Article

Path Research on National Security Education in Applied Private Universities Driven by Artificial Intelligence

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Abstract: National security education serves as a crucial measure to consolidate the foundation of national security and societal stability. For applied private universities, the regular implementation of national security education and adherence to the fundamental mission of moral education and talent cultivation not only constitute core requirements for nurturing qualified professionals who meet contemporary development needs, but also hold significant theoretical and practical value. Against the backdrop of rapid advancements in artificial intelligence technology and its widespread integration into educational fields, the deep integration of AI with national security education in higher education institutions provides new pathways for innovative educational models and quality enhancement in applied private universities. This paper focuses on the application of AI in national security education, systematically analyzing practical challenges currently faced by applied private universities, including outdated teaching content, inadequate practical platforms, and imbalanced faculty structures. To address these critical issues, the study proposes targeted and actionable implementation strategies across four key dimensions: developing adaptive intelligent curriculum systems, establishing diversified smart practical teaching platforms, cultivating high-quality intelligent faculty teams, and improving comprehensive intelligent support systems. These strategic measures aim to significantly enhance the effectiveness and innovation level of national security education, providing robust theoretical support and practical references for advancing the high-quality development of national security education in applied private universities.

Keywords: artificial intelligence; private universities; security education; educational innovation; teaching strategies

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1. Innovation Opportunities for National Security Education in Applied Private Universities Driven by Artificial Intelligence

In the context of rapid advancements in artificial intelligence (AI), applied private higher education institutions are presented with significant opportunities to enhance national security education [1]. The integration of AI technologies enables transformative improvements in educational models, curriculum design, faculty training, and practical teaching methodologies. These advancements contribute to the modernization of national security education by fostering innovative approaches and leveraging technological tools to address emerging challenges. By utilizing AI-driven solutions, institutions can better align their educational strategies with contemporary demands, ensuring that students are equipped with the necessary skills and knowledge to navigate complex security landscapes effectively.

1.1. Technology Empowerment: Building an Intelligent System for National Security Education

With the advancement of the "Education + Artificial Intelligence" model, intelligent education has emerged as a pivotal focus for university development. In the realm of national security education, AI technology is transforming the entire spectrum of teaching, learning, and evaluation processes. At the instructional level, educators can utilize data-driven insights provided by intelligent systems to precisely evaluate students'

understanding of key concepts. This enables dynamic adjustments to teaching strategies, pacing, and priorities, ensuring that instructional resources are tailored to address specific learning needs and improve overall teaching effectiveness. In learning environments, smart platforms facilitate real-time monitoring of students' progress and behavioral patterns. By analyzing individual study habits, identifying knowledge gaps, and addressing personalized learning requirements, these systems deliver customized educational materials that promote targeted academic growth. Furthermore, in assessment frameworks, intelligent evaluation systems surpass the constraints of traditional single-exam methods by implementing multi-dimensional assessments. These assessments combine depth and objectivity, offering a more comprehensive reflection of students' learning outcomes. This approach not only enhances the accuracy of evaluations but also reduces the stress typically associated with high-stakes examinations, fostering a more supportive and effective educational experience [2].

1.2. Precision Empowerment: Addressing Shortcomings in Faculty Development

Applied private universities encounter persistent challenges in faculty development, particularly in the domain of national security education. The integration of artificial intelligence technology offers a transformative approach to mitigate these issues. During the instructional preparation phase, advanced intelligent teaching tools can swiftly generate preliminary lesson plans that align seamlessly with curriculum requirements. This significantly reduces the time and effort educators must dedicate to foundational tasks such as resource collection and lesson plan organization. By automating these initial processes, teachers are afforded greater flexibility to concentrate on refining critical teaching content and devising strategies to address complex instructional challenges [2, 3]. This approach not only minimizes preparation costs but also enhances teaching efficiency and elevates the overall quality of education delivered to students. Furthermore, the adoption of such technologies fosters a more streamlined and effective preparation process, enabling educators to adapt to evolving academic demands with greater agility.

In the realm of classroom instruction, intelligent platforms empower educators to diversify interactive teaching methods, thereby fostering a more engaging learning environment. These platforms enable real-time monitoring of student engagement, providing valuable insights into participation levels and comprehension. Additionally, they offer auxiliary functionalities such as automated assignment grading and attendance tracking, which collectively enhance teaching efficiency. From a long-term perspective, artificial intelligence contributes to sustainable faculty development by delivering comprehensive instructional feedback that aids educators in refining their teaching strategies. Moreover, it facilitates the expansion of learning exchange channels through innovative online training programs and immersive virtual workshops. These resources effectively address gaps in faculty capacity by providing accessible and scalable professional development opportunities [4, 5]. By leveraging these advancements, institutions can ensure that their educators are equipped with the tools and knowledge necessary to meet the dynamic needs of modern education systems.

1.3. Collaborative Empowerment: Developing a Distinctive Practical Teaching Model

Artificial intelligence technology acts as a pivotal tool for fostering collaboration between universities and industries, enabling applied universities to create distinctive and effective practical teaching systems. One key aspect is the development of practical platforms. By leveraging school-enterprise partnerships, universities can simulate industry-specific safety scenarios, converting real-world cases into dynamic teaching materials [6]. This approach integrates virtual and physical environments, significantly reducing costs while maintaining high safety standards. Another critical element is curriculum innovation, where advanced industry trends and practical safety knowledge are seamlessly incorporated into academic programs. This enriches educational resources and enhances students' adaptability to evolving career demands. Faculty development is

equally essential, emphasizing the implementation of a "dual-mentor system." This system pairs academic faculty with industry professionals to provide comprehensive practical guidance, bridging the gap between theoretical knowledge and real-world applications. The outcomes of this model demonstrate its ability to integrate high-quality industry resources, address limitations in traditional teaching methods, and expand the scope and depth of instruction. Furthermore, it effectively tackles deficiencies in national security education practices within universities, ultimately enhancing the overall effectiveness of education and preparing students for future challenges in their respective fields.

1.4. Innovation Empowerment: Driving the Modern Transformation of Safety Education

Artificial intelligence innovation is revolutionizing the approach of applied private universities to national security education by enabling comprehensive advancements in content, delivery models, and platforms. This transformative process overcomes traditional limitations of time and space, significantly enhancing the precision and effectiveness of educational initiatives while steering institutions toward modernization and intelligent systems. Firstly, the integration of educational informatization allows abstract concepts to be converted into engaging visual formats through multimedia and online teaching tools, thereby improving student engagement and learning outcomes. Secondly, the establishment of digital resource repositories consolidates diverse materials, ensuring that educational content remains dynamic and aligned with the rapidly evolving landscape of national security. This integration accelerates the updating of knowledge and fosters a more cohesive learning environment [7]. Lastly, the optimization of digital processes through mobile learning devices facilitates flexible learning opportunities and real-time interaction. This not only enhances the intelligence of educational management systems but also enriches the overall learning experience for students, preparing them for future challenges.

2. Practical Challenges Faced by National Security Education in Applied Private Higher Education Institutions

Applied private universities encounter numerous challenges in implementing national security education, which significantly impact the effectiveness of teaching methodologies and hinder the progress of intelligent transformation. These institutions often face limitations in resources, faculty expertise, and curriculum design, making it difficult to integrate national security topics comprehensively into academic programs. Additionally, the lack of standardized frameworks and technological infrastructure further complicates efforts to enhance educational outcomes in this critical area [8].

2.1. Outdated teaching content with insufficient adaptability

Current national security education in applied private universities faces significant challenges due to outdated teaching content and insufficient adaptability to modern developments. One critical issue is the lack of integration between artificial intelligence and national security, which are increasingly interconnected in contemporary contexts. These institutions often struggle with limited educational funding and a shortage of qualified faculty, which delays the necessary updates to curriculum content. As a result, the pace of educational reform fails to match the rapid evolution of security threats and concepts. A fundamental aspect of national security education is its ability to address emerging security domains, yet many applied private universities have not adequately expanded their focus to include areas such as data sovereignty, artificial intelligence security, and polar security. This gap creates a disconnect between academic instruction and the practical demands of the field, leaving students underprepared to address modern security challenges. Furthermore, teaching resources remain heavily reliant on outdated case studies that emphasize historical events and traditional security frameworks. This reliance limits students' exposure to contemporary security scenarios

and reduces their ability to analyze and respond to new threats effectively. The absence of updated, practical case studies diminishes the relevance and impact of national security education, underscoring the urgent need for curriculum modernization and resource enhancement.

2.2. Weak practical platforms and insufficient support measures

Applied private universities encounter substantial obstacles in implementing effective national security education practices, particularly due to deficiencies in their practical support systems. These shortcomings hinder the advancement of intelligent teaching methodologies and the overall quality of education. A major challenge lies in the construction of practical infrastructure, as many institutions face financial constraints and lack adequate hardware facilities. This results in an inability to develop professional, standardized platforms that offer immersive and hands-on learning experiences for students. Consequently, students are deprived of opportunities to engage deeply with the subject matter in a practical context. Current teaching methods predominantly rely on one-way formats, such as centralized lectures and thematic presentations, which fail to incorporate tailored strategies that align with the interdisciplinary nature of talent cultivation. This uniform approach often leads to disengagement among students, thereby compromising the effectiveness of national security education. Furthermore, traditional teacher-centered instructional models remain widespread, characterized by limited classroom interaction and minimal experiential learning components. Students are rarely provided with opportunities to apply theoretical knowledge to practical scenarios, particularly in technical security courses. The lack of robust practical guidance in these areas significantly hampers their ability to translate theoretical concepts into real-world applications, thereby undermining the intended educational outcomes [9].

2.3. Imbalanced faculty structure and insufficient professional competence

Currently, applied private universities implementing national security education programs encounter substantial challenges in faculty structure, which significantly hinders the improvement of educational quality. The reliance on part-time instructors, primarily composed of counselors and ideological-political education teachers, results in a low proportion of full-time faculty members. This imbalance disrupts teaching stability and limits opportunities for professional development. A critical issue is the shortage of educators with specialized expertise in national security-related disciplines. Many instructors are required to teach across multiple fields, often with limited alignment to their primary areas of expertise, which diminishes the professionalism and relevance of classroom instruction. Furthermore, the lack of systematic training in emerging technologies, such as artificial intelligence and big data, restricts faculty members' ability to adopt advanced teaching methodologies, including human-machine collaborative instruction models. This technological gap is compounded by insufficient industry-academia collaboration, which limits the practical application of theoretical knowledge. High staff turnover rates in private institutions exacerbate these issues, as valuable practical teaching experiences are frequently lost, preventing the establishment of a stable and experienced faculty base. This creates a recurring cycle of faculty shortages and weak practical education, ultimately undermining the effectiveness of national security education programs and their ability to achieve desired educational outcomes. Addressing these structural and competency-related challenges is essential for fostering sustainable improvements in educational quality.

2.4. Lagging intelligent transformation and insufficient empowerment effectiveness

In the intelligent transformation of national security education, applied private universities encounter numerous practical obstacles that impede the full realization of AI-driven advancements. These institutions often depend on smart technologies to address deficiencies in educational resources, yet they face significant limitations due to restricted

funding and inadequate technical infrastructure. As a result, the implementation of intelligent teaching models remains suboptimal. Compared to public universities, applied private institutions exhibit pronounced disparities in adapting to rapid technological developments. This is particularly evident in their slower pace of updating teaching content and integrating advanced educational tools, which prevents them from achieving a harmonious alignment between technological progress and pedagogical innovation. From a technical application standpoint, these universities frequently lack robust in-house research and development capabilities. Consequently, they tend to adopt generic, standardized solutions rather than customizing technologies to meet the specific requirements of their national security education programs. This reliance on non-specialized tools diminishes the effectiveness of technological empowerment, as it fails to address the unique challenges and practical teaching needs of these institutions. Addressing these gaps requires a strategic focus on enhancing funding, fostering technical expertise, and promoting tailored technological solutions to ensure meaningful progress in intelligent transformation.

3. Path Exploration of National Security Education in Applied Private Universities Driven by Artificial Intelligence

The integration of artificial intelligence technology into applied private universities has created significant opportunities for advancing national security education. By utilizing the capabilities of technological innovation, institutions can enhance their curriculum frameworks to better align with modern educational demands. Practical innovation plays a crucial role in developing teaching methodologies that are both dynamic and adaptable, ensuring that students gain relevant skills for addressing contemporary challenges. Strengthening faculty development is essential to equip educators with the expertise needed to effectively implement AI-driven tools and strategies. Additionally, robust support systems are vital for sustaining these advancements, enabling institutions to achieve intelligent transformation while maintaining operational efficiency. This study examines pathway construction through a comprehensive approach, addressing these four interconnected dimensions in detail.

3.1. Establishing an Adaptive Intelligent Curriculum System

In the development of curriculum resources, it is essential to explore the integration of national security theory with specialized courses across various disciplines. Practical case studies should be tailored to the unique characteristics of each discipline, fostering interdisciplinary collaboration through course clusters. For example, computer science programs can incorporate topics such as cybersecurity and data sovereignty, emphasizing the boundaries of artificial intelligence applications in national security contexts. This includes teaching data encryption techniques, protection strategies, and analyzing real-world cyberattack scenarios to highlight the relationship between technological security and national sovereignty. To ensure the curriculum remains relevant and timely, dynamic update mechanisms should be implemented to incorporate the latest advancements in national security knowledge. Recognizing the practical needs of applied private universities, digital teaching resources can be developed, such as mobile-compatible micro-lectures, customizable courseware templates, and knowledge point mind maps, which enable educators to design flexible and adaptive curricula. Intelligent Q&A modules powered by AI technology can address common student inquiries, facilitating independent problem-solving and enhancing learning efficiency. Smart teaching systems should be utilized to collect and analyze student learning data, identifying knowledge gaps and enabling adjustments to teaching priorities and pacing. For students with weaker foundational knowledge, additional reinforcement of national security theory is necessary, while advanced learners should be introduced to emerging security topics. Furthermore, immersive technologies like VR can be employed to create realistic learning scenarios, such as border security operations and data protection demonstrations. These

experiences allow students to engage deeply with the critical importance of national security, fostering a comprehensive understanding through interactive and immersive methods.

3.2. Building a Diversified Intelligent Practical Teaching Platform

In developing practical teaching platforms, it is essential to align with the operational realities of applied private universities by creating training systems that leverage network and intelligent technologies. By designing progressive practice projects that simulate real-world national security scenarios, traditional constraints of time and space in practical education can be effectively overcome. This enables students to engage in hands-on learning at any time using mobile devices or computers, fostering greater flexibility and accessibility in their educational experience. For industry-academia collaboration platforms, establishing stable partnership mechanisms is vital to integrate corporate resources and address the limited practical resources available in academic institutions. Inviting corporate technical experts to regularly share insights into cutting-edge developments and technological trends in national security fields ensures that practical education remains aligned with industry advancements. Furthermore, mutual resource sharing and complementary strengths between universities and enterprises can facilitate the joint development of specialized practical courses tailored to the unique educational positioning and teaching realities of private institutions. Implementing a "dual-mentor" collaborative model, where industry mentors participate in classrooms on a monthly basis with standardized teaching hours, provides comprehensive involvement in hands-on instruction and training guidance. This approach not only addresses the scarcity of practical resources in higher education but also ensures alignment with industry job requirements. By enhancing the effectiveness of national security education through practical training, students are better equipped to meet the demands of the professional world, fostering a more robust and application-oriented learning environment.

3.3. Cultivating a High-Quality Intelligent Teaching Staff

In faculty development, the primary strategy should emphasize "intelligent empowerment and professional advancement" to enhance teacher training systems. This approach seeks to develop educators with advanced competencies and proficiency in smart technologies, addressing the requirements of national security education while aligning with the operational needs of applied private universities. To achieve this, a structured and systematic training framework should be implemented, incorporating specialized workshops, classroom observations, and blended online-offline training programs. These initiatives should prioritize improving digital teaching skills and the effective use of intelligent tools. For example, regular training sessions on "AI + National Security Education" could feature experts in digital pedagogy and national security, who would demonstrate the operation of smart teaching systems and introduce emerging security concepts. Practical case studies, such as those involving computer cybersecurity and legal analysis from law programs, would further enable educators to integrate intelligent technologies into national security education effectively. This would also help them refine their instructional design and classroom delivery methods. Interdisciplinary collaboration is another critical component, with cross-disciplinary teams comprising ideological and political educators, computer science instructors, and law faculty working together to develop integrated curriculum strategies. This approach would foster a "ideological-political + professional + technical" composite teaching model, enhancing the overall educational framework. To ensure faculty retention, incentive mechanisms should be established to strengthen professional identity and foster a sense of belonging. These mechanisms could include performance evaluations, recognition programs, and continuous training opportunities, which would reduce turnover rates and support sustainable faculty development.

3.4. Establishing a Comprehensive Intelligent Support System

To ensure robust information security safeguards, it is imperative to establish stringent data management mechanisms tailored to the specific requirements of national security education programs. Emphasis should be placed on enhancing protections for sensitive content, standardizing protocols for the collection, storage, and utilization of instructional data, and implementing measures to mitigate risks of information leakage. These efforts are essential for the orderly execution of national security education initiatives [4]. In the realm of teaching evaluation, the development of a diversified and intelligent assessment system is crucial. This system should comprehensively measure students' mastery of knowledge, practical skills, and security awareness. By integrating both formative and summative assessments, it can leverage advanced smart systems to collect and analyze learning data, thereby facilitating continuous instructional improvement. Additionally, establishing robust feedback mechanisms through effective communication channels among students, educators, and enterprises is vital. Such mechanisms enable the timely collection of insights and suggestions, fostering the optimization of course content and teaching strategies while creating a closed-loop cycle of "evaluation-feedback-improvement-enhancement." On the policy and resource front, coordinated efforts are necessary to ensure success. Externally, securing government policy incentives and funding is essential for upgrading intelligent equipment, implementing teacher training programs, and developing practical platforms. Internally, it is important to integrate campus educational resources, refine management systems, delineate responsibilities across operational stages, and promote collaborative educational efforts. These measures collectively provide a strong foundation for advancing intelligent national security education pathways.

4. Conclusion

This study provides an in-depth analysis of practical approaches to national security education within applied private universities, emphasizing the transformative role of artificial intelligence. The findings highlight how AI contributes to optimizing curriculum structures, creating advanced teaching platforms, enhancing faculty expertise, and refining support systems. These advancements establish a robust technological foundation for updating educational content, fostering innovative teaching methodologies, and cultivating practical competencies among students. By leveraging intelligent course design, immersive practical instruction, interdisciplinary faculty collaboration, and closed-loop evaluation mechanisms, institutions can significantly enhance students' national security literacy and application skills. Furthermore, AI-driven modernization and intelligent transformation of national security education offer actionable strategies for developing high-quality applied talents equipped to address contemporary challenges. The implications of this research extend beyond immediate educational improvements, suggesting broader opportunities for integrating AI into diverse academic disciplines. Future research should explore the scalability of these AI-driven frameworks across various educational contexts, assess long-term impacts on student outcomes, and investigate emerging AI technologies to further refine national security education methodologies.

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