

Science and Culture: Inheritance Process through Education and History

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Article Info

Article history:

Received : 11 November 2023

Published : 02 January 2024

Keywords:

Science

Education

History

Info Artikel

Article history:

Diterima : 11 November 2023

Publis : Januari 2024

Abstract

This article discusses the role of Education and History as a medium for the transmission of knowledge and culture. In simple terms, everything that is known is called knowledge, and all knowledge that is compiled based on scientific principles is called science. Culture can be defined as the result of creation, work and human taste which also includes science. Science can be understood as a set or collection of knowledge that is organized and has systematic procedures and has scientific steps. Science gives birth to and supports the creation of culture, and then this culture develops and preserves that knowledge. In the process of inheritance or preservation of culture and knowledge, this is where the role of history as a science and education as a system. History as a science which is a record of events that occurred in the past that has distinctive value and has a broad impact on society, history becomes a science that "maintains" and preserves culture. Education has a role in supporting the existence and development of culture and as a forum for the struggle for scientific activities.

Abstrak

Artikel ini membahas mengenai peran Pendidikan dan Sejarah sebagai media pewarisan ilmu dan budaya. Secara sederhana bahwa segala sesuatu yang ditahu maka hal itu disebut pengetahuan, dan segala pengetahuan yang disusun berdasarkan kaidah ilmiah maka disebut sebagai ilmu. Budaya bisa didefinisikan sebagai hasil cipta, karya dan rasa manusia yang juga termasuk didalamnya adalah ilmu. Ilmu bisa dipahami sebagai perangkat atau sekumpulan pengetahuan yang teratur dan memiliki prosedur sistematis dan memiliki langkah ilmiah. Ilmu melahirkan dan menyokong terciptanya kebudayaan, dan kemudian kebudayaan inilah mengembangkan dan melestarikan ilmu itu. Dalam proses pewarisan atau pelestarian budaya dan ilmu, disinilah peran Sejarah sebagai ilmu dan Pendidikan sebagai sistem. Sejarah sebagai ilmu yang merupakan catatan peristiwa yang terjadi dimasa lalu yang bernilai khas dan berdampak luas bagi masyarakat, sejarah menjadi suatu ilmu yang "menjaga" dan melestarikan budaya. Pendidikan memiliki peranan dalam menunjang keberadaan dan pengembangan kebudayaan dan sebagai wadah pergelutan kegiatan keilmuan.

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1. INTRODUCTION

In simple terms, everything that is known is called knowledge, and all knowledge that is compiled based on scientific principles is called science. However, in this paper, it is not intended to dichotomy these two things, be it science or knowledge. It is clear that this paper will explain and link science and culture. We certainly agree that humans are perfect human beings among God's creatures. Perfect because apart from its unique physical appearance, complete with all its uses, what is no less important is its possession of reason and taste. These last two things are the peak of human perfection, with reason we can know what is right and wrong, what is good and what is bad, and with taste, humans can know what is beautiful and what is ugly. With reason and feeling, humans can develop their knowledge into a science. With this knowledge, humans then carry out their life processes with various kinds of works and initiatives, which we then call culture.

Science and culture are actually in a position of interdependence and influence. Science in a society depends on its cultural conditions, while science also influences the course of culture. This means that science and culture are related. Science gives birth to and supports the creation of culture. And then this culture develops and preserves knowledge itself. Talking about science and culture is definitely talking about human existence. Humans are both subjects and objects, humans are the ones who are knowledgeable and cultured. With this culture, humans create a better living environment which will be used as their "kingdom" and at the same time, with this culture, humans want to regulate and control nature (Sutrisno, 1995). The human desire to achieve this is natural and inevitable, but it becomes a problem if the human desire for control is not balanced with the desire to protect. And it also becomes a problem if the desire to protect it is unequal. Humans only focus on maintaining things that have pragmatic use value, ignoring ideal values. The desire to master and exploit nature for one's livelihood and happiness tends to be the focus of one's goals. This will actually be the biggest threat and problem, not only for nature, but also for human existence itself.

Talking about human existence as knowledgeable and cultured people, things that are ideal noble values must be made "commander" in carrying out their daily lives. Pragmatic goals must not be overdone but must be placed in a corridor that is rooted and measurable. So, he talks about human existence, without ignoring that strengthening these ideal values is definitely related to the inheritance process. The process of inheritance as a process of maintaining and controlling humans as knowledgeable and cultured creatures is what then contributes to the role of education as a system and the role of history as science. Therefore, the study of science and culture is very important, talking about science means talking about human abilities to become unique human beings, also at the same time talking about the function of science itself which functions to help humans in solving practical daily problems (Suriasumantri, 2016). In the Indonesian context, there is a kind of goal and mission to be achieved, namely the development of national culture.

In the development of national culture, science has a role as a source of values that supports the implementation of national culture, and a source of values that contributes to the formation of a nation's character. The role of science as forming the character of a nation is the aim of History which is taught in schools as part of the education system. History learning in schools should be able to instill scientific values as a support for the development of national culture, so that Indonesian society in its culture instills scientific values which, according to Jujun, are in the form of a critical, rationalist, logical, objective, open, and upholding truth and universal service. (Suriasumantri, 2016). Therefore, it is important to study science and culture, explaining the connection and attachment of humans to culture, science to the development of national culture, cultural patterns themselves and what is no less important is the role of education and historical science in the process of inheritance and development of culture.

2. RESEARCH METHOD

The research method used is the library research method, which is a research method by examining literary sources in the form of books, articles, archives and so on to answer various research problems that have been determined or related to research questions.

3. RESEARCH RESULTS AND DISCUSSION

1. Man and Culture

As explained previously, humans are cultural creatures. Culture is defined as the entire system of ideas, actions and results of human work in social life which are made human's own through learning. This means that almost all human actions are cultural.

There needs to be a clear emphasis on this definition, namely a system of ideas, actions and learning outcomes. So whatever humans achieve as a result of their learning is classified as culture. Linguistically, the word culture comes from the Sanskrit language *buddhayah* which is the plural form of the word *buddhi* which means "mind" or "reason". Thus, culture can be interpreted as things related to reason. Relating to creation, work and human feelings and the results of these creations, works and feelings (Keontjaraningrat, 2009). Although there are experts who provide different definitions between "culture" and "culture", where they define that culture is power and mind, in the form of creativity, intention and feeling while culture is the result of creativity, intention and work (Sutrisno, 1995). Culture also has the same meaning as the word "culture", where the word comes from the word "colere" which means cultivating and working, especially cultivating the land and changing nature.

This mind also causes humans to develop a meaningful relationship with the natural surroundings by assessing objects and events, which then becomes the goal and content of culture. Quoting Koentjaraningrat's opinion, that forms of culture are divided into three, namely;

- The form of culture is a complex of ideas, thoughts, values, norms, regulations and so on.
- The form of culture as a complex of patterned activities and actions of humans in society.
- The form of culture as objects created by humans.

The three things mentioned above are an explanation of the forms of culture related to human existence, and are confirmation that humans in the context of cultural studies, have two positions, namely as subjects and objects. Talking about the position of humans as knowledgeable and cultured creatures, it cannot be separated from the human desire to fulfill their living needs and the need for survival from generation to generation. Looking at the forms of culture that have been described previously, we can at least draw the conclusion that forms of culture are divided into two things, namely those that are material (physical) and those that are non-material (spiritual). Material culture certainly includes all objects created by humans as a result of their creations and works that can be seen and touched, for example living tools. Meanwhile, non-material things are things that cannot be seen or touched, are not physically visible but can be felt, such as language, religion/belief, tradition and science.

2. Science and Development of National Culture

Science is part of knowledge and knowledge is an element of culture. This sentence is the opening sentence of Jujun S. Suriasumantri in his introductory book on philosophy in the sub-chapter on science and development of national culture. Looking at this sentence, especially the last sentence, at least Jujun is quoting Koentjaraningrat's own opinion regarding the cultural elements. It is true that knowledge is part of culture. Knowledge itself is part of the non-material form of culture as we have explained previously. Before discussing this context, we must have the same mindset regarding the meaning of science, culture and cultural development so that this study and explanation is well directed. That science is knowledge obtained through scientific methods. Where this knowledge has a rational, logical, objective and open nature (Suriasumantri, 2016).

It is also understood that science is a set or collection of knowledge that is orderly and has systematic procedures and has logic/rationality which is supported by empirical facts that are objective and verifiable and open to criticism (Latif, 2015). By Ibnu Khaldun, he divided knowledge into two parts, namely, *aqli* science and *naqli* science. Where *aqli* knowledge is natural knowledge for humans that is obtained with reason and thought, while *naqli* knowledge is knowledge obtained from the person who teaches it

(Khaldun, 2011). So in terms of the origin of knowledge, according to Ibnu Khaldun, one source comes from within humans themselves and the second comes from outside them, or from their surroundings. Meanwhile, culture in this context is a set of value systems, ways of life and means for humans in their lives.

National culture is a culture that reflects the aspirations and ideals of a nation which are realized in state life. On the other hand, the development of national culture is part of a nation's activities to achieve these aspirations and ideals. Talking about cultural development as an activity, as a process certainly cannot be measured by numbers. Because what we want to achieve in this case are the noble ideal values of a nation. In the context of developing national culture, science has a dual role, namely, knowledge is a source of values that supports the development of national culture and secondly, science is a source of values that fills the formation of the character of a nation. If in his book, Al Makin explains how knowledge is related to power (Makin, 2015), then we try to explain the relationship between science and culture. If science is a process of thinking then culture is the result of that thinking.

Therefore, science has a very important role, science and culture are interrelated, depend on each other and influence each other. Talking about Indonesian national culture, the cultural development in question is the development of Indonesian national culture based on the values of Pancasila as the essence of the noble ideas of the Indonesian people. Pancasila is the soul of all Indonesian people, the way of life of the Indonesian people and the foundation of the state. Apart from that, Pancasila is at the same time a goal and outlook on life, awareness and moral ideals which include the soul and character that are deeply ingrained/rooted in the culture of the Indonesian nation (Sudarsa, 2013).

Pancasila as a philosophical grondslag (philosophical basis) as well as a weltanschauung (view of life) is the foundation in the realm of cultural development of the Indonesian nation. The development of the national culture of the Indonesian nation, apart from referring to Pancasila as a basis and outlook on life, must also apply rational, logical, objective and open values, uphold universal truth and devotion as the characteristic values of science itself. The application of these scientific values is very important as a moral principle to support the development of national culture as well as creating ideal modern humans for the Indonesian nation. Cultural development is of course interpreted so that culture remains more sustainable and develops better, has pragmatic beneficial value to society while also being supported by ideal noble values that are in accordance with Pancasila.

3. The Process of Cultural Inheritance Through History and Education

Culture is not inherited generatively (biologically) but only acquired by learning. Therefore, humans are cultural creatures because in response to their survival to fulfill and achieve happiness in life. Talking about continuity or continuity cannot be separated from what we call the inheritance process. The process of cultural inheritance from the past to the present, from the present to the future. So there is a kind of thread from the past, the present, and what will come later. However, we limit the inheritance process to a cultural context that has pragmatic useful values and ideal noble values, as explained previously.

In the process of cultural inheritance, this is where the role of history as a science and education as a system. History as a science in this study, we provide an explanation and limitation that history is not just a story of the past, a story passed down from generation to generation which the observers always look back on, so that some groups give it a kind of stigma, making it difficult to move on. Regardless of the discussion of scientific methods, history as a science is everything that happened in the past that has unique value and has a broad impact on humans and humanity, which is then useful in the present for

humans and humanity as well, as well as a basis for observing/predicting the future. . In essence, history as a science is events that are studied from the past, as a basis for the present, in order to observe the future. Therefore, from this interpretation and understanding, we can say that history plays a role in the process of cultural inheritance.

By understanding history, culture will naturally be included in it, because history, according to Hariyono, occurs as a consequence of humans taking part in their cultural environment (Hariyono, 1995). Culture is the result of human creativity, work and initiative which always develops to become better from phase to phase. In this development process, history becomes a science that "guards" and preserves this culture. Culture is not just about the abstract. In the previous discussion, it was divided into two, namely, material and non-material. Where material is in physical form such as buildings and various other equipment, while non-material is intangible such as religion, language and science. It is in this second part that the role of history is very prominent. In terms of cultural inheritance, especially in the era of globalization, a world that feels very modern, we do not only focus on the use of technology and its results but also the main thing that should be emphasized is the ideal values of the culture itself (Giddens, 2004).

The inheritance of these ideal values is closely related to history. History as a scientific study tries to convey to humans as the main actors that there are abstract values that must be used as a reference in fulfilling needs to achieve happiness. An illustration, motorized vehicles such as cars, motorbikes, trains and so on are cultural products. It was created as a result of the development of previous vehicles without engines which were still manual, but later developed into something better. The explanation is that vehicles in the form of cars and motorbikes are not created just like that, but go through stages of modification.

This is where history explains the stages of modification. In its ongoing process, history tries to record and document these technological products. Then history also tries to convey that in the creation of cultural products there is always exploration, desire and effort to move towards better processes and results. Similar to the role of history as a science, the role of education as a system is also very important. Education as a conscious effort, by Umar Tirtarahardja and La Sulo, provides an understanding of education based on its function (La Sulo, 2010), namely:

- Education as Cultural Transformation, which can be interpreted as the activity of passing on culture from one generation to another. Where this transformation process is divided into 3 forms, namely values that are still suitable are continued, those that are less suitable are repaired, and those that are not suitable are replaced.
- Education as a Personal Formation Process, education is defined as a systemic and systemic activity directed towards the formation of students' personalities. Systematic because education is continuous and systemic because it can take place in all situations and conditions. Includes two targets, namely personal formation for those who are not yet adults (learning age) and for those who are adults (self-education).
- Education as a process of preparing citizens is defined as a planned activity to equip students to become good citizens. Both in our Indonesian context, which refers to religious values and Pancasila.
- Education as Workforce Preparation is defined as activities that guide students so that they have the basic provisions for work. The basic provisions in question include the formation of attitudes, knowledge and work skills for students.

The role of education is very important in supporting the existence and development of culture. As a conscious effort, education is the main process of cultural inheritance. Note that it does not only emphasize the cognitive and psychomotor aspects but also the affective aspects, which according to the previous term are the balance of reason

knowledge and taste knowledge. Education is a forum for scientific activities, it should not only be limited to theoretical studies but must also be implemented in everyday life. Therefore, Jujun then explained systemic and systematic steps to increase the role of scientific activities, namely:

- Science is part of culture and therefore steps towards increasing the role and activities of science must take into account the cultural situation of our society.
- Science is one way of finding the truth
- The basic assumption of all activities in finding the truth is a sense of trust in the methods used in these activities
- Scientific education must be linked to moral education.
- The development of the scientific field must be accompanied by development in the field of philosophy, especially those involving science.
- Scientific activities must be autonomous and free from power structures.

4. CONCLUSION

Culture is the entire system of ideas, actions and results of human work in social life which are made human's own through learning, as a means to fulfill their life needs. One form of cultural output is science. Science and culture are intertwined with each other. Science develops in a cultured society and culture will also influence the course of scientific development. For this reason, the development of the Indonesian national culture should always be directed towards a path that supports the development of knowledge.

In scientific developments, a cultural pattern has emerged that is adopted by the scientific community, namely the separation between natural sciences and social sciences. Natural sciences that develop more rapidly have greater prestige than social sciences. In fact, these two sciences should synergize with each other in order to support the progress of humanity towards a better path.

Studying science is not just about knowing, understanding and applying that knowledge. Studying science also requires us to understand how and why science is created, built and developed. Using a historical approach in studying science will be able to answer epistemological questions. Studying history means studying the past as a means of understanding the present, and by understanding the present we will be able to build a better future.

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