

Kuhnian's Paradigmatic Analysis Method As a Solution of Abstract Thinking Difficulties in Social Studies

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Abstract

In general, the intelligence possessed by students is different from one another. The factors influence intrinsic factors, maturity, formation, interests, and freedom. In addition, environmental and educational factors also play a role in the formation of intelligence. This study aims to describe Kuhnian's paradigmatic analysis as a solution to the difficulties of abstract thinking in social studies learning. This study describes the discussion by utilizing a literature study. The research results are described in a paradigmatic analysis. Kuhn thoroughly examines each expert's thoughts and scientific works and reveals his contribution to the scientific revolution. Social studies learning dimensions are explained in the form of social action. Social studies are learning conditions of abstract thinking in the process of causality. The reconstruction to solve the problem of difficulty in abstract thinking in social studies subjects in junior high schools is carried out as follows: 1) Teaching social studies as integrative social studies, 2) implementing social studies learning using a trans-disciplinarity approach, 3) conveying that social studies learning is "advanced knowledge." 4) Applying the inquiry model, and 5) Integrating influential social studies learning.

Abstrak

Pada umumnya kecerdasan yang dimiliki siswa berbeda satu dengan yang lainnya. Hal ini karena ada faktor yang mempengaruhi faktor bawaan, kedewasaan, pembentukan, minat, dan kebebasan. Selain itu, faktor lingkungan dan pendidikan juga berperan dalam pembentukan kecerdasan. Penelitian ini bertujuan untuk mendeskripsikan analisis paradigmatis Kuhnian sebagai solusi atas kesulitan berpikir abstrak dalam pembelajaran IPS. Penelitian ini mendeskripsikan pembahasan dengan memanfaatkan studi kepustakaan. Hasil penelitian yang diuraikan dalam analisis paradigmatis, Kuhn mengkaji secara utuh pemikiran dan karya ilmiah masing-masing pakar dan mengungkapkan kontribusinya terhadap revolusi ilmiah. Dimensi pembelajaran IPS dijelaskan dalam bentuk tindakan sosial. Pembelajaran IPS

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mengkondisikan berpikir abstrak dalam proses kausalitas. Adapun rekonstruksi untuk menyelesaikan permasalahan kesulitan berpikir abstrak pada mata pelajaran IPS di Sekolah Menengah Pertama, dilakukan seperti: 1) Mengajarkan IPS sebagai *integrative social studies*, 2) Menerapkan Pembelajaran IPS menggunakan pendekatan *trans-disciplinarity*, 3) Menyampaikan bahwa Pembelajaran IPS sebagai "*advance knowledge*", 4) Menerapkan Model inquiry, dan 5) Mengintergrasikan Pembelajaran IPS yang *powerfull*.

INTRODUCTION

Every individual who has taken the education taught is expected to face and solve problems in life and develop self-potential. Therefore, education is the principal means for all individuals to obtain teaching to mature knowledge. Education can be obtained anywhere, both formal and non-formal, but it will be more dominant if it is obtained formally in schools, especially in learning (Tilaar, 2002). The passage of education must experience a transition (transitional period) of knowledge that finally satisfies what he knows at that time. So the education system should be able to stimulate creative-productive thinking, attitudes, and behaviour, in addition to logical thinking and reasoning (Depdiknas, 2008).

In general, the intelligence possessed by students is different from one another. This is because factors influence intrinsic factors, maturity, formation, interest, and freedom. In addition, environmental and educational factors also play a role in the formation of intelligence. A simple analysis is then presented by Piaget (1886-1980), where humans grow, adapt, and change through physical development, personality development, socio-emotional development, and cognitive development. Specifically development primarily depends on how far children can manipulate and actively interact with their environment (Hergenhahn & Olson, 2010).

Various subjects respond to the reasoning mechanism without exception in Social Sciences. It adopts an inter and transdisciplinary to help students gain abstract thinking skills. This is because IPS allows students both individually and in groups to actively seek, explore, and find concepts and principles holistically and authentically (Supardan, 2014). The concept becomes a fundamental component in social studies learning. However, it is challenging to think abstractly for students who study social studies in junior high school. In case it becomes a problem while students can not explore their ability to think abstractly. One method that can explain the problems is the paradigmatic Kuhnian method.

According to Kuhn, the paradigm knows social reality constructed by a particular mode of thought or inquiry, producing a specific mode of knowing (Kuhn, 2008). Paradigm becomes a fundamental view of a scientific discipline about the subject matter that should be studied. Therefore, it can be concluded in a nutshell that the notion of a paradigm is the whole constellation of beliefs, values, and techniques possessed by a scientific community in viewing something (a phenomenon). Paradigms help formulate what should be studied, what questions should be answered, and what rules should be followed in interpreting the answers obtained. In particular, Kuhn describes the paradigm in two senses. First, a paradigm means a whole constellation of beliefs, values, techniques that members of a particular scientific community share. Second, the paradigm shows a kind of concrete puzzle-solving element which, when used as a model, pattern, or example, can replace explicit rules as the basis for solving normal problems and puzzles of unfinished science (Kuhn, 2008).

This study aims to describe Kuhnian's paradigmatic analysis as a solution to the difficulty of abstract thinking in social studies learning. The difficulty of abstract thinking can be seen in the framework of philosophy. Kuhn interpret and identify the paradigm in learning theory as a schema. Kuhn himself defines a schema as a mental structure or cognition by which a person intellectually adapts and coordinates surrounding the environment (Kuhn, 2008; Zubaedi, 2007). Children face new stimuli or experiences that do not follow the existing schemes in their learning development

and cannot assimilate their new experiences with their schemes. This paper is prepared to study complex abstract thinking for students, especially in social studies subjects in junior high school, using the Kuhnian paradigmatic analysis method

METHODS

This study describes the discussion by utilizing a literature study. Literature study, known as the literature review method, is used to identify, measure, and interpret all the results that are the topic of research (Hennink et al., 2020; Park & Park, 2016). The strategy in literature search used by researchers is to find, select, and choose which information is needed from a large amount of information published first (Azwar, 2004). Search for data, journals, or ebooks, because based on the level of difficulty, it takes a lot of free time in the search process. Sources of data obtained by researchers in this study contained search results on Google Scholar and Ebook using the keywords Kuhnian paradigmatic analysis, abstract thinking, and social studies learning (Alma, 2015). The results of the collection of literature refer to the conclusion that the Kuhnian paradigmatic analysis method is a method that examines the problem of revolutionary scientific development. Kuhnian's paradigmatic analysis begins with paradigm 1, anomaly, crisis, revolution/reconstruction, paradigm 2, and verification.

FINDINGS AND DISCUSSION

Carroll, in taxonomy, think found evidence of differences in cognitive abilities in general based on factor analysis (Kuswana, 2011). Based on the results of the analysis, the factors were identified based on three ability strata, namely general (applies to all cognitive tasks), broad (related to about ten special abilities), and narrow (many special abilities in specific ways). Difficulty in abstract thinking is closely related to children's developmental schemes. In a theoretical context, this matter is described by Piaget. According to Piaget, children are born with several sensorimotor schemata, which provide a framework for their initial interactions with their environment (Hergenhahn & Olson, 2010). These sensorimotor schemata determine the child's early experiences. In other words, only events that can be assimilated to the schemata can the child respond to, and therefore the incident will determine the boundaries of the child's experience. However, through experience, the initial schemata were modified.

Each experience contains unique elements that the child's cognitive structure must accommodate. Through interaction with the environment, cognitive structures will change and allow continuous development. Intellectual growth begins with the child's reflexive response to the environment continuing to develop to the point where the child can think about potential events and mentally explore possible consequences (Hergenhahn & Olson, 2010).

Interiorization results in the development of operations that free the child from the need to deal directly with the environment because, in this case, the child can carry out symbolic manipulation. The development of operations (interiorized actions) provides the child with complex ways to deal with the environment. Therefore, the child can perform more complex intellectual actions because the child's cognitive structure is more articulated, likewise, children's physical environment. It is said that the cognitive structure of children constructs the physical environment (Hergenhahn & Olson, 2010).

The stages of children's cognitive development are divided into 4 phases. This paper explicitly discusses why children have difficulty thinking abstract, social studies learning at the junior high school level. Phase fourth which is then called the formal operational stage, actually appears in children aged 12 years and over. This period is marked by the child's ability to operate a series of concrete operations into complex operations (Jarvis, 2011). Progress in children during this period is that he does not need to think with the help of concrete objects or events. Instead, he can think abstractly. Children can understand the form of argument and are not confused by the side of the argument and are therefore called formal operations.

Ideally, the scope of Social Studies Subjects is based on Permendikbud No. 58 of 2014. In studying social studies, students are given the ability to think abstractly through studying the concept that describes social science and humanities concepts. This is because the younger generation fosters cultural nationalism (cultural nationalism), which means recognition of diverse ethnic cultures, which were born and developed in Indonesian society (Abbas, 2017; Bagus, 1996). After that, it is necessary to manage natural resources to ensure the nation's welfare based on science and technology and the principles of social justice and increase the competitiveness of goods and services products by improving the quality of human resources as subjects in competition.

Social studies subjects take on the role of providing a broad and in-depth understanding of related fields of science, namely: (1) Introducing concepts related to people's lives and their environment; (2) To equip basic skills for logical and critical thinking, curiosity, inquiry, problem-solving, and skills in social life; (3) Fostering commitment and awareness of social and human values; and (4) Fostering the ability to communicate, cooperate, and compete in a pluralistic society, both at local, national and global levels. The scope of social studies is humans' social, economic, and cultural behaviour in society in the context of changing space and time (Abbas, 2015; Al Muchtar, 2007). Therefore, the community becomes the primary source of IPS.

The difficulty of students in abstract thinking is based on three main problems. First, the social studies learning pattern is not optimal. The optimization in question provides critical thinking space based on the habituation of value experiences that involve students. Second, based on the research results presented by Karima and Ramadhani (2018), the increase in abstract thinking skills in social studies learning is weakened by the memorization concept (not the meaning of the concept). This is accused of being a failure in social studies learning at the junior high school level. Suppose we trace from the framework of cognitive development. Participants educate who are educated in Junior High School aged 12 years and over. They are included in the formal operational thinking stage category, where concrete operations are used to form more complex operations. The main characteristics of their development are hypothesis, abstract, deductive, and inductive, and logical, and probability (Abbas, 2020a; Ritzer, 1980).

In addition, students' difficulty in abstract thinking is due to verbalize learning and low cognitive-oriented evaluation. Second, verbalized learning always uses oral delivery in learning, or what we often call lectures. Teachers who constantly lecture in class quickly make students bored so that learning is no longer effective. According to Wina Sanjaya, the lecture/verbalizes method presents lessons through oral narrative or direct explanations to a group of students (Sanjaya, 2007).

Third, low cognitive-oriented evaluation, only at the cognitive level one (C1) and cognitive two (C2) or at the level of knowledge and understanding, not at the level C3-C6 (application, analysis, synthesis, evaluation). It also does not cover the affective and psychomotor aspects of students. For example, suppose we examine the Basic Competencies of subjects in Junior High School starting from C2 (in Grade 7). However, the next one is at C3-C4. Based on Permendikbud Number 64 of 2013 concerning Content Standards, the competency level VII – VIII is 4. While in class IX, it is 4A. This difference is based on the Competency Level, a generic competency achievement criteria that students must meet at each grade level to achieve Graduate Competency Standards. Competency Level 4A is the ability to transition level education Basic to secondary education, and Competency Level 6 is the ability to transition from secondary education to higher education.

The problem of difficulty in abstract thinking in Social Studies Learning in Junior High School because three main problems, namely:

1. Social studies learning that has not optimized critical thinking skills through the meaning of concepts.

2. The orientation of learning is dominated by verbalizes.
3. Evaluation oriented to low cognitive.

Based on Kuhnian's paradigmatic analysis, it is a paradigm. In the central context of the scientific revolution is the paradigm. To describe this problem, Kuhn has based his ideas on the comprehensive role of history. According to Kuhn, history is not just a purely descriptive or normative discipline but is more than purely descriptive normative. Kuhn has used history as a basis for constructing his paradigm ideas. History has helped him discover the constellation of facts, theories, and methods stored in science textbooks. In this way, Kuhn discovered a process of theory development which he later referred to as a revolutionary paradigm development process (Abdullah, 1995).

In Kuhn's line of thought regarding paradigmatic analysis, a paradigm is a primary element in the progress of science. Scientist always work with a particular paradigm, and scientific theories are built on the fundamental paradigm. Through a paradigm scientist able to solve difficulties born within the framework of his knowledge, there were so many anomalies that could not be included in the framework of his knowledge that required a paradigmatic revolution to the science. Thus, according to Kuhn, science can develop in an open-ended manner (its nature is always open to being reduced and developed).

The flow scheme think described by Kuhn is a form of criticism of the Cartesian - Newtonian method where weaknesses affect the study results. Science experts prioritize evidence over values for decision-making in their research (Wiriaatmadja, 2012). Kuhnian paradigmatic analysis can indeed be implemented in various problem areas, without exception. The following is the flow of Kuhnian's Paradigmatic Analysis of the problem of abstract thinking in social studies learning in junior high school:

Table 1. Kuhnian's Paradigmatic Analysis Thought

Paradigm I	Normal Science	Anomaly	Crisis	Revolution/ Reconstruction	Paradigm II
Middle school students have difficulty thinking abstractly	<ol style="list-style-type: none"> 1. Middle school students aged 11-12 years and over 2. The 11-year-old child is in stages of formal operational cognitive development. 3. Middle school social studies learning emphasizes mastery of concepts 	<ol style="list-style-type: none"> 1. Children do not understand the concept of social studies learning. 2. a Child only memorizes concept definition. 3. The low social studies were learning outcomes in schools (below the KKM). 4. The lack of children's participation in social studies learning discussions. 	<ol style="list-style-type: none"> 1. Children are not able to improve abstract thinking skills. 2. Children are not able to decipher facts to support abstract thinking skills. 3. Social studies learning is only considered as learning memorization. 	<ol style="list-style-type: none"> 1. Teaching social studies as integrative social studies, Applying Social Studies Learning using a trans-disciplinary approach. 2. Social studies were learning as "advance knowledge." 3. Application Inquiry Model 4. Integrate Powerful social studies learning as delivered by NCSS. 	<ol style="list-style-type: none"> 1. It strengthens the abstract thinking of junior high school students in social studies learning. 2. We implemented influential social studies learning.

(Source: Kuhn, 1973:43-111, with modifications, in Wiriaatmadja, 2012)

Kuhn tried to make the theory of science more suitable to the historical situation, so it was hoped that the philosophy of science would be closer to the reality of science and science activity real scientific. Paradigms help a person formulate what to learn, what questions to answer and what rules to follow in interpreting the answers obtained. Kuhn's line of thought is described to shift the theory of Geocentrism to Heliocentrism (later known as the Copernican revolution).

In paradigmatic analysis, knowledge, and science that was developed before the scientific method (Cartesian-Newtonian), the truth is recognized as a science called normal science, formed through simple observations or experiments and recognized by the experts of the time to be the basis for further developments. InperspectiveScientific developments, Social Studies education is taught as an integrated discipline, namely Discipline Education (PDIPS) or Discipline Education in the Field of Study (PDBIPS) (Abbas, 2020b; Supardan, 2014). In several kinds of literature, the names of educational disciplines in the field of study are often referred to according to the discipline's origin, such as science education, IIS (Social Science Education), Language Education, Engineering, Sports. The philosophical foundation and approach to the development of PIPS as a scientific discipline (Brameld, 1996).

Paradigm reconstruction is carried out as a paradigm leap in the Kuhnian model. Reconstruction is carried out by modifying and innovating theories based on social phenomena in a new cultural framework. In table 1, Kuhnian's paradigm of paradigm analysis shows that the problem of thinking difficulties for junior high school students is not only seen from the stage of development. Reconstruction in social studies learning is needed as a form of strengthening. It is understood that social studies education is a synthetic discipline that seeks to organize and develop the substance of social sciences scientifically and psychologically for educational purposes (Somantri, 2001). The meaning of synthetic discipline is that PIPS not only synthesizes relevant concepts between educational sciences and social sciences but also correlates with social problems,

Social studies study material is a combination or integration of various branches of social sciences and humanities. It is more meaningful and contextual if the social studies material is designed in an integrated manner. Concepts formed in a multidisciplinary manner, such as multiculturalism, environment, urbanization, peace, and globalization, are derived from traditional discipline concepts and enrich social studies (Supardan, 2014). Social studies materials are in the form of facts, concepts, and generalizations related to aspects of cognitive, affective, psychomotor, and spiritual values (Somantri, 2001).

An epistemological study of the ideas and thoughts of social studies education experts in Indonesia, especially regarding the definition of social studies education as a field of study, scientific discipline, school program, and profession, is an academic necessity. In his epistemology of the scientific and scientific revolution, Kuhn thoroughly examines each scholar's thought and work and reveals his contribution to the scientific revolution. According to Saxe and Nelson in Farisi and Malik (2015:129), epistemologically, it is a fundamental issue related to clarity and certainty for each member of the PIPS community regarding ways of seeing the world and practising science in it and a change towards a new paradigm with further implications. To the need for a new and more rigid definition of the field (Kuhn, 2008).

Abstract thinking is an absolute thing that students must have in social studies learning. The togetherness of information held between one fact with another fact can happen. Because the amount of information held will always be limited and may not be entirely the same. However, it must be realized that a fact does not always have the same information as another fact, even though it is still related to the same human activity. Based on the facts that have been collected, a concept is formulated. In formulating a concept, we look for togetherness that is owned between one fact and another.

Efforts to seek togetherness require the ability to think abstractly. The ability to think abstractly required in formulating a concept is higher than when formulating facts. Therefore,

higher abstract thinking skills are required in formulating generalizations and theories. In the diagram, it is stated simply that generalizations are developed from concepts. In the procedure, expected new generalizations can be developed after research. Before the research, the generalization could only be said to be a hypothesis (quick answer).

An abstract thought process occurs when formulating generalizations into concepts and the information needed for the studied concepts. It requires thinking that something general becomes something special, called the deductive thinking process (Jarvis, 2011). Abstract thinking is also needed when undergoing the causality process. Causality is used when a hypothesis is formulated. In particular scientific views, the existence of such a law of causality is questionable. However, developing a hypothesis still requires questions about the nature of the relationship between existing concepts (Kuswana, 2011; Wiriaatmadja, 2012). Likewise, with the development of theory is a description of the connection between generalizations and concepts.

The solutions to solve the problem of difficulty in abstract thinking in social studies subjects in junior high school can be done as follows:

1. Teaching social studies as integrative social studies, not as a disciplined education, as an applicative-oriented education, developing thinking skills, learning abilities, curiosity, and a caring and responsible attitude towards the social and natural environment. In addition, the purpose of social studies education emphasizes knowledge about the nation, the spirit of nationalism, patriotism, and community activities in the economic field in the space or space of the Republic of Indonesia.
2. We are applying Social Studies Learning using a trans-disciplinarity approach where the boundaries of scientific disciplines are no longer visible because the concepts of scientific disciplines are intermingled and related to the problems encountered around them. These conditions facilitate social studies learning into contextual learning.
3. Conveying that Social Studies Learning is "advanced knowledge," the knowledge structure is then developed, corrected, and improved on an ongoing basis to explain the past, present, and future and help solve problems social life through the best thoughts and attitudes and actions.
4. They apply the inquiry model in social studies learning to apply simple research methods to answer social problems.
5. Integrate Powerful social studies learning as mandated by the National Council for the Social Studies, namely: *meaningful*, integrative, value-based, challenging, and active) (Mutiani et al., 2021; Sapriya, 2009).

This abstract thinking ability is an essential aspect of intelligence, but not the only one. The aspect emphasized in thinking abstractly is the effective use of concepts and symbols in dealing with extraordinary situations in solving a problem. The ability to think abstractly cannot be separated from knowledge of concepts because thinking requires imagining or describing objects and events that are not always physically present. People who have good abstract thinking skills can easily understand abstract concepts well. In his study, the disciplines of the social sciences are always related to human social life. To a certain extent, human social life is a life that is free from external influences and can be said to be diverse and very creative.

Social life is a life that is much higher than biotic life for animals and plants. Suppose the pattern of biotic life is strongly influenced by hereditary life, the natural environment, and instincts. In that case, the pattern of social life can be said to be trying to do something different from what has been done for generations, trying to dominate the natural environment, and being influenced more by intelligence and feelings than instincts. Human social life cannot be separated from the ability of community members to think abstractly. All existing objects and equipment cannot be separated from existing abstract thinking.

What can be seen clearly, the symptoms/phenomena studied by social science are often impossible to know with the five senses even when using assistive devices. The phenomena of life that are developed in concepts such as love for the homeland, the spirit of nationalism, power,

strength, disappointment, and so on are abstract. Suppose a physicist can see the actual form of ions, neutrons, protons, and even the smallest micro-organisms with the help of an electronic microscope. In that case, social scientists can only see the actual parts connected to a concept based on abstract thought.

Concepts developed in the social sciences are always abstract. This thing that marks abstraction of thinking in the disciplines of social sciences is the distance between those who study the disciplines of the social sciences and the phenomena studied. The distance between those who study social science disciplines and the phenomena studied can occur because of the time element and geographical elements. Those who study the disciplines of the social sciences learn about an event that occurred in the past, which often has no direct connection between the present and is no longer recognizable. Likewise, those who learn something beyond their geographical reach must study social systems elsewhere.

Kuhnian's paradigmatic analysis method is part of the scientific revolution initiated by Thomas Kuhn. This method emphasizes transforming the old paradigm into a new paradigm that brings more alternatives. The process described in the development of science is a cycle of how normal science has dominated all scientific problems to date. The paradigms here are played by scientists that dominate the paradigm. According to Kuhn, there are two meanings. First, paradigm means the whole constellation of beliefs, values, and techniques shared by particular scientific community members. Second, the paradigm shows a kind of concrete puzzle-solving element which, if used as a model, pattern, or example, can replace explicit rules as the basis for solving problems and standard unfinished puzzles of science.

The usefulness of the Kuhnian paradigmatic analysis method as a solution to describe the problem of abstract thinking difficulties in children in junior high school is described as follows:

1. Researchers can see that the capacity of the paradigm can be used to anticipate problems faced by the community.
2. Provide an understanding that the paradigm is the primary element in the development of science.
3. Provide a new perspective that certain groups of scientists can oppose every paradigm supported by normal science due to new phenomena in society.
4. Describing the problem in a sequence is not only based on evidence but also based on values.
5. It gives the view that the scientific revolution was opened by a growing awareness marked by a subdivision view of the scientific community that tends to be narrow, namely not enable another old paradigm.
6. Contribute the thinking process to science so that it is open-ended. So the theory is used according to the situation of community activities.

CONCLUSION

Social studies subjects take on the role of providing a broad and in-depth understanding of related fields of science, namely: (1) Introducing concepts related to people's lives and their environment; (2) To equip basic skills for logical and critical thinking, curiosity, inquiry, problem-solving, and skills in social life; (3) Fostering commitment and awareness of social and human values; and (4) Fostering the ability to communicate, cooperate, and compete in a pluralistic society, both at the local, national and global levels. The scope of social studies is humans' social, economic, and cultural behaviour in society in the context of changing space and time. Therefore, the community becomes the primary source of Social Studies. The problem of difficulty in abstract thinking in Social Studies Learning in Junior High School because three main problems, namely: 1) Social studies learning that has not optimized critical thinking skills through the meaning of concepts; 2) Learning orientation is predominantly verbalized, and 3) Evaluation is oriented towards low cognitive. Kuhn examines each scholar's thought and work in detail in paradigmatic

analysis and reveals his contribution to the scientific revolution. Epistemologically, this is a fundamental issue related to clarity and certainty for every member of the PIPS community regarding ways of seeing the world and practising science in it and a change towards a new paradigm which has further implications for the need for a new and more rigid definition of the field. Social studies learning dimensions are explained in the form of social action. Social studies were learning conditions of abstract thinking in the process of causality. The reconstruction to solve the problem of difficulty in abstract thinking in social studies subjects in junior high schools is carried out as follows: 1) Teaching social studies as integrative social studies, 2) implementing social studies learning using a trans-disciplinarity approach, 3) conveying that social studies learning is "advanced knowledge, 4) Application inquiry model, and 5) Integrate Powerful social studies learning.

Kuhnian's paradigmatic analysis method is a method that examines the problem of revolutionary scientific developments. Kuhnian's paradigmatic analysis begins with paradigm 1, anomaly, crisis, revolution/reconstruction, paradigm 2, and verification. Paradigm is meant by unified idea is accepted by a commitment by a community of scientists within a certain period. Then, as a result of the emergence of new symptoms, this old paradigm will fall into several stages of the development process, namely anomaly, crisis, downfall (revolution), and finally, the emergence of new ideas that replace the position of the old paradigm with a closing process, namely verification of the objective probabilities. In terms of usefulness, Kuhnian's paradigmatic analysis method is: 1) see that the capacity of the paradigm can be used to anticipate problems faced by the community; 2) Provide an understanding that the paradigm is the primary element in the development of science; 3) Provide a new point of view that every paradigm supported by normal science can be opposed by new phenomena (anomaly); 4) Describe the problem sequentially not only based on evidence but also based on values; 5) the scientific revolution was opened by growing awareness, and; 6) Contribute the thinking process to science so that it is open-ended.

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