

Exploration of Ideological and Political Elements in English for Science and Technology (EST) Course

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Abstract: Nowadays, the construction of ideological and political education in curriculum has become an important component of higher education. A course without ideological and political elements is incomplete. Based on this, this paper provides an in-depth analysis of the excavation of ideological and political elements in EST course. By integrating curriculum ideology and politics into EST teaching, students can not only improve their EST reading and translation capability, but also can gradually build up a good self-confidence of Chinese culture, establish logical thinking ability, develop consciousness of innovation, and foster the spirit of craftsmanship.

1. Introduction

The excavation of ideological and political elements is particularly important for the construction of ideological and political education in curriculum. The appropriate application of ideological and political elements directly affects the effectiveness of ideological and political education in the curriculum. A good curriculum of ideological and political education is like integrating salt into water, invisibly promoting positive values. President XI in his speech at the National Conference on Ideological and Political Work in Universities stressed we must adhere to making moral education the central, integrate ideological and political work throughout the entire process of education and teaching, achieve all-round moral education, and strive to create a new situation for the development of higher education in China. Nowadays, the construction of ideological and political education in curriculum has become an important component of higher education. Therefore, teachers from various disciplines actively respond to the call to commit to the construction of ideological and political education in the curriculum, striving to explore ideological and political elements of the curriculum.

EST is an important component of English teaching in vocational colleges. As a language carrier, it serves as a bridge for expanding disciplinary knowledge and shaping values [1]. On the one hand, EST teaching aims to enable students to master English terms in their field of study and improve their reading and translating capabilities in dealing with relevant English literature. On the other hand, EST contains a large number of ideological and political elements. By exploring Chinese elements in English, students' cultural confidence can be enhanced. By exploring language logic, students' logical thinking can be established. By exploring science and technology, students'

innovative awareness can be stimulated. Through translation practice training, students' professional qualities can be cultivated. By creating a collaborative atmosphere, students' team awareness can be strengthened.

2. Exploration of Ideological and Political Elements in EST Course

2.1. Contrast between English and Chinese to Stimulate Cultural Confidence

Chinese characters are the most influential cultural symbols in the Chinese cultural system. They are not only written symbols that record Chinese language, but also important carriers of Chinese culture. In translation teaching, by comparing the characteristics of English and Chinese languages, students can experience the charm of Chinese culture and enhance cultural confidence. For example, in Chinese, emphasis is placed on meaning over form. In terms of expression, Chinese pursues more freedom and creativity. However, English is characterized by hypotaxis. It is heavily constrained by grammar and part of speech rules, and the phenomenon of retained inflectional language in English makes it cumbersome. The rapid growth of English vocabulary has become a burden for learners, while Chinese vocabulary generation is closely related to the original vocabulary, making it easy to master. Comparison between English and Chinese showcases the advantages of Chinese language, thereby establishing language confidence.

2.2. Explore Language Logic to Establish Logical Thinking

EST contains a large number of derivative words, and in order to understand and master English vocabulary, it is necessary to master the word formation logic of English words. English words are usually composed of prefixes, roots, and suffixes. Among them, prefixes indicate the number of nouns, the direction of verbs, the degree of adjectives, etc; The root determines the core and basic meaning of a word; The suffix represents the part of speech of a word [2]. By mastering the roots and affixes in specialized English word formation, one can understand the rules of English word formation, identify the commonalities of English words, and thus understand and master more words. In the process of learning word formation logic, it helps to cultivate logical thinking ability.

Translation between English and Chinese is an important part for EST teaching. In the process of translation, it is necessary to master the logical order of sentences. In the translation algorithms of artificial intelligence and translation software, there are similarities and differences between the sentence models of English and Chinese [3]. Only by mastering the sentence logic of English and Chinese, can one accurately translate. For example, the right hand sixteen character spaces are used to display data that the user enters. This is a complex sentence. First, we should identify the subject, verb and object in this sentence. That is "the character spaces are used to display data". When translated into Chinese, the order of subject, verb, and object is still maintained. Then identify other components of the sentence, such as attributives and adverbials. "That the user enters" is the attributive. The order of the attributive changes according to the rules of Chinese grammar. In other words, when translating the complex sentence, the main order of the sentence remains unchanged, while the order of other components changes according to the characteristics of English and Chinese languages. In the process of translation, just like artificial intelligence and translation software, students can gradually establish logical thinking ability.

2.3. Cultivate Professional Ethics through Translation Practice

EST teaching should deepen professional ideals and moral education, help students deeply understand and consciously practice the professional spirit and norms of various industries,

cultivate professional character and behavioral habits of observing laws and regulations, cherishing posts and devoting wholeheartedly to work, as well as the craftsman spirit of being serious, responsible, and striving for excellence. For example, EST translation requires high levels of professionalism, scientificity, and accuracy. The translation process should be serious and careful to avoid interpreting out of context or misinterpreting the meaning from the text. Take terminology translation as an example. With the rapid development of technology, the number of terminology is increasing and a large number of polysemy phenomena have emerged. It is required that vocabulary translation pay attention to accuracy and the meaning of words should be determined based on the contextual context. At the syntactic level, common sentences in scientific English usually include several coordinate sentences or clauses, with complex structures and various difficulties such as understanding long and difficult sentences. Students need to have perseverance, develop the habit of consulting reference books and conducting multiple checks, strive for excellence to ensure translation quality. Thus students' rigorous and precise attitude can be stimulated through translation practice.

2.4. Focus on Technological Shortcomings to Ignite the Belief in Building a Strong Technological Country

President XI in his speech emphasized multiple times that key core technologies cannot be obtained, purchased, or negotiated. Only by mastering key core technologies can we fundamentally safeguard national economic security, national defense security, and other security. When teaching the CPU section, listing examples such as the Huawei chip supply interruption incident in the United States, Intel's monopoly on computer chips, ARM's monopoly on embedded chips, etc., makes students recognize the constraints faced by China's computer industry so as to stimulate a sense of crisis among everyone. In the section introducing the Windows 7 operating system, when talking about the Windows version, it can be combined with the hot topic of Microsoft's cessation of Windows 7 system updates in 2020 to stimulate students to think about what impact the cessation of Windows 7 updates will have on China? Faced with Microsoft's monopolistic behavior, China can only passively accept it, which motivates us to make our own operating system to replace Microsoft's Windows system. There are no artificial restrictions, and anyone can use it freely. Through these examples, students can understand the importance of building a strong technological country and keep the faith that only by taking the path of independent innovation can we firmly grasp the lifeline of technological development in our own hands.

2.5. Create a Collaborative Atmosphere to Enhance Team Awareness

Unity and collaboration emphasize the spirit of resource sharing and collaborative cooperation among team members, thereby forming strong productivity and creativity. EST teaching can enhance students' teamwork skills in practical activities. By setting up a large team assignment, students are required to divide labor and cooperate to complete tasks. During this process, it is necessary to record the division of labor of each member and evaluate their contribution to completing the task, which is used as the basis for evaluating the final score of the team assignment. During the performance evaluation process, the instructor evaluates the quality of the assignment and scores each member based on their contribution. The introduction of this mechanism not only makes students pay more attention to team performance, but also enhances their enthusiasm and initiative in participating in team collaboration. While learning knowledge and improving abilities, overall situation consciousness and team spirit will be enhanced.

3. Conclusions

EST has unique advantages in the construction of ideological and political education in the curriculum. Through the exploration of ideological and political elements in EST, especially the comparison of English and Chinese languages, the logic of English word formation, the scientific technology contained in sentences, and the professional ethics embodied in practice, ideological and political elements can be excavated from aspects such as cultural confidence, logical thinking, innovative spirit, and craftsmanship spirit.

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