STUDY ON THE DEVELOPMENT OF VOCATIONAL EDUCATION FROM THE PERSPECTIVE OF INSTRUMENTALIZATION THEORY

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Abstract: The paper will use Andrew Feenberg’s Instrumentalization Theory to deconstruct and analyze vocational education. The development of vocational education is affected internally by Primary Instrumentalization Theory, resulting in the main problems as follows: decontextualization of curriculum mode, lack of technological ethics education and technological aesthetic education, fracture between vocational education and the life world, lack of technological innovative education. Vocational education should follow Secondary Instrumentalization Theory: developing the systematic curriculum mode of vocational education, implementing technology ethics and aesthetics education, getting through technological world and life world, carrying out technological innovative education.

Key Words: Vocational Education; Instrumentalization Theory; Primary Instrumentalization Theory; Secondary Instrumentalization Theory

1. The Analysis of Connotation of Instrumentalization Theory

Technology has been existent considerably as a certain kind of living way, penetrating in all areas of human life. Andrew Feenberg’s Instrumentalization Theory provides an overall framework to explain technology, including two parts of Primary Instrumentalization Theory and Secondary Instrumentalization Theory. Primary Instrumentalization Theory focuses mainly on the natural attribute of technology and its functional implementation, which considers technology as tools and means. Secondary Instrumentalization Theory focuses mainly on the social attribute of technology and the mutual construction of human and technology, criticizing that Primary Instrumentalization Theory explains technology in an one-sided way. Specifically, Primary Instrumentalization Theory consists of decontextualization, reductionism, self-independence and positioning four aspects. Correspondingly, Secondary Instrumentalization Theory...
includes four aspects of systematization, intermediary, vocation and activation. Generally speaking, they can be reached as follows:1. Decontextualization refers that technological object separates from the original technological situation. Systematization concerns with the the relationship between technological object in the overall situation as well as the connection between technology user and nature. 2. Reductionism means to simplify and restore the multiple values of technological object to the useful aspects of the technology. Intermediary refers to the manifestation of aesthetic, moral and ethical characteristics in the design of technological equipment and its application process, in order to promote the realization of the technology of multiple value. 3. Self-independence means the separation of technological subject and technological object. Therefore, technological subject can avoid and reduce the impact of technological behavior consequences on their own. Vocation refers to technological subject consider technological activity and its consequences as a whole, treating them as their vocation. 4. Positioning refers to technological subject set themselves as the role of management and control in the process of technology using. Activation means the technological object can be activated on the strategy in the process of technology using.

2. The Criticism of Vocational Education Problems under the Control of the Primary Instrumentalization Theory

(1) One-Sidedness of Curriculum Mode of Vocational Education Development Lead by “Decontextualization”

“Decontextualization” was a dominant logic in the process of curriculum mode development of vocational education, of which the core idea is to put the specific technology away from its original situation and divide it into different units. It get through several typical vocational education curriculum mode. As the origin of modern vocational education curriculum mode, the vocational education curriculum mode of Russia founded in 1868, it started to design the curriculum by divide the technological craft process into different part. It carried out group instruction for students and firstly implemented curriculum mode of vocational education in schools. In the early 1970s, the International Labor Organization developed the curriculum system of MES. The MES based on the analysis of the tasks and skills, through the closely divided and accurate description, formed systematic and flexible curriculum. But the problem is that the excessive decomposition of the work system will disruptive technology as a whole. At almost the same time, CBE began to be applied to vocational education and training. It developed curriculum mode of vocational education around competence, through which students leaned just a few bits and pieces of knowledge, skills and tasks. It is difficult for students to get a whole understanding of the entire workflow. In the development of vocational education in China, it can also be seen the profound impact of “decontextualization” on the curriculum development of vocational education. At the early stage of Reform and Open-up Policy, the main curriculum mode of vocational education is adding the practical courses to Three Stage Curriculum which is the traditional course-centered mode that is composed of general knowledge course, basic course and specialized course. The problem of this kind of curriculum mode is the separation of these four stage of courses, which is not developed on the basis of the whole wok situation. Such as well with the following curriculum modes developed by Chinese Curriculum Developer, they ignores the integrity and situational characteristics of vocational ability, so still unable to cultivate students’ comprehensive vocational ability.

(2) The Lack of Technological Ethics and Aesthetic Education under “Reductionism”

Technological ethics relates to the relationship between technology, human and nature. In modern vocational activities, it accounts for a growing proportion of technological factors. Worker use technological tools, methods and strategies to achieve their career goals. However, their dignity is easy to be overwhelmed by utility of technology and they should be faced with oppression and domination
brought about by the expansion of technological factors. The risk also exists in vocational education, which ignores the subjective demands of students but merely focuses on technology teaching. It also ignores the importance of natural ethical education, paying less attention to the relationship between human, technology and nature. Technological aesthetics involved in the style, form and function of product, relationship between designing and application and other important elements. But it is clearly insufficient of technological aesthetics education in the practice of vocational education in China. Utilitarian tendency obscures people's pursuit for beauty, which makes the gap between the aesthetic needs of students and courses-setting.

(3) The Fracture between Vocational Education and the Life World Dominated by “Self-Independence”

“Self-Independence” is reflected to the field of vocational education for increasing fragment between vocational education and life world. Vocational education focuses on how to help students gain technological abilities as technological subject, rather than cultivating their perception of effects that their technological behavior may cause as well as the technological value in the world. In the pre-modern word, technological world and life world connected together, in which technological activities inherent in the light of the overall requirements of the living world. In such a context, apprenticeship constructed harmonious relationship of two word by technology and skill teaching. But in the modern era, vocational education transplanted the way of production to the educational process of the industrial pipeline, keen on making out "Tool Man" that can product goods and create economic value. It objectively reflected and exacerbated the fragment of technological word and life word, which departs from the nature of education.

(4) The Lack of Technological Innovative Education under “Positioning”

“Positioning” in vocational education shows that students are considered as the objects controlled completely by teachers, and in accordance with the fixed and unchanging pattern to teach. It set students’ learning as the memory of theoretical knowledge and imitation of teachers or masters’ technological skills, ignoring the cultivation of ability of technological innovation. Although in the present innovation and entrepreneurship education has become an important way to cultivate students’ innovation ability, but in fact, it is a mere formality of many innovative entrepreneurship curriculum in vocational colleges and the curriculum system is incomplete. Some innovation and entrepreneurship courses just welcome some entrepreneur or successful people to do report and lecture and lecture, of which the course content and form are too simple.

3. The Ideal Orientation of Vocational Education Development under the Guidance of Secondary Instrumentalization Theory

(1) Systematization: Developing the Whole Pattern of Curriculum Mode of Vocational Education

The development of vocational education curriculum mode in the future should follow systematic of constructing the holistic learning environment. Heidegger defines it as a situation of integrity, including the physical environment, the available tools, in the hands of the task requirements, individual personality and career goals, as well as social and cultural ties. It makes sense for each part of the network. First of all, from the perspectives of curriculum objectives, it couldn’t be confined to cognitive and skill objectives, moral, ethical and aesthetic objectives should also be put into curriculum objectives. Secondly, the moral, ethical and aesthetic knowledge should be added to the content of curriculum of vocational education. Finally, the curriculum should also be integrated into the spiritual content, which can help students establish the true devotion and love for the work and develop their work seriously, excellence, striving for excellence and professionalism.

(2) Intermediary: Implementing Technological Ethics and Aesthetics Education
It can be done in two ways to cultivate students’ ethical quality and technological aesthetics literacy. One way is to cultivate students’ technological ethics and aesthetics literacy throughout the each stage of vocational education. For example, in the teaching of technological design, it could be involved in technological responsibility, integrity, safety and risk prevention, environmental protection and so on. Technological aesthetics education provides guidance for designing activities, indicating not only what is the technological aesthetics, but also set the aesthetic quality standards of products, and help people to create technological aesthetics; the other way is to setup the specialized courses of technological ethics and aesthetics.

(3)Vocation: Connecting the Technological World and Life World and Reverting the Whole Significance of Vocational Education

Seen from the perspective of life world as the background of vocational education, people need to face the whole life world and show out their own values in the living world. As a special type of education, vocational education’s basic purpose is to cultivate technological skills talents. People under vocational education are not living in isolation or just in a specific vocational world, he must also deal with all aspects of life world. Therefore, vocational education should integrate technological, intellectual, cultural and aesthetic factors together, in order to cultivate students’ the complete professionals.

(4)Activation: Carrying out Technological Innovative education, Highlighting the Subjectivity of Human Being

For vocational education, its core value is to cultivate people that can work in production, services and management, achieving the objectives of technology transfer and technological innovation throughout their technology and skills practice. In particular, it should open-up the embedded courses of technological innovation and also integrate technological innovation and professional courses, in order to cultivating students’ innovation consciousness and ability in the process of curriculum implementation. Vocational education should also set a partnership with businesses and governments, and build the cooperative technological innovation platform in order to promote students’ consciousness and ability of technological innovation.

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