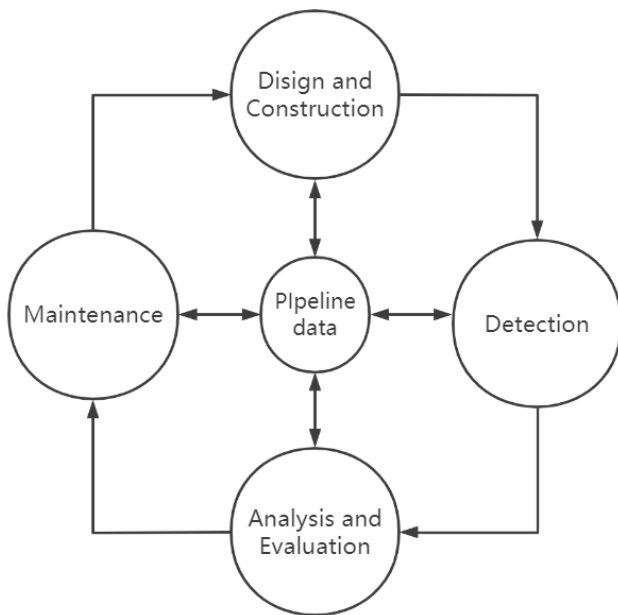


Figure 1. Circulation of pipeline integrity management elements

storage and transportation facilities” (32 class hours) are merged into “strength design and safety management of oil and gas storage and transportation facilities” (64 class hours). The repeated contents in the two courses are deleted and the teaching sequence of related content is rearranged. In addition, the schedule time of “engineering mechanics” ends together with “strength design and safety management of oil and gas storage and transportation facilities” (Figure 2). In this way, not only can the two courses which are not related be skillfully combined together to teach the students, so as to make the knowledge more systematic and three-dimensional. It gives students a comprehensive understanding of the different aspects of knowledge and urges them to review the concepts through assessments at the end of the two courses so that they can feel the subtle connections between the courses. After exploration and practice, the reform of curriculum system combined with the adjustment of the training plan has achieved initial success. Whether it is a random survey or

asking professors to summarize, the response is generally more enthusiastic than before, which is mainly reflected in students’ understanding and mastery of the whole system more clearly and logically. In addition, students pay more attention to the integration of subjects when they ask teachers questions after class.

3. Curriculum System Reform Combined with Teaching Improvement

As mentioned above, in order to build a closer relationship between several courses related to the safety of oil and gas storage and transportation facilities. The college has tried to adjust curriculum by merging courses. Then the teaching content of the course was adjusted accordingly. Before the adjustment, the teaching contents of the three courses are numerous, scattered and miscellaneous. The teachers are clear about the knowledge taught, but knowledge mastered by the students is distributed in Independent points. They may know the specific content of each point, but they can’t connect each point into a line. That is, they may be able to answer some basic knowledge such as the definition of strength, stress and integrity management. However, the results are not satisfactory when they are asked to describe course content in a systematic way.

In view of the above problems, the research group carefully checked the syllabus of each course, and discussed the adjustment of course content. The merged course content in new syllabus was simplified and refined. The overlapping content of the two merged courses was deleted, the teaching order of the content was readjusted and the related content was rearranged according to the actual project implementation sequence. The purpose is to enable students to have a more intuitive understanding of the safety related contents and the relationship between them. In addition, the research group has drawn mind maps for each chapter and section. For example, when teaching integrity management technology system, students will first see the corresponding mind map (Figure 3) and follow

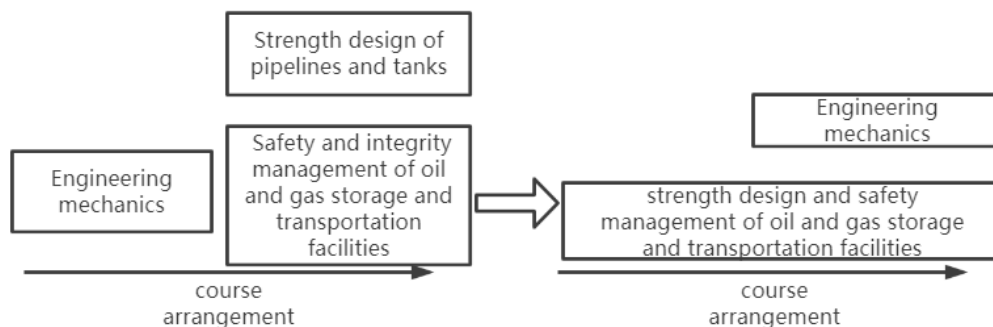


Figure 2. Schematic diagram of training plan adjustment

the teacher to clarify the knowledge to be learned. This should be a part of students' autonomous learning, but now students' learning ability is different and their subjective initiative is accompanied by students' personal vision. It is not guaranteed that every student can browse the content that has been learned or will be learned before and after class. The research group hopes that this can help students better grasp the knowledge system and realize the importance of taking notes and drawing mind maps, so as to make students' learning ability to a higher level.

In addition to some adjustments and supplements to the teaching content, the research group also improved the teaching and assessment methods of the course. In the past, these three courses were offered for a long time. After several years of exploration, the teachers have formed their own independent teaching system. Their characteristics are mainly pure theoretical teaching, that is, teachers actively teach knowledge while students listen passively and the effect is assessed by mid-term and final exams. This kind of teaching method is mostly used in the traditional classrooms nowadays. The teaching is carried out steadily, which can ensure a certain teaching quality. However, it also exposes some problems in practical practice, such as various theoretical knowledge and abstract concepts. When the class is in normal operation, it can be found that some students find it too boring. There are a few people who sleep and are busy with other things. Their learning initiative is low, and the quality of teaching

is worrying. Moreover, due to the complex relationship between the difficulty of test questions and the students' learning efficiency, for many years, the course assessment method can only be examinations. When the exam is around the corner, students just have to cram in order to pass it. The method of engineering analysis and calculation mastered by students is simple. After the examination, the knowledge of temporary forced stuffing will be forgotten by students, which is undoubtedly what the teachers do not want to see.

In view of the disadvantages of the above teaching methods, the research group carried out a series of reforms on teaching and assessment methods on the basis of learning from the reform methods of other organizations in petroleum related courses^[8-14]. "Strength design and safety management of oil and gas storage and transportation facilities" has become a combination of theoretical teaching and practical training projects, that is, practical design, actual evaluation and other training projects are added to the classroom while the curriculum content matrix is constructed. The ordinance is for various pipelines, pipe fittings and tanks, and the abscissa is the strength design, safety assessment, prediction and early warning. In the early stage of the course, theoretical teaching is still conducted to teach students the basic theory and basic requirements of analysis and the concept of relevant engineering design and evaluation standards. In the later stage, the class content is changed into group discussion of stu-

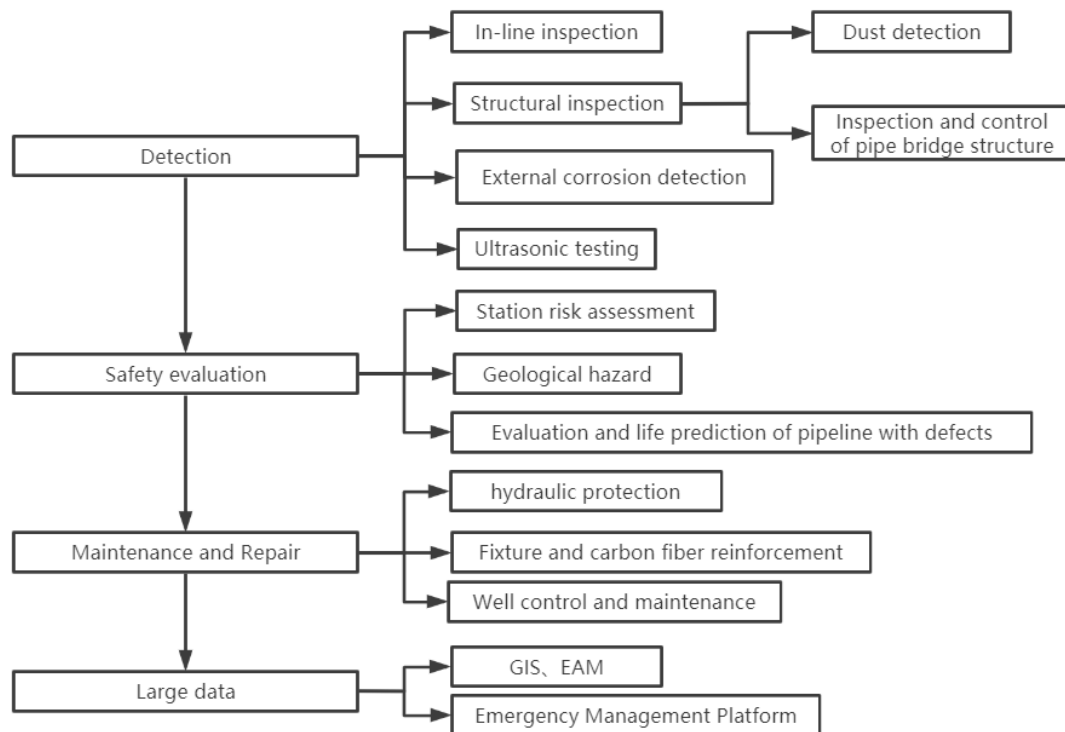


Figure 3. Integrity management technology system

dents. Finally, different groups exchange views with each other and teachers give comments. It aims to improve the level of interaction between students and teachers, as well as students' sense of classroom participation and learning initiative. "Engineering Mechanics" still focuses on theoretical teaching, with additional learning and application of finite elements. The extra-curricular hours are used to let students learn the operation of finite element software and the analysis and calculation of examples, so that students can feel the charm of practical applications behind the formula. The evaluation mode of "Engineering Mechanics" is divided into two parts. The mechanical theory part still adopts the examination. However, examination questions are more closely related to engineering practice. It not only puts pressure on the students, but also drives them to review the relevant knowledge after class and look at the learned knowledge from a new perspective of engineering practice. The finite element calculation part is a single large assignment assessment. The assessment content is to submit the calculation software compiled according to exercises, input data files and calculation results. But each subject generates relevant parameters according to the student number, that is, each student's big homework is a unique topic, so as to avoid the phenomenon of plagiarism among students. The usual performance of the course "strength design and safety management of oil and gas storage and transportation facilities" is to complete a number of design and evaluation reports in groups. At the end of the term, a comprehensive report and defense will be conducted for the reports completed in groups. The review teacher will ask members of the group random questions about the reports, the performance of the members will directly affect their final performance. In order to avoid the subjective will of the teacher and the limitation of his / her field of expertise, the research group will invite several experts from the engineering site to grade the students' report content and performance during the final report and defense, so as to cultivate students' sense of ceremony and make them pay attention to the quality of the selected report content.

Although the reform of teaching methods and assessment methods is still in the preliminary stage of exploration, the above-mentioned specific measures are not the final measures of curriculum system reform, it has achieved initial success. In the classroom, under the guidance of the teacher, students practice and discuss the training project. The classroom atmosphere is warm and the role of the teacher gradually changes from a single "narrator" to a "listener". This not only improves the students' learning initiative, but also timely feedback on the teaching effect to the teacher, so that the teacher can adjust the teaching

content and progress according to the learning effect. After class, when they know that temporary cramming at the last minute is not feasible, the student union is willing to spend more energy on the understanding of learning content, so as to lead some "lost Lambs" back to the correct path. Finally, students can see their original brilliance again in the defense, because they have prepared carefully. Students can talk about questions asked by teachers and experts. Although the answers are not necessarily correct, the confident attitude revealed by the students when they stand on the platform to answer the questions and the ability to search, sort out, process data and finally turn knowledge into their own use are undoubtedly valuable assets for them.

4. Conclusions

As an important part of the training plan for undergraduate students majoring in oil and gas storage and transportation engineering, the safety of oil and gas storage and transportation facilities has been paid more and more attention by the society. However, some existing problems have been reflected in the previous practical teaching activities, which have reduced the teaching quality and affected the realization of the objectives of the training plan for compound talents. By actively exploring solutions to problems, a set of curriculum system reform has been explored. Specifically, the teaching quality has been improved and the students' learning enthusiasm has been aroused by adjusting the training plan, merging courses, adding training items and making a flexible assessment system. The preliminary practice shows that the reform method has received good results. Students' understanding of the safety content of oil and gas storage and transportation facilities is more flexible, in-depth and systematic. They can draw inference from one instance and apply the knowledge to practical engineering cases, which is conducive to the realization of talent training objectives in the training plan. On this basis, the university will further explore the reform system. We should really guide the students to become the national pillars who can be competent for the safety of oil and gas storage and transportation facilities.

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An Analysis of Colour Metaphors of Emotions in Jimmy's Picture Book-*Turn Lift, Turn Right*

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ABSTRACT

The analysis in this paper aims to find colour metaphors in the artist Jimmy Liao's picture book *Turn Lift, Turn right*, and to use the pictures in this book to establish the relations between colour and emotions. This paper selects seven pictures of indoor scenes from this picture book, and brings forth an illustration by observing that different colours can be used as metaphor to convey different emotions. The results clearly indicate that the author Jimmy choose a large number of warm colour (such as yellow, red and orange) to present the positive emotions (like energy, passion and strength), while the cool colour (like blue and gray) to give out negative feelings (such as fear of loss, sorrow, heartbreaking).

1. Introduction

The past three decades have witnessed a profound change in metaphor studies due to the developments in cognitive linguistics: metaphor is no longer viewed as just an ornamental device, but as a basic cognitive mechanism that deeply influences humans' conceptual system and behavior (Lakoff and Johnson, 1980) [8]. A conceptual metaphor is actually a basic cognitive mechanism and metaphorical language is an external representation of the human mind (Lakoff and Johnson 1980;1999) [8,9]. With the foundation of Conceptual Metaphor Theory (CMT), Various experimental studies have provided arguments for the close connection argued by the CMT between real life and metaphor from the perspective of psychology (Gibbs and Marcus, 2006) [3]. Forceville (2016) explored the study of multimodal metaphors, and suggested that metaphor not only manifest in language, but also related

to different modes such as: pictorial signs, written signs, spoken signs, gestures, sounds, musics, smells, tastes and touch [2]. Aliakbari and Khosravian (2013) also give contributions about the analysis of colour-term conceptual metaphors in Persian proverbs [1]. The conceptual metaphor theory (Lakoff & Johnson, 1999) also focuses on the colour-emotion associations language, and demonstrates that emotions, mood and feelings are metaphorically linked to more concrete perceptual experience such as colour [9].

In addition, in the field of emotion metaphor research, conceptualizations such as ANGER IS HEAT, ANGER IS A HOT FLUID IN A CONTAINER (Kovecses, 2000) [7] EMOTION IS LIQUID (Nhu Quynh Luu, 2013) [12], EMOTIONS ARE FORCES (Kazuko Shinohara and Yoshihiro Matsunaka, 2009) are explained clearly about emotion understanding [6]. Furthermore, Marmolejo-Ramos, Correa, and Sakrkar et al.(2017) find out that

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the positive emotion words ‘joy’ in upper spatial locations while the negative emotions such as ‘sadness’ in lower spatial locations^[11].

However, those above findings pay little attentions on the relations of colour metaphors and emotions. This paper try to use Jimmy’s picture book *Turn Left, Turn Right* as example to find out how the colour use as metaphor to convey emotions, and what types of emotion that are illustrate by colour metaphors through Jimmy’s picture books.

2. Development of Jimmy’s Illustrative Works

The name “Jimmy” comes from the English, first name of the Taiwanese illustrator and picture book writer Jimmy Liao. He has published more than 40 picture books since 1998 that have been translated into many foreign languages. His notable works include “*Turn Left, Turn Right*” “*Sound of Colors*” and “*The Starry Night*” some of which have been adapted as movies, musical theaters, television programs, and animations and have won awards. Many characters in his picture books have been applied to the production of authorized derivative goods, including music boxes, smart cards for Taipei Mass Rapid Transportation, gift cards for convenience stores, puzzles, and leather purses (Jimmy S.P.S Official Site, 2021)^[4]. All the pictures were adapted from the book-Turn Left, Turn Right (2018)^[10].

3. Method

In the book *Turn Left, Turn Right*, this paper choose seven pictures which contains both bed-sitting rooms of the female character and male character. All the pictures’ layout is the female’s bed-sitting room on the left page, while the male character’s bed-sitting room on the right

page. Both the rooms have one bed, one sofa, one telephone, one bedside table, one radiator, three lights, several books, some stuffed animals, one plant, two windows respectively. The main differences between the two rooms are the original colour of the sofas, the woman owns a pink single sofa, while the man owns a green single sofa. Besides, the woman also has a blue armchair and a stool with the same blue colour and a writing table. There two stools in the man’s room, one has the same pink colour with the woman’s sofa, while the other stool has the same green colour as his own sofa. Moreover, the furniture at the left corner of both rooms is not same, there is a low cabinet on the left page owned by the woman, while there is a bookshelf on the same location in the man’s room. For the differences of the windows, the left page owns curtains while there are shutters on the right page.

The colours which used in the seven indoor scenes will be evaluated and discussed one by one, try to find out what types of emotion that Jimmy wants to convey to readers from the metaphorical perspective.

4. Analyzation of Colour Metaphors in *Turn Right, Turn Left*

4.1 The First Picture

Form the pictures (see Figure 1) it can be seen the artist Jimmy choose bright light yellow as dimensional mass tone in both rooms, the walls, floors, cabinet, bookshelf, curtains, shutters all covered with the bright yellow. The white poufy could in a pale blue sky outside the window, the woman sitting in the dark blue armchair drinking coffee with a bright red cup on the left page, while on the right page the man wearing a pair of bright green socks lying on his stomach in bed, watching TV. The bright and



Figure 1. The date is 6th of October

warm colour such as yellow and white were used, which gives out the peaceful and joy emotions as Jonauskaite, Althaus, Dael, Dan-Glauser, and Mohr (2019) have observed ^[6].

For this scene appears at the beginning of the story, both the male and female character have not met yet, they don't have clear aims about future life. The author draws a small tree with many bright green with slight yellow leaves in right corner of the woman's room, and draws a plant with lush green leaves on the top of the man's TV. The green colour can be viewed as the metaphor to prefigure the development of the story was full of hope.

4.2 The Second Picture

This picture (see Figure 2) draws the night when the two characters met. Both the rooms were covered with deep blue. And based on the colour theory of Jonauskaite, Parraga, Quiblier and Mohr (2020), blue could link with the emotions of relief, admiration, contentment and pleasure ^[5]. Jimmy colour the whole picture in deep blue to indicate the beautiful affections in both characters when they first with each other. They may fall in love at the first sight.

For all the picture coloured in deep blue, the reader can only distinguish the furniture displayed in black lines. Outside the windows, the sky is light pale pink, with a big rabbit which only can be seen its one eye at the right window of the woman's room, and its back can be seen from both the windows of the man's room. There are four little white rabbits in both rooms. They are jumping, sitting with smell. The lumps on the bedside table give out a small round yellow aperture. Pink (Jonauskaite, Parraga, Quiblier and Mohr, 2020) can be related with the feelings of love, pleasure, joy, admiration and contentment ^[5]. White has the emotional power which present relief, con-

tentment, interest, pride and fear to some extent. In this picture, it can be used as a metaphor to suggest the character's affections for each other are happy, pleasant with joy, very pure and may have some uncertainty.

4.3 The Third Picture

This picture (see Figure 3) draws the similar rooms as the first picture, the main difference is the dark gray colour of the sky outside the windows. It's raining outside and the sky is coloured in dark gray with dark black clouds. For the black colour, Jonauskaite, Parraga, Quiblier and Mohr (2020) evaluate that it can be related to disappointment, disgust, sadness and fear ^[5]. This metaphor may give readers the signal that the relationship between the main characters may not go smoothly as expected. After their first met at the park, they lost each other's phone number because of the heavy rain on the way home. The small tree's leaves turn brown from green in the woman's room, and the green plant which on the man's TV also has several brown leaves in it. This brown metaphor may imply both the characters lose some energy in lives. Because brown has always been a symbol of disgust, contempt and disappointment (Jonauskaite, Parraga, Quiblier and Mohr, 2020) ^[5]. The woman and man cannot get in touch with each other, but also miss each other. This disappointment and sadness emotion is well illustrated through dark gray, black and brown colours.

4.4 The Fourth Picture

The two rooms in the picture (see Figure 4) were coloured in dark blue, the readers could only distinguish the interior furnishings from the thing dark lines of each objects, such as sofa, bed, rug, radiator, curtains, shutters, books, plant, telephone, cups and so on. There is some

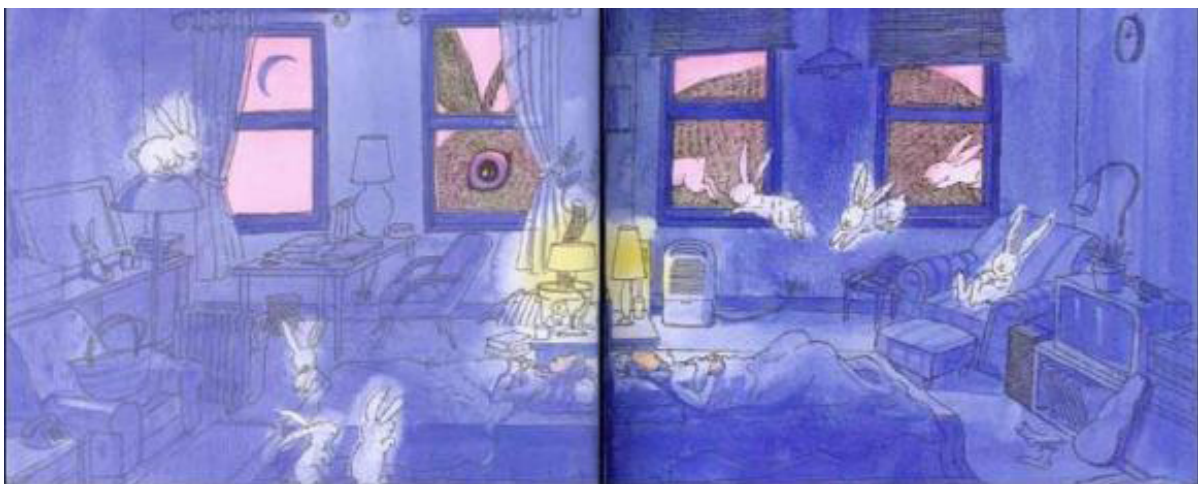


Figure 2. The date is 22nd of December



Figure 3. The date in 30th of March



Figure 4. The date is 8th of November

dark blue shadow on each stuff in both of the rooms. Outside the window there are more darker blue, even tend into black to indicate the time of deep night. Those blue and black colour which link with people's emotion of sadness and fear, act as the metaphor here to show the man and woman feel very upset. They have not seen each other for about eight months, and still cannot forget each other.

There are curved thin crescent which coloured in soft white on the up range of the windows of both rooms respectively. On the left page (see Figure 4), the woman sitting in blue coloured armchair facing a birthday cake, which dotted with colourful candles. The candle light gives out a yellow halo which is the only bright colour in the whole room. On the right page, a floor lamp stand at the corner of the room to shine a small yellow halo equal-

ly as the one on the left. The white moon colour and the yellow light colour can be viewed as the metaphor to indicate the lonely and sadly feelings of both characters, for they are the only sources of light for the whole picture.

Moreover, the colour-emotion associations which are yellow-joy, yellow-pleasure, yellow-amusement, yellow-admiration, white-relief, white-contentment (Jonauskaitė, Parraga, Quiblier and Mohr, 2020) suggest that the characters may control their deep memory for each other^[5]. The yellow halos in both room may metaphorically tell the reader the hope of the future.

4.5 The Fifth Picture

The artist Jimmy put all the picture in deep blue again, with thin black lines and darker blue shadows to give out



Figure 5. The date is 6th of December

a rough sketch of the furnishings. The only bright colour in both rooms are the faces of both characters. The woman and man all wear light pale pink in their face, and they all closing eyes standing against the wall. In fact, they have no idea that they share the same wall all the time. For the wall is drawing in deep dark blue in the middle of the two pages, it often neglected by readers, so it seems that the two characters stand back to back. All pictures were splashed with patches of blue can be perceived as metaphor of sad, tired and heart broken. For they have not seen each other for almost one year, there is no bright colour in the picture may suggest that there is no hope inside the heart of the characters.

4.6 The Sixth Picture

For this picture (see Figure 6), although the main colour painted in light yellow colour again, both the rooms

were in the a messy situation. There are books, clothes and a lot of colourful little things were scattered on the bed randomly. The light blue suitcase of the woman and the brown luggage bag of the man also opened on their beds. The woman lifts a corner of the curtain, revealing the dark black sky outside. Her hand grabs a bring a tan shirt, and a pale brown coat lying on the pink sofa casually. The man puts a green shirt in his brown black bag, his claybank coat and brown black violin box lying on the sofa too. Besides, the tables, cabinet, bed sheet, bookshelf, TV stand, bedside table were coloured in light pale brown. It is worth noting that the small tree in the woman's room loses all the leaves and become dry, while the plant on the man's TV set had withered with only two brown wilting leaves.

Even though the yellow colour metaphor may give the reader positive emotions, but as brown colour per-



Figure 6. The date is 22nd of December

ceived disgust, contempt, disappointment, and regret (Jonaskaite, Parraga, Quiblier and Mohr, 2020) feelings, the pictures may want to show this metaphor to indicate the characters' negative attitude towards their future relations ^[5]. Moreover, the messy coloured stuff on the beds suggest the chaotic and disordered mood of the characters. They feel disappoint and no hope about the relationships and the future life, so they pack up all the things and make a decision to leave the city.

4.7 The Seventh Picture

This is the last picture (Figure 7) of the book to illustrate the rooms of both character. The author uses the geometric perspective drawing method, to make the picture of room image coincide with a seaside image. From the picture, readers can see the floor and haft of the walls are printed in light sky-blue sea with waves and white foam. At the top of the ceilings and the top half walls, it coloured with light sky-blue as a background, and large white clouds floating in the sky. It looks like the sea picture lay on the picture of the two rooms or the rooms became transparent only with thin black graphic lines to illustrate the walls, windows. There is no furnishings, no people, no curtains or shutters in the room. You can only see a big hole in the middle wall with dark blue bricks inside. And there is a green little bird is flying through the hole. Some crushed blue bricks on the floor, and there is a blue hammer and a more dark blue nail on the left room, while a dark blue light hangs from the ceiling from the right room. The scenes from outside of the windows have large white clouds in the blue sky, which has the same colour with the bricks.

Those using of great light blue and white patches revealing the contentment, relief, admiration, pleasure and

joy emotions. Though both the characters are not in the picture, readers may receive the metaphors carried by the colour that their story is a happy one. Finally, the male character and woman character met with each other at the relic of the park, which they had met for the first time fifteen months ago, before they leave. The hole in the wall denotes that the two characters open their heart to each other.

Most strikingly, the small tree which still stands at the corner of left room became green again, with two luxuriant branches with many green leaves. On the right page, the plant which was placed on the window became green again as well, even blossom with four orange and yellow flowers. According to Jonaskaite, Parraga, Quiblier and Mohr (2020), orange can also refer to joy, amusement and pleasure. Jimmy uses the green tree, plant, small bird, and orange flowers as metaphors to demonstrate that the woman and the man have a happy ending ^[5].

5. Conclusions

The advantage of Lankoff's Conceptual Metaphor Theory ^[9] and Forceville's Multimodal analytical method lies not only in adding one more way of seeing colour-emotion associations ^[2]; it rather a new method to evaluate the types of emotion that colour metaphors could conveyed in picture books. One example is Jimmy Liao's picture book-Turn Left, Turn Right ^[11] use the bright warm colour such as yellow, light blue, white, orange, pink to express positive feelings (like joy, love, relief, admiration, pleasure and contentment), while he also use the dark cool colour (like black, gray, brown, deep dark blue) to show the sad, disappoint, fear, regret feelings of the characters. This drawing method might be handy for either those who paint picture books or who prefer to use colour to describe



Figure 7. The date is 6th of March

the emotions of the character in novels. It is hoped that the analysis results of these colour-emotion metaphors cannot only expand the depth of emotion metaphors, but also do a favor for improving multimodal discourse reading ability of Jimmy's readers. Furthermore, it can also guide people's healthy emotional awareness, and provide some useful references for the creative thinking of picture books' designers. However, further insights on the colour-emotions and metaphor in picture books are necessary.

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From Small Activities to Big Life: The Dilemma and Implementation Path to Discipline Integration in Middle Schools Pointing to Qualities

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ABSTRACT

The cross-integration of middle school disciplines is the current trend and the need of education, but it is faced with difficulties in practice. The article mainly adopts the observation method and literature research method, analyzes the dilemma with three aspects, and put forward the progressive four-step implementation path. Respectively, schools and teachers can set up teaching objectives pointing to the core qualities of disciplines firstly, organize teaching materials to carry out small interdisciplinary activities in class secondly, then integrate teachers to launch big project-based learning and interdisciplinary activities, finally create comprehensive curriculum pointing to comprehensive qualities.

1. Introduction

In 2016, *Core Competencies and Values for Chinese Students' Development* was released, whose core qualities are actually beyond traditional disciplines. In 2019, *China Education Modernization 2035* was issued, which describes the vision of shifting from the core qualities of a single discipline to paying more attention to the whole education. cross-integration of disciplines is such a kind of developing trend and idealization results: it upholds the humanistic teaching concept, with different levels of interdisciplinary learning as the action carrier, breaks the boundary of of the knowledge and thinking in traditional disciplines, creates a real learning field that is in line with the laws and needs of people's physical and mental development and promotes people's continuous, comprehensive and stable promotion

of comprehensive qualities. The cross-integration of middle schools refers to the reform process and goal starting from the current situation of ordinary middle school education.

Based on this background and concept, the author tries to explore the feasible path of cross-integration of middle schools, change small class activities to real life, make learning happen at any time, naturally and effectively, to deliver more high-quality talents for higher education and the future society.

2. The Present Dilemma

2.1 The Discussion of Subject-oriented Education is still Controversial

Today, social problems are becoming more and more complex, subject knowledge is extremely rich, and community construction is strongly called for, the demand for

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talents in the future will change. Traditional disciplines focus on the memory of knowledge, and the training of knowledge, ability and thinking is outdated and rigid. The discipline based thought rooted in this mode has become an important resistance to interdisciplinary integration. In view of this, more than ten years ago, referring to the articles published in American educational journals, some researchers thought that educational research should change from “discipline based” to “problem-based”^[1]. With the release of the new curriculum standard and core qualities in recent years, some researchers have compared the new curriculum standard with the old one, and think that it should develop from “discipline-oriented” to “human-oriented”^[2], or to “whole person”^[3], etc., but some researchers are still calling for “returning to subject standard”^[4]. We can see the diversity and disunity of opinions.

2.2 The Development of Discipline Structure is Slower than its Content Expansion

Twenty years ago, China’s new curriculum reform was launched and quality education was implemented. The document requires “changing the current situation of curriculum structure, which overemphasizes subject orientation, too many subjects and lacks integration, setting up a nine-year consistent curriculum category and class hour ratio, and setting up comprehensive courses to meet the needs of different regions and students’ development, and reflecting the balance, comprehensiveness and selectivity of curriculum structure.”, “The primary school stage is mainly based on comprehensive curriculum, and the junior high school stage is mainly based on the combination of subjects and comprehensive curriculum.”^[5] Professor Zhang Tingkai of the Institute of curriculum and teaching materials pointed out clearly that “the curriculum design of compulsory education should eventually move towards the integration of curriculum system and structure.”^[6] Looking at the reality, the generation of high-quality interdisciplinary talents needed by the society depends on the high-quality interdisciplinary training in schools, but this integration has not yet been realized, and in the middle school stage with the greatest academic pressure, the resistance is the biggest.

2.3 The Cross-integration of Middle School Disciplines Lack Motivation

Primary school students have strong plasticity and more spare time. The successful cases like “Chinese+” cross-border learning in primary school affiliated to Rugao Normal School in Jiangsu Province reveal the feasibility of the reform. However, the interdisciplinary integration of middle school still stays at the level of theory and con-

sciousness, showing an ambiguous attitude of trial, wait-and-see or refusal, and its implementation is full of fog. At present, the evaluation criteria generally accepted by the society for schools and schools for teachers are mainly academic performance in traditional disciplines, especially in undeveloped areas in economy. Local governments and middle schools are lack of appropriate cases as comparison, feasible path as reference, professional teachers and corresponding incentive policies, and lack of understanding of its significance. Middle school students are facing the huge pressure of high school/college entrance examination, and the cost of trial and error is high in front of the watershed of life. All kinds of reality bring the front-line reform lack of motivation and confused action.

3. The Implementation Path

3.1 Set up Teaching Objectives Pointing to the Core Qualities of Disciplines

Based on the above situation, schools and teachers can set up teaching goals that pointing to and integrating core qualities of disciplines according to the actual situation. According to the classic “Taylor Principle”, among the four basic problems in compiling curriculum and teaching plan, the determination of educational goals is in the first place. Therefore, improving teaching objectives can be the first step to promote the reform of practice. It is necessary to set up comprehensive learning goals in traditional courses, which not only refer to the integration of different levels of teaching goals within disciplines, but also refer to the integration of goals that can be achieved by cooperation among different disciplines.

For example, core qualities of Chinese in high school include language construction and use, thinking development and promotion, aesthetic appreciation and creation, and cultural inheritance and understanding. Chinese class covers the study of the mother tongue, reading and writing. In a high school Chinese class, the teacher explained the poem *To A Skylark*, written by Percy Bysshe Shelley, in the state-compiled textbook. Two different teaching objectives are designed and represented in Table 1:

It can be seen that the first teaching objective on the left side of the above table can be divided into three points as shown on the right side, but the level is vague and lacks the progressive relationship of operability, and is limited to the text analysis focusing on the knowledge level, which pays less attention to the students’ comprehensive ability and personalized thinking. The teaching objectives on the right side are divided into three levels: knowledge, ability and thinking. Starting from the most basic recitation, it gradually goes deep into the text, analyzes the

techniques, and then combines reading and writing. At the same time, it uses the activity of “reciting to students” to exercise students’ ability of practical use of language. In this process, it improves the understanding of emotion, achieves recognition, and achieves the education of values and quality. In fact, such a design takes into account the above four core qualities of Chinese subjects. Only in this way can each class point to unique core qualities, establish discipline self-confidence, create equal opportunities for dialogue among different disciplines, and lay the foundation for the realization of interdisciplinary integration beyond the state of discipline dependence.

Table 1. Two Different Teaching Objectives of *To A Skylark*

Design 1	Design 2
1. Grasp the symbolic significance of the skylark and understand the poet’s yearning for light and his pursuit of ideals.	1. Knowledge: Know the author, read poetry with emotion, and understand the meaning of poetry, especially the skylark image in poetry.
2. Analyzes the expression effect of metaphor and contrast, understand the connotation of the romantic expression method used in this poem.	2. Ability: Discover, analyze, use poetry metaphor, other rhetorical techniques and interlocking structural arrangement. Imitate this poem and recite it to classmates.
3. Understands the characteristics of this poem in transition and interlocking.	3. Thinking: Understand and agree with the author’s yearning for light and the pursuit of ideal expressed by the author through this poem.

3.2 Organize Teaching Materials to Carry out Small Interdisciplinary Activities in Class

In the initial stage, especially in schools with insufficient resources or traditional schools, can face great resistance to reform. Teachers of various disciplines can consciously use the existing resources in class, and design some interesting interdisciplinary class activities from the current knowledge points within the discipline. These tasks usually do not take up too much classroom time, but can naturally penetrate into the subject and improve the quality of the class. It should be noted that these tasks are not generated at will, but are fully prepared according to a lot of experience. Otherwise they are easy to fall into the superficial and fragmented low-quality learning state.

After reading and comparing the state-compiled textbooks of various subjects since the eighth curriculum reform, we can find that the tendency of liberal arts focusing on tools and science focusing on Humanities, which provides a good reference. For example, there is an ancient article named “Stone Boat Note” (volume 2, grade 8) in Chinese textbook in junior high school. Teachers can set

the interdisciplinary task of “read through the full text and draw the boat”. When it comes to the lettering of the small windows on the boat and the appearance of the characters, the pursuit of beauty involves the painting skills of fine arts. The length unit mentioned in the article is different from today’s. If students want to pursue the accuracy of painting, they must firstly understand the dynasty that made the boat, and then look up the conversion relationship between ancient and today’s measurement units. They will find that there are different opinions on the Internet, which requires careful reading and research, and students’ information literacy is trained. Then use mathematical calculation skills to find out the more accurate value, and finally draw a more accurate and beautiful boat, form a deep impression on the content of the text, also learn the explanation method and writing method of expository text under the guidance of the teacher. In this way, Chinese will be associated with history, fine arts, mathematics and other disciplines, but remember to pay attention to the duration and emphasis in the operation.

Another example is the column of “the feelings of biology and literature on plants” in Biology textbook (volume 1, grade 7), which excavates the biological knowledge in ancient poetry and modern prose, which is helpful to the study of biology and literature. Teachers should consciously set such interdisciplinary tasks which come from and return to daily life and are usually moderately difficult in class to guide students to participate.

3.3 Integrate Teachers to Launch Big Project-based Learning(PBL) and Interdisciplinary Activities

The large-scale activities mentioned here refer to those carried out in the form of PBL. The scale of activities and the depth of discipline integration are further. In the existing cases, most of them are based on a key or advantageous discipline. Due to the problems of difficult organization, tight class hours and shortage of professional teachers, most these activities in middle schools in different regions are characterized by low frequency development, uneven quality, etc.

In view of recent social problems in Nanjing, as is shown in Table 2, I design the following interdisciplinary research case of environmental protection for reference:

This task is triggered by a piece of news with the theme of “environmental protection”. In real life, environmental protection problems are not easy to be solved like “writing environmental protection slogans” commonly seen in Chinese test papers or “using some environmentally friendly degradable materials” only according to the knowledge in chemistry class. High level answers require comprehensive use of sociology, biology, chemistry, communication,

Table 2. An Interdisciplinary Research Case of Environmental Protection

Background	Social Issue	It is reported that on January 6, 2020, Nanjing Intermediate People's court announced a typical annual environmental protection case. A water company in Nanjing, the defendant, was supposed to be responsible for sewage treatment, but secretly discharged the sewage into the Yangtze River through concealed pipes. It also artificially tampered with the monitoring data, and was repeatedly fined for being "a hardened criminal". It was sentenced to "the most severe fine" for domestic environmental pollution, with a total fine of 520 million yuan plus environmental remediation fees. The defendant was sentenced to a maximum of six years' imprisonment.
	Social Action	This incident has attracted the attention of the government and the public on the environmental pollution. Nanjing government has once again put forward the call for building " <i>A Resource-saving and Environment-friendly Society</i> ". In order to make a positive response to it, our school decided to build " <i>A Resource-saving and Environment-friendly School</i> ".
Activity 1	Observation & Reflection	Our school will hold an activity of " <i>Advisers for the Effort</i> ". The monitor has collected the following materials: At present, there is a lot of food waste in the school canteen, and it is suggested that the garbage should be classified and special ways should be adopted to deal with the leftovers in the canteen. The waste-water can be used to irrigate flowers and plants on campus, or be treated in a unified way, so as to avoid the domestic waste-water from polluting the water source. Please try to add more materials. After independent thinking, each group will discuss and select 3 suitable ones.
	Group Assignment	How would you deal with the behavior of the water company if it was you? Please choose to play different roles, such as students, teachers, government officials of environmental protection departments, journalists, managers of traditional petrochemical enterprises and new energy enterprises. Students who choose the same roles gather up into a team. Each team need to write a solution and present it to the public based on your role.
End	Social Participation	Organize the research results of each team into a comprehensive solution, and try to publish them on the Internet or send them to " <i>Mayor's Mailbox</i> " (Selective according to the quality of completion)

economics and other disciplines.

In fact, there are many interdisciplinary activities included in a project, which need to integrate teachers of various disciplines to achieve in-depth and professional guidance. In the teaching and research, we can adopt the interdisciplinary integration mode of "individual preparation - Integrated preparation of this discipline - mutual research of related disciplines"^[7], that is, teachers need to prepare lessons three times before, during and after class, first independently, then collectively, finally, make interdisciplinary preparations. Comprehensive teachers can be cultivated in the interdisciplinary project participation based on school-based characteristics and management optimization.

3.4 Create the Comprehensive Curriculum pointing to Comprehensive Qualities

Focusing on appropriate and advanced teaching objectives, expanding and optimizing interdisciplinary activities, and finally becoming a new comprehensive curriculum are the development direction of disciplines facing the future. Its goal is also changing from core qualities of a single discipline to comprehensive qualities of a whole person. Chinese scholars have realized that "comprehensive curriculum design is easy to spread to multi-disciplinary fields under a certain theme, but creating a situation that can arouse the whole life of students and obtain the

unforgettable integrated experience is the real difficulty of design implementation"^[8]. "The emergence of education based on curriculum standards emphasizes that subject knowledge has largely replaced integrated curriculum. "However, "when teachers become more and more familiar with curriculum based on standards, they have the ability to integrate curriculum fields and will be enthusiastic to do so"^[9]. More than 20 years ago, Beane J A believed that "comprehensive curriculum is essentially different from interdisciplinary curriculum. It should go beyond the boundaries of disciplines, focus on the problems that are common in society and concerned by young people, and take the participation of teachers and students as the form of curriculum organization, The fundamental purpose of comprehensive curriculum is to promote the integration of human and society"^[10].

For example, "integrated curriculum in the United States has gradually differentiated into an action framework composed of interdisciplinary integration - English language, interdisciplinary integration - Social Sciences, interdisciplinary integration - stem curriculum and interdisciplinary integration - the theme of the 21st century"^[11]. Based on the real life situation, we can set up population education course, legal education course, social skills course, leisure and lifestyle course, etc. when these courses are meticulously integrated, it is inevitable to involve history, geography, chemistry, biology, physics, health and other disciplines, which can overcome the shortcomings

of too detailed subject division, Effectively expanding the connotation and extension of learning content is conducive to students' overall understanding of things and the development of comprehensive quality. This also brings enlightenment for the whole teaching ecology: these real, vivid, rich and intensive activities need to be designed and carried out closely around the real life and comprehensive education goals, and the formalism beyond the stage is not advisable.

4. Conclusions

The interdisciplinary integration of middle school is facing the inevitable trend and realistic dilemma. Big life is composed of small activities, which can focus on people's quality and achieve breakthrough from transformation activities. Here are four steps as the implementation path: setting up teaching objectives pointing to core qualities of disciplines firstly, organizing teaching materials to carry out small interdisciplinary activities in class secondly, then integrating teachers to launch big project-based learning and interdisciplinary activities, finally creating comprehensive curriculum pointing to comprehensive qualities. Once realized, it will break not only the barriers among disciplines, but also the barriers to the unlimited development of human and society.

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Exploration and Analysis on the Discourse Power of Network Moral Education

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ABSTRACT

Network moral education has three connotations including discourse right, discourse power and discourse effectiveness, and four characteristics including interactivity, diversity, symbolism and implicitness. These characteristics to a certain extent make the position and function between the subject and object of network education change, resulting in the discourse power and discourse effectiveness out of sync. Therefore, when solving these problems, we should take the ideological beliefs as the leading point, use the new media technology means, take the discourse power construction as the starting point, occupy the discourse highland and manifest the representation. At the same time, we should take life practice as the standard, change the discourse, break the implicitness, and put the initiative of network moral education in the hands of educators.

1. Introduction

The emergence and development of the network makes the network moral education an unstoppable trend, and how to make full use of the network platform to carry out moral education work, and actively grasp the discourse power of network education has become the top priority of moral education.

2. Connotations of Discourse Power of Network Moral Education

Discourse power of network moral education is the sum of various discourse rights, powers and effectiveness generated and developed by educational participants in the process of educational guidance, thought control and interaction under technical support in the context of high integration of network and real society, and the connotation can be defined from three aspects: discourse rights, discourse powers and discourse effectiveness.

2.1 Discourse Right of Network Moral Education: Combination of the Right of Participation and the Right of Expression

Moral education contains certain discourse rights, and the construction of discourse rights of network moral education is the extension and realization form of ideological and moral education in the network society. The social power relationship established on the basis of network discourse rights is reflected in the discourse rights owner's right of participation in network education activities with discourse qualifications and power, that is, the opportunity for educators and the educated to freely express their opinions and views on social phenomena through the network media. It is also reflected in the educator's right of expression to guide and regulate educational activities and achieve the purpose of network moral education by relying on the characteristics of the network society to explain ideological beliefs, political concepts and value ide-

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as to the educated and to realize the exercise of discourse rights.

2.2 Discursive Power of Network Moral Education: Integration of Control Power and Guidance Power

Michel Foucault believes that discourse is a kind of “power”, a power realized by people through the control of discourse. Thus, the discourse power of network moral education is essentially also the dominant power of the state ideology in the network society. With the optimization of information dissemination and education method, educators and the educated comply with network morality, laws and regulations in an effort to realize the dual influence of externalization and internalization of mainstream ideology. On the one hand, the discourse power of network moral education is manifested as control power, which is reflected in the formation of the authority mechanism of mainstream ideology with the help of state power, rather than just relying on the generation way of network technology. On the other hand, it is manifested as the guidance power. The discourse subject integrates political consciousness and moral thought into the network discourse system, and during the guidance, the educators or the educated are not each in an independent state, but both sides make linkage and effectively use the appeal of discourse to enhance the discourse power.

2.3 Discourse Effectiveness of Network Moral Education: Value Recognition and Behavior Consciousness

The discourse subject dominates the political direction of the public in the network environment. When carrying out educational activities, on the basis of fulfilling the discourse rights, we need to enhance the cohesion and guidance of education and form the influence effectiveness of network moral education, which is reflected in the understanding and absorption of moral education content by the educated, changing the current state of cognition of the subject, making them actively form value identity, and transforming it into moral norms and codes of conduct that guide their social practice. The discourse effectiveness also manifests itself in the transformation of the role of the educated. In the process of receiving education, the educated learn the information taught by the subject of the discourse and generates new ideas, and use the ideas to re-educate others, which is also the consciousness of behavior formed by the network moral education, and the identity of the educated transit from the object of education to the subject of education ^[1].

3. Characteristics of Discourse Power of Network Moral Education

3.1 Interactivity

In traditional moral education activities, the relationship between the subject and the object of education is clearly defined, and the two cannot override each other. Interlinguality, as a factor constituting network moral education, advocates that the subject and the object of education have freedom and equality of discourse, not only in terms of equality of personality and status, but also in terms of dominance of discourse opinions. Therefore, in the network society, the subject and the object of moral education traditionally can be free from the restrictions of social relations and choose and absorb the accepted social ideology according to their own consciousness, and the relationship between the subject and the object becomes blurred and equalized. In addition, the network society is characterized by fast information dissemination and wide coverage, and young people can quickly acquire information to, forming an advantage in terms of quantity and quality of information, but this advantage can easily conflict with the educator’s perception of educational content, which in turn affects the educator’s way of thinking and level of judgment. In other words, in the two-way network moral education, the educators are also receiving education, and thus the educated are also the educators while receiving education.

3.2 Diversity

Discourse power, as a political right, represents the right of citizens to participate in social and political life according to the law. At the same time, discourse power is also a kind of language right, which means that it is possible to resist public power to assert one’s values while following the rules of social reality and natural environment. Both subjects and objects of education can use the emerging medium of discourse to articulate their views in the online society, expressing themselves in a variety of forms and with different perceptions of the same event. Simultaneously, the literary forms used to exercise discourse power are diverse, and the development of online popular culture creates space for the development of people’s internal and external discourse time, and traditional literary forms of discourse are gradually replaced by popular literary forms. Especially when tracking real-time hot issues in society, it is possible to integrate the personality of young people into the communication style, constantly influencing the subject and object of education ^[2].

3.3 Implicitity

The discourse power can hide itself, and the influ-

enced group will have self-ideological consciousness and control the behavior, so the discourse effectiveness of network moral education will also be affected to a certain extent. The expression of mainstream ideology within the network discourse system is mostly popularized and simplified. Combined with the rhetoric, symbols, syntax and other skills used in the expression of literary forms, educators put the value concept of national mainstream ideology, the ideology of the core value system of the society, the moral beliefs of the personal code of conduct, as well as the realistic ideology and future outlook into the communication and education between the subject and the object, which has an effect on the ideology and morality, ideals and beliefs, and the code of conduct of the educated unconsciously. The communication between subjects and objects of education is not only the interaction of words, but also the realization of discourse effectiveness, which relies more on the spiritual communication and the intercommunication of ideology and consciousness. The subtle communication method breaks the boundaries of time and space, and the hidden influence makes it easier to consolidate the effectiveness of network moral education, and the objects are more likely to externalize and internalize the educational contents. In addition, the external environment and the individual cognitive level of the subject and object of education have an impact on the discourse effectiveness of moral education.

4. Real Situation of Discourse Power of Network Moral Education

4.1 Status of Discourse of Subject Declines and the Subjectivity of Discourse of the Object is Enhanced

At present, there is a big difference between traditional moral education and network moral education. The traditional “single subject” indoctrination model has gradually developed into a “double subject” intercommunication model that is coordinated with network moral education. In the “double subject” mode of education, the contradiction formed by the difference in discourse runs through the whole moral education, and the educator and the educated have a conflict of ideas and viewpoints, and eventually tend to agree on common values.

First of all, the status of the discourse between the subject and the object changes due to the interaction of network moral education and the characteristics of the subject and the object in the network society. The educated are not general objects and do not absorb the educational content in a passive way. With the subjective initiative, the educated can judge the value information received and are no longer passive recipients of information. On the ba-

sis of the above, they can also create and spread valuable information, gradually forming a pattern opposite to the subject position of the educators. Thus, the discourse confrontation between the educated and educators is also mutual interaction, and the ultimate goal of communication is to eliminate contradictions and form social and cultural identity and consciousness of action. Secondly, the diversity of discourse rights affects the construction of discourse system of network moral education. The diversity of discourse content, two-way discourse transmission, and open discourse environment reflect the development trend of modern moral education, which undoubtedly weakens the threat of authoritative discourse system. As a result, the educators’ authoritative discourse role is weakened, and the relationship between the subject and the object is further blurred ^[3].

4.2 Imbalance between Discourse Power and Discourse Effectiveness

Traditional moral education usually falls into the dilemma of discourse construction due to the lack of thinking about personal values and emotions as well as the understanding of the subject and the object of education. Although network moral education has formed its own advantages, it still faces the same discourse dilemma. The network society is a public domain for subjects and objects of education to fulfill their discourse power, and it is also an environment for discourse confrontation. Both sides have differences in reality and present different levels of discourse power and ideology. However, considering the lack of trust and understanding in networking, the power of network ideological and political education is usually in a state of imbalance in terms of its exercise and return of power and effectiveness.

In addition, the implicitness of discourse power promotes the asynchrony of discourse power and effectiveness of network moral education. The implicitness of discourse power roots in the asynchrony of discourse effectiveness. In the network moral education environment, the pluralistic culture makes the educated unable to focus on accepting and absorbing the correct ideological values, and they are unable to identify which values are useful or useless among many value choices. So it is difficult for them to form cultural self-awareness and value construction, and the lag of feedback makes the discourse effectiveness absent, and the practical activities in the real society also lose their value orientation. Therefore, to break the implicitness of the discourse effectiveness, it is necessary for the discourse power to continuously deliver spiritual power to the discourse effectiveness. Educators should look for common discourse power premises, understand

the receptiveness of the educated, adhere to the discourse foundation, and adopt the education method of indoctrination and communication to achieve the desired education effect. The educated take the guiding value concept, ideals and beliefs, moral code as the code of conduct and target of life practice and return to the real world ^[4].

5. Construction Path of Discourse Power of Network Moral Education

5.1 Take Ideals and Beliefs as the Lead, Use New Media and Face Diversity

The network moral education is to carry on the socialist mainstream ideology penetration education to the educated to construct the spiritual and the real world. Given the characteristics of ideological beliefs first in practical activities, the education of ideals and beliefs of educated shall be the focus in all cases, and the dominance of ideals and beliefs shall be adhered to in the diversified network trends and carriers. At the same time, the network moral education should also continue to enrich its content with the development of the times, effectively improve the influence of moral education by the audience-oriented communication method, give full play to the advantages of big data processing, and actively advocate the correct ideology on the basis of quantitative data. In addition, educators should also flexibly use various literary forms of moral education in the network environment, creatively integrate dominant value content into popular literary forms, and create diverse network cultural products.

5.2 Take the Construction of Discourse Power as the Starting Point, Occupy the High Ground of Discourse and Manifest Symbolism

Faced with the deconstruction of discourse power of moral education in the network environment, the subject of discourse should establish the spirit of struggle, take the initiative to attack the principle issues, and occupy the high ground of discourse in the struggle of public opinion. Especially in the process of discourse confrontation, the subject of discourse must constantly improve the cultural literacy of discourse, enhance the skills of discourse struggle, and hold on to the high ground of discourse. It is also necessary to purposefully strengthen the network technology, effectively use the network media with sufficient theoretical knowledge and skilled network technology, timely give full play to the guiding power of the authoritative discourse of network moral education, targeting to identify problems, solve confusion and form consensus. At the same time, the object should also form value trust mechanism and make timely feedback on the ideological

and moral education received to continuously consolidate the foundation of its ideological beliefs ^[5].

5.3 Take Life Practice as the Standard, Change the Way of Discourse, and Break the Implicity

As Marx pointed out, "The question whether objective truth can be attributed to human thinking is not a question of theory but is a practical question. Man must prove the truth — i.e. the reality and power, the this-sidedness of his thinking in practice." Therefore, life practice serves as a measure to judge the discourse effectiveness, and the process of life practice is also the process of individual cognitive experience accumulation, which is the overall perception of society and culture. In the networked environment, people not only want to understand the discourse content of moral education and the way it unfolds, but also look forward to the effectiveness experience brought by this new education mode. While this requires that the abstract language break through the cognitive barrier by changing the way of discourse and making the theoretical language popular, with the affinity and appeal of language. After a certain period of time, the effectiveness of network moral education will be maximized, and the educated will form cultural consciousness and behavior consciousness unconsciously to realize the actualization of discourse effectiveness. At the same time, the educated will receive positive influence on all aspects of real life, form a correct judgment and resistance to the multi-culture of the network, and take the initiative to screen the value information obtained from the network. Therefore, the implicity of the discourse power of network moral education can be eliminated, and the discourse effectiveness can be maximized ^[6].

6. Conclusions

Network moral education classroom is very advantageous compared with traditional classroom. It creates a more vivid and lively teaching environment, and facilitates teachers' teaching diversity at the same time. At the same time, teachers can better use audio and video to mobilize students' enthusiasm, better help students establish survival ideals, expand wisdom and knowledge, and make moral education work more effective from different perspectives. Cultivating students' survival wisdom and establishing students' survival ideals are also the keys to building a practice platform of network moral education to establish survival wisdom.

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Research on the Application of Intelligent Evaluation and Teacher-student Cooperation Assessment System in Teaching English Writing

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ABSTRACT

Low efficiency in teaching and time-consuming in writing evaluation are two big problems for college English teachers. Therefore, it is necessary to create a new teaching model to solve these problems existing in traditional classroom-based teaching. This research adopts the research methods of test comparison before and after the students' composition experiment, questionnaire and semi-open interviews. Empirical research on a new teaching model that integrates the intelligent composition review and reform system represented by Piangai.com and the collaborative evaluation of teachers and students is conducted. The research results show that the new writing teaching model improves the quality of students' writing, promotes students' learning initiative, and enhances students' writing self-efficacy. This writing teaching model provides ideas for solving the problem of time-consuming and inefficient English writing teaching in large classes.

1. Introduction

Instruction of college English writing plays an important role in college English teaching. Traditional English writing teaching has the problems of large class size, heavy curriculum burden on teachers, difficulty in ensuring timely feedback on students' composition, and lack of individualization in student learning^[1]. Now the new generation of college students has distinctive characteristics in terms of cognitive models, study habits, and information technology applications^[2]. The above reasons determine that college English writing teaching needs to explore diversified models. It is an urgent task to create an English writing teaching model combining the traditional education model with the advantages of modern network technology.

With the development of education informatization, computer-assisted foreign language writing (Computer Assisted Foreign Language Writing, CAFLW for short) has become the focus of foreign language education research^[3-5]. Among the numerous computer-assisted foreign language writing websites in China, Pigai (an intelligent composition review software) has the largest number of users. This intelligent online automatic composition correction system is based on natural language processing technology and corpus technology. It analyzes students' compositions comparing with the standard corpus. The distance between the students will be scored instantly on the written English composition of students, multi-level analysis of the content and suggestions for improvement^[6]. Compared with the traditional teaching mode, Pigai, as an intelligent online automatic composition correction sys-

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tem, has the advantages of simple use process, easy learning and operation, instant feedback and sentence-by-sentence comments, suitable for independent training and convenient for teachers' teaching and research. And some scholars Lee et al ^[7] found that learners who received dual feedback from the intelligent writing platform and teachers were better than those who only received single feedback from teachers in traditional teaching, regardless of the content and structure of the composition. The overall score was still better.

Pigai intelligence composition review currently has certain limitations, such as the inability to independently determine whether the content is wrong; pointed out the problem of writing, but cannot provide correct examples; some serious grammatical errors cannot be recognized by the system; functions in logic and text structure need to be strengthened ^[8]. The peer feedback method helps students to exchange ideas and learn from each other's writing materials, which can effectively improve students' ability to write content and topics. Students agree with the participation and interaction brought by peer feedback, but they tend to be based on teacher feedback. A teaching model supplemented by peer feedback ^[9]. Yang Yonglin et al ^[10] conducted research on students who used the intelligent writing platform for teaching experiments and found that Chinese students relied more on teachers in evaluating emotional cognition. Teacher evaluation has more advantages in various forms of evaluation. If students can discuss with peers and teachers more in the writing process, change from one-time drafting to repeated revisions, and from one-way feedback to multi-way feedback, it can enhance students' sense of self-efficacy and significantly improve students' writing ability and writing scores ^[11].

To solve this problem, self-assessment, peer assessment, automated assessment and teacher assessment are integrated in the instruction of English writing. However, there are few research examples on how to use a simple and practical intelligent online review system and teacher-student cooperative assessment in the process of writing teaching to improve students' independent writing ability and writing motivation. In order to improve students' interest in writing and writing quality, Teacher-student Cooperative Assessment (TSCA) is adopted based Production-oriented Approach (POA) in teaching theory, the author takes the students as the center and integrates the intelligent automatic online review system with teachers and students. After the integration of cooperative evaluation theory, it is introduced into English writing teaching, giving full play to its advantages such as individualization, instant feedback, sentence-by-sentence comments, online revision, and joint participation of teachers and

students, so that students can have the joy of writing in the process of multiple manuscript revisions and realizing self-exploration and self-innovation construction. It is expected to enhance the self-efficacy of students' writing ability, and improve the motivation and writing ability of English autonomous writing.

2. Theoretical Basis

2.1 Process Writing Theory

Process writing is a teaching method of writing courses popular in Western education systems in recent years. The core idea is that the writing process is a process of gradual improvement, in which teachers' guidance is needed, and students' own deliberate learning is combined to express the thoughts of the article through multiple revisions ^[12]. The teaching of process writing focuses on the writing process and content, so that students can think about and modify the language use and article structure ^[13]. This teaching method is student-centered, focusing on students' learning needs, the use of text, autonomous learning and the use of target language, but it also has certain limitations. Only using the process writing teaching model cannot solve the problem of large class size. And the needs of students are different. Individual students will be entangled in details, easy to deviate from the subject and waste class time ^[14]. Therefore, in this study, teacher evaluation, student self-evaluation, and peer evaluation are introduced into English writing teaching, which effectively solve the limitations of process writing.

2.2 Self-efficacy Theory

Writing self-efficacy is reflected in the author's confidence in completing specific writing tasks, and has a significant impact on students' composition performance ^[15]. The purpose of self-efficacy theory is to develop students for the learning potential of students. Teachers need to work hard to improve students' sense of self-efficacy in writing during the writing teaching process, so that they have a certain interest in English writing, which is ultimately reflected in the improvement of English writing ability and performance ^[16]. Traditional English writing teaching is aimed at taking exams, lacking initiative in writing topics, and difficulty in overcoming writing difficulties on their own. These factors will lead to a decrease in students' sense of self-efficacy in the process of English writing ^[17]. Establishing a diversified writing feedback mechanism of intelligent revision, The combination if student self-evaluation, teacher evaluation, and peer evaluation can enable students to clarify the content of writing, plan writing tasks reasonably, present writing topics better, and enable students to achieve self-efficacy in the writing pro-

cess, and effectively improve the writing ability and writing score^[18].

2.3 Teacher-student Cooperation Assessment (TSCA) in POA

“Teacher-student Cooperation Assessment” is the evaluation based on the “Production-oriented Approach”, which is used to make up for the problem of large class size and delayed-effective evaluation feedback. It consists of three parts: before class, during class, and after class. In the pre-class stage, the teacher first selects the topic, and selects articles with the same topic for “guide reading”, so that students have a clear understanding of the content of the topic, and then selects typical samples in the composition submitted by the students; Common problems are analyzed and targeted training is given. At the same time, peer evaluation training is conducted. After class, combined with teacher professional guidance, student self-evaluation and peer evaluation, students will revise and improve their self-writing skills again^[19]. “Teacher-student Cooperative Assessment” is not a simple superposition of teachers and other evaluation methods, but breaks the boundary between “learning” and “evaluation” between teachers and students, and integrates evaluation into the learning stage, which plays a role in deep learning.

The preliminary teaching research of TSCA has a certain foundation^[20,21]. Through the method of experimental design, it studies the influence of TSCA on college English writing. Compared with traditional writing teaching methods, TSCA method can promote students to better master language skills and fully mobilize students’ learning enthusiasm and initiative. However, the TSCA teaching methodology also has certain shortcomings in teaching practice. The main problem is that the TSCA teaching model has high requirements for students and a large amount of output tasks. It is impossible to guarantee timely feedback solely by individual teachers. The introduction of an intelligent online automatic composition correction system can effectively solve the problem of a large amount of review work in the after-school phase, and provide immediate feedback to students. The intelligent composition review system effectively solves students’ language-level problems, such as spelling, vocabulary, grammar, etc.; and TSCA provides help for students’ further improvement of writing content, writing framework and language. The two complement each other can improve students’ writing quality and writing efficiency.

3. Research Design

3.1 Research Object and Process

The subjects of this study are students from four teach-

ing classes taught by the author, with a total of 175 students. All the students tested have scores of 110 or more in the college entrance examination, so there is little difference in the level of students’ English college entrance examination. The experiment period is from the first week to the fifteenth week. The teaching of writing for students is based on the teaching theme of “New Standard College English”. Students will draft four writing tasks in the experiment period, which are Task 1: Discovering yourself; Task 2: Discovering yourself (Second draft); Task 3: How to Tell Chinese Stories in English; Task 4: How to Tell Chinese Stories in English (Second draft). The students first complete the writing topics assigned by the teacher (tasks 1, 3) within the time limit specified on the Pigai review online and modify them according to the computer review comments; after the writing task, the teacher conducts a common analysis based on typical samples; the teacher conducts peer evaluation among the students after training; Finally, students submit their writing content (tasks 2 and 4) in Pigai according to the teacher’s revised comments, and the system will give appropriate feedback online.

3.2 Data Collection

For the content of this research, the author adopted the research methods of two tests before and after the experiment, questionnaire survey and semi-open interview, and the research data was analyzed using SPSS19.0 software. The data used in this study come from the writing process records provided by the Pigai system, questionnaires and interviews with students after the experiment. After the deadline of each online independent writing task, the author of this article will analyze all the writing process data of pigai.com, including the vocabulary richness, vocabulary difficulty, clause density, average sentence length, spelling accuracy, and grammar of each composition. The accuracy rate, average word length, article length, number of paragraphs and total score, etc., are analyzed using SPSS19.0 software. All data collection has the permission of the students.

After completing four writing tasks, the researchers conducted a questionnaire survey on the online teaching platform to find out their recognition of the new mode of English writing teaching, and to investigate the teaching effect of the new mode of English writing teaching. The questionnaire consists of 9 closed-ended and 3 open-ended questions. A total of 175 people filled out the questionnaire and 175 copies were returned. The design of the questionnaire refers to the design of^[22] the statistics using a 5-level scale, ranging from “very dissatisfied” to “very satisfied”. The higher the score, the higher the degree of

recognition of the teaching method by students. On the contrary, the lower. In addition, the researchers conducted semi-open interviews with 20 test students (5 in each class).

3.3 Data Analysis

For quantitative data, all 175 students' different manuscripts from four writing tasks were derived from Pigai.com. The machine evaluation adopts the vocabulary richness, vocabulary difficulty, clause density, average sentence length, spelling accuracy rate, and grammatical accuracy rate of students' articles. Average word length, article length, number of paragraphs, total score and other parameters for measurement and comparison. Students' text quality is scored by writing the first draft and final draft respectively, and the SPSS 19.0 software is imported for data comparison and analysis, and the T test is used to compare whether there are significant differences between the scores. The questionnaires and interviews are summarized by themes and used for qualitative analysis after classification. As a supplement to quantitative analysis.

4. Research Results and Discussion

4.1 Impact on Students' English Writing Ability

The overall results of writing tasks 1 and 2, writing tasks 3 and 4 used the paired sample T test method to judge the difference in the improvement of students' performance between the pre-test and the post-test. The results are shown in Table 1. The results showed that there were significant differences between the two groups in the changes in the results of the pre-test and post-test (P values were 0.008, 0.004, respectively). It can be seen from Table 1 that the average score of task 2 is 1.44 points higher than that of task 1, and the average score of task 4 is 1.65 points higher than that of task 3. In terms of the standard deviation of the pre-test and post-test scores, both groups have a significant decline. Among them, tasks 3 and 4 have the largest decline (5.134), which indicates that students' writing proficiency among students after accepting the new mode of writing teaching. The difference has narrowed. Therefore, Table 1 shows that when students study under the new writing teaching mode, their overall performance has improved, and the difference in writing level among students has decreased.

Use the paired sample T test method to test the analytical results of the pre-test and post-test, and use the SPSS 19.0 software to process the data. The analysis results of tasks 1 and 2 are shown in Table 2, and the analysis results of tasks 3 and 4 are shown in Table 3.

From Table 2 and Table 3, it can be seen that under the

influence of the new writing teaching model, all aspects in the two groups of tasks 2 and 4 are higher than the data in tasks 1 and 3 respectively, and similar trends appear. The average sentence length ($t=0.956$; $t=0.943$) and the length of the article ($t=-0.083$; $t=-0.078$) have significant changes, with significant statistical significance, indicating that under the double feedback of teacher evaluation and peer evaluation, students have expanded their writing thinking and enriched The writing materials have been improved, and the quality of writing has been improved. In terms of spelling accuracy rate ($t=-3.245$; $t=-3.313$) and grammatical accuracy rate ($t=-2.478$; $t=-2.348$), there is no obvious difference between the two groups of tasks, which shows that Juku.com provides immediate feedback during the submission process. The content has prompted students to make changes, and the details are often ignored in peer reviews. Synthesizing the data in Table 1-3, the intelligent composition correction system and the "teacher-student cooperation" evaluation system are organically integrated, which effectively improves the quality of students' writing.

Table 1. T-test results of paired samples for overall performance of pre-test and post-test

performance of pre-test and post-test	Average	Standard deviation	T value	P value
Pre-test (task 1)	82.30	5.53	3.246	0.008
Post test (task 2)	83.74	4.51		
Pre-test (task 3)	86.52	4.21	5.134	0.004
Post test (task 4)	88.17	4.03		

4.2 Students' Attitudes towards the New Writing Teaching Model

One week after the practice of the new teaching model, this study conducted a questionnaire survey and semi-open interviews on the impact of the intelligent correction system and teacher-student cooperative evaluation of the English writing teaching model on students' English writing. The results of the questionnaire survey are shown in Table 4.

In the questionnaire survey, the proportion of students who chose "satisfied" and "very satisfied" both reached more than 66.22%, and the number of students who chose "unsatisfied" or "very dissatisfied" was relatively small. Specifically, the subjective attitude of students' English writing has changed from the following aspects:

(1) The input before writing contributes to making English writing goals clearer. Through the reading input of the same subject and the teacher's classroom explanation and sample analysis, students can clarify the vocabulary, phrases, sentence patterns and structure used in the

Table 2. Paired-sample T-test results of analytical scores before and after tasks 1 and 2

Scoring items	Pre-test results (Task 1)	Post-test results (Task 2)	T value	P value
Vocabulary richness	6.43	6.56	0.165	0.833
Vocabulary difficulty	5.39	5.45	-0.579	0.588
Clause density	1.14	1.19	0.147	0.823
Average sentence length	16.21	16.31	0.956	0.042
Spelling accuracy rate	0.997	0.998	-3.245	0.692
Grammatically correct rate	0.912	0.919	-2.478	0.742
Average word length	4.27	4.31	0.166	0.788
Article length	275.42	325.36	-0.083	0.038
Number of paragraphs	5.16	5.35	0.256	0.731

Table 3. Paired-sample T-test results of the analytical results of pre-test and post-test for tasks 3 and 4

Scoring items	Pre-test results (Task 3)	Post-test results (Task 4)	T value	P value
Vocabulary richness	5.657	5.85	0.173	0.865
Vocabulary difficulty	5.28	5.55	-0.632	0.541
Clause density	0.96	1.07	0.194	0.846
Average sentence length	19.70	20.72	0.943	0.044
Spelling accuracy rate	0.997	0.998	-3.313	0.672
Grammatically correct rate	0.902	0.913	-2.348	0.661
Average word length	4.55	4.78	0.175	0.763
Article length	245.67	284.77	-0.078	0.041
Number of paragraphs	4.44	4.61	0.247	0.742

Table 4. Questionnaire survey of English writing learning motivation

	The influence of reading input on my clear writing elements	The influence of teacher's classroom explanation and sample essay analysis on my writing	Juku.com automatic reviews help me	The teacher's common evaluation of writing helped me	Peer reviews help me
Very satisfied	28.38%	33.33%	20.27%	45.50%	16.67%
Satisfied	61.71%	61.72%	45.95%	50.90%	49.55%
General	9.91%	4.95%	31.53%	3.15%	28.83%
Dissatisfied	0	0	2.25%	0.45%	4.50%
Very dissatisfied	0	0	0	0	0.45%

writing of the subject, so that the students can clarify the content covered by the subject writing, and expand the thinking of students' writing. All students expressed their recognition of the role of input facilitating part. Among them, classmate Wang believes that "the new teaching model has allowed me to learn some writing skills, and I have been exposed to more topics. I know that I should use advanced vocabulary as much as possible when writing, and my expression should be diversified. At the same time, I also learned about the structure and content of different topics. What is it, and more importantly, it has improved my writing level. I have a better understanding of writing knowledge, but I still can't use advanced vocabulary well when writing. The expression of the subject is still too single, and the overall level of composition is not high, not very good at using clauses, lack of highlights,

this part needs to be improved".

(2) Intelligence and teacher feedback have increased students' interest in English writing. More than 66.22% of the students expressed satisfaction with the instant feedback from Juku. However, some students still believed that the intelligent instant evaluation system did not meet their expectations, and the corresponding teachers' evaluations of common problems were obtained. Students' high recognition and satisfaction reached 96.40%, which is consistent with the previous research results of others. Compared with the intelligent Juku Piangai.com, Chinese students recognize the authority of teachers more. The results further prove that teacher-student collaborative evaluation plays an indispensable role in English writing teaching. Student Zhang believes that "Juku.com is helpful for improving vocabulary and optimizing grammar,

but disagrees with some of the machine reviews”; Student Zheng believes that “Juku.com allows me to find errors in writing and correct them in time. In addition, machine reviews You can comment sentence by sentence, very meticulous”; “Pigai.com’s instant feedback plus teacher comments, so that I can clearly understand the problems that arise in my writing,” said classmate Wan.

(3) Student mutual evaluation greatly improves students’ sense of achievement in English writing. In the process of teacher-student cooperative evaluation, students play both the role of readers and teachers, and they can objectively understand their own article structure and language deficiencies. The process of continuous improvement of grades in revision has enabled students to gain a stronger sense of accomplishment and satisfaction in writing. As Student Cai said in the interview, “Compared to machine feedback, students’ mutual evaluation is more humane. For example, he will patiently point out where the error is, and will help you correct it, and even one problem can be extended to other problems. Which allows me to better find errors and areas that need correction; through the mutual evaluation of students, I found that the areas that I still need to improve are grammatical problems, because grammatical errors always occur.”

5. Conclusions

Through this teaching practice research, the application of the integration of intelligent review system and teacher-student cooperative evaluation in college English writing teaching has positive significance for the improvement of students’ English writing ability, learning motivation and self-efficacy.

In the teaching practice process and the follow-up questionnaires and semi-open interviews, this research also found some shortcomings in the integration of the intelligent correction system and teacher-student cooperative evaluation. As far as Juku.com is concerned, whether it is closely related to the theme, the structure of the article, Whether the logic is reasonable and other aspects cannot be correctly assessed. Some students still have a certain degree of distrust or even resistance to the online instant feedback of the intelligent correction system. As far as teacher-student cooperative evaluation is concerned, the following points should be paid attention to in teaching practice: the choice of reading input materials is very important; peer evaluation training is the cornerstone of ensuring the quality of peer evaluation; output task setting is a difficult point, and new teaching needs to be changed. The specific requirements of each teaching link in the model are accurate.

There are also shortcomings in this experiment. First of

all, the research object of this research is the freshmen of the university. The university implements graded college English teaching. They are all A-level students with a score of 110 or more in the college entrance examination. Therefore, there is little difference in the level of students in the college entrance examination and cannot represent other colleges or other students. Secondly, due to time constraints, the task workload was only arranged for four writings, and the number of samples has certain limitations. Therefore, the general validity of the results of this study needs to be further demonstrated by subsequent studies.

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The Fusion and Construction Strategy of Smart Sports and Traditional Sports Teaching Mode in College and Universities

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ABSTRACT

Use expert interviews, literature and other methods to summarize and analyze the pros and cons of smart sports and traditional sports, combine traditional sports with smart education, and create a more scientific and effective smart education model for colleges and universities, so as to promote the joint participation or supervision of schools, teachers, parents, and students to improve the quality of physical education, so as to achieve physical education for students and enhance the time and intensity of students' physical fitness.

1. Introduction

In the fight against the spread of the "COVID" epidemic, colleges and universities insisted on "continuously running schools", combining traditional sports with smart sports, and implementing online education, which can not only meet the needs of epidemic prevention work, but also ensure adequate physical exercise; the "smart sports" classroom can also integrate the traditional mode of individual education, bad weather, avoid insufficient physical space, insufficient feedback on teaching effects, etc., and will cooperate with traditional sports for a long time^[1].

2. The Overview and Advantage Analysis of Smart Sports

2.1 The Overview of Smart Sports

Smart sport is a new sport concept with rich connota-

tion, distinctive features, and future-oriented. With sports "wisdom", continuous innovation and expansion on the basis of tradition, and the ability to quickly evaluate priorities, and make relevant decisions, is a new type of sports participation method, in order to meet the individual needs of athletes, enrich the sports experience, improve the quality of sports, and promote the sustainable development of sports. Domestic research on smart education is still in its infancy. Currently, it is mainly focused on concepts, preview or course settings. However, there is not much research on smart sports at home and abroad. How to combine traditional sports with smart sports is still very extensive.

Intelligent sports are gradually entering colleges and universities sports teaching. The use of intelligent teaching methods in physical education can not only effectively improve the initiative and enthusiasm of sports participants,

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but also help students discover their own athletic ability. Through new technologies and new methods, students can better participate in sports activities, provide reliable data for the development of smart sports, establish a good big data analysis system for students, and help students participate in sports activities scientifically and effectively.

2.2 The Advantage Analysis of Smart Sports

2.2.1 Smart Sports is Highly Integrated with a New Generation of Information Technology

Smart sports break the limitations of the traditional sports environment and combines the organic space of sports with the digital space of sports behavior. Through the ubiquitous information network, comprehensive measurement, monitoring and analysis of sports behavior. The system realizes the overall perception of sports behavior through various sensors, facilitates the monitoring and management of school sports courses, and provides a theoretical basis for sports managers to make management decisions, cloud computing and other intelligent processing technologies, which is used to process and analyze the quality of perceptual information, use more accurate data and scientific methods to help students participate in various sports activities, at the same time, there are a lot of opportunities to learn high-quality videos, which can improve the aesthetic ability of primary school students, prevent students from simply imitating the teacher's role in learning, and form relatively standardized technical measures.

2.2.2 Smart Sports Integrates Multiple Resources

The integration of intelligent sports with education, medical care, tourism, culture, etc., can quantify and train students' willingness to train actively, reduce the risk of accidents, exercise scientifically, and build a digital, networked and intelligent sports space, sports fashion and sports ecology. "In the Internet age, network resources are abundant, and various standardized activities can be implemented through the network to promote safe, healthy, and safe sports for students. "Offline" is to integrate various resources, realize the optimal allocation and full utilization of sports resources, increase the time and possibility of physical exercise, better complete sports tasks, and enhance students' physical fitness.

2.2.3 Smart Sports Meet the Diverse Sports Needs of Students in Colleges and Universities

Smart sport is an advanced and systematic ecological project that can quickly meet people's different sports

needs. Modern students in colleges and universities have distinct personalities and different requirements for physical exercise. By providing students with more scientific fitness tracking training methods, so that students can master physical performance, autonomy, etc., they can drive different training programs according to the different needs of the population, realize the selectivity and democratization of students in colleges and universities, and stimulate students' interest in sports and achieve the goal of lifelong sports.

3. The Status Quo of Traditional Physical Education Teaching Model in Colleges and Universities

3.1 Poor Physical Fitness of Students

The influence of physical education class determines the physical and mental health of students in colleges and universities to a certain extent, but the physical condition of students in colleges and universities is not optimistic. Bad habits, such as playing online games, endanger the health of students. In recent years, the results of the students in colleges and universities physical health survey show that the overall status of the physical health of students in colleges and universities such as vitality, the country and some provinces and cities have also introduced measures to strengthen school sports activities in order to achieve the purpose of improving students' physical fitness.

3.2 The Concept of Physical Education Needs to be Improved

A reasonable teaching concept is the guarantee for smooth teaching. At present, the education and training of students' motor skills and the evaluation of sports level are of great significance. In order to obtain high scores, students do boring and mechanical physical exercises, which are incompatible with the educational goals of quality education. In order to successfully complete the teaching task, teachers do not have time to consider individual differences, it is difficult to teach students in accordance with their aptitude, and to cultivate students' sports awareness, which leads to passive learning of students. This traditional method of physical education that "suppresses" students' learning is not only difficult to guarantee the quality of physical education, but also is not conducive to students' love of sports, and it is difficult to form the habit of "lifelong sports".

3.3 Single Method of Physical Education

At present, the physical education of colleges and uni-

versities mainly adopts traditional administrative teaching or club teaching, where teachers and students are taught in teams, which cannot adjust the physical education curriculum and teaching tasks flexibly. The mastery and standardization of students in colleges and universities has become the standard of physical education evaluation. Its scientificity and effectiveness directly affect the efficiency and quality of teaching. The course uses demonstration, explanation, imitation, etc., and has high requirements for teacher qualifications and behavioral norms. If teachers do not systematically grasp the needs of students' daily activities, the teaching effect is difficult to guarantee.

3.4 Real Interpersonal Communication

Traditional educational concepts are outdated and have some defects. However, the traditional teaching method, that is, face-to-face teaching, has an irreplaceable side. Face-to-face teaching is practical and provides in-depth emotional communication between teachers and students. The feedback to students, teaching effects and other information is more intuitive and timelier, which is conducive to improving students' competitiveness. Some students will fall in love with sports because of the teacher's personality. This is the advantage of traditional physical education.

4. Situation Analysis of the Involvement of Smart Sports Teaching in the Traditional Sports Teaching Mode in Colleges and Universities

4.1 Smart Sports Teaching Equipment Begins to Take Shape

Smart sport is the product of technologies such as cloud computing, big data, and the Internet of Things. Modern sports will continue to integrate with advanced technology, create new technologies, new concepts, highlight the value of data, realize the normalization of intelligent innovation, and have strong vitality. Cloud, Internet of Things, and virtual reality have begun to take shape. In addition, smart phones are becoming more and more widely used among students, and smart bracelets are becoming more and more popular, providing basic equipment for real-time smart sports teaching mode.

4.2 Students are Willing to Accept

The intelligent sports information perception network has a wide coverage, is conducive to the integration of resources, and has a positive impact on athletes and athletes themselves. Smart sports resources can expand participants' cognitive space of their own sports status, choose

appropriate sports methods, venues, and intensity, and manage and respond to the individual needs of sports participants in a timely manner.

Modern students in colleges and universities have distinct personalities, diversified needs, pursue a life of learning efficiency, and are more willing to accept new things. Contemporary students in colleges and universities will be more popular among students in colleges and universities.

4.3 Teachers Have Sufficient Professional Skills

Colleges and universities pay more and more attention to the construction of school spirit, and actively participate in physical education teacher qualification competitions and functional teaching competitions, so that physical education teachers as intellectuals continue to innovate in teaching concepts, teaching methods, and teaching resources. Improve the level of physical education through scientific and technological means, improve the quality of education, and become the dissemination and promotion of smart sports, with the ability to lead intellectuals in learning smart sports.

In summary, colleges and universities have launched smart teaching tools. The psychological and professional level of teachers and students have also prepared for smart teaching. The field of physical education of colleges and universities needs to be expanded. As a useful supplement to traditional physical teaching methods, it is necessary to intervene in smart teaching of physical education.

5. The Construction of the Model of the Integration of Smart Sports and Traditional Sports Teaching

5.1 Build a Smart Sports Platform

The intelligent sports platform is an interactive platform for resource integration and information sharing. It is an informationized process. The key to building a smart sports platform in colleges and universities is:

(1) Introduce smart sports equipment to make sports videos for students. The sports bracelet is an ordinary and easy-to-accept smart exercise equipment. Through the establishment of a related chat platform, it can monitor the exercise status of students such as exercise density, heart rate, and calorie consumption, automatically record various data indicators during school exercise, monitor the frequency, duration and suitability of students' exercise in school, compile students' exercise records, and facilitate students, teachers and parents to access sports files.

(2) Promote important general information and knowledge.

Based on this platform, on this platform, according to

students' learning interests and course content, real-time promotion of event information and theoretical knowledge on this platform, including sports news, sports training, sports rehabilitation, nutrition, sports anatomy, sports health, etc., through reading and continuous reading, arouse students' desire for health and fitness and cultivate good exercise habits.

(3) Assign teachers. Use the smart sports platform to arrange homework corrections, check student participation rates, approve vacations, communicate with teachers and students, answer questions in a timely manner, and solve problems.

(4) Compile a learning webpage guide. Through the smart sports platform, students can browse related activity information, high-quality learning videos, write homework, communicate with teachers frequently, and have holidays.

(5) Parents can participate. Parents can use the platform to check school guides, review homework, understand the teacher's feedback to the teacher at the end of the homework, and put forward corresponding opinions and suggestions. If the network demonstration platform is successfully established, it is due to the online and offline behaviors of colleges and universities sports activities, the information exchange between families, schools, and families, and the realization of intelligent education for teachers and students.

5.2 Push Sports Clock-in Scheme

The sports intelligence platform is developing towards computerization, functionalization and individualization. Through the benign interaction between platforms, policies, services, data, etc., promote the promotion and implementation of related work and policies, and put forward various sports suggestions according to the physical conditions and goals of students to enable students to actively choose and participate in the competition according to their physical condition and goal pursuit. Use safe and accurate teaching videos, including nuclear power training method, cardiopulmonary endurance training method, limb strength training method, etc., to carry out rehabilitation training for sports injuries in certain parts of the body, and use related relaxation and stretching methods to help students train and hit scientifically.

5.3 Use Relevant Equipment to Push Monitoring Information

The effective combination of physical activity monitoring and after-school exercise monitoring is of great significance for stimulating students' enthusiasm for sports,

and scientifically evaluating and guiding students' sports activities. Use relevant recording equipment in offline classrooms to demonstrate students' heart rate and energy consumption. Install weight scales and related easy-to-use health assessment equipment in sports facilities or dormitories. Promote simple health assessment and assessment methods. Provide temporary feedback on sports stunts, animations, subtitles, etc. to improve the average time of physical education, respond to students' feelings, and stimulate students' interest and willingness to participate^[2].

5.4 Implement "Online and Offline" Integrated Physical Education

Online and offline dual-pronged approach to maximize the value of school education. Pre-class (online) preview (theory and practice), check the preview effect in class (offline), and use smart monitoring equipment (sports bracelet) to set a personalized target heart rate in advance based on the students' situation discovered before the experiment. And according to the students' situation detected before the experiment, the intelligent monitoring device (sports bracelet) is used to set the personalized target heart rate in advance, and the target heart rate is set in advance through the video throughout the course.

5.5 Teachers Push Personalized Exercise Prescriptions

Make use of the convenient conditions provided by the intelligent sports platform, observe students' sports interests through reading, and formulate sports teaching content suitable for students' interests. Grasp the students' sports status, sports weaknesses and points of interest, make suggestions that are easy to be accepted by students, arrange preview content, realize personalized and accurate physical education, and help students establish a "health first" awareness, and take the completion of homework as the basis of usual performance, and encourage students to actively participate in sports activities.

5.6 The School and Parents Jointly Supervise the Teaching Situation

The intelligent sports platform is characterized by timely information and strong interaction. It can not only update a large amount of information resources in time, but also provide users with online services, so that users can experience diversified services. Using the intelligent sports platform, schools can monitor the development and implementation of sports teaching in colleges and universities, and help managers discover problems in time, optimize or formulate corresponding countermeasures.

Parents can check sports files through the smart sports platform, communicate with those in need in time, actively participate in sports activities, and make suggestions and opinions to the school to ensure that schools, teachers, and parents work together to promote the physical and mental health of students in colleges and universities.

6. Conclusions

Traditional sports and smart sports have their own advantages, which are worth learning from. Vary from person to person, time to place, and proceed from reality to implement “online and offline” integrated physical education, promote the integration of traditional sports and smart sports, and build scientific and effective new methods of physical education in colleges and universities.

Establish scientific and effective new methods of physical education in colleges and universities, improve the quality of physical education in schools, ensure the time and intensity of students’ exercise, and improve their physical fitness.

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