Licong Zh., Pryshliak O., Melnyk D., Koshivka L. Reliance on artificial intelligence in Chinese vocational undergraduate theses. *Освіта. Інноватика. Практика,* 2025. Том 13, № 7. С. 56-62. https://doi.org/10.31110/2616-650X-vol13i7-008.

Licong Zh., Pryshliak O., Melnyk D., Koshivka L. Reliance on artificial intelligence in Chinese vocational undergraduate theses. *Osvita. Innovatyka. Praktyka – Education. Innovation. Practice,* 2025. Vol. 13, No 7. S. 56-62. https://doi.org/10.31110/2616-650X-vol13i7-008.

УДК 377:37.04
DOI: 10.31110/2616-650X-vol13i7-008

Чжан ЛІЦУН[1], Оксана ПРИШЛЯК[2], Діана МЕЛЬНИК[3], Людмила КОШІВКА[4]
[1-4] *Тернопільський національний педагогічний університет імені Володимира Гнатюка, Україна*
[1] *https://orcid.org/0009-0002-0692-5285*
aupool2023@163.com
[2] *https://orcid.org/0000-0003-3108-502X*
pryshlyak_o@yahoo.com
[3] *https://orcid.org/0009-0004-8743-916X*
olehivna.diana@tnpu.edu.ua
[4] *https://orcid.org/0009-0001-5233-9028*
liudakoshivka@gmail.com

ВИКОРИСТАННЯ ШТУЧНОГО ІНТЕЛЕКТУ В КИТАЙСЬКИХ ДИПЛОМНИХ РОБОТАХ БАКАЛАВРІВ ПРОФЕСІЙНО-ТЕХНІЧНОЇ ОСВІТИ

Анотація. *Дослідження присвячене вивченню ступеня залежності студентів бакалаврату закладів вищої освіти Китаю від штучного інтелекту (ШІ) у процесі написання випускних кваліфікаційних робіт. Актуальність теми зросла після офіційної заяви Міністерства освіти КНР у 2025 році про те, що студенти професійно орієнтованих бакалаврських програм зазвичай не зобов'язані виконувати такі роботи. На основі репрезентативних даних компанії MYCOS національно визнаної дослідницької та консалтингової організації у сфері вищої освіти було проаналізовано відповіді 3145 респондентів (викладачів і студентів з різних університетів) щодо поширеності та моделей використання ШІ, а також ставлення академічної спільноти до його застосування. Результати показали, що майже половина опитаних викладачів (50 %) і студентів (46 %) підтримують скасування випускних робіт, головними аргументами називаючи невідповідність їх змісту цілям професійної підготовки та низьку якість виконання. При цьому викладачі звичайних університетів частіше підтримують таку позицію, ніж представники елітних «Double First-Class» закладів, що відображає відмінності у пріоритетах. Окрему увагу приділено методам виявлення текстів, згенерованих ШІ: 64 % викладачів перевіряють логічну та стилістичну узгодженість роботи, 51 % застосовують усне опитування для перевірки обізнаності студента, а 41 % використовують спеціалізовані інструменти визначення ШІ-контенту. Водночас ефективність таких інструментів залишається обмеженою через ризик хибних результатів і неможливість виявлення ретельно відредагованих текстів. Аналіз альтернативних моделей підсумкової атестації засвідчив, що найбільш затребуваними є практичні проєкти (75 % студентів, 69 % за даними викладачів), далі дослідницькі роботи з окремих навчальних курсів та оцінка професійних компетентностей, зокрема через сертифікацію або галузеві конкурси. На основі отриманих результатів запропоновано багатовимірну концепцію відповідальної інтеграції ШІ в академічне письмо, яка включає розроблення вікових і рівневих стандартів використання, вбудовування тренування критичного мислення та навичок верифікації інформації у навчальні програми, а також реформування системи оцінювання з акцентом на процес мислення, аргументацію та міждисциплінарність. Зроблено висновок, що університети мають розробляти адаптивні та диверсифіковані системи оцінювання, які враховуватимуть одночасно можливості ШІ та потреби ринку праці, сприяючи формуванню у студентів поєднання творчих, аналітичних і практичних компетентностей.*

Ключові слова: *штучний інтелект; випускна кваліфікаційна робота; бакалаврат; Китай; освітня оцінка; критичне мислення; академічна доброчесність; підсумкова атестація; залежність від технологій; практичні компетентності.*

Zhang LICONG[1], Oksana PRYSHLIAK[2], Diana MELNYK[3], Liudmyla KOSHIVKA[4]
[1-4] *Ternopil Volodymyr Hnatiuk National Pedagogical University, Ukraine*
[1] *https://orcid.org/0009-0002-0692-5285*
aupool2023@163.com
[2] *https://orcid.org/0000-0003-3108-502X*
pryshlyak_o@yahoo.com
[3] *https://orcid.org/0009-0004-8743-916X*
olehivna.diana@tnpu.edu.ua
[4] *https://orcid.org/0009-0001-5233-9028*
liudakoshivka@gmail.com

RELIANCE ON ARTIFICIAL INTELLIGENCE IN CHINESE VOCATIONAL UNDERGRADUATE THESES

Abstract. *This study investigates the extent to which vocational undergraduate students in China rely on artificial intelligence (AI) in the process of writing graduation theses, a topic that has gained heightened relevance following the 2025 policy statement by the Chinese Ministry of Education that vocational undergraduates are generally not required to produce such theses. Drawing on comprehensive survey*

data from MYCOS – a nationally recognized higher education research and consulting organization with a respondent pool of 3,145 teachers and students from diverse institutions, the research analyzes both the prevalence and the patterns of AI-assisted writing, as well as the educational community's attitudes toward its use. The findings reveal that nearly half of the surveyed teachers (50%) and students (46%) support the cancellation of undergraduate theses, primarily due to their perceived misalignment with vocational training objectives and their often-unsatisfactory quality. Teachers in ordinary undergraduate institutions express stronger support for cancellation than those in elite "Double First-Class" universities, reflecting differing institutional priorities. The study also explores the methods used by educators to detect AI-generated content. The most common strategies include checking for logical and stylistic consistency (64%), oral questioning to verify familiarity with the material (51%), and the use of specialized AI detection tools (41%). However, the accuracy of these tools remains limited, with documented cases of both false positives and undetected AI-polished content. To address the changing educational landscape, the research examines preferred alternatives to traditional theses. Practical projects such as product design, innovation transformation, and entrepreneurial initiatives- emerge as the most favored option (75% of students, 69% of teachers), followed by course-based research reports and vocational skill certifications. In light of these findings, the paper proposes a multi-dimensional framework for responsible AI integration into academic writing. This includes establishing age- and level-specific usage guidelines, embedding critical thinking and verification skills into curricula, and diversifying assessment models to emphasize the reasoning process rather than final outputs alone. Ultimately, the results highlight the need for adaptive, diversified evaluation systems that align with both the evolving capabilities of AI and the labor market's demand for graduates who combine creative, analytical, and practical competencies.

Keywords: *artificial intelligence; graduation thesis; undergraduate; China; educational assessment; critical thinking; academic integrity; final evaluation; technology dependence; practical competencies.*

Problem statement. The rapid advancement of artificial intelligence (AI) has significantly transformed the landscape of higher education, particularly in academic writing and research. In China's vocational undergraduate programs, the integration of AI tools into the process of preparing graduation theses has sparked both opportunities and concerns. The growing accessibility of AI-powered text generation and editing tools has enhanced writing efficiency, streamlined information gathering, and expanded students' access to diverse resources. However, it has also raised critical questions about originality, academic integrity, and the development of independent thinking skills.

The debate over whether vocational undergraduates should be required to submit graduation theses has intensified in recent years. In February 2025, the Chinese Ministry of Education officially stated that "vocational education undergraduates are generally not required to write a graduation thesis," reigniting nationwide discussion on the value and necessity of such projects. Critics argue that many undergraduate theses fail to align with professional training objectives and often exhibit low quality, while supporters emphasize their role in cultivating research abilities and academic rigor. Against this backdrop, the influence of AI technology adds a new dimension to the debate, as concerns grow about students' potential over-reliance on AI, the erosion of creativity, and the weakening of critical thinking skills.

This study investigates the extent to which vocational undergraduates in China rely on AI in writing their graduation theses. Drawing on survey data from MYCOS, a leading Chinese higher education data and consulting organization, it examines teachers' and students' perspectives on AI-assisted writing, the reasons behind support for or opposition to thesis requirements, and preferred alternative assessment models. The research aims to provide evidence-based insights to inform education policy, assessment reforms, and the development of AI usage guidelines that balance technological assistance with the cultivation of independent academic competencies.

Analyze recent research and publications. We analyzed current research on the use of AI in education. DU Fulei [2] explains AI writing, that is, a new way of writing by AI for text generation and text editing, with three main explicit advantages: It can greatly improve writing efficiency; A large number of "high-yield authors" are promoted. A large amount of writing materials can be collected through connected computers conveniently, greatly shortening the time for people to collect writing materials. It should be said that AI helps the author's writing activities, but we must also treat it rationally. Chen Angxuan and Jia Jiyou [1] believe that students who rely too much on AI will gradually lose the awareness and ability of independent thinking, gradually lose their creativity and the internal motivation for active growth, and their cognition may gradually become superficial and fragmented. In response to this problem, they put forward the following suggestions: according to students' cognitive abilities and age stages, construct AI teaching application specifications by age and level. Gou Mengxing [4] discussed the impact of the emerging technology artificial intelligence ChatGPT on the teaching of the "Science and Technology Paper Writing" course in colleges and universities, and proposed that artificial intelligence ChatGPT has a positive impact on the "Science and Technology Paper Writing" course. Through the reasonable application of ChatGPT technology, students' innovative thinking and practical ability can be improved. Fu Yao and Xiong Shuping [3] pointed out that generative artificial intelligence provides a new research paradigm, writing paradigm, and thinking paradigm for college students' academic paper writing. However, it has a profound impact on college students' academic paper writing, such as it may bring a "trust crisis" to a few college students' academic paper writing, develop dependence and inertial thinking, solidify academic achievements, and illegally collect data to endanger data security.

The study by Stefanie Krause conducted an online survey of 188 students to explore the pros and cons of GenAI [7]. The survey covered students from many countries, mainly master's students in STEM majors, and the frequency of use of AI and the dimensions of responsible behavior were analyzed. Most students use GenAI

to complete homework, exam preparation, and other tasks, and believe that it can reduce the burden and assist learning, and high-frequency users have a stronger perception of positive impact. More than 70% of students believe that GenAI increases the risk of cheating, and some point out that the content is inaccurate, but some students still support its use in the exam, reflecting their contradictory attitudes towards technology. Nearly 70% of students hope that educators will teach GenAI for reasonable use, indicating that existing guidance is insufficient.

According to the 2025 Student Perspective on Artificial Intelligence Report released by the United Kingdom Joint Information Systems Commission (JISC) in 2025, AI tools such as ChatGPT and Microsoft Copilot have become important components of students' daily study and life, and are widely used in writing, research, note-taking, and job preparation [5]. But students are also worried that AI may have a negative impact on academic integrity, data privacy, information authenticity, and future employability. Students expect educational institutions to develop clear and consistent AI usage policies, clearly define the boundaries between appropriate use and academic misconduct, and provide course-specific AI usage training, including how to write effective tips, verify the authenticity of AI output content, and avoid false information.

Li, S. [6] analyzed 389 graduate student questionnaires from two institutions in Portugal and found that most students (62.7%) were familiar with and used ChatGPT, of which 73.4% were applied to academic fields, 80.7% were used to collect information, and 50.4% were used to find initial research ideas. Although students said that ChatGPT has the advantages of being responsive, easy to search, and good at summarizing, it also pointed out that its disadvantages include the absence of references, information errors, or fiction. Nearly 60% of students believe that ChatGPT can be used to promote learning, but only 20% feel comfortable using ChatGPT to assist academic research.

The "Artificial Intelligence Index Report 2025" from Stanford University points out that from 2013 to 2023, the number of global AI-related scientific research publications has shown an exponential growth trend. Data shows that from the perspective of countries or regions, the output of AI papers is the highest in East Asia and the Pacific (34.5%), followed by Europe and Central Asia (18.2%) and North America (10.3%). In terms of citations, East Asia and the Pacific also rank first (37.1%), while North America and Europe have been declining in recent years. China accounts for 23.2% of the global output of AI papers, surpassing Europe (15.2%) and India (9.2%); in terms of citations, China also leads with a share of 22.6%, followed by Europe (20.9%) and the United States (13.0%).

The research goal. Through the survey data of "MYCOS", this study analyzes the degree of reliance of undergraduate students in some higher education institutions in China on AI when writing graduation theses, and further emphasizes the auxiliary positioning of AI. Regarding the problem of how to accurately identify and reasonably apply AI writing, through analysis and discussion, corresponding measures and suggestions are proposed to understand the new "education assessment standards, certification system, and management model" of certain undergraduate majors.

Methods. We will conduct research in the following ways: through questionnaires (online solicitation and field visits) of some college teachers and undergraduate students, as well as quantitative analysis of data. We will analyze them in sequence from three aspects: how to identify the content generated by AI, the primary and secondary reasons for supporting the cancellation of the graduation thesis, and a new model of graduation assessment methods.

A total of 3,145 valid answer sheets were collected.

Results. We focus on analyzing the following three aspects:

1. How do college teachers identify AI-generated content during the process of undergraduate thesis guidance and review?

Research data (Figure 1) shows that 64% of teachers will check the consistency of the overall logic and language style of the undergraduate theses, which is also the main means for the interviewed teachers to distinguish AI-generated content; secondly, it is to test students' familiarity with the research content through question and answer (51%). It is worth noting that 41% of teachers use professional AI detection tools. However, the limitations of detection tools cannot be ignored. For example, there have been news reports that some classic works in the "Chinese" textbooks were misjudged and marked as AI-generated, while the content polished by AI has not been identified. It reflects that the current AI detection technology is not perfect enough, and relying solely on tools makes it easy to misjudge the original content. In addition, 34% of teachers asked students to submit records of the undergraduate thesis creation process, forming an effective supplement to technical testing by tracing the writing trajectory. This process review has also been clearly listed as a normative requirement by some universities and is worth learning from.

2. Analysis of the primary and secondary reasons why college teachers and students support the cancellation of undergraduate theses.

The disconnection between the undergraduate theses and the cultivation goals and low quality are the main reasons for supporting the cancellation of undergraduate theses. In addition to the challenges brought by

the application of technology, the dispute over the existence and abolition of the graduation thesis itself has never stopped.

Data (Figure 2) shows that nearly half (47%) of the college teachers and students surveyed support the cancellation of graduation theses, and more than 31% oppose the cancellation of graduation theses. Among them, the proportion of teachers in the interviewed universities who supported the cancellation of graduation theses was 50%, while the proportion of students was 46%. Judging from different types of colleges, teachers in ordinary undergraduate colleges support the cancellation of undergraduate theses, reaching 60%. In contrast, the proportion of teachers in "Double First-Class" (DFC: It refers to a world-class university construction university and a first-class discipline construction university, referred to as "Double First-Class" in China) colleges and universities opposing cancellation is as high as 50%. DFC universities are not only the focus of China's higher education development, but also one of China's important strategies towards globalization. By integrating with international higher education, we will enhance the international competitiveness of China's higher education and provide strong support for China's economic and social development.

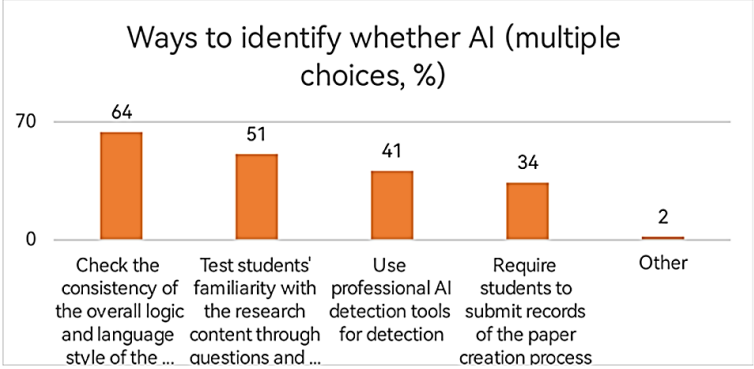

Fig. 1. How university teachers identify whether a paper is generated by AI (multiple choice)
Sources: MYCOS, 2025, http://www.mycos.com.cn/

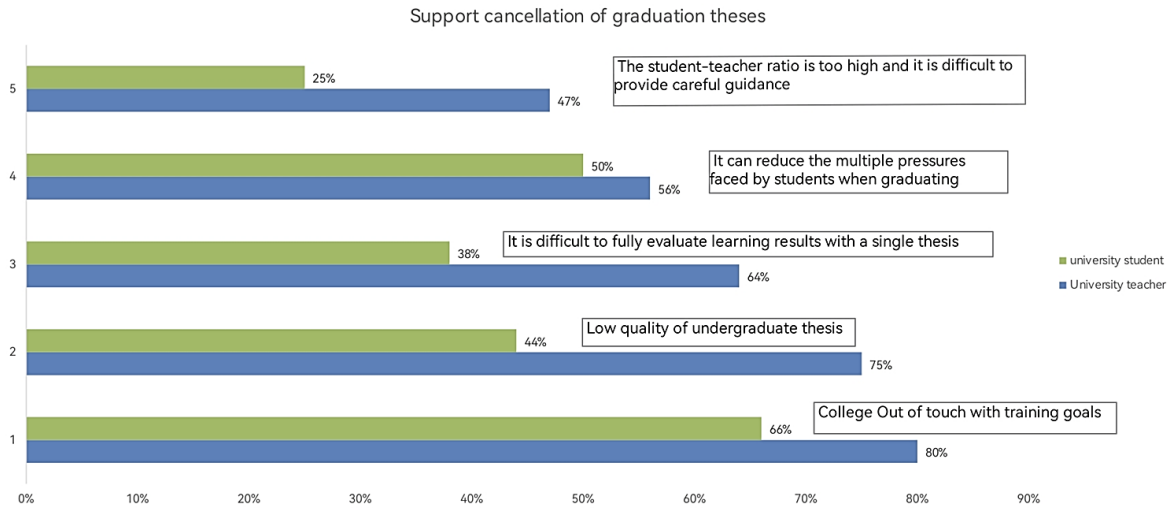

Fig. 2. Distribution of reasons why college teachers and students support the cancellation of graduation theses (multiple choice)
Sources: MYCOS, 2025, http://www.mycos.com.cn/

The disconnection between undergraduate thesis and training goals is the main reason why college teachers and students support the cancellation of the thesis. Data shows that among college teachers who support the cancellation of undergraduate theses, 80% believe that graduation theses are out of touch with the training goals, and this proportion among the student group also reaches 66%. Taking the cultivation of applied talents as an example, such students may need practical skills training more than academic theses. This reflects that there is a deviation between the thesis system of some universities and the actual talent training needs.

The low quality of undergraduate theses is the second major reason why college teachers and students support the cancellation of graduation theses. 75% of the teachers interviewed believe that undergraduate theses are temporarily pieced together and shoddy, and should be cancelled; this proportion of students is 44%. It is worth noting that the proportion of teachers in ordinary undergraduate colleges and universities who

believe that students' undergraduate theses are of low quality (82%) is much higher than that of teachers in DFC colleges and universities (41%).

3. Analysis of the graduation assessment methods that college teachers and students hope to conduct.

Data (Figure 3) shows that more than 40% of teachers said that the school has set up various forms of graduation assessment. In addition to an undergraduate graduation thesis, what other way can we use to conduct a graduation assessment? When answering this question, 75% of students hope that the school will use practical projects, such as graduation design, transformation of innovative achievements, such as patents, entrepreneurship projects, etc., to conduct graduation assessments. In addition, there are also many students in the assessment of course research (such as course theses, research reports, etc.) and vocational skills (such as internship reports, vocational skills certification, qualification certificates, industry competitions, etc.), with the selection ratios of 44% and 42% respectively.

But judging from the current actual situation, only 41% of teachers said that the school has built a more flexible assessment system. Among them, the proportion of students who use practical projects to conduct graduation assessments is the largest, reaching 69%. Assessment methods such as vocational skills and curriculum research account for 39% and 28% each. In addition, teachers also reported that the graduation assessment of their colleges and universities also includes graduation works exhibitions, graduation operation assessments, translation reports, etc.

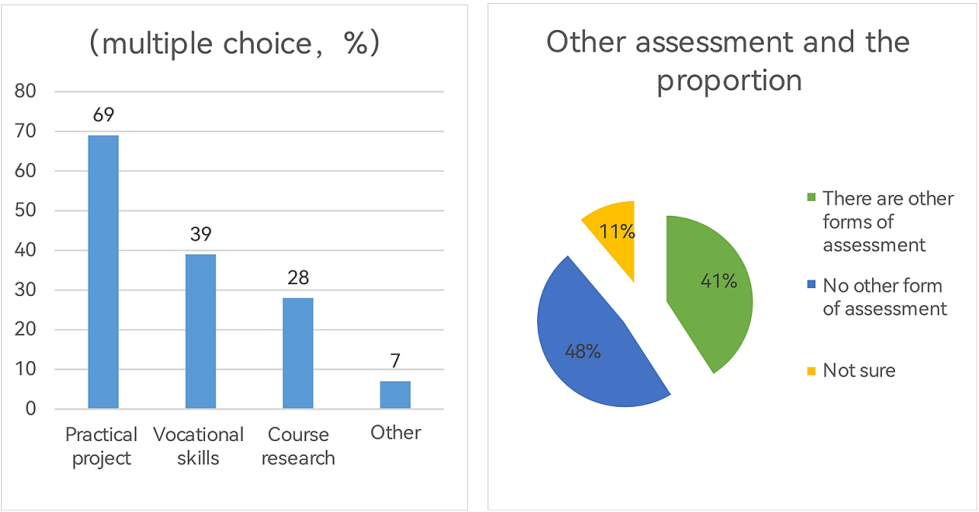

Fig. 3. Other assessment methods in universities
Sources: MYCOS, 2025, http://www.mycos.com.cn/

Some countermeasures and suggestions are stated below:

1) Clarify the strategies and norms of artificial intelligence in different teaching scenarios, compile manuals and typical cases for different age groups, and introduce an artificial intelligence tool certification system that adapts to the learning stage. The content should include designing independent thinking ability training models, improving creativity and intrinsic motivation stimulation strategies, establishing a guarantee mechanism to promote the development of systematic knowledge and disciplinary thinking, and building a governance system for dynamic technology supervision and continuous improvement.

2) Embed critical thinking training in course design, increase the evaluation and reflection links of AI-generated content, and improve students' ability to analyze, verify, and reconstruct information; promote case study methods, organize students to conduct group discussions and case analysis around complex problems, cultivate logical reasoning and deep-thinking abilities, and avoid lazy thinking.

3) Reform the examination evaluation system, focus on the thinking process, increase open-ended questions and thinking recording links, attach importance to the assessment of reasoning, argumentation, and analysis abilities, and reduce the assessment of direct results. Design cognitive enhancement tasks to guide students to maintain deep thinking when using AI tools, and verify, summarize, and improve AI outputs.

4) The impact of artificial intelligence on students is not only reflected in the technical level, but also involves psychology and educational ecology. It is necessary to build a Trinity governance system of "technology-education-psychology". Establish a risk warning system for artificial intelligence education tools to monitor technical defects or ethical problems in real time, and encourage students, parents, teachers, and technical parties to participate in the assessment. Develop a negative list of artificial intelligence education applications to prevent the misleading of algorithms and data analysis models. Gradually form a closed-loop management model of problem discovery, rapid response, and dynamic adjustment.

5) Emphasize the auxiliary positioning of AI, require students to complete learning tasks through independent efforts, and avoid dependence on technology. Through project-based learning, guide students to propose innovative solutions in combination with AI tools, and evaluate students' creative achievements rather than single results. In terms of mechanism construction, carry out interdisciplinary learning in the form of subject research, cooperative exploration, problem solving, etc., use artificial intelligence as a tool for the cross-integration of multidisciplinary knowledge, help students consolidate their systematic thinking ability, and cultivate comprehensive qualities and interdisciplinary problem-solving capabilities.

6) We can continuously improve college students' academic research capabilities by accelerating the construction of a national integrated big data system, enhancing college students' scientific research integrity and scientific research ethics, comprehensively improving content management regulations, and establishing a sound academic data governance system.

Conclusions. The findings of this study provide a multifaceted picture of how artificial intelligence is reshaping the landscape of undergraduate thesis writing in Chinese vocational education. Survey results demonstrate that reliance on AI has become a notable phenomenon, with many students integrating AI tools into various stages of their work, from information gathering to drafting and editing. While AI offers clear benefits in terms of efficiency, accessibility of resources, and support for language polishing, the evidence also points to substantial risks, including diminished independent thinking, weakened creativity, and the erosion of deep engagement with academic content.

The divergence in teachers' and students' views regarding the necessity of undergraduate theses reflects broader tensions between traditional academic models and evolving vocational education priorities. The high proportion of respondents supporting the cancellation of 50% of teachers and 46% of students underscores dissatisfaction with their current relevance and quality. This dissatisfaction is particularly pronounced in ordinary undergraduate institutions, where the perceived misalignment between thesis requirements and practical training goals is greatest. Conversely, in "Double First-Class" universities, resistance to cancellation suggests a stronger commitment to research-oriented academic training and the maintenance of scholarly standards.

The methods used by educators to detect AI-generated content reveal an emerging hybrid approach that combines human judgment with technical tools. Logical and stylistic analysis, oral questioning, and process documentation serve as critical complements to detection software, which remains imperfect and prone to misclassification. This underscores the need for capacity building among educators, not only in the technical use of detection tools but also in pedagogical strategies that promote authentic student engagement. Preferences for alternative assessment formats point to a shifting educational paradigm that values practical and applied competencies alongside, or instead of, traditional academic research outputs. Practical projects, innovation transformation, entrepreneurship initiatives, vocational skills certifications, and course-based research assignments were identified as viable and desirable pathways for evaluating student achievement. Such diversification aligns with the needs of the modern labor market, where adaptability, interdisciplinary problem-solving, and applied expertise are increasingly valued.

Based on these findings, the study argues for the urgent development of structured, age- and level-specific guidelines for AI use in academic contexts. Embedding critical thinking, verification, and reflection into curricula can mitigate the risks of over-reliance on AI, while diversified assessment models can ensure that evaluation reflects both process and outcome. A governance model integrating technology, education, and psychology is essential to manage AI's impact holistically, address ethical risks, and preserve academic integrity.

Ultimately, the study concludes that the future of vocational undergraduate education in China will depend on the ability of institutions to balance the advantages of AI with the cultivation of independent intellectual and professional competencies. By reframing evaluation systems to value reasoning, creativity, and practical application, higher education can harness AI as a supportive tool rather than a replacement for human thought, thereby fulfilling the broader educational mission of nurturing adaptable, skilled, and ethically grounded graduates.

Conflict of Interest. The authors declare no financial, personal, or other interests that could be considered a potential conflict of interest regarding the publication of this article.

Funding. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data Availability. This is a theoretical study and does not involve the use of any additional datasets.

Use of Artificial Intelligence. AI tools were not used in the writing of this work.

References

1. Chen, A.-X., & Jia, J.-Y. (2024). Does Explainable Artificial Intelligence Help Enhance the Learning Outcomes of Adaptive Learning? – Meta-Analysis based on 29 Experiments and Quasi-Experiments. *Modern Educational Technology*, *34*(10), 92–102. https://doi.org/10.3969/j.issn.1009-8097.2024.10.010

2. Du Fulei. (2024). Rationally Treat AI Writing. *Applied Writing, 10*(1). URL: https://chn.oversea.cnki.net/kcms/detail/detail.aspx?filename=YYXZ202410017&dbcode=CJFD&dbname=CJFDTEMP&v=
3. Fu Yao, Xiong Shuping, and Tian Zhengchao. (2025). Transformation, Challenges, and Countermeasures of Generative Artificial Intelligence on College Students' Academic Paper Writing. *Artificial Intelligence, 2*, 93-100.
4. Gou, Mengxing (2025). The impact of the artificial intelligence ChatGPT on the teaching of the "Science and Technology Paper Writing" course. *Food Industry, 46*(05), 113-116.
5. Ruano-Borbalan, J.-C. (2025). The transformative impact of artificial intelligence on higher education: A critical reflection on current trends and future directions. *International Journal of Chinese Education*, *14*(1). https://doi.org/10.1177/2212585X251319364
6. Li, S. (2025). Generative AI and Second Language Writing. *Digital Studies in Language and Literature*, *2*(1), 122-152. https://doi.org/10.1515/dsll-2025-0007
7. Krause, S., Panchal, B.H. & Ubhe, N. (2025). Evolution of Learning: Assessing the Transformative Impact of Generative AI on Higher Education. *Front. Digit. Educ.* 2, 21. https://doi.org/10.1007/s44366-025-0058-7

| Матеріал надійшов до редакції: 31.05.2025 р. | Прийнято до друку: 15.08.2025 р. | Опубліковано: 30.09.2025 р. |