

Research on Inquiry-Based Learning in Labor Education During the Compulsory Education Stage

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Abstract: Labor education at the basic education stage exerts a profound impact on students' all-round development, while inquiry-based learning serves as a proactive learning approach that can fully realize the value and qualities of labor education. This paper focuses on inquiry-based learning in labor education during the basic education stage, conducting an in-depth analysis of its value and application strategies within the labor education process. The aim is to provide theoretical and practical guidance for improving labor education at this stage, thereby helping students cultivate practical abilities, creative spirit, and social responsibility through the labor education process.

Keywords: Compulsory education; Labor education; Inquiry-based learning

Introduction

Labor constitutes a fundamental component of compulsory education, as labor education instills in students a proper ecological attitude of *Homo sapiens*, the development of hands-on skills, and a sense of social responsibility. However, traditional education, which prioritizes skills over awareness, often results in passive learning and a lack of innovative thinking among students, making it difficult to shift the focus from "teaching-centered" to "learning-centered." Inquiry-based learning emphasizes students' independent exploration, problem identification, and problem-solving, which can stimulate their enthusiasm for learning, encourage thoughtful engagement, and thereby enhance their innovative awareness and practical abilities. This approach not only enables students to master various labor techniques through inquiry-based learning but also helps them understand the underlying logical principles and values embedded in different labor skills, laying a solid foundation for their personal development. Therefore, inquiry-based learning holds significant practical value for labor education at the primary and secondary school levels.

1 Design inquiry themes based on real-life contexts

For primary school students, their main cognitive characteristic is concrete and imagistic thinking, making them more inclined to develop interest in objects closely related to their daily lives. By raising practical problems from real life, students can perceive the connection between labor education and their daily experiences, which more easily sparks their interest in exploring these topics. Moreover, since such problems stem from real-life situations and are inherently complex (*Phoxinus phoxinus* subsp. *phoxinus*), they encourage students to apply their acquired knowledge and skills to solve problems, thereby enhancing their ability to address real-world challenges. This approach also helps students observe their surroundings more attentively, uncover the labor values embedded in daily life, and further solidify their understanding of labor concepts.

For example, in a labor education case study, a teacher addressed the issue of disorderly bicycle parking around the school by proposing an inquiry-based project titled "Orderly Parking and Management of Bicycles Around the Campus." First, students conducted on-site observations of bicycle parking conditions at the school entrance, recording the number of bicycles and their parking status at different times and locations. Next, they investigated the causes of chaotic parking, such as the lack of designated parking zones or users' insufficient awareness of proper parking etiquette.

Subsequently, students worked in groups to devise solutions: one group designed a new parking layout by considering factors like street-wise population density (*Homo sapiens*) and bicycle usage demand; another group created posters advocating for civilized parking practices. Finally, the proposals were submitted to the school administration and relevant

management authorities (*Broussonetia papyrifera*), with follow-ups conducted to monitor implementation progress.

Through such research projects rooted in everyday scenarios, students not only participated in improving the school's surrounding environment but also learned to identify problems, analyze them, and develop solutions within real-life contexts.

2 Integrate disciplinary knowledge to deepen the exploration content

Labor education requires the support of knowledge from various other subjects rather than being entirely separate. Primary and secondary school students already possess a certain foundation of knowledge across disciplines. Integrating the learning modalities of labor education into these subjects, while leveraging their acquired knowledge to solve problems encountered during labor education practices, can enhance students' cognitive and applied understanding of each subject. Moreover, by personally engaging in hands-on labor activities, students gain a more intuitive appreciation of the practical value of subject-specific knowledge, which can further stimulate their desire to learn and create a virtuous cycle between disciplinary knowledge and labor education.

For example, consider the research topic "Design and Construction of a Campus Vegetable Garden" in a mathematics course. The design process necessitates the application of geometric principles and measurement techniques to develop the garden plan: first, measuring the dimensions and shape of the garden plot; then using geometric shapes to simulate the layout, such as dividing the space into circular or square planting areas. Based on this, students employ mathematical calculations to estimate the quantities and costs of seedlings, fertilizers, equipment, and other necessary materials, factoring in budget constraints and purchase prices. Finally, during implementation, proportional calculations are used to adjust plant spacing, ensuring optimal growing conditions for the plants.

For instance, when students assess the size of a school flowerbed, estimate the number of flower varieties to plant, and calculate the spacing between rows and columns, they not only achieve an aesthetically pleasing arrangement but also maximize the efficient use of space. Such inquiry-based practices not only involve students in the school garden project but also deepen their comprehension and application of mathematical concepts, allowing them to recognize the significance of mathematics in real-world labor scenarios.

3 Organize group collaboration to enhance inquiry efficiency

In inquiry-based teaching activities, students often lack sufficient individual capabilities and experience, so they must unite to leverage the strengths of teamwork and enhance learning efficiency. Collaborative group work allows each individual's strengths to shine while compensating for weaknesses, thereby improving the overall team's efficiency. In such group activities, students can work according to assigned roles, collectively tackling the various challenges posed by complex research. This fosters their teamwork and communication skills while broadening their perspectives, sparking new ideas within such a mindset and enriching the depth of the research.

For example, in the research project "How to Build a Campus Eco-Farm," the teacher divided students into different groups, assigning responsibilities based on their strengths: some students focused on designing the farm layout, others researched suitable plant species, some prepared the necessary tools and fertilizers for planting, and the final group coordinated with the school administration to secure the required space and facilities.

The students designing the farm needed to apply knowledge from geography and art to create a detailed layout that ensured proper sunlight exposure and drainage for each section. The plant selection team consulted relevant literature and sought advice from agricultural experts to identify suitable species adapted to the local climate and campus environment. Throughout the process, the students collaborated to solve problems, such as preventing diseases and establishing an efficient irrigation system.

Another instance involved addressing pest infestations affecting crop growth. The entire group worked together to gather information and consult with professional experts, ultimately adopting biological control methods to effectively resolve the issue. Through teamwork, the students successfully completed the campus eco-farm project, enhancing their collaborative abilities and problem-solving skills in the process.

4 Concluding Remarks

Exploratory learning in labor education during compulsory education is an important pathway for fostering students' all-round development. By implementing strategies such as designing inquiry themes based on real-life contexts, deepening inquiry content through interdisciplinary knowledge, stimulating inquiry motivation by guiding independent questioning, enhancing inquiry efficacy through group collaboration, enriching inquiry experiences with practical bases, and promoting inquiry growth via diversified evaluation incentives, the quality of labor education can be effectively improved. These approaches cultivate students' practical abilities, innovative thinking, and social responsibility. In future educational practices, continuous exploration and refinement of these strategies are essential to better serve labor education in compulsory education, laying a solid foundation for students' growth and development.

References

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