

# SWOT Analysis of the Construction of "Foreign Language +" Interdisciplinary Teaching System Under the Background of New Liberal Arts

Wei Li<sup>1,a</sup>, Xue Li<sup>2,\*</sup>

<sup>1</sup>School of International Studies Harbin Institute of Technology Harbin, China

<sup>2</sup>School of International Studies Harbin Institute of Technology Harbin, China

**Abstract:** The reform and development of higher education should actively respond to the top-level design of the country, and the cultivation of foreign language talents needs to be reformed and innovated according to the background of the times. Under the background of new liberal arts, the construction of teaching system should adhere to the national social demand orientation, adhere to the interdisciplinary integration, and carry out collaborative innovation on this basis. Based on the national conditions and school conditions, according to the school orientation and personnel training objectives, taking the supply-side reform of personnel training as an important starting point, this paper makes SWOT analysis on promoting the construction of "foreign language + science and technology" interdisciplinary teaching system under the background of new liberal arts, and puts forward the construction of "foreign language +" interdisciplinary curriculum system, interdisciplinary teaching mode, interdisciplinary management mode and interdisciplinary curriculum ideological and political mode. The aim is to embody the standard of foreign language discipline based on language and culture, promote the cross-integration of engineering and foreign language discipline, and cultivate interdisciplinary high-end talents. It provides a demonstration for the construction of new liberal arts in national science and engineering universities, and provides practical reference and sample reference for the development of foreign language majors.

## 1. INTRODUCTION

Documents such as "Implementation Measures for Promoting the Construction of World-class Universities and First-class Disciplines as a Whole", "Guiding Opinions on Accelerating the Construction of" Double First-class "in Colleges and Universities" and "Several Opinions on Deepening the Construction of World-class Universities and First-class Disciplines" clearly state that colleges and universities should optimize the discipline layout, break down the barriers between traditional disciplines and specialties, highlight interdisciplinary integration and collaborative innovation, vigorously promote the innovation of scientific research organization mode, strengthen organized innovation, and encourage high-quality cooperation across universities, institutions and disciplines. [1] In January 2022, the Ministry of Education approved the opening of 30 philosophy and social science laboratories of the Ministry of Education, including the Language Laboratory of Peking University, the Artificial Intelligence and Human Language Laboratory of Beijing Foreign Studies University, and the Chinese Character Research and Social Application Laboratory of Beijing Normal University, to further promote the reform of interdisciplinary integration system.

On April 23, 2022, in order to accelerate the interdisciplinary integration and promote the overall leap of discipline competitiveness, Harbin Institute of Technology announced the "Integration and Extension Plan" for emerging interdisciplinary subjects [2], and proposed the layout of a number of emerging interdisciplinary subjects, platforms and directions; Improve the level of interdisciplinary scientific research; Innovate the training mode of interdisciplinary talents; Improve the evaluation system of teachers; Improve the system and mechanism of interdisciplinary construction and other specific ways to promote interdisciplinary integration. With the wide penetration of artificial intelligence, big data, Internet and other technologies in all levels of society, there is a cross-integration development trend of integration and innovation between natural science and humanities. The traditional foreign language talent training mode can no longer meet the needs of training compound and innovative talents in the new era. It is of unique value to promote the construction of interdisciplinary teaching system of "foreign language + science and technology" under the background of new liberal arts. Foreign language disciplines should not only follow the tradition of inheritance, but also promote integration and innovation, that is, the integration of foreign languages with modern information technology,

<sup>a</sup>rii217@163.com, \* Corresponding author: lixuesnow@hit.edu.cn

cross-integration with other disciplines, and embody interdisciplinary characteristics, so as to train liberal arts talents and social scientists in the new era who know and love China and are worthy of national rejuvenation for the country.

## 2. USE APPLICABILITY OF SWOT ANALYSIS MODEL IN THE ANALYSIS OF "FOREIGN LANGUAGE +" INTERDISCIPLINARY EDUCATION SYSTEM

SWOT (Strengths Weaknesses Opportunities Threats) analysis, also known as situation analysis, is a strategic analysis method originally proposed by Heinz Wehrich, a professor of management at San Francisco University in the United States. [7] After 40 years of development, it has grown into a mature and effective analytical auxiliary tool, and has been widely used in strategic development and planning in many fields. The concrete process is to use structured and visual analysis process to decompose the decision-making problems layer by layer and present them with structured analysis methods. Analytical auxiliary tools are used to overcome the complexity of multiple factors, weaken the "fog" effect in the process of constructing interdisciplinary education system, identify, classify and systematically sort out the influencing factors that affect the construction of interdisciplinary teaching system that highlights the characteristics and advantages of colleges and universities, so that the logical relationship can be more clearly and reasonably summarized, and then provide a new attempt and idea. The following analysis model is used to analyze the advantages, disadvantages, opportunities and challenges in the process of constructing a complex interdisciplinary teaching system, so as to provide a useful reference scheme for promoting the "foreign language +" interdisciplinary teaching system under the background of new liberal arts.

## 3. STRATEGIC PORTFOLIO MATRIX

Using swot model (Table 1), this paper analyzes the factors affecting the cultivation of foreign language talents under the background of new liberal arts, and then makes new thoughts on the construction of interdisciplinary education and teaching system of "Foreign Language Plus".

**Table 1.** Situation Analysis of Foreign Language Talents Training (SWOT Analysis Model)

<i>Strategic Portfolio Matrix</i>	Strengths(S) Internal Advantage Factors of Foreign Language Talents Training	Weaknesses(W) Internal inferiority factors in the cultivation of foreign language talents
	Opportunity(O) External Opportunities for Foreign Language Talents Training	Threats(T) External threats faced by foreign language talents training

### Strengths (S):

S1: Chinese excellent traditional culture is rich in inside information and has formed a distinctive ideological system. It embodies the knowledge, wisdom and rational speculation accumulated by Chinese people for thousands of years. [3] Based on the excellent characteristics of eclecticism of Chinese civilization, the construction of interdisciplinary education system of "foreign language + science and technology" from the perspective of new liberal arts is in a favorable position to promote mutual learning between Chinese and foreign civilizations.

S2: The policy advantages of new liberal arts construction are obvious. In 2018, when visited Peking University, he pointed out that great efforts should be made to set up interdisciplinary groups and strong scientific and technological research teams [4]. In 2020, the Conference on the Construction of New Liberal Arts sponsored by the Working Group on the Construction of New Liberal Arts of the Ministry of Education issued the Declaration on the Construction of New Liberal Arts, which made comprehensive arrangements for the construction of new liberal arts [5].

S3: Harbin Institute of Technology gives full play to the characteristics and advantages of a strong engineering school in the world, formulates a training plan for outstanding talents, and the institution is stationed in a special training zone for interdisciplinary talents. Driven by mechanism innovation, it breaks through the boundaries between colleges and disciplines, and promotes the combination of science and technology, the intersection of workers and workers, the infiltration of workers and culture, and the integration of medical workers.

### Weaknesses (W):

W1: Being in a great change that has never happened in a hundred years, it is urgent to solve the problem of how to promote the exchange and dialogue of civilizations, break through the thinking of "small liberal arts", build a pattern of "big liberal arts" and explore the realistic path of building new liberal arts in China on the premise of coordinating the relationship between "China's needs" and "world development" in the period of great development, great change and great adjustment[6].

W2: The contradiction between the development of liberal arts in the traditional sense and the needs of social development has become increasingly prominent [7]. In the traditional sense, due to the specialization of research, there are discipline barriers that restrict the realization of in-depth integration and development. The exploration of interdisciplinary education system is characterized by fragmentation, and there is no synergy based on the experience of researchers.

W3: Due to the lack of planning from the perspective of promoting the development of new interdisciplinary fields and the support of teaching practice and management experience in the construction of related minor majors and emerging majors, some of the proposed teaching methods and teaching ideas lack operability and universality.

### Opportunity (O)

O1: The international order and global governance pattern dominated by western developed countries have been undergoing profound adjustment for more than 100 years. It can make the high-quality resources of foreign philosophy and social sciences, including the positive achievements of philosophy and social sciences in all countries of the world, become the beneficial nourishment of philosophy and social sciences with Chinese characteristics [8].

O2: The Ministry of Education officially added "interdisciplinary" as the 14th discipline category. Under the guidance of correct value, we should optimize curriculum, adjust the orientation of personnel training, strengthen the construction of teaching staff, explore the reform of training mode, promote the construction of curriculum system, promote the renewal of teaching content, try to reform teaching methods, and optimize and integrate the existing curriculum system.

O3: The construction of new liberal arts is closely related to the world scientific and technological revolution and industrial transformation. In the current process of the construction of new liberal arts, we should give full play to the ever-changing scientific and technological elements and the important role of technical media, and accurately grasp the relationship between the "art" of scientific and technological means and the "Tao" of discipline construction in the construction of new liberal arts [9].

Threats (T):

T1: How to closely follow the fundamental task of cultivating people by virtue, make overall plans to promote curriculum ideological and political education throughout personnel training, systematically build a cooperative and progressive curriculum ideological and political integration construction mechanism, promote the ideological and political construction of "foreign language + science and technology" interdisciplinary new ecological curriculum to achieve connotative development and forge ahead, and effectively and long-term improve the teaching quality and educational effect of the curriculum.

T2: How to consciously promote the cultural exchange and integration between China and foreign countries in the process of transformation and upgrading, optimize the curriculum structure and innovate the education and teaching mode in the period of great development, great change and great adjustment. On the premise of sticking to the red background, we should explore multi-modal ways of educating people that are in line with international standards and have their own characteristics, and cultivate compound international talents who can correctly understand the trend of the times and the international trend and carry out civilized exchanges and dialogues.

T3: On the premise of respecting the characteristics of liberal arts education and the law of talent growth, we should break down the traditional professional barriers and discipline barriers, explore new characteristics of liberal arts education and the law of talent, and explore the construction of a cross-border interactive integrated education system. As Okahara pointed out, in a sense, in order to solve the complex problems faced by people, such as the global environmental problems and the global

economic gap, the education of sustainable development needs to integrate various disciplines organically, not for the purpose of disciplines, but as a means to use them[10].

#### 4. DISCUSSION ON STRATEGY BASED ON FOUR QUADRANT ANALYSIS

As shown in Table 2, based on the analysis of strengths, weaknesses, opportunities and challenges, the following elements of foreign language talent training situation analysis under the background of new liberal arts are arranged and combined.

**Table2.** Arrangement and combination of analysis elements of foreign language talent training situation under the background of new liberal arts

Arrange ment and combina tion of elements in situation analysis	Strengths+Opportunity Maximising opportunities	Weaknesses+Opportunity Adjustment of tactics and strategic transformation
	Strengths+Threats Adjusting strategies for multiple paths to development	Weaknesses+Threats Keeping a close eye on competitors

SO strategic plan: strengthen the socialist direction of running a school, closely follow the fundamental task of cultivating people by virtue, improve the "trinity" talent training mode of shaping core values, cultivating comprehensive abilities and exploring multi-dimensional knowledge [11], comprehensively promote the ideological and political construction of courses, carry out the ideological and political construction of courses throughout the talent training, strengthen the education of Chinese excellent traditional culture, focus on improving students' humanistic quality, scientific spirit, national security awareness and cognitive ability, integrate professional characteristics to promote the ideological and political construction of courses, and build socialist core values.

WO strategic plan: draw lessons from the talent training system and typical experience of world-class universities, build an interdisciplinary teaching system of "foreign language + science and technology" based on the basic national conditions and school conditions, set up a joint curriculum group across colleges and departments, improve the training mode of "public basic courses for Grade One and Grade Two + platform courses for Grade Three + professional courses for Grade Four", lay a solid foundation, strengthen general knowledge, strengthen cross-cutting and optimize curriculum teaching resources. Further explore the through training mode of this research, rationally arrange the curriculum level and knowledge content, scientifically plan the semester distribution of courses, and establish a through curriculum system of this research that is dynamically updated and mutually selected.

ST strategic plan: solidly promote's thought of socialism with Chinese characteristics in the new era into teaching materials, classroom and mind, and dig deep into the ideological and political resources and curriculum ideological and political elements contained in various courses with curriculum goal design, syllabus revision,

textbook editing and selection, and lesson plan courseware compilation as carriers. Taking the integration of curriculum ideological and political construction as an important lift, breaking down discipline barriers, forming a cross-border linkage integrated curriculum system, solving the problem that the traditional major and minor professional curriculum system is only the superposition of two professional courses, strengthening students' independent choice, taking the supply-side reform of interdisciplinary curriculum resources of "foreign language + science and technology" as the starting point, creating conditions for students to build a multi-optional professional development track and minor in the second major or degree, solving the limitations of traditional single degree and major and minor degree teaching management mode, meeting students' diversified and individualized needs, and promoting students' multi-type development.

WT strategic plan: break through the thinking of "small liberal arts", construct the pattern of "big liberal arts" [12], explore the realistic path of cross-integration of liberal arts and science and engineering, specifically construct the interdisciplinary teaching system of "foreign language + science and technology" from the perspectives of curriculum system, teaching mode, management mode and curriculum ideological and political construction, formulate the reform plan of interdisciplinary teaching system, and cultivate the cross-integration talents of arts and engineering in the new era who are responsible for national rejuvenation. It is necessary to grasp the value orientation of liberal arts education, implement 's socialism with Chinese characteristics in the new era into curriculum materials, and realize the unity of professional knowledge imparting and value guidance, self-cultural identity and national subjective consciousness construction, knowledge and enlightenment function, and students' needs and teaching. Combining foreign language and culture in explicit education, aerospace engineering technology, information technology with value guidance in implicit education, classroom teaching with social practice, creating an interdisciplinary teaching system with Harbin Institute of Technology characteristics, providing reference for the reform and innovation of talent training mechanism in national science and engineering universities.

## 5. CONCLUSIONS

Great social changes call for new liberal arts, national soft power needs new liberal arts, talents with "new era, new responsibility and new mission" need new liberal arts, and prosperity of advanced socialist culture needs new liberal arts. Strijbos et al. (2015) screened ten key abilities that undergraduates should master from many specific abilities, and classified these abilities into group ability group, conceptual ability group and individual ability group[13]. On the other hand, digital technology has a far-reaching influence on foreign language teaching. This is a natural consequence of the fact that most human experiences are now mediated through software and screens--it was inevitable that the digital would eventually start to

radically change the arts and humanities[14]. The Social Technology Research and Development Center of the National Research and Development Legal Person Science and Technology Promotion Agency divides "interdisciplinary and super-interdisciplinary research" into three categories: Multidisciplinary, Interdisciplinary and Transdisciplinary[15]. The construction of new liberal arts needs to adhere to the needs of the state and society, adhere to the development principles of cross-integration, inheritance and innovation, and collaborative sharing, and promote the expansion and upgrading of traditional liberal arts and the budding development of emerging liberal arts. "The rise and fall of the national movement depends on education". In the process of constructing and promoting the interdisciplinary education system of "foreign language + science and technology", the concept of foreign language people should keep pace with the development of the times, first meet the needs of the country and society, jump out of the thinking track of "small liberal arts", not only serve the humanities, but also serve the disciplines of science and technology, and strive to cultivate compound foreign language talents who can meet the most scarce needs in the development of new engineering, new medicine and new agriculture.

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