

Practical Dilemmas and Optimization Strategies of Smart Ideological and Political Education in Universities in the Digital-Intelligent Era

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Abstract: In the context of the digital-intelligent era, the extensive application of digital-intelligent technology has brought development opportunities for ideological and political education in universities, including enriched educational carriers, expanded educational reach across time and space, and improved educational precision. Nevertheless, the iterative upgrading of technological tools does not directly lead to an increase in the effectiveness of education. At present, smart ideological and political education in universities still faces practical dilemmas. These include cognitive deviation, supply-demand mismatches, ethical risks and technological dependence, which restrict the overall progress of upholding the essence while innovating and improving the quality and efficiency of ideological and political education. On the basis of sorting out historical opportunities and practical dilemmas, this paper proposes optimization strategies across four dimensions: adhering to the education-oriented standard, optimizing the matching between supply and demand, consolidating ethical defense lines, and strengthening subject participation. It is expected to provide feasible references for promoting the sound development of smart ideological and political education in universities.

Keywords: digital-intelligent era; ideological and political education in universities; smart ideological and political education; digital-intelligent technologies

1. Introduction

Modern information technology has achieved extensive popularization and application across various sectors nowadays. This progress is accelerating the evolution of human society toward a digital-intelligent era. In the Outline of the Plan for Building a Strong Nation in Education (2024–2035), the Central Committee of the Communist Party of China and the State Council clearly stipulate that it is necessary to “advance deep integration between ideological and political work and information technology, and build featured brands for online ideological and political education”. [1] This guideline clarifies the path to integrate digital-intelligent technology with ideological and political education practice. Ideological and political education in universities as a core link to fulfill the fundamental task of fostering virtue through education, so it needs to keep pace with the wave of digital transformation. It shall take advantage of technological empowerment to strength educational outcomes and act as the core driving force for educational development. Even so, universities encounter practical troubles in this process, such as alienation of educational subject-object relations, the weakening of educational values, and technological ethical risks. Thus, balancing technological empowerment and educational value orientation has become a key task for universities in the modernization drive of ideological and political education.

There has been extensive academic discussion on the definition of the concept of “smart ideological and political education”. Professor Zhu Zhiting was one of the earliest to define “smart education” theoretically. He emphasized that the cultivation of human-machine collaborative data wisdom, teaching wisdom and cultural wisdom through an ecological learning environment of technological integration. [2] Afterwards, Wang Lei and Wang Jianzhou introduced this concept into the field of ideological and political education. They defined the smart development of ideological and political education as “In order to fully meet the dual needs of social development and students themselves, it is necessary to utilize modern information technology to activate various educational resources. At the same time, a three-dimensional and comprehensive ideological and political education system should be established”. [3] This definition has been widely recognized and has laid a vital theoretical foundation for subsequent research.

To be clear, “the smart ideological and political education is not equivalent to the technologically-driven ‘intelligent ideological and political education’”. It is a core category that encompasses the educational goals, content, and methods. Technology is merely one of the driving dimensions.” [4] From this, the article will elaborate on the discussion from the perspectives of historical opportunities, current challenges, and optimization strategies. The goal is to provide useful references for promoting the stable development of smart ideological and political education in universities.

2. Historical Opportunities for Promoting the Smart Development of Ideological and Political Education in Universities in the Digital-Intelligent Era

In recent years, digital-intelligent technologies have been rapidly updated and widely applied in education, reshaping the development pattern of modern education and bringing unprecedented opportunities for the innovation and quality improvement of ideological and political education in universities. Take advantage of the unique strengths of digital-intelligent technologies, ideological and political education in the new era has achieved all-round upgrading in carrier forms, coverage scope and educational precision.

2.1 "Technological Empowerment" Enriching Carriers and Forms of Ideological and Political Education

Traditional ideological and political education mainly relies on offline lectures, thematic seminars and class meetings. The teaching methods and educational carriers are rigid and monotonous, lacking sufficient appeal. They can hardly adapt to young students' diverse ways of thinking and acceptance habits. With the emergence of brand-new educational carriers such as short videos, virtual simulation and intelligent tutoring, abstract theoretical concepts can be transformed into perceptible and interactive concrete experiences. Ideological and political education has also shifted from one-way indoctrination to a new type of immersive and participatory teaching form. Diversified digital carriers and communication forms effectively enhance the attractiveness of educational contents, enabling the idea of fostering virtue through education to better fit the growth context of contemporary young students in the new era.

2.2 "Space-Time Expansion" Broadening the Coverage and Supply of Ideological and Political Education

Traditional educational activities are restricted to fixed class hours and venues. Besides, uneven distribution of teachers, curriculum resources and platform construction restricts access to high-quality educational resources. Nevertheless, digital-intelligent technologies break the time and space constraints. Intelligent learning platforms support students' autonomous learning without the restrictions of physical classrooms. Meanwhile, universities can connect internal and external resources via interconnected digital-intelligent systems, and expand the supply scale of ideological and political education resources by integrating high-quality resources.

2.3 "Data-driven Approach" Improving the Precision and Pertinence of Ideological and Political Education

Under the traditional teaching model, the teacher mainly obtains an understanding of the students through their performance in class, feedback on their homework, and individual communication. Because these methods cannot take into account every student and teachers mainly rely on their subjective experience, the judgment results are not accurate. The introduction of data technology has opened up new possibilities to solve this problem. With the help of big data, colleges and universities can systematically collect students' information. Make use of these information, they can analyze the students' areas of interest and knowledge gaps. Thus, the teacher's judgement of the students becomes more objective and accurate. Individualized education is also more practical and feasible.

3. Practical Dilemmas of the Smart Development of Ideological and Political Education in Universities in the Digital-Intelligent Era

Admittedly, digital-intelligent technologies pave new paths for the innovation development of ideological and political education in universities. Nevertheless, digital-intelligent technology is merely an auxiliary educational tool. Reliance on technology alone cannot resolve practical contradictions. At present, the smart development of ideological and political education in universities faces practical dilemmas concerning educational concepts, resource supply and demand, digital ethics and subject development.

3.1 "Cognitive Deviation" Restricts Educational Consensus and Hinders Overall Coordination in Smart Development

In the context of the digital-intelligent era, most universities actively promote the smart transformation of ideological and political education. However, during the actual construction process, some universities and teachers fail to update their understanding of ideological and political education in time. They equate it with the upgrading of teaching equipment, the construction of online platforms, and the integration of various digital-intelligent technologies. Some educators

spend excessive effort on courseware and smart platforms, but fail to attach sufficient importance to necessary theoretical explanations and communication and interaction between teachers and students. This can easily lead to the ideological trap of "emphasizing technology but neglecting education".

The intellectual development and value internalization of students often require long-term immersion and repeated guidance. "Confused and disordered discourse forms will weaken the theoretical system of ideological and political education, render educational content superficial, and prevent ideas from truly taking root in students' minds".[5] If the focus of intelligent construction is placed on the improvement of technical indicators, the direction of intelligent construction will deviate from the core direction of education and nurturing. Ultimately, the application of digital and intelligent technologies can only be superficial and fail to truly integrate into the deep practice of ideological and political education.

3.2 "Mismatch between Supply and Demand" Blocks Resource Connection and Weakens Educational Effects of Technological Empowerment

In the construction of smart ideological and political education, the quantity and forms of various educational resources are constantly being enriched. This provides universities with diverse educational carriers and options for ideological and political education. In fact, some universities blindly pursue resource stockpile and platform expansion, ignoring content optimization. Many of the resources in the repositories merely transfer the teaching materials from traditional classrooms to online classrooms without any further optimization. This has led to outdated resource content and delayed updates. The utilization of resource is not in proportion to the construction investment and many learning materials even remain idle for a long time.

Furthermore, there are significant differences in the thinking patterns and acceptance habits of students. However, most resources on smart platforms adopt a "one-to-many" content push model. Students often receive information irrelevant to their majors and ideological demands. Over time, students' initiative will decline, resulting in a wider and wider "gap" between the supply side and the demand side. Accordingly, the bottleneck of resource construction does not lie in the quantity, but in the structural compatibility between "supply" and "demand".

3.3 "Ethical Risks" Erode Humanistic Foundation and Weaken Student-oriented Value Care

While digital and intelligent technologies bring convenience, they also give rise to some notable ethical issues. Some universities evaluate educational effectiveness overly rely on data standards such as platform browsing duration, online interaction and task completion rates. This means that the originally dynamic and complex process of ideological and political education is simplified into a quantifiable statistical checklist. When "visible" data indicators are strengthened, "invisible" spiritual growth is easily overlooked.

Algorithm, when helping universities improve the efficiency of resource distribution, also pose potential risks of information cocoons. Under the influence of the algorithm, the content that students are exposed to is mostly the same. This made it very difficult for them to come into contact with different positions and viewpoints. Over time, this may lead to students' cognitive self-seclusion. Opaque algorithms hinder teachers' and students' value judgment. If there is no ethical restraint, technology will weaken humanistic care.

3.4 "Technological Dependence" Undermines Subjective Consciousness and Weakens the Endogenous Driving Force of Smart Education

Digital-intelligent technologies pervade every link of teaching and offer convenience, but also foster dependence on technology. As for teachers, intelligent tools simplify teaching work, yet over-reliance on data may diminish real care for students. "The subjectivity of educators is alienated in digital space, and their initiative, autonomy and creativity in educational practice are diminished." [6]

As far as students are concerned, algorithmic suggestions ease the process of finding learning material, but most content they encounter is screened and delivered by platform systems. Trapped in algorithmic information circles, "learners gradually lose the capacity for independent screening and judgment, and cognitive subjects become objectified." [7] The passive shift of teaching and learning weakens the inherent driving force of smart education.

4. Optimization Paths for the Smart Development of Ideological and Political Education in Universities in the Digital-Intelligent Era

Through the analysis of the above practical difficulties, This article will rise corresponding optimization strategies from four aspects. This mainly cover optimization strategies from four dimensions: adhering to educational orientation, optimizing resource matching, establishing ethical constraints and strengthening subject participation.

4.1 Adhering to Educational Orientation and Standardizing Technological Application through Value Guidance

Adhering to the fundamental educational orientation helps construct a new paradigm for smart development guided by value leadership. During the project certification stage, universities must make effort to ensure that the technical design is in line with the educational goals. All steps should give priority to the educational outcome over technological feasibility.

With regard to the construction of the evaluation system, sufficient institutional space should be reserved for qualitative evaluation. Educational dimensions that cannot be easily quantified, such as students' ideological growth and improvements in their ability of value judgment, ought to be incorporated into the evaluation system. This can prevent educational practice from deviation from the educational orientation driven by single technical indicators.

As for teacher training, efforts should focus on helping teachers form sound value judgment over technology application. When confronted with various technologies, teachers can establish educational goals as the basis for evaluating the feasibility of teaching methods.

4.2 Optimizing Supply-Demand Matching and Responding to Individual Needs through Differentiated Supply

Optimizing supply-demand matching helps build a new resource supply system oriented toward adaptive allocation based on actual needs. In the progress of resource production, multiple versions of the same theoretical theme are created to meet the personalized needs of students from different majors.

When it comes to platform push, universities should set aside feedback channels for students to voice their demands. Students can label trending topics and ideological puzzles that draw their attention. This approach enables algorithmic recommendations to shift from one-way transmission to two-way interaction, thereby enhancing the accuracy of resource provision. But the final decision-making power should be in the hands of the teachers.

Furthermore, establish a regular review mechanism for resources. Timely eliminate the content that has been idle for a long time and promptly add the content that has received good student feedback and has high utilization rate. Only in this way can the rational flow and update of resources be effectively guaranteed.

4.3 Consolidating Ethical Defense Lines and Safeguarding Value Care through Institutional Regulation

Consolidating ethical defense lines requires establishing a new risk prevention mechanism oriented by institutional norms. First and foremost, define the boundaries of technological application. By clearly defining the scope of data collection and scenarios for algorithm application to strictly prevent data abuse and boundary violations, thus ensuring the security of teachers and students' information.

Secondly, establish an algorithm supervision mechanism. Regularly evaluate the recommendation models and promptly correct any deviations in value orientation or distortions caused by imbalanced data samples.

Furthermore, strengthen value guidance in the delivery of educational resources. Since the content of the push cannot deviate from the mainstream value orientation, teachers should take the lead in designing and deeply interpreting the core educational aspects. And they should firmly grasp the initiative in ideological and political education.

4.4 Strengthening Subject Participation and Activating Subject Consciousness through Virtual-Real Integration

Strengthening subject participation contributes to constructing a new form of educational interaction oriented toward virtual-real collaboration. In terms of teaching arrangements, students finish theoretical online learning independently, while the limited classroom time is focused on discussion and analysis. At the same time, When teachers use learning data reports to understand students' learning progress, they still need to maintain active attention to individual students. After all, data serves merely as one way to understand students and cannot replace real-life interaction and observation.

For students, integrating algorithmic cognition education into the regular teaching curriculum is necessary. This can help them understand the operational logic of the algorithm and guide them to step out of the algorithmic framework. With this, students can gradually develop the ability to make independent judgments. In the teaching that combines virtual and real elements, educators should encourage students to explore with questions in mind. In this way, their sense of active participation can be continuously enhanced.

5. Conclusion and Outlook

Digital-intelligent technologies are reshaping the implementation way of ideological and political education in universities. To promote the development of smart ideological and political education, the key lies not in whether the technology is advanced or not, but in prioritizing the educational goals. Technological application must conform to educational essence and achieve coordinate unity between technological and educational logic. This paper proposes optimization strategies in four dimensions: educational orientation, supply-demand matching, ethical construction and subject participation. Future research may improve evaluation standards and coordination mechanisms, explore differentiated models for universities of various types and enrich relevant practical paths.

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