

Research on the value evaluation of ideological and political case studies of industrial design courses under AI technology

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Abstract: With the advent of the era of artificial intelligence, human society is experiencing a transformation from an industrial economy to an intelligent economy. In this context, the value orientation in industrial design courses has also changed. In order to cultivate talents with comprehensive quality and practical ability that meet the requirements of the new era, it is necessary to optimize and upgrade the value evaluation of ideological and political cases of existing industrial design courses, so as to better promote the all-round development of students. Based on this, this paper mainly explores and thinks deeply on the evaluation of ideological and political case values of industrial design courses under AI technology, aiming to provide theoretical reference for promoting the effective improvement of ideological and political case values of industrial design courses in China.

1. Introduction

The ideological and political case of industrial design course is an important part of the industrial design professional course system of colleges and universities, and its content covers professional knowledge, skills and humanistic qualities, which is of great significance for improving the quality of students' employment. However, at present, many colleges and universities do not attach much importance to it, and often only pay attention to the transmission of theoretical knowledge in the teaching process, and ignore its educational function. Under AI technology, the evaluation and research of ideological and political case values in industrial design courses will help teachers more accurately understand the problems in ideological and political education in industrial design courses, and then take targeted measures to improve and improve the education program to truly achieve the goal of talent training in this discipline.

2. Overview of the Values of Ideological and Political Cases of Industrial Design Courses under AI Technology

As a discipline that covers theoretical knowledge and practical skills, industrial design courses carry many factors that are closely related to human values. The popularization and development of

AI technology has had a profound impact on the field of industrial design, and has also brought new thinking and reflection to the ideological and political teaching of industrial design courses in colleges and universities, and its main value elements are as follows (see Table 1).

Table 1: Value elements of ideological and political cases of industrial design courses under AI technology

Values Elements	Values elements under AI technology emphasize the focus
Humanized design and social responsibility	User experience, human-computer interaction, social needs
Sustainable development and ecological protection	Energy consumption, waste generation, product life extension
Innovative spirit	Creativity, innovative thinking, attention to social issues and future development

First of all, industrial design courses under AI technology can emphasize the values of humanized design and social responsibility. AI can provide a deep understanding of user needs and behaviors through data analysis such as human-computer interaction, psychology, and user research. By incorporating this data into the design process, products that are more in line with user experience and needs can be created, and this design thinking that focuses on human needs and user experience will cultivate students' values of humanity and social responsibility. Secondly, industrial design courses under AI technology can focus on the values of sustainable development and ecological environmental protection. In the design process, by using AI technology to analyze and optimize materials, manufacturing and use stages, energy consumption and waste generation can be reduced, and maximize the life of products. This sustainability-oriented design thinking will cultivate students' values of rational use of resources and environmental protection. Finally, industrial design courses under AI technology can also cultivate students' innovative spirit. In industrial design courses, by introducing AI technology, students can be stimulated to think creatively and innovatively, making them pay more attention to social issues and the future development of mankind in terms of values [1].

In short, the ideological and political cases of industrial design courses under AI technology mainly emphasize the sustainable development of human values, humanized design and social responsibility, and innovative spirit, so as to cultivate students' values and critical thinking ability, which will help them better cope with future design challenges and promote the healthy and orderly development of industrial design.

3. The Need to Integrate Ideological and Political Cases in Industrial Design Courses (See Figure 1)

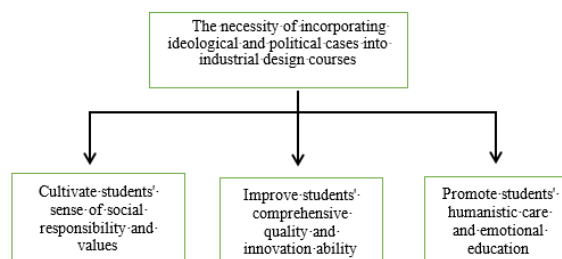


Figure 1: The necessity of incorporating ideological and political cases in industrial design courses

3.1 Cultivate Students' Sense of Social Responsibility and Values

The integration of ideological and political cases in industrial design courses helps to cultivate students' sense of social responsibility and values, which is of great significance in the practical teaching of industrial design. First of all, the ideological and political cases in the industrial design course involve environmental pollution, resource waste, human health and other issues. Through the introduction of ideological and political cases, students can realize the impact that their design works may have on society, so as to cultivate their sense of social responsibility, stimulate their attention to social issues, pursue sustainable development and environmental awareness values. Second, ideological and political cases can help students examine their own design behavior and think about the values behind it. Through case studies, students can understand the values behind different design decisions, so as to reflect on their own design choices, which helps to cultivate students' professional ethics and humanistic care, so that they pay more attention to user needs, respect cultural differences, and realize the "people-centered" ecological design concept in the design process ^[2].

3.2 Improve Students' Comprehensive Quality and Innovation Ability

The integration of ideological and political cases into industrial design courses will help improve students' comprehensive quality and innovation ability, and promote their better development. First of all, the ideological and political cases in the industrial design course involve culture, history, philosophy and other fields, so as to trigger students' thinking and understanding of different knowledge fields, which helps to improve students' comprehensive quality, cultivate their sensitivity to society, culture and human values, so as to integrate multiple elements and concepts in the design process and enhance the comprehensive ability of industrial design. Secondly, through the analysis and discussion of ideological and political cases, students can find innovative design solutions from different thinking perspectives, which helps to cultivate students' critical thinking and creative thinking, so that they can provide users with better experiences and solutions from a social perspective when facing design challenges. At the same time, it will also promote innovation and progress in the field of industrial design and promote the rapid development of the entire Chinese industrial design industry.

3.3 Promote Students' Humanistic Care and Emotional Education

The integration of ideological and political cases in industrial design courses helps to promote students' humanistic care and emotional education, and improve students' understanding of the meaning and value of life. First of all, the ideological and political cases in the industrial design course will involve social issues, humanitarian actions, interpersonal relationships, etc., and will guide students to reflect on their concerns as designers about the emotions and needs of users. By analyzing these cases, students can cultivate their emotional sensitivity to pay attention to others and care for society, so as to pay more attention to the needs and emotional experience of users in the design process. Secondly, ideological and political cases can provide a situation for moral dilemmas and ethical decision-making, allowing students to think about the balance between right and wrong, interests and values. Through case discussions, students can become more aware of their social responsibilities as designers and clarify the moral standards that should be followed in their actions. This helps students develop moral judgment and a sense of social responsibility, enabling them to incorporate human care into the design process to provide more warm and meaningful industrial products.

4. Methods and Steps of Value Evaluation of Ideological and Political Cases in Industrial Design Courses under AI Technology (see Figure 2)

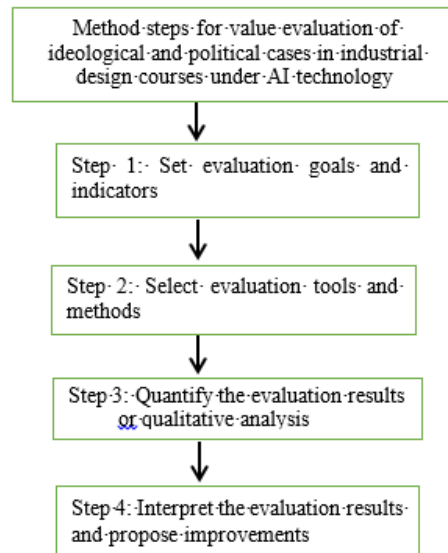


Figure 2: Method steps of value evaluation of ideological and political cases in industrial design courses under AI technology

4.1 Set Evaluation Goals and Indicators

Under AI technology, setting evaluation goals and indicators is the first step in the value evaluation of ideological and political cases in industrial design courses, which can provide clear standards and guidance, so that the evaluation process is objective and comparable. First of all, the evaluation objectives should comprehensively cover the human values emphasized in the industrial design course, such as sustainable development, humanized design, social responsibility, etc., so as to stimulate students' thinking about humanistic care and social responsibility. Second, evaluation indicators can include case relevance and enlightenment. Relevance refers to whether the case and the content of the industrial design course are closely related and can effectively guide students to think and discuss. Enlightenment refers to whether the case can stimulate students' innovative thinking and personal growth, and whether it has profound educational and teaching value. In addition, the evaluation index can also measure the impact and enlightenment of cases on students, such as whether it can improve students' sense of social responsibility, stimulate their understanding of human care, etc., so as to achieve the objective evaluation of ideological and political cases, provide improvement and optimization direction for industrial design courses, and better cultivate students' values and thinking ability.

4.2 Select Evaluation Tools and Methods

The selection of evaluation tools and methods is the second step of the value evaluation of ideological and political cases in industrial design courses under AI technology, which can effectively collect and analyze relevant data and further evaluate the quality and influence of cases. First, questionnaires could be used as an evaluation tool. Design questionnaires for students, including subjective question and answer questions and quantitative grading questions, to understand the students' understanding of the values involved in the case, the impact of the case on thinking and

critical thinking, and the overall evaluation of the industrial design curriculum. Secondly, the evaluation of students' works can also be used as an evaluation method. Through the evaluation of students' works designed based on ideological and political cases, it is evaluated whether they can reflect human values and social responsibility. The evaluation can include the innovation, sustainability, humanization and social influence of the work, and the overall evaluation can be obtained through expert review and evaluation criteria, so as to comprehensively and objectively evaluate the effect of ideological and political cases, and provide guidance and feedback for further optimization and improvement of industrial design courses.

4.3 Conduct Quantitative or Qualitative Analysis of Evaluation Results

Quantitative or qualitative analysis of evaluation results is the third step of value evaluation of ideological and political cases in industrial design courses under AI technology, and the evaluation data can be further analyzed and summarized to draw statistical conclusions. First, for quantitative analysis, statistical methods can be used to process and analyze the data from the questionnaire. By calculating statistical indicators such as mean, standard deviation and frequency distribution, students can understand the degree of recognition and understanding of different values involved in ideological and political cases. These quantitative analysis results can provide objective data support to quantitatively evaluate the teaching effect of ideological and political cases in industrial design courses. Secondly, for qualitative analysis, content analysis can be carried out on the data of case discussions and student work evaluations. Refine key themes and concerns by summarizing, organizing, and categorizing students' perspectives and opinions. This analysis method can reveal students' understanding of ideological and political cases, help evaluate the impact and inspiration of cases on students, and enable teachers to adjust teaching objectives and teaching methods in a targeted manner [3].

4.4 Interpret Evaluation Results and Put Forward Suggestions for Improvement

Interpreting the evaluation results and putting forward improvement suggestions is the fourth step of the value evaluation of ideological and political cases in industrial design courses under AI technology, which is helpful to put forward targeted improvement suggestions for the evaluation results. First, interpreting the evaluation results requires a comprehensive analysis and comparison of the results of quantitative and qualitative analysis. Through the analysis of data such as questionnaire surveys, case discussions and student work evaluations, we can understand the overall acceptance of ideological and political cases, the degree of attention to different values, and the influence and inspiration of cases on students. Secondly, recommendations for further development and strengthening can be made based on the highlights and success stories in the evaluation results. These highlights can serve as experiences and examples to guide and model future industrial design courses. By summarizing successful cases, we can promote the introduction of more similar ideological and political cases, and further improve the effect of ideological and political cases in cultivating students' values and critical thinking ability.

5. The Countermeasures to Enhance Ideological and Political Values in Industrial Design Courses under AI Technology

5.1 Optimize the Design and Selection of Ideological and Political Cases

Optimizing the design and selection of ideological and political cases is one of the important countermeasures to enhance ideological and political values in industrial design courses, which helps

to improve the relevance and inspiration of cases, so as to better guide students to think and understand human values. First of all, it is necessary to optimize the design of ideological and political cases to ensure their relevance to industrial design courses. Selecting cases closely related to industrial design can involve sustainable development, humanized design, social responsibility, etc., which is in line with the core values of industrial design, so that students can intuitively feel the application and influence of human values in industrial design. Secondly, the selection of inspiring ideological and political cases can stimulate students' innovative thinking and critical thinking ability. These cases can cover different fields and issues, and provoke students' thinking about social issues, humanitarian action and ethical decision-making. Through the selection of cases, students can be guided to think about the value and social impact of design, and cultivate their values of human emotions and social care, laying a solid ideological foundation for their future design practice.

5.2 Introduce AI Technology to Assist Case Evaluation and Discussion

The introduction of AI technology to assist case evaluation and discussion is one of the important countermeasures to enhance the ideological and political values in industrial design courses, which can improve the objectivity and efficiency of evaluation. First of all, with the help of AI technology, students can perform semantic analysis and sentiment analysis of the perspective of the case, such auxiliary analysis can provide objective evaluation results, help evaluate students' understanding of the case and the degree of reflection of values, and improve the accuracy and consistency of evaluation. Secondly, the introduction of AI technology can also assist case discussions. Through techniques such as natural language processing and text generation, AI can simulate conversational environments for interactive discussions with students. Such auxiliary discussions can help students think and express opinions more deeply, promote in-depth discussion of ideological and political cases and the exchange of diverse views, help them better understand and apply human values, and enhance the effectiveness and influence of ideological and political education in industrial design courses^[4].

5.3 Cultivate Students' Critical Thinking and Awareness of Values

Cultivating students' critical thinking and value awareness is one of the important countermeasures to enhance ideological and political values in industrial design courses. First, cultivate students' critical thinking about ideological and political cases. AI technology can provide a large amount of data and information support, helping students to deeply analyze the case and evaluate its internal logic and external impact. Students can explore the factors related to human values in cases through inquiry, questioning, which will enable them to be more sensitive to identifying and solving complex problems in industrial design practice, and pay attention to the rationality and sustainability of human values. Second, strengthen the cultivation of value awareness. AI technology can assist students in the collection and analysis of relevant information, allowing students to examine and think about the value elements in the case from multiple angles and different positions, and how to practice these values in design practice, so that students are more aware of the connection between design decisions and human values, and improve their sense of responsibility for personal and social impacts in industrial design.

5.4 Deepen Coordination and Integration with Ideological and Political Education

With the support of AI technology, deepening the collaboration and integration with ideological and political education is one of the important countermeasures to enhance the ideological and political values in industrial design courses. First, strengthen the integration of course content.

Industrial design courses can be closely combined with the content of ideological and political education, with the help of diversified teaching resources and case materials provided by AI technology, the courses, theories and cases in ideological and political education can be introduced into the industrial design classroom, so that students can deeply understand and apply the ideological and political values of humanistic care, environmental protection, innovation and development, etc. Secondly, encourage cooperation and exchange between ideological and political teachers and industrial design teachers. AI technology can provide teachers with guidance on curriculum design and teaching methods, incorporate research and practical projects combining ideological and political education and industrial design into the curriculum, and cultivate students' interdisciplinary comprehensive literacy and critical thinking ability. Such synergy and integration will help students to better apply these values in industrial design practice and contribute more positive to the sustainable development of society.

6. Conclusions

In summary, the evaluation of ideological and political case values of industrial design courses under AI technology is of great significance for cultivating students' comprehensive quality and values. By optimizing the design and selection of ideological and political cases, introducing AI technology to assist evaluation and discussion, cultivating students' critical thinking and value awareness, and deepening the synergy and integration with ideological and political education, these are all effective countermeasures to enhance ideological and political values in industrial design courses. It can not only promote the organic combination of industrial design education with humanistic care, sustainable development, social responsibility and other values, but also provide students with a more comprehensive educational experience, cultivate them to become industrial designers with a sense of social responsibility and innovation, and contribute to the sustainable development of society.

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