

Scientific Knowledge of Education based on Herbert Spencer

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ABSTRACT

India higher education is important for cultivating high-quality, multi-skilled and well-trained talents. Herbert Spencer is one of the most typical questions for education. After investigation, this study researches questions based on India huge demand of well-trained, high-skilled and application-oriented talents under current economic development. Practical Scientific Knowledge. The guidance on the education practice. The essay demonstrates the challenges and provides constructive suggestions including reform education curriculum, strengthen faculty and enhance University-enterprise co-operation which is multi-win for undergraduates, Universities and enterprises. Based on the University-enterprise cooperation practice with Institution the experiences are summarized and the research results can be popularized. This paper will analyze Herbert Spencer's "What Knowledge is of Most Worth?", and provide the helpful advises on practical scientific knowledge education.

Keywords: Practical scientific knowledge education, Herbert, Spencer, worth

Introduction

In today's competition, human resources are the most important resource for achieving the goals. In future, China will need a large number of high-quality talents urgently to contribute to new industrialization for further industrial structure upgrading and modern service industry developing. The new demand of India higher education can fulfil the needs of high-quality, multi-skilled and well-trained talents in China as the important resources of China's social and economic development. Institutions of higher learning should be in response to the rising demand for significant and applicable education (Alhija, 2016). Education is the basic of universities and colleges in the new economic era. The foundation of education is to know "What Knowledge is of Most Worth?"

Review of Literature

Herbert Spencer and his education theory have big impact in the history. "What Knowledge is of most Worth?" have guided the research on the scientific knowledge.

Herbert Spencer and Education

Herbert Spencer (April 27, 1820–December 8, 1903) was a British positivist philosopher, sociologist and educational reformer. He was well known as "Social Darwinism" father and proposed a theory of applying evolutionary theory to sociology, especially education and class struggle. President of Harvard University said Spencer was a true pioneer of education. Herbert Spencer defined the purpose and task of education was to teach everyone how to live completely.

He arranged the activities of people into four categories to determine the teaching content:

1. The directly minister to self-preservation activities require understanding of anatomy, physiology and hygiene;
2. The indirectly minister to self-preservation activities to secure the necessities of life lead not only to master the basic skills of reading, writing, and computing, but also to grasp the logic of arithmetic, geometry, mechanics, physics, chemistry, astronomy, geology, biology, sociology and foreign language knowledge, etc.;
3. The rearing activities require the study of physiology, psychology, and pedagogy in order to correctly implement the physical, intellectual and moral education of children;
- 4 The social obligations activities bring that people are necessary to study history;

In teaching methods, Spencer advocated the automatic learning based on students and emphasized the role of interest in the process of teaching, In the aspect of moral education, Spencer put forward that individual self preservation is the most important moral principle and coined the moral evolution formula.

What Knowledge is of Most Worth?

Spencer's "Education: intellectual, moral and physical" was published in London in May 1861 including the four papers:

1. What Knowledge is of Most Worth?
2. Intellectual Education
3. Moral Education
4. Physical Education.

Herbert Spencer's "Theory of Education" presents a most typical question "what knowledge is of most worth?" and the answer is "the knowledge of Sciences". That paper bashed Great Britain's traditional education and advocated science education to replace the

classical language teaching that promoted the educational reform in the India and had a positive impact on the education reform in the world. Some people think that this paper is a key to the new society (Peel, 1971).

Research Design

With The Development Of Industrialization and urbanization in India, the development of social economy has put forward new requirements for the construction of application-oriented talents. In the exploration of the application-oriented undergraduate talents training, practical curriculum plays an important role in improving students' practical ability to solve problems. Challenges in Practical Scientific Knowledge Education Outdated Practical Training Curriculum As we all known, new standards, new systems, new technologies and new devices emerge rapidly in the 21st Century as an era of information explosion. These universities want to cultivate high skilled talents with practical ability.

Weak Teachers' Resources

There is a big gap of the teachers with professional title, educational background, enterprise experience and technical skills in applied Universities. This is because those with rich practical experience and master advanced technology experts have been attracted by the favorable conditions of the enterprise and do not want to be in school only as a teacher. At the same time, many young teachers in the university joined into the schools after graduation directly. So the structure and the level of the teachers in Universities should be optimized and improved.

Adhere to Education Curriculum Reform

Undergraduate education plan is a programmatic document for the training of professionals; the training programs and the quality of the curriculum directly affect the

quantity and quality of employment. The personnel training plan can start from the enterprise research firstly. According to the research report, the universities could sum up the job descriptions of enterprise graduates employment and then extract the work tasks and screen typical tasks from these jobs students should complete.

Finally, according to the typical tasks and the cognitive rules, they design the teaching process of the students, form the curriculum system with learn and practice combination, and arrange the curriculum implementation. Teaching is the final placement point of talent cultivation. Curriculum reform is the core of professional construction. The purpose of it is to reinforce undergraduates' practical skills and innovation awareness (Tang & Wu, 2016). The quality of curriculum construction is the key to the cultivation of talents. The teachers are "teaching by doing" and students are "learning by doing" through deepen the practice-oriented curriculum transformation.

Strengthen Faculty

Practical scientific knowledge education must rely on teachers to complete. The quality of lecturers is important to the management of higher education institutions (Evgeniya & Alexander, 2016). Based on the specialty particularity, Universities can take special talents introduction policy and talent incentive policies and measures to attract the faculty that have rich practical professional experience for leading discipline reform and the construction.

In the process of cooperation, both university and enterprise reach an agreement to form the framework of cooperation for the specific implementation of cooperation. The realization of a good school-enterprise cooperation in long-term must rely on a reasonable system and institution, including

management system, rules and regulations system, incentive mechanism and other aspects. University should designate a responsible person for a specific enterprise and carry out enterprise research fully. The cooperation can be varied and flexible: inviting enterprises to participate in the training plan and supervise and guide the implementation of professional talents.

Lesson 1: Set up a professional Steering Committee to jointly develop a targeted teaching plan According to the speciality direction, the steering committee of professional construction review the teaching plan and course outline and study teaching implementation plans together in order to grasp the objective of professional training and pertinence and practicability of curriculum system and teaching content. It can ensure the realization of professional training goal effectively.

Lesson 2: Work together on the plan of students' learning and working alternation and practical training courses according to the business demand needs According to the business needs, the internship can be arranged so that students place themselves in the real business environment experiencing the modernization of the operation process. They will directly involve in the completion of business tasks, finish their practical training courses, and also dig up the raw data from company. This internship also shows the Institution strongly support the company. During the cooperation, the experience, education and feedback model can be designed as Institutions.

Lesson 3: Teach jointly by high level teachers from both Universities and enterprises The teachers are selected from the Universities to ensure the quality of teaching and improve the level of students' training. There are qualified teachers who are involved in the training base of the University.

Lesson 4: Develop integration projects of business, education and research According to the new technology and new requirements of enterprise, the university write the new teaching material, arrange new practical training, and blend the latest research achievements into teaching. Through cooperation, they can complete teaching and scientific research project successfully, carry out the exploration on the practice of high-skilled education actively, and promote the improvement of teaching and scientific research level.

Lesson 5: Combine with Corporate University After discussion with enterprises, its common that many companies have “Corporate University. Both of the parties agree to combine. During combination with Corporate University, universities pay more attention to professional development direction, and know what demand and trend of jobs and talent skills.

Form Practical Skills

Students participate in the enterprise internship program in line with the rule of cognitive learning, and help students consolidate the book knowledge, master the practice of technology, and structure practical skills. During the internship, students can not only verify the theoretical knowledge, but also master the practical scientific skills well through practical operation under the guidance of enterprise enlightenment.

Improve Comprehensive Quality

Through the internship, the students pay more attention to the spiritual level. They are familiar with corporate culture and modern enterprise management knowledge to promote students to grow up as soon as possible. Students participate in the practical work, understand the society, learn to obey discipline, behave teamwork, and enhance the ability to work with all the staff, so that they get exercise and improve

in all aspects which are conducive to the cultivation of students’ comprehensive quality.

Increase Employment Opportunities

After undergraduates learn the practical scientific knowledge, company’s part-time teachers will participate in the graduate employment guidance and hold a forum to analyze the employment situation.

Boost Learning Intention

Students go to the real enterprise and find the practical scientific knowledge they learned is directly linked with the employment, then they have clearer learning purpose and stronger consciousness and initiative of learning knowledge. They have continuous learning force.

Advance Quality of Education and Teaching

The school and the enterprise work out the training plan and implement the orientation training of job skills. The quality of practical scientific knowledge learning is getting better and better. Complete Professional Training Objectives Universities can create a real and effective teaching and learning two-way interaction under social interaction scenarios and career scenarios through strengthen the construction of off-campus training base and put students in the real business and service environment. The students understand the practical scientific knowledge and practise job competencies in a strong career atmosphere to sublimate the theoretical knowledge of students.

Obtain Employee Training Bases

In order to improve the training of enterprise employees, Universities help enterprises strengthen the construction of teaching materials. Enterprises can rely on Universities as the training bases. The excellent engineers of company can join in the further university training and get certification as well. The company common training can also be organized in Universities.

Conclusion :

Herbert Spencer raised the question “What Knowledge is of most Worth?”, and provided the answer “Scientific Knowledge is of most Worth”. During China’s economic transition and development and the industry structure upgrading, there is a huge demand of well-trained, high-skilled, and application-oriented talents in India. It comes up with the new requirement of higher education, so the practical scientific knowledge education is most important in country for the cultivation of applied talents of undergraduate level in response to the imbalance between supply and demand. There are challenges in practical scientific knowledge education, such as outdated practical training curriculum, weak teachers’ resources and less university-enterprise cooperation. After research, this study provides constructive suggestions including adhere to education curriculum reform, strengthen faculty work together on the plan of students’ learning and working alternation and practical training courses according to the business demand needs, teach jointly by high level teachers from both Universities. Especially, an experience, education and feedback model can be used for reference during University in India. These help undergraduates learn practical skills, improve the comprehensive quality, boost the students’ learning intention and increase employment opportunities. The benefits to Universities are to complete professional training objectives, advance the quality of education and teaching and receive scholarship and donation.

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