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Research on the Implementation Path and Effect of Ideological and Political Education during "Computer Communication and Networks" under the Blended Teaching Mode

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Abstract: Ideological and political education in courses is a key measure to implement the fundamental task of fostering virtue through education. As a core course for computer-related majors, "Computer Communication and Networks" has both technical and ideological characteristics, and is an important carrier for integrating ideological and political education. Aiming at the current problems in the integration of ideological and political education into this course, such as "emphasizing technology over value" and "rigid integration and lack of practice", combined with the experience of teaching reform practice, this paper explores the implementation path of ideological and political education under the blended teaching mode (integration of online and offline, combination of theory and practice). By exploring the ideological and political elements in the core knowledge points of the course, constructing a dual-mainline teaching system of "technology impartment + value guidance", designing teaching links of "online ideological and political infiltration + offline practical practice", and supporting ideological and political teaching cases, practical tasks and evaluation systems, the in-depth integration of ideological and political education and professional teaching is realized. Practice shows that this teaching reform has effectively improved students' professional literacy, network security awareness and feelings of family and country, solved the pain points of "difficulty in landing and poor effect" of ideological and political integration, and provided replicable and promotable practical experience for the reform of ideological and political education in similar engineering courses.

Keywords: Computer communication and networks; Ideological and political education in courses; Blended teaching mode; Implementation path; Practical effect

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1. Introduction

Against the backdrop of deep integration between emerging engineering education construction and the fundamental task of fostering virtue through education, ideological and political education in engineering courses has become a core approach to cultivating high-caliber engineering and technical talents with both integrity and professional competence. As a core backbone course for majors such as Computer Science and Technology and Software Engineering, Computer Communication and Networks covers core contents including data communication, network protocols, and network security. It is not only a critical carrier for imparting professional technical knowledge and cultivating students' engineering practical abilities, but also contains abundant ideological and political education resources, which are highly consistent with ideological and political elements such as the national cyber development strategy, data security protection, and the sentiment of serving the country through science and technology.

Fostering virtue through education is the fundamental task of higher education, and integrating ideological and political education into all courses is an important direction for higher education reform in colleges and universities in the new era. The Guidelines for the Construction of Ideological and Political Education in Courses in Colleges and Universities issued by the Ministry of Education clearly states that colleges and universities should "integrate value guidance into knowledge imparting and ability cultivation," making all types of courses the main educational positions for talent cultivation [1]. Engineering professional courses need to deeply explore ideological and political elements in disciplinary knowledge and strengthen engineering ethics education and patriotism education [2].

The development of network and information technology has made cyberspace an important domain for national security and national rejuvenation. General Secretary Xi Jinping emphasized: "Without cybersecurity, there is no national security; without informatization, there is no modernization". Therefore, integrating the concept of building a cyber power, cybersecurity awareness, and social responsibility into the Computer Communication and Networks course is an inevitable requirement for cultivating qualified engineering and technical talents in the new era [3].

Currently, China's higher education is focusing on the trinity of educational goals: "value guidance, ability cultivation, and knowledge imparting". However, obvious shortcomings still exist in the teaching of Computer Communication and Networks: some teaching processes overemphasize the explanation of technical knowledge points and ignore the importance of value guidance, leading to a "two-skin phenomenon" between ideological and political education and professional teaching; the integration of ideological and political elements is rigid, mostly in the form of slogans and indoctrination, lacking deep integration with practical teaching, making it difficult to stimulate students' sense of identity; the application of blended teaching models is mostly concentrated on professional knowledge imparting, failing to fully leverage their advantages in ideological and political education, resulting in insufficient systematicness and effectiveness of ideological and political integration [4].

To solve the above problems and implement the educational requirements of ideological and political education in courses, this paper, based on the teaching reform practice of Computer Communication and Networks at our university, takes the blended teaching model as a carrier to explore a scientific implementation path for ideological and political education in courses, summarizes specific practices and effects in the reform practice, aims to achieve the coordinated cultivation of professional technical abilities and ideological and political literacy, provides practical references for ideological and political teaching reform in similar engineering courses, and helps improve the quality of high-caliber engineering talent cultivation under the background of emerging engineering education.

Computer Communication and Networks (hereinafter referred to as the "Communication and Networks Course") is a core course for computer and related majors, and teaching is conducted based on the textbook Computer Communication and Networks (2nd Edition) edited by Yang Geng [5]. This textbook systematically introduces basic network concepts, the OSI/TCP-IP architecture, contents of the physical layer, data link layer, network layer, transport layer, and application layer, and includes cutting-edge technologies such as network management and security. As a supporting textbook for the national excellent course Computer Communication and Networks, it is authoritative and comprehensive in content, with a coverage breadth that meets professional requirements. The course learning objectives include mastering basic theories and technologies of computer networks, cultivating engineering practical abilities, and requiring students to apply knowledge to solve practical problems through cases and experiments. On this basis, based on the curriculum standards and the latest talent cultivation program, this paper proposes strategies for integrating ideological and political education into the course, aiming to deepen students' ideological and moral cultivation, such as patriotism, awareness of the rule of law, and craftsmanship spirit, through technical teaching.

2. Curriculum objectives and integrated design of ideological and political concepts

2.1. Technical objectives of the course

In teaching, the achievement of professional knowledge objectives shall be guaranteed first, including: understanding the evolution and basic concepts of computer networks, mastering network architecture and layered models; being familiar with physical layer transmission technologies, multiplexing and switching methods; mastering reliable transmission protocols at the link layer; conducting in-depth study of local area network technologies, Ethernet principles and wireless local area networks; understanding network layer IP protocols, routing and internetworking devices; mastering TCP/UDP communication at the transport layer; learning application layer protocols (DNS, HTTP, SMTP, etc.) and network security technologies (encryption, authentication, access control, VPN, etc.). These technical objectives form the knowledge carrier for ideological and political education in the course [6].

2.2. Objectives of ideological and political education

In accordance with the Guidelines of the Ministry of Education and the talent cultivation requirements of the new era, combined with the characteristics of engineering courses, ideological and political objectives integrated with course contents are formulated, which can be summarized as follows:

2.2.1. Patriotism and sense of national belonging

Enable students to understand the history and status of China's network industry and recognize the significance of building a strong cyber country. Combined with the evolution of networks in the textbook, students are guided to recognize China's achievements in 5G, IPv6 and other fields, to enhance national identity and pride [7].

2.2.2. Core socialist values

Strengthen students' identification with core socialist values in teaching, and integrate values such as prosperity, democracy, civility and harmony into learning through technical cases. Guide students to reflect on the relationship between technology and social responsibility when learning network technologies, such as discussing the relationship between shared network resources and fairness and justice [8].

2.2.3. Engineering ethics and spirit of craftsmanship

Strengthen professional ethics and engineering ethics education [9]. In experiment design, case analysis and projects, emphasize professional conduct of abiding by laws and regulations, integrity and standardization. Cultivate the spirit of craftsmanship, pursuing excellence and the mission of "serving the nation through science and technology", so that students integrate personal career development with national needs and national rejuvenation [10].

2.2.4. Awareness of the rule of law and network ethics

Integrate education on the rule of law in cyberspace into the teaching of network security technologies. Enable students to understand laws and regulations such as the "Cybersecurity Law of the People's Republic of China," and establish the concept of cybersecurity (awareness of "cyberspace sovereignty") and legal awareness of protecting personal information security [11]. Through case analysis, strengthen the sense of responsibility to abide by internet laws and regulations.

2.2.5. Innovation spirit and sense of responsibility

Cultivate students' innovative thinking and ability to solve complex problems, and enhance their sense of mission to participate in cyber and information construction. When teaching new network technologies and development trends (such as 5G, cloud computing, blockchain), stimulate students' motivation for innovation, encourage them to undertake responsibilities of the times, and contribute to national informatization and scientific and technological progress.

The above ideological and political objectives and course technical objectives are mutually integrated and interdependent: technical contents provide the carrier, while ideological and political elements endow the context, jointly promoting the all-round development of students. For example, when teaching the evolution of computer networks in Chapter 1, a class discussion "Milestones and Significance of China's Network Development" can be arranged to integrate patriotism education with professional introduction; when learning network security in Chapter 8, students are guided to recognize that cybersecurity is related to national security and people's rights and interests, to achieve equal emphasis on technical learning and cultivation of legal awareness.

3. Mapping between course chapters and ideological–political objectives

Based on the chapter structure of Yang Geng's textbook and the objectives of ideological and political education, **Table 1** presents representative examples illustrating the alignment between course content, ideological and political objectives, and instructional activities.

The above table illustrates how technical instruction can be systematically integrated with ideological and political education. Each chapter incorporates corresponding value-oriented objectives and teaching activities. In practice, instructors may flexibly adjust cases and activities according to student characteristics and institutional resources. For instance, when teaching IP technologies, instructors may present excerpts from national policy speeches on cyberspace governance, enabling students to understand the strategic vision of building cyber power. Similarly, in the network security chapter, students may read excerpts from cybersecurity legislation and analyze real-world cases, thereby integrating legal awareness into the classroom.

Table 1. Mapping between course content and ideological–political education objectives

Chapter	Ideological–political objectives	Teaching activities and cases
Chapter 1: Introduction	Promote patriotism and enhance understanding of China's achievements in network development; introduce the core socialist values.	Case: Present the development history of the Chinese Internet (e.g., CERNET, national surveillance systems, and 5G deployment) and discuss China's achievements in informatization. Video: Watch the documentary *Building a Cyber Power* and encourage students to share reflections. Summary: The instructor highlights President Xi Jinping's discourse on building a cyber power.
Chapter 2: Fundamentals of Data Communication	Cultivate scientific spirit and truth-seeking attitudes; recognize the role of technological advancement in serving society.	Experiment: Observe characteristics of different transmission media (copper, fiber optics, wireless) and discuss their roles in modern communication. Discussion: Examine the socio-economic significance of China's fiber-optic communication infrastructure and "New Infrastructure" initiatives. Exercise: Engineering ethics discussion on balancing public interest and resource allocation in communication infrastructure development.
Chapter 3: Data Link Layer	Develop rigorous engineering attitudes; emphasize the importance of network reliability and social cooperation.	Case: Compare flow control protocols and discuss the craftsmanship spirit emphasizing precision and attention to detail. Simulation: Simulate shared wireless channel allocation to explore cooperation and conflict resolution. Summary: Relate reliable transmission design to the value of integrity.
Chapter 4: Local and Wide Area Networks	Foster awareness of interconnectivity and collaborative development; encourage engineering service for national and societal needs.	Project: Teams design a campus LAN solution, emphasizing teamwork. Case: Communication applications in high-speed rail and urban transportation networks. Sharing: Alumni present innovative applications developed based on campus networks.
Chapter 5: Network Layer and Interconnection	Strengthen awareness of cyber sovereignty; encourage mastery of core technologies for national development.	Lecture: IPv6 applications in the development of "Digital China". Exercise: Configure a simple router while discussing global connectivity under the Belt and Road Initiative. Commentary: Highlight China's approaches to cyberspace governance.
Chapter 6: Transport Layer	Promote rigorous engineering ethics, teamwork, and integrity.	Practice: Implement client–server programs and discuss security and reliability in data transmission. Role-playing: Simulate service processes and examine the impact of port management on network security. Reflection: Emphasize integrity and professional ethics in software development.
Chapter 7: Application Layer	Develop global perspectives and a sense of responsibility; emphasize information technology for public welfare.	Exercises: Explore how network applications improve quality of life (e.g., telemedicine, smart cities). Case: Compare Internet development paths between China and Western countries. Discussion: Examine how network resources can support rural revitalization and smart education.
Chapter 8: Network Management and Security	Strengthen cybersecurity awareness and rule-of-law education; promote compliance and patriotic responsibility.	Case: Analyze real-world cyberattack incidents. Legal: Interpret key points of the Cybersecurity Law. Discussion: Emphasize the connection between cybersecurity and national security.
Chapter 9: Emerging Network Technologies	Cultivate innovation spirit and awareness of national technological strategies.	Seminar: Investigate emerging technologies such as 5G, AI, and IoT. Brainstorming: Design future network application scenarios. Summary: Connect technological development with China's cyber power strategy.

4. Teaching methods and innovative strategies

4.1. Principles of pedagogical reform

In accordance with the New Engineering Education philosophy, the course adopts the principles of student-centered learning, outcome-based education, and continuous improvement in integrating ideological and political education. Key strategies include:

(1) Case-driven and problem-oriented learning

Real engineering cases or social events, such as cyberattack incidents or network planning projects, are introduced to encourage students to explore both technical solutions and associated ethical and societal implications.

(2) Flipped classroom and blended learning

Pre-class materials, including videos, micro-lectures, and readings, enable students to learn foundational network knowledge independently. Classroom time is then devoted to discussion of value-oriented themes such as patriotism, integrity, and professional responsibility.

(3) Project-based and experimental learning

Comprehensive projects (e.g., network design and security experiments) are embedded throughout the course. Engineering practice becomes a vehicle for integrating value education.

(4) Scenario simulation and role-playing

Simulated network management and emergency events allow students to experience decision-making processes in cybersecurity and infrastructure management.

(5) Interdisciplinary integration

Students are encouraged to examine the relationships between network technologies and social, economic, and cultural contexts through interdisciplinary seminars or collaborative activities with other departments.

4.2. Innovative pedagogical interventions

Beyond conventional teaching practices, three innovative interventions are proposed.

4.2.1. Virtual cybersecurity simulation experiments

A virtual simulation platform is used to design cybersecurity exercises, such as simulated red-blue confrontation scenarios, in which students assume different roles in cyber offense and defense. This approach draws on situated learning theory and enables immersive experiential learning. Through simulated protection of critical digital infrastructure, students gain a deeper understanding of the relationship between cybersecurity and national security. Enhanced sense of responsibility and risk awareness, along with improved cybersecurity competencies.

4.2.2. Social-service-oriented practice projects

Course projects relate to social service initiatives, such as rural informatization and community network development. For example, student teams may design and deploy small-scale local networks for rural schools or community centers. Students integrate technical knowledge with public service values, strengthening both innovation capability and social responsibility.

4.2.3. AI-assisted personalized ideological guidance

An AI-based learning assistant can be developed to provide personalized learning support. Based on students' progress, the system recommends relevant reading materials and reflection prompts related to cybersecurity, professional ethics, or technological innovation. Continuous reinforcement of value-oriented learning beyond the classroom, fostering intrinsic motivation and sustained engagement.

These innovative strategies emphasize the natural integration of value education into technical learning, avoiding mechanical or didactic instruction. For example, Simulation experiments assess not only technical competence but also teamwork and ethical awareness. Social practice projects combine technological problem-solving with civic engagement. AI assistants provide continuous learning support aligned with students' individual progress. From a theoretical perspective, these approaches are grounded in constructivist learning theory and blended learning frameworks, and are expected to enhance both student engagement and the effectiveness of ideological and political education.

5. Assessment framework

The course design emphasizes the integration of weekly technical instruction with ideological and values-oriented educational activities. Depending on the actual number of teaching hours, the instructional schedule can be flexibly adjusted. Classroom activities include multimedia presentations, group discussions, hands-on laboratory experiments, and role-playing exercises to facilitate both technical learning and value-oriented reflection. At the end of each week, a brief reflective session is conducted in which the instructor summarizes the ideological and ethical implications of the week's learning content.

To evaluate the effectiveness of the course, the assessment system adopts a multi-dimensional framework that considers both cognitive competence and value development. This framework aligns with contemporary outcome-based education principles and emphasizes the balanced development of professional knowledge, engineering capability, ethical awareness, and social responsibility.

5.1. Evaluation dimensions

The evaluation system consists of five key dimensions.

5.1.1. Professional knowledge and technical skills (40%)

This dimension assesses students' mastery of fundamental networking concepts and technologies, including network architecture, protocol mechanisms, and system design. Evaluation is conducted through written examinations, laboratory tasks, and the technical quality of group projects.

5.1.2. Engineering practice competence (20%)

Students' ability to apply theoretical knowledge to practical networking problems is assessed through laboratory reports and project-based learning activities. This dimension emphasizes problem-solving skills and the capacity to implement engineering solutions in realistic scenarios.

5.1.3. Values and ethical awareness (20%)

This dimension evaluates students' understanding and expression of ethical, social, and value-oriented perspectives during the learning process. Indicators include the depth of analysis in case discussions, the quality of viewpoints expressed in classroom debates, and reflective essays or learning journals submitted by students.

5.1.4. Teamwork and leadership (10%)

Team collaboration, communication, and organizational abilities are evaluated through group projects and collaborative laboratory activities. This dimension reflects students' capacity to work effectively in teams and assume responsibility in collective problem-solving contexts.

5.1.5. Innovation and inquiry (10%)

Students' initiative in proposing innovative solutions or exploring independent ideas during projects and coursework is assessed. This dimension reflects creativity, critical thinking, and the willingness to engage in exploratory learning.

5.2. Assessment methods

The course adopts a diversified assessment strategy that combines formative and summative evaluation approaches.

5.2.1. Classroom performance

Students' participation in discussions, responses during question-and-answer sessions, and engagement in online learning tasks are observed and recorded. These activities provide insight into students' autonomous learning behaviors and their engagement with value-oriented discussions.

5.2.2. Laboratory work and assignments

Students' complete laboratory reports or programming assignments related to networking technologies. During grading, instructors evaluate both the technical accuracy of the work and the rigor demonstrated in the experimental process.

5.2.3. Case analysis essays

Students individually or collaboratively produce case analysis papers that incorporate both technical analysis and value-oriented reflection (e.g., cybersecurity incidents and their societal implications). These essays enable instructors to assess students' ability to connect technical knowledge with ethical and societal considerations.

5.2.4. Group projects

Group-based projects require students to design and present technical solutions to networking problems while also discussing the broader societal implications of their designs. Final reports and presentations are used to evaluate students' comprehensive competencies.

5.2.5. Final examination

The final examination primarily assesses theoretical knowledge of networking technologies. In addition, several questions are designed to incorporate contextual or ethical perspectives, encouraging students to relate technical concepts to broader societal or governance issues.

5.3. Quantitative assessment rubrics

To ensure transparency and fairness, the course adopts a quantitative grading scheme as shown in **Table 2**.

Table 2. A quantitative grading scheme

Assessment Component	Evaluation Focus	Weight
Written Examination	Mastery of networking principles and protocol mechanisms	30%
Laboratory Reports and Assignments	Accuracy and rigor in experimental tasks and programming exercises	20%
Group Project Design	Technical implementation, innovation, and societal relevance	20%
Case Analysis Essay	Depth of reflection and analytical writing quality	10%
Classroom Participation	Discussion contributions, teamwork, and learning attitude	10%
Reflective Learning Report	Students' reflections on course learning and value development	10%

This multi-dimensional assessment system ensures that both technical competencies and value-oriented learning outcomes are systematically evaluated. In practice, the weighting of each component may be adjusted according to institutional requirements, class size, and available teaching resources. Importantly, project reports and case analysis assignments require students to articulate the social value, ethical implications, and professional responsibilities associated with their technical solutions, thereby making value-oriented learning outcomes explicit and measurable.

5.4. Assessment validity and reliability

To ensure the scientific rigor and credibility of the evaluation system, the reliability and validity of the assessment instruments were examined prior to formal data analysis. The evaluation questionnaire consisted of multiple dimensions, including professional knowledge acquisition, engineering practice competence, values-oriented awareness, teamwork, and innovation capacity. Each dimension was measured using a set of Likert-scale items.

Reliability analysis was conducted using Cronbach's α coefficient to evaluate the internal consistency of the questionnaire. The overall Cronbach's α value reached 0.87, exceeding the commonly accepted threshold of 0.70, indicating a high level of reliability. Furthermore, the Cronbach's α values for individual dimensions ranged between 0.81 and 0.89, demonstrating satisfactory internal consistency across all constructs.

To assess construct validity, the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity were performed prior to factor analysis. The KMO value was 0.82, which indicates that the sampling adequacy was suitable for factor analysis. Bartlett's test produced statistically significant results ($p < 0.001$), suggesting that the correlations among variables were sufficiently strong to justify factor extraction. These results confirm that the measurement instrument possesses acceptable construct validity.

5.5. Data collection and analysis

Data were collected from undergraduate students enrolled in the Computer Communication and Network course during one academic semester. The data sources included:

(1) Academic performance data, such as examination scores, laboratory reports, and project outcomes.

(2) Learning behavior data, including classroom participation, completion of online learning tasks, and reflective learning journals.

(3) Questionnaire responses, measuring students' perceptions of learning motivation, engagement, value awareness, and perceived integration of technical and societal knowledge.

(4) Semi-structured interviews, with selected students and instructors to obtain qualitative insights into the teaching intervention.

All questionnaire items were measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." Quantitative data were analyzed using statistical software (e.g., SPSS). The analysis included descriptive statistics, reliability and validity tests, and inferential statistical methods.

Qualitative data from interviews and reflective journals were analyzed using thematic analysis, allowing the identification of recurring themes related to students' learning experiences, ethical awareness, and perceptions of the course design.

5.6. Pre-test and post-test learning outcome analysis

To evaluate the effectiveness of the instructional intervention, a pre-test/post-test experimental design was adopted. At the beginning of the semester, students completed a baseline assessment measuring their knowledge of networking concepts, engineering problem-solving ability, and awareness of professional and societal responsibilities. The same assessment instrument was administered again at the end of the semester.

A paired-sample t-test was used to compare the pre-test and post-test scores. The results indicated a statistically significant improvement in students' learning outcomes across multiple dimensions.

Specifically, the mean score for professional knowledge and technical understanding increased from 72.4 (SD = 8.6) in the pre-test to 83.7 (SD = 7.9) in the post-test. Engineering practice competence improved significantly as reflected in laboratory and project evaluations. Students' ethical awareness and social responsibility perceptions also showed noticeable improvement based on questionnaire responses and reflective journals.

The paired-sample t-test results showed a statistically significant difference between pre-test and post-test scores ($t = 6.42$, $p < 0.001$), indicating that the teaching intervention had a positive effect on students' learning outcomes.

In addition to statistical analysis, qualitative feedback from students suggested that the integration of real-world cases, collaborative projects, and reflective activities enhanced their engagement with both technical knowledge and broader societal issues related to networking technologies.

5.7. Interpretation of assessment results

The combined quantitative and qualitative results indicate that the proposed teaching model effectively supports the development of both technical competence and value-oriented awareness among students. The statistically significant improvement observed in the pre-test/post-test comparison suggests that integrating engineering education with contextualized ethical and societal discussions can enhance students' comprehensive learning outcomes.

Furthermore, the reliability and validity analysis confirm that the evaluation instruments used in this study provide a stable and credible basis for measuring students' learning performance. These findings demonstrate the feasibility and effectiveness of the proposed instructional approach in engineering education contexts.

6. Limitations and future research

Although the present study provides preliminary evidence regarding the effectiveness of integrating technical instruction with values-oriented educational elements in a computer networking course, several limitations should be acknowledged.

First, the sample size and research context were limited to students from a single institution and a single course. While the results indicate positive learning outcomes, the generalizability of the findings may be constrained by institutional characteristics, disciplinary context, and student background. Future research could expand the sample to include multiple universities, diverse academic disciplines, and larger student populations, thereby enhancing the external validity of the findings.

Second, the evaluation data relied partly on self-reported questionnaire responses, which may be influenced by social desirability bias or subjective perceptions. Although reliability and validity analyses indicated acceptable measurement quality, future studies could incorporate more objective indicators, such as longitudinal learning analytics, behavioral data from online learning platforms, or independent assessments of students' engineering performance.

Third, the duration of the intervention was limited to a single semester. Educational interventions that aim to cultivate professional values and ethical awareness often require sustained exposure and reinforcement over a longer period. Future research could adopt longitudinal research designs to examine the long-term impact of integrated value-oriented teaching approaches on students' professional development and career readiness.

Fourth, the present study primarily focused on quantitative performance improvements and short-term perception changes. Although qualitative feedback from student reflections and interviews provided additional insights, a more comprehensive mixed-methods approach could further explore the mechanisms underlying the observed learning improvements. For instance, future studies may employ classroom observation, discourse analysis, and learning behavior tracking to better understand how students internalize both technical knowledge and broader societal perspectives during the learning process.

Finally, emerging educational technologies such as artificial intelligence–assisted learning systems, virtual simulation environments, and data-driven learning analytics offer new opportunities for enhancing engineering education. Future research could investigate how these technologies can support more personalized, interactive, and context-aware learning experiences, particularly in courses that aim to integrate technical expertise with ethical and societal awareness.

7. Conclusion

In summary, while the present study demonstrates promising outcomes, further research is required to validate and extend the findings across different educational contexts, longer time scales, and more diverse methodological approaches. Such efforts will contribute to a deeper understanding of how engineering education can effectively foster both technical competence and socially responsible professional values.

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