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Increasing the Efficiency of Educating Scientific Consciousness for Vietnamese Students

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Abstract---Educating scientific consciousness is considered one of the important factors in the development of our country; especially in the current trend of internationalization and globalization. Improving the education of scientific consciousness for Vietnamese students is very needed, as it will contribute to the development of education in Vietnam. In this article, the authors focus on discussing scientific consciousness education, thus proposing some solutions to improve scientific consciousness education for Vietnamese students, which have both theoretical and practical significance. The education of scientific consciousness has created a favorable environment for students to learn and develop, to have positive and proper belief in the good values of life, and to create new values of capacity and creativity of each individual. It is those values that have been strongly influencing the belief and lifestyle of students towards building a fairer and more progressive society.

Keywords---development, education, globalization, scientific consciousness, students.

Introduction

Along with training high-quality human resources and investing in scientific research, educating scientific consciousness is also considered indispensable and receives a lot of attention, especially in the context that the socialist-oriented market economy in Vietnam has direct impacts on scientific consciousness education through its two-sided properties. Therefore, educating scientific consciousness for students in Vietnam is currently an issue that is paid attention from different parties. To well realize this, it is necessary to clarify the factors that affects scientific consciousness education and thus propose solutions to overcome

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the problems in doing this task, as it has a crucial role in strongly renovating education and training towards attaching importance to developing learners' qualities and capabilities (Calderhead, 1989; Evans, 2008).

Research Methodology

Books and journals about science, scientific consciousness, consciousness education, etc. are collected and processed to generalize the content of this article. Inductive, deductive, historical and logical methods are combined with other interdisciplinary methods for social sciences research, such as analysis, synthesis, systematization, comparison and contrast, etc.

Findings and Discussion

Scientific consciousness education

****Concept of scientific consciousness education***

In the 1986 Vietnamese translation of "A Dictionary of Philosophy" published by Progress Publishers, Moscow, it is said that "science is a field of study aimed at producing new knowledge about nature, society and thinking, including all conditions and factors of this production: scientists, science institutions, facilities for experiments, research methods, concepts, scientific information system as well as all existing knowledge" (A Dictionary of Philosophy, 1986).

In "Some issues of scientific awareness", the authors said that: "Science is not only knowledge and objective truths that reflect fundamental relationships and laws, but also the activities of scientists who research and produce new knowledge to apply in practice" (Huong, 1993). There are also many interpretations of science that stem from different approaches. From the first angle: "Science can be a social institution of certain significance in modern society. That institution is transforming the lives and destinies of people in this world more than any political or religious event" (Pieck Derek, 1961). From the second angle: Science is "a system of knowledge about all the laws and movements of matters, the laws of nature, society and thought" (Pierre Auger, 1961). However, these two concepts have only defined science as a system of knowledge and a social institution without seeing it as a system of true and correct knowledge covering all diverse understandings of human about the world, and are yet to generalize the properties and laws of nature, society and thought.

To come up with a correct definition of a subject, the difference in nature of that subject must be explained. When referring to the concept of science, it is written in "Dialectics of Nature" - a Marxist-Leninist classic by Engels that: "Just as one form of motion develops out of another, so their reflections, the various sciences, must arise necessarily out of one another" (Engels, 1963). This view had been adopted and developed by Lenin, who repeatedly affirmed that: "Science... reflects the nature and reality of the natural world", or "Science... conditionally and approximately covers the universal regularity of nature in its perpetual motion and development" (Lenin, 1997).

Consciousness is a social phenomenon. The creation and existence of consciousness is associated with reality and is governed not only by biological

laws, but mainly by social laws, due to the need for social communication and practical living conditions specified by humans. With its dynamism, consciousness has re-created reality according to the needs of social practice. There are some notions that: "Scientific consciousness is a special form of social consciousness, reflecting the movement and development of nature, society and thinking by means of concepts, laws, theories, and abstractions" (Binh, 2009). Or "Scientific consciousness is both a form of social consciousness and a special social phenomenon, and thus should be considered as an integral part of social consciousness. Scientific consciousness (as a form of social consciousness), is a system of knowledge that honestly reflects the abstract logic of the world, which has been tested in practice. Scientific consciousness shares the common characteristics of social consciousness, i.e. they are all the products of existence, reflect existence and are regulated by social existence".

Inheriting the pros in those concepts, we present the following general definition: *Scientific consciousness is a generalized and abstracted reflection of nature, society and thought, which is tested in practice, thereby forming scientific belief, sentiments, will and ideal for human.* The Resolution of the 11th National Congress determined: "Fundamentally and comprehensively renovating education towards standardization, modernization, socialization, democratization and international integration" and "Fast development of human resources, especially high-quality ones, focusing on fundamentally and comprehensively renovating the national education" (Ministry of Education and Training, 2013). Therefore, it is necessary to strengthening scientific research and technology transfer in higher education institutions and between training educations and business establishments. To achieve that, it is important to master the knowledge. Mastering scientific research activities has a significance not only to researchers in general but also to students in particular when participating in scientific consciousness education. From the analysis, we come up with the most general definition of scientific consciousness education as follows: *"Scientific consciousness education is the interaction between teachers and learners in order to enable learners to receive scientific knowledge, and on that basis form their scientific belief, sentiments, will and ideal"*.

*** Basic features of scientific consciousness education**

Scientific consciousness education is a social phenomenon, so there are many different approaches to it. In terms of structure, scientific consciousness education is complex and consists of different parts, such as education of scientific knowledge, education of scientific belief, education of scientific sentiments, education of scientific will and education of scientific ideal.

First, Education of scientific knowledge: In the context of globalization and the strong influence of the knowledge economy, the world has changed profoundly (Chiu & Kwan, 2016; Rugman, 2003). In addition, the development of telecommunications network has allowed quick exchange and transmission of information (Gaudin & Chaliès, 2015; Brusilovsky et al., 1998). Access to knowledge should place value to transmitting scientific knowledge to students through several forms of education, such as: transmitting experiential knowledge to students. Thanks to experiential knowledge, students have visualizations of

things and phenomena. Scientific knowledge is knowledge that is systematically accumulated through scientific research activities, according to a plan with definite goals and conducted based on a system of scientific methods. Through the transmission of scientific knowledge, each student forms their own system of scientific knowledge as well as flexible and creative skills to solve problems posed by social reality.

Second, Education of scientific belief: Scientific belief is considered a driving force that motivates people in their activities and knowledge acquisition. Realizing the true nature of scientific belief will determine the consciousness formation of each student. Scientific belief is the factor that ensures students to become an important force in the development of society. Educating scientific belief for students in Vietnam today is very necessary. To do that, it is needed to fully equip them with worldview and methodology in order to help them properly perceive the nature and form of problems. Positive activities also need to be diversified, so that students can participate in the learning process, practice ethics and have a firm grasp of belief education. It is necessary to point out for students that if they want to succeed, they must rely on themselves instead of others. The stronger their scientific belief, the deeper their will to defend their view. It is that scientific belief that gives students the strength to overcome all difficulties in life.

Third, Education of scientific sentiments: Sentiments are feelings that express people's attitudes in relationships. Scientific sentiments, a special form of reflection of reality, are born from the generalization of specific human emotions under the impact of the external environment, depending on each subject of impact and how people perceive it. In those relationships, different kinds of emotions are formed, such as moral sentiment, aesthetic sentiment, intellectual sentiment, practical sentiment, etc. Moral sentiment denotes a person's attitudes towards social moral requirements, in relation to others, to the community and to his own social responsibility. Intellectual sentiment denotes people's attitude towards thoughts, ideas, cognitive needs including understanding, satisfaction and skepticism. Aesthetic sentiment is the feeling of human towards the beauty in nature, society, art and literature. Practical sentiment is the expression of people's attitude towards action relating to the satisfaction or dissatisfaction of the need to perform that action. The education of scientific sentiments for students today requires coordination between family, school and society. Education of scientific sentiments is a fundamental element to ensure the existence and development of every human being in the society. At present, it is advisable to build a comprehensive and friendly educational environment that is associated with lesson contents, campaigns, emulation movements, etc.; the purpose of which is to direct students towards cultivating their sense of morality and living responsibly for themselves and for others.

Fourth, Education of scientific will: Scientific will is the psychological qualities of an individual. It is seen as the dynamic side of consciousness, which is concretely expressed in practice. In learning activities, sentiments play the role of a reinforced adjustment that stimulates the psychological positivity of students, and help orient them to achieve their goals and appreciate life. Therefore, it is necessary to educate student about perseverance, because that is an important quality that helps them to be successful in life. Ho Chi Minh once said: There is

nothing difficult if you are resilient enough; you can dig up the mountains and backfill the sea if you have strong will. As long as there is a will, students can overcome any difficulties no matter how big they are, as well as find effective methods for self-improvement in life.

Fifth, Education of scientific ideal: Educating scientific ideal is a holistic activity that affects students themselves. It pays attention to discovering, fostering and honoring typical and outstanding students who follow the model of Ho Chi Minh; as well as to continuing to replicate good examples for the creation of the next generation who are the future owners of the country. Educating scientific ideal for students is seen as sunlight for life. Therefore, students should be oriented to understand that they must live their life with a purpose and ideal. Ho Chi Minh advised the whole Communist Party as well as the people that fostering the next revolutionary generation is very crucial and indispensable. Adhering to that advice, students today continue to fulfill their responsibilities without forgetting the heroic past of their fathers, the glorious monuments of Vietnam. All is for a united, independent, free and happy Vietnam. It doesn't make sense that educating ideal for students just means helping them to have a job. Therefore, it is necessary to guide students so that they have enough confidence and believe in their future. Scientific ideal is not only built on dreams and ambitions, but also has to be based on the viewpoint on human life; different viewpoints will lead to different scientific ideals for different purposes. Today, as the independence and sovereignty of the country are ensured, the noble ideal of students is to study well and to have the opportunity to make more contributions as proof that they deserve what the previous generations left to them.

Some basic solutions to improve the education of scientific consciousness for Vietnamese students

Ho Chi Minh once said: "To build socialism, there must be socialist people". The education of scientific consciousness for students is one of the contents with practical significance to produce new human resources for the industrialization and modernization of the country.

First, strengthen the personality formation of students themselves. In the process of operation and communication, scientific consciousness education is always crucial. It functions in all areas of education and has a huge role in the formation and development of students' personality. Through education of scientific consciousness, ethical categories, principles and standards are perceived and formed (Schooler, 2002; Baars, 2002). It is the basis for students to absorb the good traditional moral values of the nation; as well as to strengthen the development of patriotism and pride for the homeland. It encourages students to always be responsible in learning, doing scientific research and participating in social activities, thus contributing to the development of themselves and the society (Pratiwi & Rohmadi, 2021).

Therefore, it is necessary to help students to clearly see the necessity of developing learning and emolument movements for the cause of "building a rich people, a strong country, an equal, democratic and civilized society". Also, students need to be motivated and supported to participate in traditional

activities and gratitude movements, to organize programs like "rekindling the tradition - forever 20", "youth volunteers", "The youth to live a beautiful and useful life, to study and follow the example of Vietnamese revolutionary heroes", etc.

Second, promote self-discipline in the cultivation and practice of students. The issue of scientific consciousness education for students has had positive changes in recent years. Such changes have created conditions for the cultivation and practice of scientific consciousness of students at a higher level (Krismayani et al., 2020). The synchronous combination of internal and external departments along with the improvement of scientific consciousness education for students play a central role in the process of educating scientific consciousness for students (Lund et al., 2010). Scientific consciousness education affects the sustainable development of a society. Therefore, it is necessary to acquire and promote new values to create conditions for society development. In order to achieve the goals and orientation of political ideology education on the basis of Marxism-Leninism and Ho Chi Minh Thought, the CPV strategy and policy as well as state law on renovation, and to be persistent with national independence and socialism, students must reinvent themselves to meet the standards and requirements of the society.

Third, establish scientific skills and lifestyle for students. We should equip students with life skills, so that they can confidently enter reality. These are important skills that help students to evaluate themselves properly, thus being able to identify their strengths and weaknesses in selecting appropriate values, and build a foundation for self-improvement (Widana et al., 2020). Emulation movements should be promoted to build a healthy living environment, including: discipline, lifestyle in the dormitory, regulations on behaviors, etc., thus contribute to the good tradition of the school. In addition, schools need to coordinate with agencies to eliminate drugs, prostitution, gambling, cheating in exams, material lifestyle, vile cultural products, etc. These works help students to be aware of fighting negative phenomena in the society today (Hunt & Eisenberg, 2010).

Fourth, enhance cultural and aesthetic value and perception for students themselves. The content of cultural education is to build politeness of students in their communication with other people in the society. Aesthetic education for students aims to guide them to appreciate the beauty of nature, life and art; as well as to evaluate their own truth, goodness and beauty. Despite not being the whole meaning, it is the starting point and also the high point in the education of scientific consciousness for students, which creates new people and new students full of qualities and abilities to bring prosperity to the country (Muzyka et al., 2021). Education of patriotism, solidarity, unity, community cohesion, etc. aims towards values of truth, goodness and beauty and strives for the future of the country. On the other hand, bad habits and vices are resolutely condemned and eliminated; signs of illegal acts, corruption, bureaucracy, irresponsibility and disregard for rules and regulations are fought against.

Fifth, encourage students' scientific research. Attaching importance to students' scientific research is a notable training content to promote students' imagination

and creativity. Scientific research of students is promoted in order to fully equip for their roles and responsibilities in scientific research activities, with different forms and at different levels, such as doing research assignment, writing essays and graduation theses, etc. Also, training students to master scientific research skills through seminars on management of students' scientific research skills must be continued. It is also advised to establish clubs for scientific research at faculty level. Through these clubs, students can participate in learning and exchanging experience on approaches to scientific research. This activity will stimulate the need for and interest in scientific research of students (Nagaiah & Thanuskodi, 2021). From which, efficiency in research is achieved.

Conclusion

As a social institution, science has penetrated into all fields of social activities and performed the functions of such an institution. Science is taken as a measure to define a behavioral pattern, and is growing into a means that contributes to transforming all aspects of social life. Science is identified as an important social institution for researchers, as it is related to policy making and supports practical research for social development. Thus, educating scientific consciousness for students today is very important.

In today's context, this issue is receiving a lot of attentions. Its purpose is to establish scientific belief, sentiments, will and ideal for students. The education of scientific consciousness has created a favorable environment for students to learn and develop, to have positive and proper belief in the good values of life, and to create new values of capacity and creativity of each individual. It is those values that have been strongly influencing the belief and lifestyle of students towards building a fairer and more progressive society.

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