

DOI: <https://doi.org/10.63332/joph.v5i7.2997>

## New Liberal Arts Talents' Cultivation in China: A Systematic Review

Yunhang Liu<sup>1</sup>, Mohamad Sattar Rasul<sup>2</sup>, Fathiyah Mohd Kamaruzaman<sup>3</sup>

### Abstract

*New liberal arts (NLA) construction has gradually become a strategic choice for higher education to meet the technological revolution and global competition. Previous studies have been carried out to highlight the importance of NLA skills and strategies for talents' cultivation in general, nevertheless, the study of the specification or attributes of NLA skills and strategies for talents' cultivation are still limited. In this paper, the core collection of Web of Science (WOS), Scopus, and CNKI are used as data sources, and the literature related to NLA skills and strategies that have been carried out by previous researchers within year 2018 until 2023 are respectively used as research objects. The study employed Systematic Literature Review (SLR) and Preferred Reporting Items for Systematic Review Meta-Analyses (PRISMA) 2020 checklist to ensure a comprehensive and rigorous analysis of the available literature. By synthesising and analysing the findings from the final selected 13 articles, the constructs of NLA skills and strategies for NLA talents' cultivation are explored. Finally, a framework of 7 NLA skills can be proposed and 5 innovative strategies are identified to be used as a reference to stakeholders to cultivate NLA talents based on the specification.*

**Keywords:** NLA, Talents' Cultivation, SLR; NLA Skills, Strategies.

### Introduction

Living in the new era characterized by globalization, high technology, artificial intelligence and social information, we have entered the era of informatization and intelligentization. Science and technology are playing an irreplaceable role in the advancing every perspective of human's daily life (Zhang et al., 2023). The promotion of the IR 4.0 pushes people to realize the importance of higher-level education construction, cultivate the high-quality innovative and "Arts" and "science" compound talents needed by the modern times. The demand for educational reform of liberal arts is universal all over the world, while the traditional approach of dividing and treating disciplines separately clearly cannot fully meet the needs of the times. The reform of liberal arts education all over the world indicates the trend of specialty reorganization and discipline integration (Zhou, 2022).

STEM education (Science, Technology, Engineering and Mathematics) was firstly put forward in America, and taken seriously in many colleges and universities (Huang, 2023), aiming to break down disciplinary boundaries, promote interdisciplinary collaboration, and cultivate students' practical abilities and innovative spirit (Yin, 2020). Later, liberal arts were involved in STEM, so that STEM has gradually evolved into STEAM (Science, Technology, Engineering, Mathematics, and Arts) which builds bridges between originally independent and separate disciplines, transforming students' originally scattered and fragmented specialized knowledge into a unified whole (Xin, 2023). The STEAM learning philosophy has the potential to serve the

<sup>1</sup> Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, 43600, Malaysia, Email: [p123176@siswa.ukm.edu.my](mailto:p123176@siswa.ukm.edu.my)

<sup>2</sup> Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, 43600, Malaysia, Email: [drsattar@ukm.edu.my](mailto:drsattar@ukm.edu.my)

<sup>3</sup> Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, 43600, Malaysia, Email: [fathiyah@ukm.edu.my](mailto:fathiyah@ukm.edu.my)



development of the NLA (He, 2023). In 2017, Hiram College in the United States pioneered the concept of "New Liberal Arts," which is an innovative disciplinary system designed to address the challenges of globalization and digitization in the 21st century. Emphasizing interdisciplinary and cross-disciplinary learning, it encourages students to broaden their horizons and transcend the confines of traditional humanities frameworks by integrating with other disciplines (Varlotta, 2018). Unlike traditional disciplinary teaching in the liberal arts, the NLA education based on the STEAM learning philosophy emphasizes interdisciplinary and cross-domain knowledge integration (Zhang, 2020). This not only helps students cultivate interdisciplinary or cross-disciplinary comprehensive literacy but also fosters the ability to innovate in practice (Xin, 2023).

China has pioneered the latest educational reform to improve the quality of new talents. Currently, the cultivation of talents in higher education stands as a paramount concern, and the role of NLA appears particularly prominent in this regard. Consequently, the Ministry of Education (MOE) issued a series of policies to propel the advancement of this initiative. Table 1 provided below delineates the construction process of NLA.

Time	Events	Significance
2017	The Shillam Institute in the United States was the pioneer in introducing the concept of "NLA".	Encouraging students across various majors to transcend the confines of disciplinary boundaries and participate in holistic interdisciplinary education.
2018	The MOE issued the <i>Opinions on Accelerating the Construction of High-Level Undergraduate Education and Comprehensively Improving the Ability of Talent Training</i> .	The notion of "NLA" was formally introduced, along with a comprehensive initiative for "Four News," quickly became a focal point of discussion within higher education circles.
2019	The MOE, along with other relevant departments, launched the <i>Six Excellences and One Top" 2.0 Plan</i> .	Signifying the official launch of the national "Four News" construction project, the implementation phase of the NLA concept commenced.
2020	The MOE issued the <i>Declaration on the Construction of NLA</i>	Advancing the construction of NLA should prioritize tradition while embracing innovation, emphasize values as guiding principles, and progress in a systematic manner.
2021	The MOE released the <i>Notice on Recommending NLA Research and Reform Practice Projects</i> .	Initiating NLA research and reforming projects marks the ascent of the NLA movement.

Table 1. The Construction Process of New Liberal Arts

The core essence of "NLA" is to "be rooted in the new era, respond to new demands, promote the integration, modernization, and internationalization of liberal arts education" (Fan, 2020). The establishment of the 'New Liberal Arts' represents not merely a superficial or piecemeal change, but rather a profound transformation in disciplinary structure, professional arrangement, and evaluation frameworks (Zhang, 2020). Consequently, its impact transcends the boundaries

of academia to influence broader social development. From this perspective, the construction of “NLA” is “not a superficial or patchwork-like innovation, but a comprehensive innovation in terms of disciplinary positioning, professional layout, and evaluation systems (Wu, 2023). Comprehensive innovation is certainly a goal, but its achievement requires a breakthrough point. Such a breakthrough point should fundamentally innovate the characteristics of humanities and social sciences disciplines, while also being practical, feasible, and effective” (Zhang, 2020). Under the impetus of the fourth industrial revolution, we should realize the connotation construction of higher education, cultivate the high-quality innovative talents needed by the times, and strive to realize the balanced innovative development of “Arts” and “Science”.

## Materials and Methods

According to Kitchenham and Charters, SLR is “a form of secondary study that uses a well-defined methodology to identify, analyze and interpret all available evidence related to a specific research question in a way that is unbiased and repeatable”. Following the protocols outlined by the University of York (2009) and Verner et al. (2012), the approach adhered to a structured protocol encompassing: (1) research questions; (2) search process; (3) inclusion and exclusion criteria; (4) data selection and extraction process, and (5) data synthesis. Each phase of the Systematic Literature Review (SLR) is listed below:

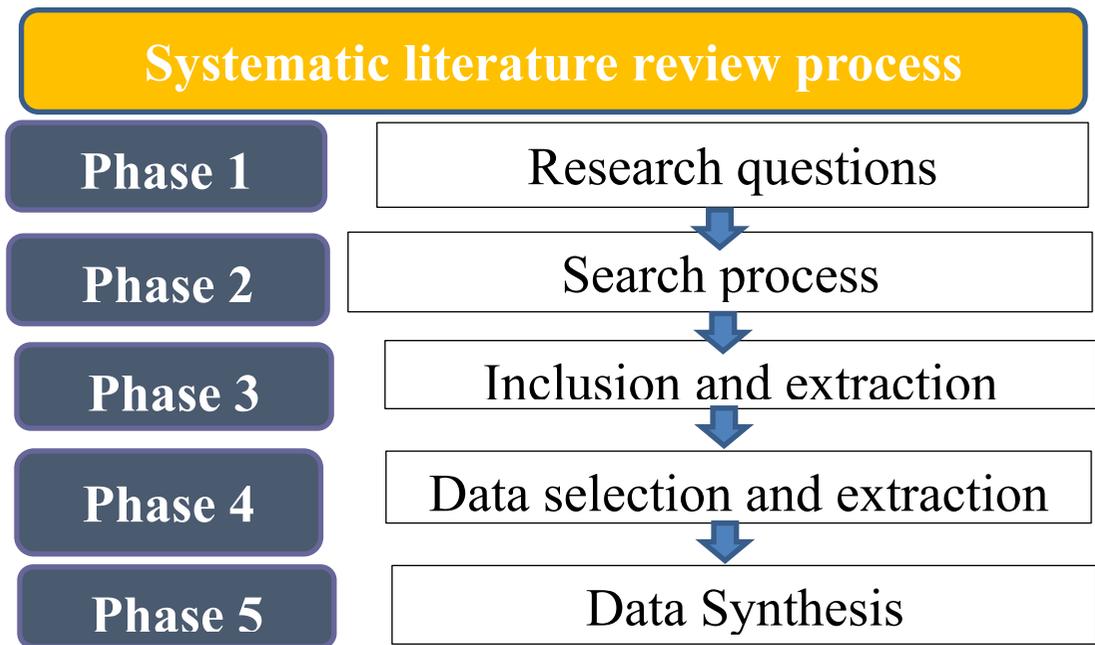


Figure 1. Phases of the Systematic Literature Review (SLR)

### Phase 1. Research questions

In phase 1, three questions were formulated to examine research published between 2018 and 2023. These questions were crafted to address the research objectives and to pinpoint pertinent and distinctive attributes capable of addressing the inquiries delineated in Table 2:

N	Dimension	Research Questions (RQ)
1	General Characteristics of published studies of NLA	RQ1. What are the articles to be studied in the research?
2	Constructs of NLA skills	RQ2. What are the constructs of NLA skills for talents' cultivation?
3	Strategies for NLA talents	RQ3. What are the strategies applied in the studies to cultivate NLA talents?

Table 2: Research Questions

## Phase 2. Search process

SLR was conducted by searching databases of WOS, Scopus, and CNKI that were published between January 1<sup>st</sup> 2018 and December 30<sup>th</sup>, 2023, using the search terms (“*New Liberal Arts*” OR “*New Humanities*”) AND (“*talent cultivation*” OR “*talent training*”) to identify relevant literature. The search strings were run against the title, keywords, and abstract, depending on the search platforms. To achieve the objectives of extensively reviewing the most relevant studies and answering the research questions. The search was performed on December 30<sup>th</sup>, 2023. The search string for both databases is shown in Table 3:

Keywords	Journal Sources
“New Liberal Arts” OR “New Humanities” AND “talent cultivation” OR “talent training”	WOS
	Scopus
	CNKI

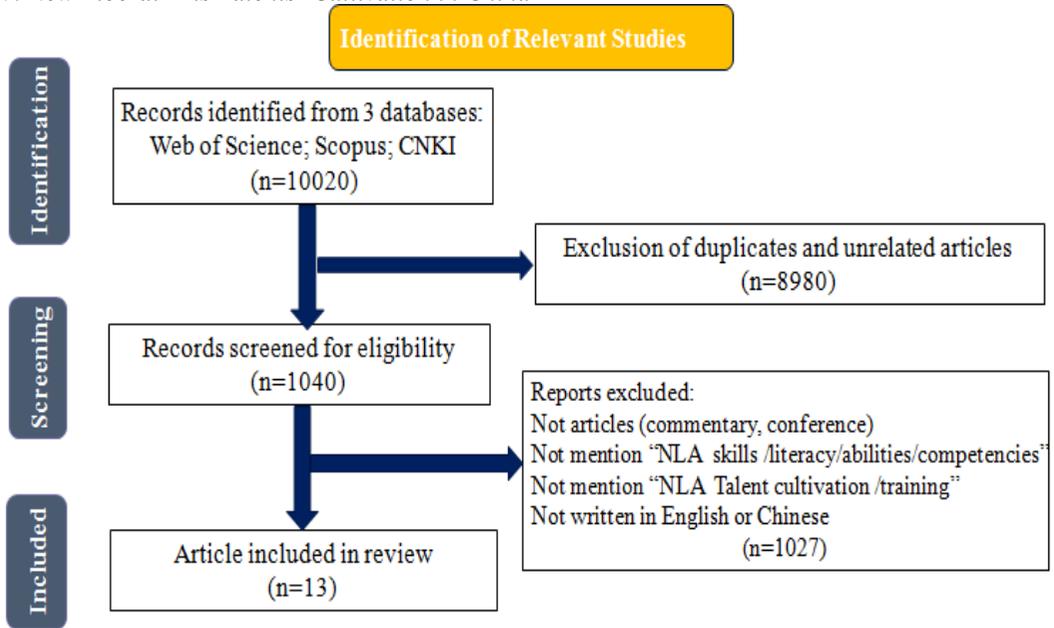
Table 3: Search Strings Used in the Indexing Systems

## Phase 3. Inclusion and extraction criteria

The inclusion criteria required articles to incorporate keywords such as “New Liberal Arts” or “New Humanities,” alongside “talent cultivation” or “talent training” in their titles, abstracts, or keywords. These terms served as basic search parameters, without verifying whether the articles explicitly addressed the concepts. After evaluating research eligibility, studies evidently violating at least one exclusion criterion were eliminated. Exclusions were applied to books, conference proceedings, and book chapters. Furthermore, studies not released between January 1<sup>st</sup>, 2018, and December 30<sup>th</sup>, 2023, were excluded.

## Phase 4. Data selection and extraction process

In phase 4, articles were sought, followed by data extraction, which was then entered into an Excel database. A standardized data extraction form within an Excel spreadsheet facilitated manual collection. Extracted information encompassed authors, countries, publication years, and titles. The present study employed the PRISMA 2020 checklist to ensure systematic review standards. The process entailed three stages: identification, screening, and inclusion, as depicted in Figure 2.



**Figure 2: PRISMA Flow Chart for Selecting Process of Articles**

### Stage I: Identifying

Based on the researches of the previous published journal articles, this paper collected the literature mainly through the Internet literature database: Web of Science, Scopus, CNKI that were published in English or Chinese between January 1<sup>st</sup> 2018 to December 30<sup>th</sup>, 2023. The key search words are NLA, talent cultivation, etc., to collect and consult the literature related to this article to summarize the literature. The method of using a combination of keywords to find the relevant articles is shown in Table 4.

Table 4: Journal source and keywords Used to Find Relevant Articles

### Stage II: Screening

The authors reviewed a total of 10020 papers that they had collected from the databases mentioned. After eliminating duplicates and unrelated articles, they subsequently reduced to 1040 articles.

### Stage III: Inclusion

Hence, the number of publications that satisfied the researcher's criteria was reduced to just 13. The following criteria for inclusion (Table 5) were applied to the search results:

Items	Inclusion Criteria	Exclusion Criteria
1	Published between January 1 <sup>st</sup> 2018 to December 30 <sup>th</sup> , 2023	Not published between 2018 and 2023
2	Journal articles	Not articles (commentary, conference, books and so on)
3	Journal articles written in either Chinese or English	Articles not available or not published in English or Chinese
4	Journal articles related to “new liberal arts” and “talent cultivation”	Not relevant to talent cultivation
5	Journal articles mentioned NLA skills, literacy, abilities or characteristics	Not mentioned NLA skills, literacy, abilities or characteristics

Table 5: Inclusion and Exclusion Criteria

1. Journal articles are written in either Chinese or English between January 1<sup>st</sup> 2018 and December 30<sup>th</sup>, 2023.
2. The terms “New Liberal Arts” and “Talent Cultivation” appear in the title, abstract or keywords.
3. The content is closely related to NLA skills, literacy, abilities or characteristics.

### Phase 5. Data Synthesis

The information analysis, aimed at addressing the research questions, was underpinned by a theoretical framework to identify key elements within the articles.

Keywords	Journal Sources	Relevant articles in Phase I	Screened articles in Phase II	Screened articles in Phase III
“New Liberal Arts” OR “New Humanities” or “talent cultivation” OR “talent training”	Web of Science	3286	6	2
	Scopus	438	14	0
	CNKI	6297	1020	11
<b>Total</b>		<b>10020</b>	<b>1040</b>	<b>13</b>

Content analysis, a qualitative technique, facilitated objective inferences from textual data within a social context (Bauer, 2020), incorporating both mechanical and interpretative components (Brewerton & Millward, 2001). The mechanical aspect involved organizing data into thematic categories, while the interpretative component focused on extracting meaningful insights relevant to the research questions (Henderikx, Kreijns, & Kalz, 2001). In phase 5, the classification process aimed to identify studies exploring NLA skills and strategies across the WOS, Scopus, and CNKI databases, addressing research questions RQ1, RQ2, and RQ3 as outlined in Table 2. Specifically, we sought to characterize the general attributes of published NLA studies and delineate the constructs of NLA skills and strategies for cultivating NLA talents. Abstracts, keywords, and titles were scrutinized to appropriately categorize each article. Synthesized responses were then organized based on predefined classifications, potentially facilitating graphical representations.

## Results and Findings

This section responds to the research questions with a detailed content analysis as well as a description of the study sample.

*RQ1. What are the articles to be studied in the research?*

A summary of each article found is detailed in Table 6, which shows the characteristics of the 13 studies from 2018 to 2023 (Figure 3) on educational interventions that were included in the systematic review: author(s) and year of publication, country, and educational stage.

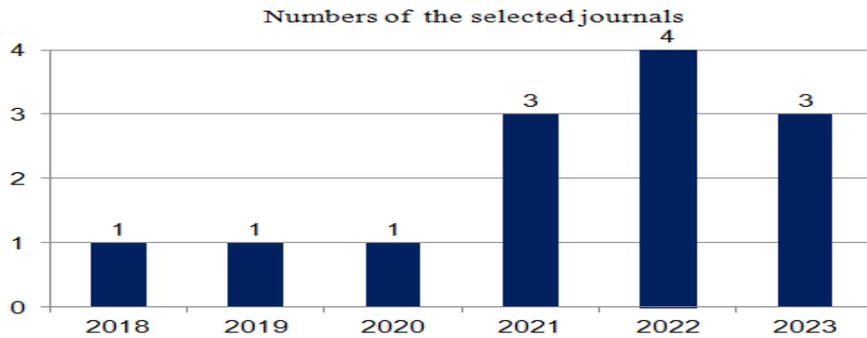


Figure 3. Year of Publication of the Selected Articles

<b>N o</b>	<b>Auth or/Ye ar</b>	<b>Sourc e</b>	<b>Countr y</b>	<b>Title</b>
J1	Varlotta/ 2018	WOS/ Scopus	America	Designing and Implementing Systemic Academic Change -Hiram College's Model for the New Liberal Arts
J2	Zhang / 2022	WOS/ Scopus	China	Innovation of French Interpretation Teaching Mode in the New Liberal Arts Environment
J3	Ye/ 2022/	CNKI	China	Cultivating New Liberal Arts Talents for the Requirements of the New Era
J4	An & Li/20 21	CNKI	China	Ideological and Political Education in Foreign Language Courses and the Cultivation of Core Competencies for New Liberal Arts Foreign Language Talents
J5	Yu/20 23	CNKI	China	Innovative Approaches, Strategic Concerns, and Forward-looking Actions in the Reform of the New Liberal Arts Talent Cultivation Model: A Cross-case Study
J6	Yang/ 2023	CNKI	China	Exploring Innovative Models for Cultivating Outstanding New Liberal Arts Talents
J7	Xu/20 23	CNKI	China	Characteristics of the Demand and Suggestions for Cultivation New Liberal Arts Talents
J8	Zhang /2021	CNKI	China	The Current Research Status and Future Trends in the Construction of New Liberal Arts in China
J9	Zou & Zheng , /2021	CNKI	China	Exploration of Talent Cultivation for Liberal Arts and Technical Talents in the context of the New Liberal Arts
J10	Wen/ 2022	CNKI	China	Cultivation of New Liberal Arts Talents of Chinese Language Major
J11	Qiu/2 020	CNKI	China	Leading the Reform and Innovation of Undergraduate Education in Chinese Tourism with the Construction of New Liberal Arts
J12	Dong/ 2022	CNKI	China	New Liberal Arts Talent Cultivation Models Under the Guidance of Ideological and Political Education: A Case Study of Accounting Major
J13	An & Wang , /2019	CNKI	China	The Essence, Status, and System of Constructing New Liberal Arts

*RQ2. What are the constructs of NLA skills for talents' cultivation?*

It is important for the study to search the previous studies on NLA skills with the highest number of citations. As it is summarized from Table 7, there were 17 elements identified as attributes of NLA skills, including interdisciplinary skill, patriotic literacy, humanistic literacy, technological skill, innovative skill, professional skill, skill application ability, digital literacy, critical thinking skill, communication skill, teamwork skill, intercultural skill, academic research ability, learning ability, decision-making skill, leadership skill, problem-solving skill and system / design thinking skill.

No	NLA skills/ Literacy/ Abilities/ Characteristics
J1	i) Analytical and critical thinking skills; ii) Written, oral, and digital communication skills; iii) Computational skills; vi) Intercultural and diversity skills; v) Mindful technology skills; vi) Systems/design thinking skills; vii) Teamwork and team building skills
J2	i) Practical operation ability; ii) Academic research ability; iii) Communication management ability; iv) Technology application ability; v) Data analysis ability
J3	i) Patriotism; ii) Humanistic awareness; iii) Professional consciousness; iv) Interdisciplinary awareness; v) Technological awareness
J4	i) Patriotic awareness; ii) Humanistic sentiments; iii) Professional competence; iv) Innovative capabilities; v) Collaborative skills
J5	i) Cross-disciplinary skill; ii) Humanistic sentiments; iii) Professional competence; iv) Digital literacy; v) Information technology literacy
J6	i) Humanistic literacy; ii) Professional skill; (iii) Innovative skill; iv) Skill application ability; v) Interdisciplinary skill; vi) Technological skill
J7	i) Humanistic literacy; ii) Digital literacy; iii) Interdisciplinary skill; iv) Innovation ability; v) Learning ability; vi) Communication skills; vii) Organizational skills; viii) Coordination ability; ix) Decision-making ability
J8	i) Interdisciplinary skill; ii) Patriotic literacy; iii) Technological skill; iv) Professional skill; v) Skill application ability; vi) Academic research ability; vii) Learning ability
J9	i) Interdisciplinary skill; ii) Patriotic literacy; iii) Technological skill; iv) Innovative skill; v) Skill application ability
J10	i) Strong patriotism; ii) Interdisciplinary knowledge; iii) Systematic professional knowledge; iv) Innovative thinking; v) Logical, and critical thinking; vi) Interdisciplinary and international perspectives; vii) Excellent Chinese writing skills
J11	i) Global citizenship awareness and social responsibility; ii) Critical thinking and innovation abilities; iii) Interdisciplinary knowledge; iv) Patriotism; v) Proficiency in information abilities; vi) Strong practical operational abilities
J12	i) Interdisciplinary skill; ii) Patriotic literacy; iii) Technological skill; iv) Innovative skill; v) Skill application ability; vi) Intercultural skill
J13	i) Solid theoretical foundation and professional knowledge; ii) Lifelong learning philosophy and practical skills; iii) Diverse, critical, dialectical, and creative thinking modes; iv) Sound character and collaborative spirit; v) Patriotism and the ability to contemplate the community of human destiny

Table 7. Previous studies of NLA skills/ Literacy/ Abilities/ Characteristics

According to Fatimah and Ahmad Esa (2015), the prerequisite for acceptance as an element or attribute is that it must be mentioned in more than 50% or 5 previous studies. The specifications

of NLA skills were shown in Table 8 to make a comparison of the NLA skills mentioned in precious studies.

N	NLA skills	America	China											Total	
			J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11		J12
1	Interdisciplinary skill			✓		✓	✓	✓	✓	✓	✓	✓	✓		9/13
2	Patriotic literacy			✓	✓			✓	✓	✓	✓	✓	✓	✓	9/13
3	Humanistic literacy			✓	✓	✓	✓	✓	✓			✓	✓	✓	9/13
4	Technological skill	✓	✓	✓		✓	✓		✓	✓		✓	✓		9/13
5	Professional skill			✓	✓	✓		✓	✓		✓	✓			7/13
6	Innovative skill				✓		✓	✓		✓	✓	✓		✓	7/13
7	Skill application ability		✓				✓		✓	✓		✓	✓	✓	7/13
8	Digital literacy	✓	✓			✓		✓				✓	✓		6/13
9	Critical thinking skill	✓									✓	✓		✓	4/13
10	Communication skill	✓	✓					✓						✓	4/13
11	Intercultural skill	✓										✓	✓		3/13
12	Teamwork skill	✓			✓										2/13
13	Academic research ability		✓						✓						2/13
14	Learning ability							✓	✓					✓	3/13
15	Decision-making skill							✓							1/13

16	Leadership skill							✓									1/13
17	System/Design thinking skill	✓															1/13

Table 8. Comparison of document analysis construct of NLA skills

Based on the comparison of previous studies, it was found that there are 17 attributes for NLA talents' skills. The researchers made a list of the main constructs that are frequently mentioned among the mentioned model or framework of NLA skills as shown in Table 7. 7 generic skills of NLA were frequently discussed in 13 journals of NLA skills and used as formation for the constructs of NLA. From the list, it addresses generic skills in the order of those that are considered important to be mastered by graduates in facing the NLA challenges. This list shows all 7 skill model reports agreeing that the most required skills are interdisciplinary skill, patriotic literacy, humanistic literacy and technological skill. Meanwhile, innovative skill, professional skill, and skill application ability were identified as important in at least 7 skill models. Other skills namely digital literacy, critical thinking skill, communication skill, teamwork skill, intercultural skill, academic research ability, learning ability, decision-making skill, leadership skill, problem-solving skill and system/ design thinking skill were recognised as important in less 6 skill model reports. In summary, these 7 skills were considered as NLA generic skills to be possessed by young graduates in order to succeed in challenging the new environment.

Based on these findings, a NLA skills framework for talents cultivation can be proposed, encompassing 7 NLA skills indicators as depicted in Figure 4. Through this framework, it can serve as a guide for stakeholders to implement NLA skills in line with technological changes.

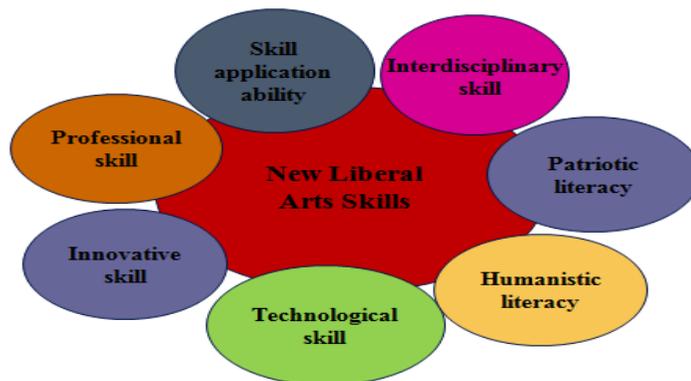


Figure 4. The Constructs of NLA Skills for Talents Cultivation

RQ3. *What are the strategies applied in the studies to cultivate NLA talents?* NLA aligns closely with the demands of the contemporary era, especially amidst the widespread adoption of information technology and the emphasis on interdisciplinary integration in education and teaching. In Table 9, a lot of strategies are put forward by the researchers and applied in reality to cultivate NLA talents.

No	Discipline	Strategies applied to cultivate NLA talents
J1	/	i) Common First-Year Experience; ii) Integrated Major; iii) Coherent Core; iv) Experiential Activities
J2	French	i) Innovative process of French interpretation; ii) Intelligent French interpretation intelligent teaching system; iii) French interpretation course based on collaborative teaching; iv) Multimodal evaluation method for French Interpretation Teaching
J3	Journalism and Communication	i) Revise talent training programs, comprehensively implement training objectives; ii) Realize curriculum clustering, increase the proportion of practical teaching allocation; iii) Fully utilize modern information technology for interdisciplinary integration; iv) Build platforms in various aspects to promote student innovation and entrepreneurship.
J4	Foreign Languages	i) Refine the task of cultivating students in disciplines; ii) Explore teaching methods for ideological and political education in courses; iii) Cultivate high-quality foreign language talents with Chinese sentiments and international perspectives needed by the country.
J5	/	i) Reaffirming the educational characteristics of liberal arts majors; ii) Tapping into the latent value of humanities knowledge; iii) Promoting the mutual development of digital humanities teaching.
J6	/	i) Establishing training objectives and requirements that integrate tradition and innovation; ii) Insisting on a curriculum and course system that combines adherence to tradition with parallel innovation; iii) Establishing a training system and format that maintain a two-way balance; iv) Fostering "diverse" teaching practices; v) Establishing a two-way connection for training evaluation.
J7	/	i) Cultivating students' morality, strengthening ideological education within the curriculum; ii) Integrating knowledge, adjusting the curriculum system; iii) Enhancing skills and emphasizing collaborative education.
J8	/	i) Promoting the localization, sinicization, and internationalization of the development of NLA; ii) Effectively fostering versatile talents; iii) Guiding relevant disciplines in the NLA; iv) Focusing on cultivating humanistic spirit and values.
J9	/	i) Identification with the cultivation philosophy; ii) Optimization of cultivation objectives; iii) Innovation in cultivation methods; iv) Synergy in cultivation resources
J10	Chinese	i) interdisciplinary ii) international

J1 1	Tourism Management	i) Clarify the training objectives for NLA talent; ii) Establish a plan for cultivating NLA talent; iii) Build a platform for cultivating NLA talent; iv) Explore NLA curriculum and teaching models; v) Improve the quality standards system for NLA.
J1 2	Accounting	i) Strengthen liberal arts talent development through diverse educational platforms; ii) Promote liberal arts talent development through curriculum and teaching mechanisms; iii) Ensure liberal arts talent development through multiple service measures.
J1 3	/	i) Adhering to the integrated development path of discipline construction, major construction, and curriculum construction. ii) Dynamically adjusting the connotation of talent cultivation by adjusting the curriculum system and updating teaching content; iii) Integrating the disciplines, majors, and courses of the NLA; iv) Allowing liberal arts students to possess basic literacy in other disciplines and enabling other disciplines to receive comprehensive humanities education.

Table 9. Previous Studies of Strategies Applied to Cultivate NLA Talents

From the above Table 9, it can be seen that as for the discipline distribution, research is primarily conducted in disciplines such as higher education, foreign languages and literature, Chinese language and literature, journalism and communication, tourism management and accounting.

N	Strategies applied to cultivate NLA talents	Journals	Total
1	Promoting interdisciplinary integration	J1, J2, J3, J5, J7, J8, J10, J12, J13	9
2	Strengthening patriotic and humanistic education	J4, J5, J7, J8, J9, J13	6
3	Optimizing teaching objectives	J3, J4, J6, J9, J11, J13	6
4	Innovating curriculum system	J1, J3, J6, J7, J11	5
5	Updating practical system	J1, J2, J9, J12, J13	5

Table 10. Strategies Applied to Cultivate NLA Talents

The most 5 prevalent cultivation strategies that intersect with NLA are presented in Table 10. The most used strategies applied to cultivate NLA talents are promoting interdisciplinary integration (J1, J2, J3, J5, J7, J8, J10, J12 and J13), followed by strengthening patriotic and humanistic education (J4, J5, J7, J8, J9 and J13), optimizing teaching objectives (J3, J4, J6, J9, J11 and J13), innovating curriculum system (J1, J3, J6, J7 and J11) and updating practical system (J1, J2, J9, J12 and J13).

### Promoting Interdisciplinary Integration

NLA concept emphasizes the application of digital means such as information technology in teaching. Zhang (2022) combines information technology to build an intelligent French  
posthumanism.co.uk

interpretation teaching system. Under the support of information technology, the flipped classroom has been introduced into the teaching of interpreting. Ye (2022) says NLA journalism and communication education needs to fully leverage modern information technology to expand the coverage and innovate the technical cognitive abilities, practical skills, and deepening capabilities of humanities professionals, continually breaking down disciplinary barriers, and fostering interdisciplinary integration. Yu (2023) points out to organically integrate digital technology with teaching in NLA disciplines, it is essential to fully utilize digital technologies such as big data, text mining, social network analysis, image processing, and geographic information systems to enrich teaching content and formats. Xu (2023) advocates universities should introduce interdisciplinary courses to create distinctive elective course modules in addition to consolidating the existing curriculum system of humanities majors and incorporate cutting-edge course modules to cultivate digital talents. The vigorous development of NLA disciplines integrating with emerging technologies such as big data, artificial intelligence, virtual reality, and genetic engineering reflects the contemporary demands for higher education discipline advancement. (Zhang et al., 2021) Under the concept of NLA, the talent cultivation mechanism in Chinese language disciplines can highlight two aspects: one is interdisciplinary, and the other is international (Wen, 2022). According to the needs of era development, to integrate various disciplines, majors, and courses in the NLA (An & Wang, 2019). The intersection of humanities and sciences involves integrating modern technological methods into the construction and teaching research of humanities disciplines. For disciplines such as science, engineering, medicine, agriculture, etc., it is essential to fully leverage the role of humanities, highlighting their significant role in cultivating humanistic and social qualities in talents in the fields of science, engineering, agriculture, medicine, etc. (An & Wang).

### **Strengthening Patriotic and Humanistic Education**

Through exposure to different cultural values, students engage in comparison, analysis, and reflection to enhance their sense of identification and pride in Chinese culture, thereby achieving the overarching goal of cultivating foreign language talents with a “Chinese sentiment and international perspective” in the field of foreign language studies (An & Li, 2021). NLA talents cultivation adheres to the principle of “cultivating cultured individuals” reflecting human-centeredness, and cultivating the profound tradition of liberal arts education (Yu, 2023). Xu (2023) advises in the training program and curriculum system, teachers need to carefully examine the ideological and political elements embedded in the courses and integrate them into the teaching process of professional courses, constructing a comprehensive and all-encompassing educational model. They should systematically break down the curriculum platform modules for cultivating talents in the new liberal arts, integrating ideological and political elements into courses from various perspectives and levels, thereby manifesting elements such as patriotism, social responsibility, moral standards, legal consciousness, critical thinking, scientific spirit, innovation ability, and humanistic spirit within the curriculum. Based on the fundamental national conditions of our country, we should absorb beneficial experiences from advanced foreign educational concepts and talent development models, conduct research across regions and countries, and accelerate the cultivation of high-quality international organizational talents with a global perspective, a Chinese standpoint, and a thorough understanding of regulations (Zhang et al., 2021). In the cultivation of talents in the humanities and technology fields, emphasis should be placed on "moral education as the priority" and "application orientation (Zou & Zheng, 2021).

## **Optimizing Teaching Objectives**

The core task of constructing the NLA is to establish an innovative talent cultivation model, with the overall goal of nurturing highly educated individuals with “patriotic sentiments, humanistic literacy, professional competence, innovative ability, and collaborative skills” (Li et al., 2018). NLA aims to cultivate outstanding talents who can embody the values of the construction of new liberal arts, possess a systematic grasp of professional foundational knowledge and basic skills, demonstrate innovation awareness, emphasize the unity and systematic nature of knowledge, master modern liberal arts theories and management methods, adeptly apply scientific and technological solutions to problems, and focus on the solid foundation, strong innovation, and practicality of production practice and social development (Yang et al, 2023). Based on the three major elements of "values," "knowledge," and "skills," construct a "three-dimensional integrated" talent cultivation target system for the humanities and technology fields, thereby coordinating the interests of various stakeholders related to talent development (Zou & Zheng, 2021). First, cultivate students with a global mindset. Second, cultivate talent with critical thinking skills. Third, cultivate talent with a well-rounded knowledge system and broad cognitive perspectives. Fourth, cultivate talent who are culturally confident and deeply understand both Chinese and Western cultures. Fifth, cultivate talent who are adept at using new media to communicate and promote Chinese culture. Sixth, cultivate talent with strong practical operational skills (Qiu, 2020).

## **Innovating Curriculum System**

In terms of nurturing top innovative talents in the 'process-oriented' new liberal arts, the training content is divided into six modules: general education, disciplinary categories, professional specialization, interdisciplinary studies, innovation and entrepreneurship, and personal development, taking into account the unique nature of practical activities both inside and outside the classroom. This structure ultimately forms a “3+2+1 formula” of “foundation+characteristics+ practice” in training content (Yang et al, 2023). Xu (2023) suggests in terms of interdisciplinary courses, courses such as Engineering Project Management, and Cold Chain Logistics can be offered to facilitate the integration of knowledge between the NLA and new engineering, science, medical, and agricultural disciplines. In the frontier course module, knowledge related to data perception should be emphasized. Specifically, courses related to digitization can be introduced, such as Business Data Analysis, Digital HR, Digital Marketing, and Intelligent Finance, enabling students to acquire knowledge in data analysis, talent profiling, digital marketing, financial decision-making, etc.,. Additionally, in terms of curriculum design, a series of courses containing practical knowledge should be appropriately introduced. For example, for students majoring in management, courses such as Python, Applied Statistics, Business Data Analysis, and Data Modeling can be offered to strengthen their abilities in data collection, data organization, data cleaning, data mining, and data analysis. To expand the teaching scale of new humanities courses and optimize teaching modes, Chinese tourism colleges should actively promote reforms in teaching methods and means, focusing on creating five types of "gold courses": offline teaching, online teaching, blended teaching, virtual simulation teaching, and social practice teaching. (Qiu, 2020)

## **Updating Practical System**

By leveraging external resources and implementing collaborative approaches such as inter-school collaboration, school-community collaboration, school-industry collaboration, and school-institute collaboration, we aim to establish a comprehensive and three-dimensional talent

development system. On one hand, this approach strengthens the supportive role of corporate partnerships in talent development, promotes the integration of science, education, and industry, and enhances collaboration with leading companies and industrial parks. On the other hand, through infrastructure development and models such as "customized" talent development, we aim to establish a broader range of implicit platforms and exchange mechanisms, activate social educational resources, optimize resource allocation, and thereby achieve collaborative talent development across multiple stakeholders (Zou & Zheng, 2021). Universities should emphasize interdisciplinary studies and integration with natural sciences in the teaching of humanities courses. They should consistently adhere to the student-centered philosophy, with ideological and political education integrated into the curriculum. This involves dismantling and reconstructing traditional course content, promoting dynamic innovation in educational methods, optimizing curriculum evaluation system construction, and striving to achieve an organic unity of knowledge and values through the improvement and enrichment of the curriculum teaching system (Dong, 2022).

## Conclusion

In brief, this review of the literature focuses on analyzing literature on NLA skills and strategies to cultivate NLA talents. Findings include (i): characteristics of studies linked to NLA skills and strategies to cultivate NLA talents; (ii): 7 constructs of NLA skills for talents' cultivation: interdisciplinary skill, patriotic literacy, humanistic literacy and technological skill. Meanwhile, innovative skill, professional skill, and skill application ability; (iii): strategies for talents' cultivation includes promoting interdisciplinary integration, strengthening patriotic and humanistic education, optimizing teaching objectives, innovating curriculum system and updating practical system. However, it is imperative to acknowledge several limitations inherent in this study. Some limitations of this study lie in insufficient search for foreign articles. This deficiency arises partly due to objective limitations in accessing relevant materials and partly due to the lack of comparative analysis and experiential reference from mature foreign studies. This article opens avenues for an extended analysis and for the integration of additional linkages. It seeks to offer value to research groups, academics, and society at large, particularly those interested in nurturing talents in the realm of NLA. Moreover, it encourages further investigation into the development of 21st-century competencies and the vast potential they hold.

## References

- An, F. C. & Li, B. N. (2021) Under the New Perspective of Humanities, Integrating Ideological and Political Education into Foreign Language Courses and Cultivating Core Competencies of Foreign Language Talents. *Foreign Language Digital Teaching*. (6), 20-31.
- An, F. C. & Wang, M. Y. (2019). The Essence, Status, and System of the Construction of the New Liberal Arts. *Academic Exchange*.(11), 5-15.
- Dong, B. R. (2022). Analysis of Talent Cultivation Model in the New Liberal Arts Guided by Ideological and Political Education. *Financial and Accounting Newsletter*. (18) 35-41.
- Fan, L.M. (2020). New Liberal Arts: Era Demands and Construction Focus. *Chinese University Teaching*, (5): 4-8.
- Fatimah Mustaffa and Ahmad Esa, Risk Management Practices Among Sports Lecturers in Malaysian Teacher Education Institutes: a Research Proposal. 2013.
- Henderikx, M.A.; Kreijns, K.; Kalz, M. (2017). Refining Success and Dropout in Massive Open Online Courses Based on the Intention–behavior Gap. *Distance Educ.*, (38), 353–368.
- Huang, P. & Li. Ping. (2023). Exploration of Innovative Financial Talent Cultivation Path Based on

- STEM Education Concept in the Context of New Humanities: A Case Study of Shandong Textile Economy. (1): 51-55.
- Kitchenham, B.; Charters, S. (2007). Guidelines for Performing Systematic Literature Reviews in Software Engineering. <https://www.bibsonomy.org/bibtex/aed0229656ada843d3e3f24e5e5c9eb>
- Lori Varlotta. (2018). Designing and Implementing Systemic Academic Change-- Hiram College's Model for the New Liberal Arts. *Planning for Higher Education Journal*, (11): 12-31.
- Qiu, H. Q. (2020). Discussion on the Development of Tourism in China: Construction of First-class Undergraduate Education in Tourism in the New Era. *Tourism Journal*. (5), 1-3.
- University of York. (Ed.) (2021). *Systematic Review; CRD*, University of York: York, UK, 2009.
- Verner, J., Brereton, O., Kitchenham, B., Turner, M. & Niazi, M. (2012). *Systematic Literature Reviews in Global Software Development: A Tertiary Study*. Ciudad Real, 14–15
- Weller, M.; Jordan, K.; Devries, I.; Rolfe, V. (2018). Mapping the Open Education Landscape: Citation Network Analysis of Historical Open and Distance Education Research. *Open Prax*, (10): 109–126.
- Wen, G. L. (2022). Talent Cultivation in Chinese Language Discipline Under the Concept of New Liberal Arts. *Roundtable*. (9), 32-35.
- Wu, L. H. (2023). “Safeguarding”, “Breaking-Through” and “Surpassing” in the Construction of “New Liberal Arts” in China. *12(5)*: 230-236.
- Ramírez-Montoya, M.-S.; Lugo-Ocando, J. (2020) Systematic Review of Mixed Methods in the Framework of Educational Innovation. *Comunicar*, (28): 9–20.
- Xu, M. X. (2023). The Demand Characteristics and Training Recommendations for Talents in the New Liberal Arts. *Quality Education in the Western Region* (20), 73-76
- Ye, J. H. (2022). Developing Humanities Talents to Meet the Requirements of the New Era in Chinese Higher Education. (3), 52-54.
- Yin, H. B. (2020). Research on Innovative Financial Talent Cultivation Model Based on STS and STEM: A Case Study of Financial Technology Major. *Marketing World*. (9): 30-31.
- Yu, Z. D. (2023). Innovative Approaches, Strategic Concerns, and Forward-looking Actions in the Reform of the New Humanities Talent Training Model: A Cross-case Study. *Journal of Southwest University (Social Science Edition)*. (6), 226-239.
- Yang, X. (2023). Exploration of Innovative Talent Cultivation Models for Outstanding Talents in the New Liberal Arts. *Heilongjiang Researches on Higher Education*. (11), 148-154.
- Zhang, J. X. (2022). Innovation of French Interpretation Teaching Mode in the New Liberal Arts Environment. *Journal of Environmental and Public Health*. (9): 1-11.
- Zhang, H. R. & Ran Yantao. (2020). Implementation of STEAM Education Concept: Construction of Mathematical Cultural Project Learning Mode and Case Development. *China Digital Education*, (7): 97-103.
- Zhang, J. (2020). Guiding the Construction of New Liberal Arts with Scientific Spirit. *Journal of Shanghai Jiao Tong University*. (2): 23-31.
- Zhang, L. S. (2021). The Current Research Status and Future Trends of the Construction of New Liberal Arts in China. *Educational Research in the New Liberal Arts*. 39-55
- Zhang, Z. Y. (2020). The Practice of the Combination of Industry and Education in the Teaching of Tourism Management Specialty in Vocational Colleges. *Journal of Hubei Open Vocational College*. (33): 138–139.
- Zou, B. L. & Zheng, W. L. (2021). Exploring the Cultivation of Technical Talents in the Humanities Under the Background of the New Liberal Arts. *Heilongjiang Researches on Higher Education*. (11), 13-17.