

A thematic review on ideological and political education for university students in China



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Abstract The development of ideological and political education (IPE) in Chinese higher education plays a vital role in shaping students' ethical, intellectual, and political values within the framework of socialism. However, despite increasing research attention, limited systematic evaluations exist, particularly regarding behavior-based frameworks such as the Knowledge, Attitude, and Practice (KAP) model. This study aims to assess the scholarly trends in IPE research from 2020 to October 2024 and to propose a conceptual KAP model to enhance IPE effectiveness. A thematic review approach was employed, guided by predefined inclusion criteria. A total of 315 peer-reviewed articles were retrieved from Scopus and Web of Science databases, of which 43 were selected for in-depth analysis. Thematic analysis using ATLAS.ti 9 generated 19 initial codes, which were classified into four key themes: educational technology and innovative teaching, online media and information-based education, curriculum integration and interdisciplinary learning, and educational theory, assessment, and quality management. Word cloud visualization indicated "Education" as the most dominant term in the corpus. The findings demonstrate a strong research focus on technological applications and instructional innovation, while revealing a notable deficiency in conceptual and evaluative frameworks like the KAP model. This study proposes a conceptual structure for applying KAP in the context of IPE, aiming to support a more comprehensive and adaptive approach to political education in higher education. The review provides theoretical and practical implications, offering insights for researchers and policymakers concerned with the strategic advancement of IPE.

Keywords: IPE research, digital pedagogy, qualitative data analysis, conceptual framework, China higher education

1. Introduction

Ideological and political education serves as a structured social activity where the state actively guides, motivates, and persuades its citizens through organized social frameworks (Sha et al., 2024). This process represents a synthesis of social value systems, normative frameworks, individual aspirations, and tangible societal challenges, aiming to nurture individuals who embody and practice these social values and norms (Liu et al., 2021). The primary objectives of such education include preserving the social order, reinforcing state authority, stabilizing societal structures, and advancing both social and individual growth (Ji & Li, 2024). In the context of higher education, this vision is operationalized through the discipline of ideological and political education. It is designed to align students' educational experiences with the principles of socialist development and the broader goals of ideological and political education for university students (Lu, 2017). The ultimate aim is to cultivate a generation of qualified socialist builders and successors endowed with ideals, ethics, discipline, and cultural awareness (Lin, 2024). According to Education's 2023 statistics, China boasts over 40 million students enrolled in higher education institutions, with approximately 34.96 million pursuing full-time undergraduate or associate degrees (Liu & He, 2022). This positions China as the nation with the highest enrollment in higher education globally, underscoring the significance of ideological and political education in shaping future leaders and citizens (Hu et al., 2020). The integration of ideological and political education into various curricula is essential for fostering a comprehensive understanding of civic responsibilities and political awareness among students (Svensson, 2023). Moreover, implementing innovative teaching strategies and assessment systems can enhance the effectiveness of ideological and political education, ensuring that it meets the evolving needs of society (Azhen, 2021). In summary, ideological and political education is a vital component of the educational framework in China, aimed at cultivating individuals who can contribute positively to society while upholding the values and norms dictated by the state (Wang, 2024). This educational discipline's ongoing development and refinement are crucial for maintaining social stability and promoting individual growth in the context of a rapidly changing global landscape (Liu & Lahoz, 2024).

Contemporary Chinese college students have grown up during a significant social transformation marked by rapid economic growth and the widespread use of information networks (Yang & Shu, 2024). Most students can make rational distinctions and accurate judgments in complex information environments, showing strong recognition of Marxism and socialism with Chinese characteristics and firm ideals and beliefs (Liu, 2017). Their self-awareness increases, accompanied by a strong sense of patriotism and social responsibility, as they actively participate in realizing the Chinese Dream of national



rejuvenation (Zhang & Yuan, 2020). This generation's engagement in social issues reflects a growing civic awareness as they navigate the challenges of a rapidly changing society (Yi & Dan, 2020). Modern communication technologies have further facilitated their participation in social discourse, allowing them to express their views and contribute to societal development (Zeng, 2016). As they confront contemporary complexities, these students are redefining their identities and roles within the context of national development (Yang, 2024). Their involvement in various initiatives demonstrates their commitment to personal growth and the collective aspirations of their nation (Jia, 2020). This dynamic interplay between individual agency and collective responsibility is essential for fostering a generation that is aware of its heritage and prepared to tackle future challenges (Jiang & Liu, 2022).

With the ongoing advancement of economic globalization, the interdependence among nations has intensified, leading to more frequent exchanges and integrations of various ideological cultures. Consequently, contemporary college students encounter significant challenges, including insufficient knowledge in ideological and political education, biases in their attitudes and practices, and difficulties in translating knowledge into actionable behavior (Liu & Tsukamoto, 2021). The government has consistently highlighted the challenges faced by ideological and political education in higher education institutions and has actively reinforced its development (Ruan & Yang, 2024). Documents such as "Opinions on Deepening the Reform of Ideological and Political Theory Courses in Higher Education Institutions" and "Opinions on Strengthening and Improving Ideological and Political Education in Colleges and Universities under the New Situation" have been issued in succession. These documents underscore the party and government's strong commitment to enhancing ideological and political education within higher education and provide practical directions and specific measures for colleges (Yao, 2020).

In summary, the emphasis on ideological and political education in higher education reflects a recognition of its importance in shaping students' values and beliefs in an increasingly interconnected world. The government's initiatives and the integration of innovative educational practices are essential for addressing the challenges faced in this domain (Yang, 2024). This has significantly increased the number of related academic studies on China National Knowledge Infrastructure (CNKI), with an average of 18,000 research papers annually. At the same time, the growing number of studies on ideological and political education for college students in major international databases (such as Web of Science (WoS) and Scopus) further highlights this topic's importance and academic recognition.

However, it is worth noting that these articles mainly focus mainly on technological applications and improving educational strategies. Some only integrate technology or concepts, and apart from some review articles published in CiteSpace, there is a lack of comprehensive analyses and reviews of the latest research results. Additionally, constructing a Knowledge, Attitude, and Practice (KAP) model for studying ideological and political education for college students remains unexplored. To better address evolving requirements within ideological and political education (IPE) discipline development under new circumstances, it is imperative to systematically consolidate representative research outputs, clarify their progression trajectory, and discern future trends. This review uncovers the multifaceted nature of collegiate ideological and political education in China. Integrating and analyzing literature from 2020 to 2024, it aims to refine systemic structures, enhance operational adaptability and efficacy, diversify research approaches, and increase educational vitality and inclusivity—advancing understanding of core disciplinary questions: (1) RQ1: What are the main trends in the literature on ideological and political education for college students from 2020 to Oct 2024? (2) RQ2: How do we construct a conceptual framework of the KAP model for ideological and political education for college students?

2. Materials and Methods

While scholarly attention toward collegiate ideological-political education is growing, comprehensive reviews remain scarce. This study employs ATLAS.ti 9 to conduct a thematic analysis addressing this gap. Thematic review, a quasi-systematic approach, is well suited for comprehensively analyzing collegiate ideological-political education literature to yield insights into prevailing issues and emerging research trajectories. This method requires researchers to examine the literature meticulously, identify recurring patterns, and construct meaningful themes. Researchers can systematically code, classify, and analyse the literature, effectively identifying and organising themes. This approach advances scholarly discourse on collegiate IPE through critical literature synthesis.

This study employed a rigorous literature selection to emphasise research objectives, establishing clear inclusion and exclusion criteria. The literature selection followed these specific criteria: (1) Articles published between 2020 and 2024; (2) At least one keyword related to "college students" or "higher education" and "ideological and political education" to ensure relevance to the research focus; (3) Only articles published in Chinese or English, and the research country is in the People's Republic of China. Scopus and WoS are widely recognised as comprehensive databases covering various disciplines. Ideological and political education for college students is a multidisciplinary topic that includes education, sociology, psychology, and statistics. Conducting literature searches in Scopus and WoS databases can enhance the credibility of literature sources. The initial database search yielded 315 records. Following title/abstract screening, 201 were excluded because they were nonrelevant to collegiate ideological-political education (IPE). Additionally, some articles were inaccessible in full text or were book chapters, duplicates, or retracted articles. Therefore, the total number of articles for review was reduced to 43 (as shown

in Figure 1). The corpus was imported into ATLAS.ti 9 and indexed by metadata (author; title; journal; publisher; year; volume). Final full-text review comprised 43 screened articles.

Complementing thematic analysis, word clouds visually represented textual data to identify prominent themes, patterns, and research trends. Following text preprocessing (removal of function words, punctuation, special characters; lemmatization), frequency-weighted visualizations were generated in ATLAS.ti 9. These findings illustrate term significance through scalable typography. This two-stage methodology involved 1) quantitative bibliometric analysis with iterative re-coding, 2) qualitative coding and classification for gap identification.

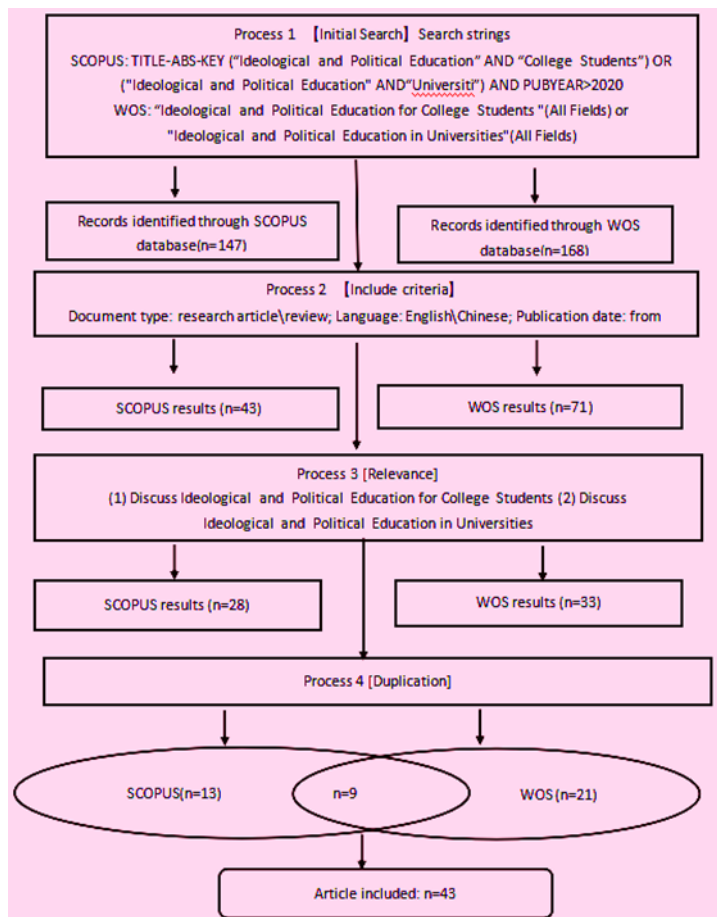


Figure 1 Literature search process in this study.

3. Finding and Discussion

The research results were analysed using a combined quantitative and qualitative approach. The quantitative aspect provided current trends in related research, while the qualitative aspect identified themes and created a conceptual framework for studying ideological and political education using the KAP model.

3.1. Quantitative findings

The quantitative part generated the following word cloud on the based analysis of the source literature. As shown in Figure 2, the most prominent words in the word cloud indicate frequent occurrences in the literature, including "education" (used 4220 times); "students" (used 3954 times); "political" (used 3553 times); "ideological" (used 3187 times); "college" (used 2297 times); "teaching" (used 2136 times); "data" (used 1845 times); "learning" (used 1267 times); "information" (used 12337 times); "network" (used 1171 times); "research" (used 1135 times); and "online" (used 970 times). As previously mentioned, this study focuses on ideological and political education for college students, where "education" is the largest word, emphasising its importance. Other significant words in the word cloud, such as "students," "political," "ideological," "college," "teaching," "data," "learning," "information," "network," etc., also appear with high frequency, further reflecting the coverage of these themes. Additionally, the frequent appearance of words such as "data," "learning," "information," "network," "research," and "online" suggests that this literature may focus on topics such as data analysis in education, online learning, and information networks. Finally, the results of the word frequency analysis indicate that keywords like "KAP" and "model"



As shown in Figure 4, research on ideological and political education for college students spans more than 20 provinces in China. The provinces with the most articles are Shanxi (9 articles), Hubei (5 articles), Jiangsu (4 articles), Sichuan (3 articles), Guangxi (3 articles), and Guangdong (3 articles). This indicates that ideological and political education for college students has received widespread attention and in-depth research in China, demonstrating its importance and universality. This broad geographical distribution reflects that researchers nationwide contribute to the academic development and technological innovation of ideological and political education in higher education.

Table 2 shows the thematic trends of the reviewed articles. Initially, there were renamed and merged, resulting in four themes: (1) Educational technology and innovative teaching, (2) Online media and information-based education, (3) Curriculum integration and interdisciplinary education, and (4) Educational theory, assessment, and quality management. These will be analysed in detail in the following qualitative section.

The quantitative research results in this section partially reflect the trends in research topics for college students. Although the national government highly values ideological and political education in higher education, like most disciplines, it also faces new challenges in the new era. Against this backdrop, ideological and political education trends in higher education should be studying. It is urgently needed to understand the relationship between change and constancy to ensure the adherence and innovation of ideological and political education in colleges and universities.

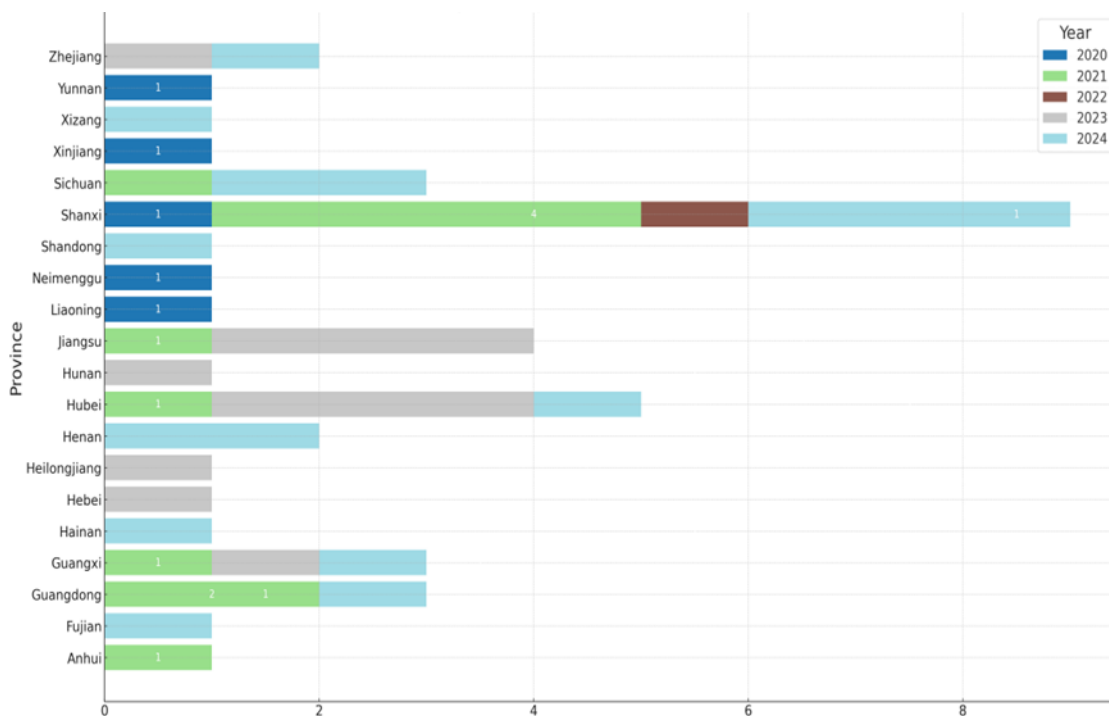


Figure 4 Location and years of publication with the number of articles.

3.2. Qualitative findings

Qualitative analysis encodes the themes and directions of issues in ideological and political education for college students. The codes were then integrated and summarised to identify the theories and concepts widely considered by researchers. Ultimately, four major themes were identified, as shown in Figure 5: (1) Educational technology and innovative teaching, (2) Online media and information-based education, (3) Curriculum integration and interdisciplinary education, and (4) Educational theory, assessment, and quality management. These themes often overlap in the reviewed articles. Nonetheless, to better focus on the key issues of the articles and the specific objectives of this study, we only adopted the main themes of the articles. Each theme will be discussed in more detail next.

Theme 1: Educational Technology and Innovative Teaching

This theme focuses on the application and innovation of technologies such as deep learning, big data, cloud computing, and virtual reality in ideological and political education for college students. Research indicates that applying advanced technologies can enhance the effectiveness of teaching ideological and political education in higher education and achieve personalised education. This improves students' learning experiences in ideological and political education courses (as shown in Table 3).



Table 2 Author vs. Themes.

no	Sources	theme 1:	theme 2:	theme 3:	theme 4:
		Educational Technology and Innovation Teaching	Network Media and Information-Based Education	Curriculum Integration and Interdisciplinary Education	Educational Theory, Assessment, and Quality Management
1	(Rui, 2022)		--		
2	(Zhang, 2024)				--
3	(Zha, 2024)		--		
4	(Yang, 2024)	--			
5	(Wang, 2022)			--	
6	(Ouyang et al., 2024)				--
7	(Luo & Alia, 2024)	--			
8	(Luo et al., 2024)	--			
9	(Liao & Xie, 2024)				--
10	(Li et al., 2024)			--	
11	(Lai, 2024)				--
12	(Hu et al., 2024)				--
13	(Chen, 2024)		--		
14	(Ban, 2024)	--			
15	(Zhou, 2023)	--			
16	(Yao, 2023)			--	
17	(Xuan, 2023)				--
18	(Xu, 2022)			--	
19	(Ma, 2023)	--			
20	(Di et al., 2023)	--			
21	(Xu, 2023)			--	
22	(Zhang, 2024)				--
23	(Zhao & Zhang, 2021)	--			
24	(Cai et al., 2022)			--	
25	(Zeng & Liu, 2021)			--	
26	(Zhao et al., 2021)			--	
27	(Zhang & Wei, 2021)				--
28	(Xiao, 2021)			--	
29	(Shi, 2021)				--
30	(Liu & Wang, 2021)				--
31	(Li et al., 2022)			--	
32	(Li et al., 2021)	--			
33	(Zhu, 2021)		--		
34	(Wang, 2020)	--			
35	(He et al., 2021)		--		
36	(Zhang et al., 2020)	--			
37	(Xue, 2020)	--			
38	(Che et al., 2020)		--		
39	(Tang, 2023)	--			
40	(Meng, 2024)		--		
41	(Wang, 2024)		--		
42	(Wang, 2021)		--		
43	(Jia, 2020)		--		



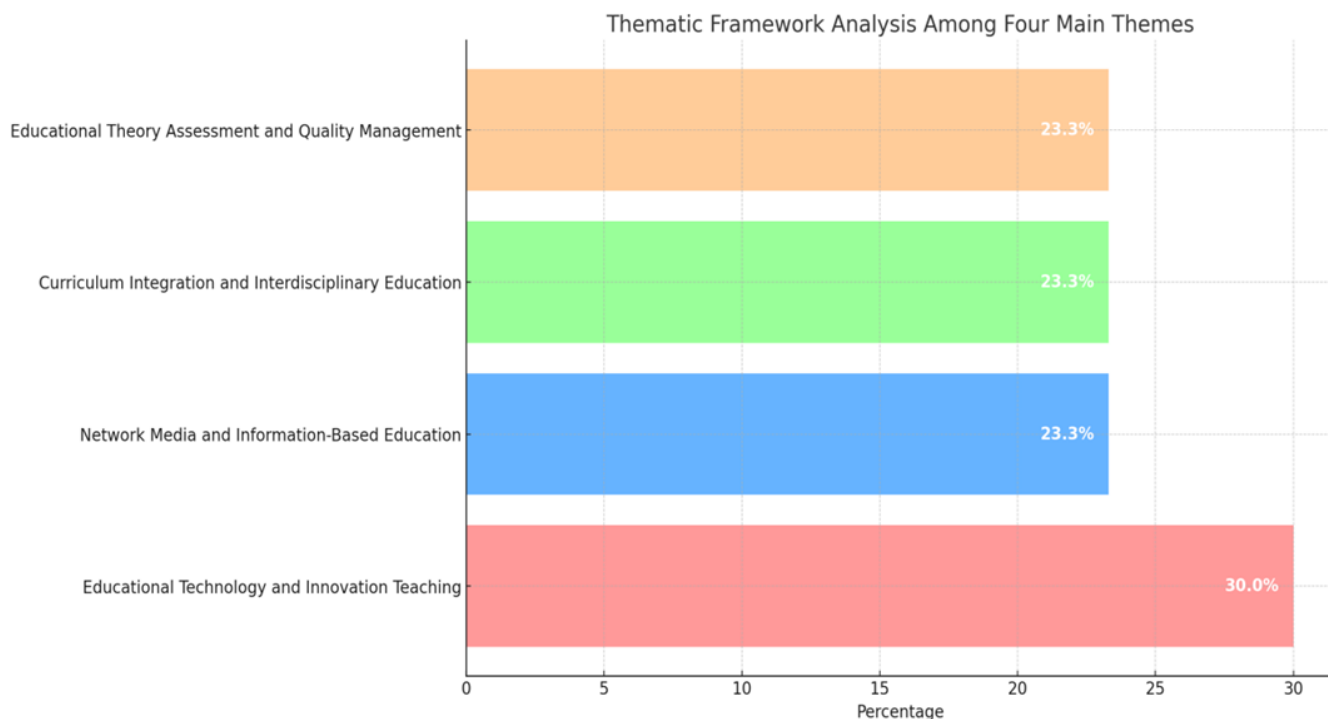


Figure 5 Overall network of ideological and political education for college students.

Specifically, it can be summarised in four aspects: First, some scholars have proposed methods to optimise ideological and political education in higher education using deep learning and big data technologies. For example, structured, contextualised, and activity-based teaching designs and knowledge-forgetting matrix decomposition techniques significantly improved teaching effectiveness and students' learning experiences. The development of IAP quality TQ assessment systems and corresponding MATLAB simulation software based on deep learning theory further enhanced the assessment and monitoring of educational quality (Yang, 2024; Di et al., 2023). Luo & Alia (2024) believed in constructing a civic, political cloud education platform based on big data technology, using collaborative filtering recommendation algorithms to analyse student behaviour data. It can achieve personalised education resource recommendations, significantly improving educational teaching effectiveness and students' political literacy. Additionally, some scholars achieved efficient ideological and political education through big data mining technology (Ban, 2024; Zhou, 2023).

Secondly, artificial intelligence is applied in ideological and political education. Some scholars applied virtual reality technology to ideological and political theory courses in higher education, showing that VR classroom teaching can significantly enhance students' interest and performance in learning. This promotes knowledge understanding and value establishment (Zhang et al., 2020). Moreover, some scholars explored the characteristics of artificial intelligence and ideological and political education in higher education and proposed innovative paths. This improves student groups' recognition of ideological and political theory courses (Tang, 2023).

Thirdly, algorithms and models are applied in ideological and political education. Luo et al. (2024) combined the NDK-means algorithm and integrated Yan'an spirit into contemporary college students' ideological and political education. It modelled student assessment reliability using the CSA-BP neural network prediction algorithm, showing high satisfaction among students of all grades with the scheme. Some scholars have also proposed the step-by-step optimisation of neural networks and particle swarm optimisation models to improve ideological and political education strategies. This effectively enhances the effectiveness of ideological and political education (Ma, 2023; Xue, 2020). Meanwhile, Zhao & Zhang (2021) proposed a GRU network-based quality assessment method for ideological and political teaching, constructed an automatic assessment system, and improved the loss function using a transfer learning model. Experimental results showed that this method has high accuracy in ideological and political teaching.

Finally, the application of cloud computing in ideological and political education. Some scholars believe that using cloud computing technology and K-means clustering algorithm models can effectively integrate cloud computing and ideological and political education (Wang, 2020). Additionally, some scholars proposed a highly efficient online education management system based on cloud computing technology, improving traditional information management processes and classification algorithms and completing online education tasks well (Li et al., 2021).



Table 3 Theme 1: Educational technology and innovation teaching.

Theme	No.	Sources	Supporting quotes	Focus
Educational Technology and Innovation Teaching	4	(Yang, 2024)	“Based on deep learning theory, this study utilizes knowledge forgetting matrix decomposition technology to identify and recommend key knowledge points, thereby enhancing the effectiveness of ideological and political education for college students and improving their learning experience.”	Deep learning, personalization, knowledge recommendation
	7	(Luo & Alia, 2024)	“A citizen political cloud education platform is constructed based on big data technology. By analyzing student behavior data using filtering recommendation algorithms, personalized educational resource recommendations are achieved, enhancing educational outcomes and students' political literacy.”	Big data technology, cloud platform, algorithmic recommendation, innovative education
	8	(Luo et al., 2024)	“Integrating the Yan'an Spirit into college students' ideological and political education pathways through the NDK-means algorithm, this study models the reliability of student assessments.”	Yan'an Spirit, NDK-means algorithm, educational pathways
	14	(Ban, 2024)	“Utilizing big data thinking, the mcasa sampling model is designed to analyze data literacy in online ideological and political education, proposing an innovative "receiver-centered" theory.”	Big data, online ideological and political education, innovative exploration, acceptancetheory
	15	(Zhou, 2023)	“The BiGRU_Attention framework based on big data mining technology achieves efficient ideological and political education through data collection and the application of the GRU structure model.”	Big data mining, intelligent pathways, BiGRU
	19	(Ma, 2023)	“The deep neural network method optimized with multi-parameter fusion gradually optimizes the neural network model, improving the precision of professional course construction in ideological and political education.”	Multi-parameter, deep neural network, curriculum-based ideological and political education
	20	(Di et al., 2023)	“Based on deep learning, the quality of ideological and political education in colleges has been enhanced through the development of the IAP Quality TQ evaluation system and the MATLAB simulation software.”	Deep learning, quality evaluation, MATLAB simulation software
	23	(Zhao & Zhang, 2021)	“The GRU network-based ideological and political teaching quality evaluation method constructs an automatic evaluation system, with results indicating a high accuracy rate in ideological and political teaching.”	GRU framework, teaching quality, automatic evaluation
	32	(Li et al., 2021)	“The efficient online education management system based on cloud computing technology improves traditional information management processes and information classification algorithms, effectively completing online education tasks.”	Online management, online education, cloud computing
	34	(Wang, 2020)	“Exploring the integration and application of cloud computing and ideological and political education in colleges using cloud computing technology and the K-means clustering algorithm model.”	Cloud computing, K-means, innovative pathways
	36	(Zhang et al., 2020)	“The application of virtual reality technology in college ideological and political theory courses shows that VR classroom teaching can significantly enhance students' interest and performance.”	Virtual reality, ideological and political courses, teaching effectiveness
	37	(Xue, 2020)	“By combining the particle swarm optimization model, this study establishes a model of group consciousness behavior among college students. Through positive and negative incentive strategies, the educational effect is effectively enhanced.”	Particle swarm optimization, educational evaluation, incentive strategies



39	(Tang, 2023)	“Examining the characteristics of artificial intelligence and ideological and political education in colleges, this study proposes innovative paths to increase students' recognition of ideological and political theory courses.”	Wireless networks, artificial intelligence, educational innovation
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Although modern educational technology has achieved certain results in ideological and political education for college students, problems still exist. For example, this includes insufficient algorithm interpretability, the generalisability and operability of big data models and virtual reality technology needing verification, insufficient long-term impact research on particle swarm optimisation models, and unexplored fusion strategies for cloud computing. To address these deficiencies, future research can enhance algorithm interpretability and platform performance while simplifying the technology application process to facilitate broader adoption. In-depth verification and research on the generalisability and operability of big data models, virtual reality technology, and particle swarm optimisation models are needed. Furthermore, exploring integration strategies between cloud computing and traditional educational methods is essential. This quickly formulates standardised and normative solutions for virtual reality teaching methods to enhance the applicability and generalisability of technology in various teaching environments, ensuring effective application in diverse scenarios.

Theme 2: Online Media and Information-Based Education

This theme covers aspects such as online literacy, the development of the new media industry, and information-based education management in the Internet era. Various studies showcase the advantages of online media in enhancing the effectiveness of ideological and political education for college students while revealing the limitations of existing research (as shown in Table 4).

Foremost, the current status and challenges of ideological and political education in higher education in the internet era. Some scholars through literature research and questionnaires, revealed numerous challenges in ideological and psychological education for college students in the internet era. This emphasises the internet's attraction and negative impact on college students and pointing out the need to improve the targeting and effectiveness of ideological and political education in higher education (He et al., 2021). Additionally, some scholars explored the significant challenges in managing ideological and political education in higher education in the Internet era. This approach proposes improvements from both the social environment and student factors (Wang, 2024).

Next, the role of online literacy and algorithms in ideological and political education for college students is discussed. Some scholars emphasised the impact of online literacy and online contact on the dissemination effect of ideological and political education for college students. This proposes that online literacy and online contact significantly influence dissemination effects (Chen, 2024). Other scholars explored the application and potential of big data technology in ideological and political education for college students in the information era. It is believed that big data provides extensive theoretical and practical space for ideological and political education (Che et al., 2020). Additionally, Zha (2024) explored the significant impact of language on ideological and political education for college students using the k-prototype clustering algorithm and the Apriori algorithm. It discovered that 90% of participants strongly associated with media promoting patriotic themes.

Following the innovative application of new media technology in ideological and political education for college students. Some scholars analysed the opportunities and challenges of ideological and political education in the context of new media. This proposes that teachers should keep pace with the development of new media, innovate education methods, and be wary of challenges brought by new media technology to ensure the effectiveness of ideological and political education in higher education (Jia, 2020; Zhu, 2021). Meng (2024) constructed a new media cloud platform for ideological and political education for college students in the context of the Internet. This shows that the platform performed well in terms of teacher teaching orientation, teaching programs, and student recognition, contributing to improving teaching effectiveness. Meanwhile, some scholars proposed innovative paths for ideological and political education for college students using implicit education forms accepted by students from the perspective of new media (Wang, 2021). Finally, a knowledge graph based on high-frequency keyword clustering can more accurately describe the connections between terms. This indicates the effectiveness of knowledge graphs in assessing the current state of ideological and political education (Rui, 2022).

Online media and information-based education show significant potential in enhancing the effectiveness of ideological and political education for college students, but they also face many challenges. Future research should focus on the following directions: improving the targeting and effectiveness of ideological and political education and improving educational management methods. This enhances students' online literacy, promoting innovative applications of information-based technology and constructing effective educational platforms and implicit education paths to ensure education's effectiveness and long-term development.

Theme 3: Curriculum Integration and Interdisciplinary Education

Curriculum integration and interdisciplinary education are widely applied in ideological and political education for college students. Research involves various methods of integrating ideological and political education with disciplines such as



psychological health education, innovation, and entrepreneurship education. This explores the positive impact of these integration methods on improving educational effectiveness (as shown in Table 5).

Table 4 Theme 2: Network media and information-based education.

Theme	No.	Author	Supporting quotes	Focus
Network Media and Information-Based Education	1	(Rui, 2022)	“Constructing a Network Knowledge Map for College Students' Ideological and Political Education, it is found that high-frequency keyword clustering knowledge graph can more accurately describe the relationships between terms, indicating the effectiveness of the knowledge graph in assessing the current status of ideological and political education.”	Knowledge Map of Ideological and Political Education: A Data Analysis Perspective and Keyword Clustering
	3	(Zha, 2024)	“By using the K-Prototypes Clustering Algorithm and Apriori Algorithm, the significant influence of language on the ideological and political education of college students was explored. It was found that 90% of the participants showed a strong affinity for media promoting patriotic themes.”	Digital Environment: K-Prototypes Clustering Algorithm, Students' Emotional and Cognitive Responses
	13	(Chen, 2024)	“Investigated the impact of Chinese college students' network literacy and internet exposure on the dissemination effectiveness of ideological and political education. The results showed that network literacy and internet exposure significantly affect dissemination effectiveness.”	Network Literacy: Internet Exposure
	33	(Zhu, 2021)	“It is proposed that teachers should keep pace with the development of new media, innovate educational methods, and be vigilant about the challenges brought by new media technology to ensure the effectiveness of ideological and political education in higher education institutions.”	New Media Industry: Educational Innovation and Reform, Student-Teacher Interaction
	35	(He et al., 2021)	“In the information age, ideological and psychological education for college students faces numerous challenges. The internet has both an attraction and a negative impact on college students, and the relevance and effectiveness of ideological and political education in colleges and universities need to be improved urgently.”	Information Era: International Political Economy
	38	(Che et al., 2020)	“Constructing a new media cloud platform for college students' ideological and political education based on the internet background, the platform performs excellently in terms of teacher guidance, teaching plans, and student recognition, contributing to improved teaching effectiveness.”	Big Data Application: Ideological and Political Education, Illusion of Omniscience
	40	(Meng, 2024)	“Based on deep learning, the quality of ideological and political education in colleges has been enhanced through the development of the IAP Quality TQ evaluation system and the MATLAB simulation software.”	New Media Cloud Platform: Data Mining Efficiency
	41	(Wang, 2024)	“From the perspective of new media, the innovative path of implicit ideological and political education was explored. Through a questionnaire survey, it was found that college students generally value implicit IAP education and that it is necessary to adopt implicit education forms that students are willing to accept.”	Information Era: International Political Economy
	42	(Wang, 2021)	“Analyzed the current status of ideological and political education in colleges and universities in the new media era and proposed countermeasures to address the shortcomings of ideological and political education using new media technology.”	Implicit Ideological and Political Education: New Media Resources
	43	(Jia, 2020)	“Analyzed the management factors of ideological and political education in colleges and universities and proposed that improvements need to be made from both the social environment and the students' own factors.”	New Media Technology: Current Status of Ideological and Political Education



Table 5 Theme 3: Curriculum integration and interdisciplinary.

Theme	No.	Author	Supporting quotes	Focus
Curriculum Integration and Interdisciplinary Education	5	(Wang, 2022)	“From the perspective of collaborative parenting, this research proposes a CIPP evaluation-based approach to ideological and political education, providing guidance and reference for the practice of ideological and political education for college students, promoting the standardization and sustainable development of ideological and political education.”	Collaborative Parenting, CIPP Evaluation Index System
	10	(Li et al., 2024)	“The SPOC hybrid teaching model has been applied in ideological and political education. This model significantly improves students' ideological and political performance and increases teachers' teaching time.”	Free Trade Port, SPOC Hybrid Teaching, AHP-FCE Evaluation of Teaching Effectiveness
	16	(Yao, 2023)	“By citing literature and conducting sample surveys, this study analyzes the impact of the online environment on college students' psychology, proposing optimized strategies for psychological training and ideological and political education for college students.”	Mental Health, Depression and Anxiety, IPE Disorders
	18	(Xu, 2022)	“The integration path of college students' mental health education and ideological and political education is explored, revealing that comprehensive intervention courses significantly improve students' mental health levels..”	Mental Health Education, Collaborative Parenting and Political Education, Integration Path
	21	(Xu, 2023)	“Research shows that ideological and political education can significantly improve emotional problems in students with affective disorders.”	Affective Disorders, Ideological and Political Education, K-means Clustering
	24	(Cai et al., 2022)	“A BO-BLSTM model is proposed for the recognition and classification of political emotions, and experiments validate the superiority of this model.”	Ideological and Political Education, Mental Health, BO-BLSTM, Educational Integration
	25	(Zeng & Liu, 2021)	“Combining cognitive psychology, it is found that ideological and political education can effectively alleviate college students' employment anxiety.”	Cognitive Psychology, Work Quality, Reform Effectiveness
	26	(Zhao et al., 2021)	“The integration of ideological and political education with innovation and entrepreneurship education significantly enhances students' entrepreneurial self-efficacy.”	Innovation and Entrepreneurship Education, IPE, Self-Efficacy
	28	(Xiao, 2021)	“During the fight against the COVID-19 pandemic, the advantages of the socialist system with Chinese characteristics were incorporated into the ideological and political education of college students, proposing that the main channel role should be played in ideological and political education courses.”	Socialism with Chinese Characteristics, Ideological and Political Education, Educational Practice
	31	(Li et al., 2022)	“Questionnaire surveys show that college students' ideological and political education effectively improves students' emotional regulation and mental health levels, providing a reference for optimizing the college students' mental health education system.”	Ideological and Political Education, Mental Health Education, Intervention Experiment

The integration of ideological and political education with psychological health education in higher education is discussed in detail. Some scholars analysed the impact of the online environment on college students' psychology and explored paths for integrating psychological health education and ideological and political education. Studies found that ideological and political education intervention courses significantly improved students' psychological health levels (Yao, 2023; Xu, 2022). Additionally, some student studies found that integrating ideological and political education effectively enhanced students' emotional regulation and psychological health levels. This provides references for optimising psychological health education systems for college students, while ideological and political education significantly improved emotional problems in students with affective disorders (Li et al., 2022). Zeng & Liu (2021) combined cognitive psychology and found that ideological and



political education could effectively alleviate college students' employment anxiety. It had a positive significance in reducing depression, negative emotions, symptoms of somatisation, and interpersonal relationship problems ($P < 0.01$).

Second, ideological and political education should be integrated with innovation, entrepreneurship education, and statistics. In integrating ideological and political education with innovation and entrepreneurship education, some scholars found that the combination significantly improved students' entrepreneurial self-efficacy (Zhao et al., 2021). Additionally, some scholars integrated ideological and political education with statistics. Using probability statistics and k-means clustering methods, they conducted a real-time analysis of college students' psychological states. Other scholars proposed the BO-BLSTM model for recognising and classifying political emotions, showing that the integration model with statistics helps cultivate college students' values and thinking styles (Xu, 2023; Cai et al., 2022).

Tertiary, in the integration of teaching methods, scholar proposed a CIPP evaluation-based research on ideological and political education. It provides guidance and reference for the practice of ideological and political education for college students, promoting the standardisation and sustainable development of ideological and political education (Wang, 2022). Li et al. (2024) adopted the SPOC blended teaching mode for ideological and political education for college students, showing that the mode significantly improved students' ideological and political performance and increased teachers' teaching time. Additionally, some scholars researched integrating the advantages of the socialist system with Chinese characteristics into ideological and political education during the fight against the COVID-19 pandemic. This proposes that the system plays a central role in ideological and political courses and course ideology (Xiao, 2021).

In summary, existing research has achieved certain results in curriculum integration and interdisciplinary education but also faces some issues. First, most studies are limited to short-term effects, lacking longitudinal studies on the long-term impact of integrated courses. Second, research samples are mostly concentrated in a single school or region, needing to improve representativeness and generalisability. Third, further exploration is required for the deep integration of different disciplines. Future research can consider the following directions: (1) Conduct longitudinal studies to assess the long-term effects of curriculum integration; (2) Expand research scope, conducting comparative studies across multiple schools and regions; (3) Deeply explore organic integration methods of knowledge systems from different disciplines.

Theme 4: Educational Theory, Assessment, and Quality Management

This theme mainly explores the application and innovation of educational theory, assessment, and quality management for college students in ideological and political education (as shown in Table 6).

In educational policy theory, Ouyang et al. (2024) through a thematic review, pointed out that normative and descriptive research on ideological and political education in China is insufficient. It lacks practical tools and methods for improving ideological and political education. They suggest strengthening the complementarity and practicality of research methods. Additionally, some scholars revealed the institutionalisation and national characteristics of ideological and political education in Chinese higher education through research on the party's leadership structure, formal teaching, and diversified activities. It emphasises the importance of patriotic education (Liu & Wang, 2021).

Moreover, in assessing and evaluating ideological and political education in higher education, several articles emphasised the importance and improvement methods of evaluation systems. Xuan (2023) evaluated college students' ideological and political dynamics using probability theory and statistical methods. It shows that statistical vocabulary display and clustering methods can understand college students' thinking dynamics in real-time. Additionally, some scholars analysed the deficiencies in the current evaluation system of ideological and political training for college students. It aims to optimise the evaluation indicators of ideological and political education using deep learning algorithms and big data models, improving the transparency and accuracy of assessments (Zhang, 2024). Zhang & Wei (2021) studied the impact of online teaching on the moral education effect of ideological and political courses, proposing strategies such as cultivating online teaching teachers. It improves informatisation levels and evaluation mechanisms to enhance moral education effects.

Finally, the research explored various innovative means to improve the quality of ideological and political education in higher education. Hu et al. (2024) constructed a cloud technology education platform based on big data analysis. They built a self-organising data mining model through digital mining technology. This improves the utilisation and sharing efficiency of educational resources and enhances course quality. Additionally, some scholars explored the impact of distance open education on ideological and political course teaching, emphasising network-based teaching reform and optimisation strategies (Shi, 2021; Lai, 2024). Meanwhile, Liao & Xie (2024) explored the factors influencing college students' sense of gain in civic and political education using factor analysis and PLS-SEM model. It proposes strategies to improve education supply quality combined with background knowledge.

Although research on educational theory, assessment, and quality enhancement in ideological and political education in higher education has made some progress, there is still room for improvement. Future research should focus more on empirical research, conducting more case studies and data verification, and deeply exploring the specific application information technology in ideological and political education. Additionally, attention should be paid to innovation in educational content and methods, combining students' actual needs to enhance the effectiveness of ideological and political education. Furthermore, a scientific evaluation system should be established to assess the effects of information-based

education comprehensively. It continuously optimises educational models to provide more effective support for ideological and political education in higher education.

Table 6 Theme 4: Educational theory, assessment, and quality management.

No.	Author	Supporting quotes	Focus
2	(Zhang, 2024)	“Optimizing Chinese word segmentation paths using deep learning algorithms has improved the Chinese word segmentation model applicable to ideological and political education, enhancing the evaluation metrics of ideological and political education.”	Deep learning, core socialist values system, ideological and political education for college students
6	(Ouyang et al., 2024)	“Chinese ideological and political education lacks normative and descriptive research, as well as practical tools and methods for improvement, necessitating stronger complementarity and practicality in research methods.”	Ideological and political education, Chinese education methods, challenges
9	(Liao & Xie, 2024)	“Using factor analysis and PLS-SEM model, this study explores the factors influencing college students' sense of gain in civic political education, proposing strategies to improve the quality of education supply by integrating background knowledge.”	Ideological and political theory courses in universities, factor analysis, PLS-SEM model
11	(Lai, 2024)	“A cloud technology education platform based on big data analysis has been constructed, improving the utilization and sharing efficiency of educational resources, thereby enhancing course quality.”	Big data analysis, cloud technology education platform, collaborative filtering algorithm
12	(Hu et al., 2024)	“By employing digital mining techniques, a self-organizing data mining model was constructed, revealing the significant impact of education levels on ideological and political education.”	Digital mining, self-organizing data mining model, influencing factors of ideological and political education, system variable prediction
17	(Xuan, 2023)	“Using probability theory and statistical theory, this study evaluates the ideological and political dynamics of college students, showing that statistical methods using vocabulary display and clustering can understand students' thought dynamics in real-time.”	Probability theory, college students' psychological state, k-means clustering method
22	(Zhang, 2024)	“The current evaluation system for IAP training among college students is insufficient; a big data analysis-based assessment method is proposed, increasing the transparency and accuracy of evaluations.”	Decision systems, IAP training evaluation system, educational assessment methods
27	(Zhang & Wei, 2021)	“Online teaching has a positive impact on the moral education effectiveness of ideological and political courses, and strategies such as training online teaching faculty, improving informatization levels, and enhancing evaluation mechanisms are proposed to improve moral education outcomes.”	Online teaching, COVID-19 pandemic, moral education function of ideological and political courses
29	(Shi, 2021)	“The impact of distance open education on ideological and political course teaching is explored, emphasizing teaching reforms and optimization strategies based on the online environment.”	The impact of distance open education on ideological and political course teaching is explored, emphasizing teaching reforms and optimization strategies based on the online environment.
30	(Liu & Wang, 2021)	“By studying the party leadership structure, formal teaching, and diverse activities, this research reveals the institutional and national characteristics of ideological and political education in Chinese universities, emphasizing the importance of patriotic education.”	Ideological and political education in universities, structure and practice, institutionalized education, patriotism

4. A Proposed Conceptual Framework of Ideological and Political Education for College Students in China

Following the thematic review, we propose expanding research frameworks to broaden the scholarly landscape of university-level ideological and political education (IPE), as shown in Figure 6. Figure 6 establishes a conceptual model explicating the knowledge, attitude, and practice (KAP) dimensions of IPE among undergraduates, thereby furnishing a robust conceptual foundation for novel research avenues. The conceptual framework is structured around the Knowledge, Attitude, and Practice (KAP) model, which provides a systematic approach to understanding how university students engage with

ideological and political education. This framework posits that these three components are interrelated and hierarchical in nature (Liao et al., 2022). Knowledge represents students' cognitive understanding and factual comprehension of ideological and political principles, including theoretical foundations, historical context, and contemporary applications. Attitude encompasses students' affective responses, value judgments, and personal dispositions toward ideological and political education, reflecting their emotional engagement and internalization of core values. Practice refers to the behavioral manifestation of acquired knowledge and formed attitudes, demonstrated through students' actual participation in political activities, social engagement, and daily decision-making processes (Alzghoul et al., 2015).

The framework suggests that these three components operate in a dynamic relationship, where enhanced knowledge contributes to attitude formation, which in turn influences practice. However, this relationship is not strictly linear but rather recursive, as practical experience can also reshape attitudes and deepen knowledge (Kwol et al., 2020). The conceptual framework thus serves as a theoretical lens through which to examine how students acquire, process, and apply ideological and political education in their academic and personal development. This KAP model addresses four fundamental questions:

- 1) To what extent is undergraduates' IPE knowledge associated with their corresponding attitudes and behavioral practices?
- 2) Does gender significantly moderate the relationship between IPE knowledge and attitudes, as well as between attitudes and practices?
- 3) To what extent do attitudes mediate the association between IPE knowledge and behavioral practices?
- 4) To what degree is the KAP conceptual model invariant across male and female undergraduates?

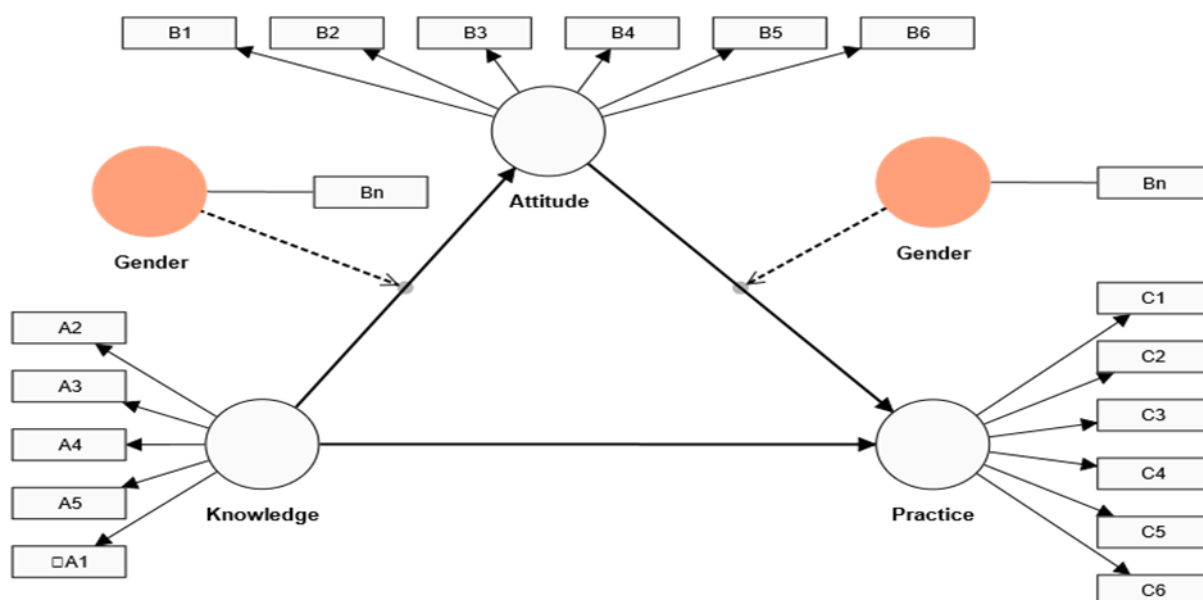


Figure 6 Conceptual framework of KAP for college students.

5. Conclusion

This study employed ATLAS.ti 9 to analyze 43 articles on ideological and political education (IPE) for college students published between 2020 and October 2024 systematically. Quantitative analysis reveals consistent growth in publications, indicating heightened scholarly attention to IPE, though comprehensive evaluations of contemporary research trends remain limited. Thematic analysis identified four dominant research foci: (1) educational technology innovation, (2) online media applications, (3) interdisciplinary curriculum integration, and (4) pedagogical assessment theories. Notably, while technological innovations and quality evaluation received significant emphasis, the literature insufficiently embedded social psychological mechanisms, particularly group norm internalization processes and attitude-behavior transformation pathways. Empirical investigations into psychological mediators of value acqudeconstructe disition (e.g., identity construction dynamics, social influence effects) were notably scarce despite their critical relevance to educational efficacy.

This paper makes dual contributions to advancing IPE scholarship. Theoretically, it pioneers integrative pathways between social psychology and IPE through developing a KAP (Knowledge-Attitude-Practice framework that specifically elucidates socio-psychological mediation mechanisms (normative influence, identity regulation) governing transformative learning processes. This conceptual advancement offers novel perspectives for understanding how ideological knowledge converts into sustained behavioral practices. Practically, the findings provide policymakers and educators with evidence-based guidance for optimizing pedagogical designs, emphasizing the necessity to incorporate group dynamics principles and value internalization patterns when developing future curricular reforms and learning environment strategies.



Three limitations warrant acknowledgment. First, database restrictions (English-only publications in WoS/Scopus) may have excluded significant region-specific studies, while title-based screening potentially omitted relevant cross-disciplinary literature addressing socio-cognitive mechanisms and moral psychological dimensions. Second, methodological constraints limited deep exploration of critical areas such as attitudinal measurement modeling and group socialization processes in IPE contexts. Third, the absence of systematic evaluation frameworks hindered robust assessment of socio-psychological factors. Future research should expand multilingual database coverage adopt experimental paradigms from social psychology (e.g., longitudinal tracking of value internalization pathways) develop culturally attuned measurement instruments for psychological mediators and investigate how institutional environments shape collective identity formation in ideological learning.

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Ethical Considerations

Not applicable.

Conflict of Interest

The authors declare no conflict of interest.

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