



The Implementation of IPAS (Natural Science and Social Studies) in Elementary School: Learning Plot and Teacher Consideration

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ABSTRACT

The policy IPAS (science and social studies) is a new phenomenon in education. This study aims to determine the implementation and considerations of teachers in carrying out IPAS learning. This research involved fourth-grade teachers at an elementary school in Bandung City. The method used is a case study with a qualitative approach. The instruments used are interviews, observation, and documentation studies. Data analysis uses the Miles and Huberman technique. The results showed that the teacher's efforts to plan, use the elements, and determine the plot specifically in IPAS learning with consideration to the student's needs, the effectiveness and efficiency of time, facilities and infrastructure, suitability of materials and elements, there are the differences felt by the teacher in the form of challenges as well as solutions that found. In conclusion, science learning is not a thematic or integrated learning process, but linked or connected because of some of the material in the book and the flow of learning objectives where science is more dominant and social studies is a support, and vice versa. These findings can be utilized as a reference and consideration in making policies and implementing science learning for other schools.

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1. INTRODUCTION

The era of disruption produces rapid and massive alteration, marked by rapidly changing social structures. It encourages every individual to have a dependence on technology, some jobs disappear, and every individual has the same opportunities and competitiveness. Individuals have the choice to reshape or create something new (Fikri, 2019). Naturally, education is a learning experience that lasts a lifetime (Kadir, 2015). Education is easier to achieve nowadays, as well as a wider open competition. The government's solution in improving the quality of quality and competitive human resources (HR) is through education. The policies made ultimately boil down to the concept of preparing future generations of the nation. The nature of policies is generally problem-solving and proactive and provides opportunities (Aziz et al., 2020; Rozak, 2021). The primary foundation underlying the policy is the consideration of common sense based on needs in the field (Tawa, 2019). Education policy is a product used as a guide for making legal-neutral educational decisions; and adapted to the educational environment in moderation (Tawa, 2019).

The concept of Free Learning Education was echoed in 2019 to improve the education quality and be flexible towards freedom and self-disclosure as an educational institution. Merdeka Belajar is part of the Prototype Curriculum Design referring to several principles, including (1) disciplinary achievement standards paying attention to the principles of focus, steady, and coherent, (2) the ability to transfer interdisciplinary competence and choice, (3) originality, flexibility, and harmony, and (4) involvement, empowerment or independence of students, and empowerment or independence of teachers (Kementerian Pendidikan & Kebudayaan, 2020). In line with the times, the education process is no longer dogmatic in nature which gives birth to public service providers, but productive investment. Education as a benchmark for the progress of the nation and the state has a strategic role and is the initiator of the nation's progress (Nurkholis, 2013; Soraya, 2020). Education management is expected to be able to give birth to outputs that have the knowledge and skills according to the expectations of all parties (Simatupang & Yuhertiana, 2021). Based on this, appropriate and directed conceptions, policies, and education programs are needed. The integration of science and social studies is one of the uniqueness of the concept of Freedom to Learn to implement the prototype curriculum (Solehudin et al., 2022). Education in Indonesia has undergone continuous curriculum changes, including this latest policy which is the result of the latest curriculum and cannot be avoided (Rosmana et al., 2022).

Science and technology continually develop to solve the challenges faced. Stakeholders offer solutions for the continuity of learning to focus on science and social studies (hereinafter referred to as IPAS) which are expected to be learning solutions to improve literacy and numeracy competencies (Suryadien et al., 2022). The pattern of IPAS education should be adjusted so that the younger generation can answer and solve challenges in the future. Teachers can take advantage of natural and social issues in a universal context of science and the context of literacy and numeracy tests for students. In addition, ongoing science learning expects students to be able to manage the natural and social environment in one unit. However, this merger policy affected the boundary between IPA and IPS was biased. This situation is like repeating thematic concepts in elementary school. Students used to know IPA as a natural science and IPS as a social science, different from the current IPAs.

The previous research came from Aziz et al. (2020) revealed the educational policy analysis model. This research is motivated by the existence of policies without being based on the five values (setting the agenda, through policy formulation, policy adoption, policy

implementation, and policy assessment or evaluation). The preceding research carried out by Fitriyah & Wardani (2022) explores the independent curriculum paradigm for elementary school teachers. This research found that in the implementation of the Kurikulum Merdeka, there were still problems in substance and technically and between teachers gave an enthusiastic response in implementing this curriculum. Similarly, the science learning studied in this study is a product of an independent curriculum policy. Meanwhile, this study focuses on the teacher's point of view as the implementer of science learning in elementary schools.

According to this explanation, the research question is focused on how to implement science learning in one of the schools in the city of Bandung? And why do teachers take policies in implementing IPAS?

LITERATURE REVIEW

Natural Science in Elementary School

Natural Sciences is a systematic arrangement of findings by the scientists (Wedyawati & Lisa, 2019). Science learning focuses on three things, namely science products, science, and a scientific attitude approach (Sumintono, 2010). The scope of science subjects in elementary schools includes (1) living things and life processes such as humans, animals, and plants and their interactions with the environment, (2) objects or materials, their properties and uses such as liquids, solids, and gases, (3) energy and its changes include force, sound, heat, magnetism, electricity, light, and simple planes, and (4) the earth and natural phenomena include land, earth, solar system, and celestial bodies. (Sari & Sumarli, 2019). The purpose of learning science in elementary schools is to provide experience to students in planning and carrying out scientific work to form scientific attitudes and increase awareness to maintain and preserve the environment and natural resources. (Depdiknas, 2004).

Social Studied in Elementary School

Social studies, in elementary schools and in various educational institution, will not be separated from theoretical knowledge and understanding of reality in social life. Generally, social studies is a study field focusing on studying the realities phenomena and problems of each individual's live in society (Susanto, 2014). The focus of social studies is to shape the understanding, interpretation, and life of each, both as individuals and as social beings (Russell & Waters, 2022). The purpose of social studies is delivered in order to help the development of individual intelligence through the manifestation of understanding activities, social and intellectual skills, and fulfillment of participation to help solve problems in the social environment (Hanifah, 2008). With regard to the main objective is to develop personal dimensions including first thinking skills, second awareness of values and ethics, and third responsibility and contribution in society (Susanto, 2014). The social environment requires many positive contributions and roles from every human being. Especially for learning as a representation of a positive potential individual who has a sensitivity to social problems and a positive mentality and can solve everyday problems. Social studies are fundamentally related to various aspects of human life and human efforts to meet life's needs, both in terms of material, culture, soul, utilization of resources, management of welfare and governance, and procedures for maintaining human civilization (Siska, 2016). The scope of social studies encompasses four aspects, the first is social and cultural systems, the second is people, place, and environment, the third is economic behavior and welfare, and the fourth is time, continuity, and change. The socio-cultural system includes

individuals, families, and communities. Sociology is as a science and method, social interaction, socialization, social institutions, social structure, culture, and socio-cultural changes. Social studies in elementary schools have a scope of four major aspects, as first there is the environment and place and population, namely humans, second, there is a period, continuity, and transformational change, third there is a social and cultural structure, and fourth commerce and security.

2. METHODS

This research utilizes a qualitative approach. This research focuses on a deeper understanding of the social environment through a well-to-do and in-depth description from the perspective of the research subject. Therefore, this research used the case study method. The research subject was teacher who taught IPAS subjects in class IV of one of the elementary schools in the Bandung city. The consideration of research subjects was due to the uniqueness of the subject as the only teacher at the school who teaches science subjects. The research subjects were first given information as the primary research data source. Based on the results of the preliminary research, it was found that of the six grade levels, there was one class level, namely grade four, and one teacher who had science subjects. The instruments used include observation, interviews, and documentation studies. This research utilizes data analysis techniques by Miles & Huberman (1992) consisting of codification, data presentation, and conclusion or verification steps.

3. RESULTS AND DISCUSSION

The research focuses on the implementation of IPAS in one of elementary schools in Bandung city as a guard or pioneer in implementing subject integration policies. Approaches, models, strategies, methods, techniques, and tactics are various elements in learning process. The various types can be selected and matched with each other by the teacher so that the learning process can manifest according to the purpose. This research produced several themes as follows.

3.1 Learning Planning Efforts Carried Out by Teachers

In accordance of the observation results found that the learning process was carried out based on the learning implementation plan. Based on the results of the interviews, it was acquired the teacher's tips in planning the IPAS by conducting an analysis of learning outcomes and setting the flow of learning objectives that students want to achieve for one year. The flow of learning objectives is a benchmark in making teaching modules or the learning plan document IPAS created according to the characteristics of students, material content, and methods. In grooving form the teacher's result analysis, the teacher compiles teaching modules or lesson plans and prepares student worksheets (LKS) and learning media as effort to prepare science learning activities. Teacher tries to simply design it to enable students can achieve the objectives of learning. It is based on the learning outcomes set by the government and then analyzed into learning objectives. Based on the results of the documentation study, it finds that the flow of learning objectives between science and social studies subjects was not merged, but separated. Similar things are found in source books, such as between the sub-chapters having separate content between IPA and IPS. Therefore, the process of relating each other is implemenated by the teacher.

3.2 Elements of the Teacher's Preferred Learning Method

Based on the results of the interviews, various methods were used, such as direct instruction, scientific learning, demonstrations, cooperative learning, and role playing. Based on the results of observations, the learning model used by the subject is the cooperative learning model. The observation results show that the teacher presents concrete and contextual examples and provides time for students to ask questions.

3.3 Teacher's Consideration for Choosing Learning Elements

In response to the results of interviews with teachers, the reason for selecting the method is to review the character of the delivered material, the characters of students in the class, and the availability of facilities and infrastructure in schools. The teacher's assessment of cooperative learning is based on the results of students being able to learn to work together, accept the strengths and weaknesses of friends, formulate the most effective solutions in solving problems, and time is utilized effectively and efficiently. Furthermore, starting from the results of role-playing interviews, it allows students to have a clearer picture of phenomena or activities because they experience them directly through role-playing. The reason for the subject utilizing scientific learning is based on the effectiveness of training students in logical, critical and systematic thinking. The subject has a certain view that the cooperative learning model according to the age of the students is in the concrete operational stage. This is more meaningful if students work cooperatively with other students.

3.4 Particular Plot in IPAS Learning

According to the interview result, the subject of IPAS learning has a particular plot design. This condition also applies to any learning subject with the definite character because it comes from different disciplines. The particular IPAS plot used various methods or strategies depending on the suitability of the material. For example, students studied about economic activity using the role playing method and style material using the scientific learning method. In line with that, the results of the interviews revealed that in the implementation of IPAS, social interactions were sought to be built. This effort is carried out by providing time for group discussions, besides interaction between students is established and it is easy for teachers to monitor interactions and provide reinforcement. The subject divides the group of active students together with active students to avoid domination. Likewise, students who are less active are united with less active students so that they have the desire to achieve common goals. The assignment system is given to students in groups such as solving problems, playing roles, and making works.

3.5 Differentiation in Teaching IPAS

Based on the results of the subject interviews, there are differences in teaching natural sciences. The difference lies in the relationship between scientific material and its social influence, and vice versa, social material is related to its influence on surrounding natural phenomena. If in the past the two subjects were taught partially, then focus on just one when giving examples that are appropriate to the context of students. Even though this is a new way of learning, according to the subject, so far there have never been students who have complained about science and social studies subjects becoming natural sciences. Furthermore, according to the research subject, this is because students are used to learning thematically in the previous curriculum.

Efforts to link two different subjects are a challenge for research subjects. These challenges can be encountered before and during the implementation of the IPAS. Before carrying out learning, the challenge is to carry out an analysis of learning objectives from learning outcomes that must be carried out in depth and pay attention to the characteristics of students, the strengths and weaknesses of human resources (HR) in schools, and adjusting school effective hours. Meanwhile, during the implementation of the IPAS the subject had challenges in the evaluation aspect in the affective domain. This needs to be done through observing students one by one in learning activities. Based on the development of different students, according to the subject sometimes affective aspects appear in several meetings.

3.6 Teacher Solutions in Facing the Challenges of Teaching IPAS

The findings of the teacher's efforts were obtained through interviews that obtained findings. The teacher's way of conveying Science and Science as well as facing the challenges of teaching Science Science focuses on the material to be learned and becomes the learning goal. The material is associated with scientific or social aspects. For example, economic activity material is linked to science which is related to the everyday lives of students. The subject explained that learning media plays a complementary position or as a complement to teaching. The subject seeks to map students into study groups according to very active, active, moderately active, and less active categories to review the development of students' affective aspects.

3.7 Consideration for Choosing a Solution

The selection of learning media, based on the results of interviews with research subjects, is based on whether the media is suitable or not with the material. The use of media is based on indirectly providing information clearly, but the use of media as a tool makes it easier for students to construct their understanding. Group method determination is based on time efficiency and effectiveness. The choice of this solution invites positive feedback as students with low abilities slowly begin to show their potential.

This research focuses on the point of view of elementary school teachers as IPAS educators. Education policy should be a pedestal to the teacher as class manager. Stake holders take part as policy makers distribute learning objectives to be developed by each teacher according to creativity and considerations regarding the conditions of students and infrastructure. More than that, the teacher's role allows students' creativity skills to come up in line with creating a meaningful learning atmosphere (Arfandi & Samsudin, 2021). Accordingly, to fulfill this goal requires the teacher's active role in the learning planning process, that it effective and answers the needs of students (Munthe & Naibaho, 2019). Similar to the findings, the manifestation of various planning efforts implements appropriate learning processes for students.

Meaningful learning comes from students' exploratory activities through optimizing learning plans, so that they can provide a stimulus for students to be interested in learning (Syahid, 2019). In line with the principle of learning motivation, there are challenging assignments and involving the senses, students learn to enjoy learning outcomes if all the senses are optimally involved (Januari & Murtafi'atun, 2019). Based on the research findings, the various forms of assignments that teachers give to students as a whole involve all the senses of students.

Learning activities are carried out interactively, in addition to the manifestation of a student-centered learning approach. In line with the findings, without putting aside the

urgency of achieving learning objectives, the teacher discloses opportunities for students to interact through group work and question and answer. Strengthening interaction between students builds a group learning atmosphere that is cooperative, not competitive (Arjangga & Suprihatin, 2010). The cooperative learning is not just collaborating, but each student has a desire to support each other in understanding the material, group members are divided into low, medium, and high sections, consisting of the diversity of students, and the reward system is given to non-individual groups (Kurnia et al., 2014).

Students' thinking process, questions often arise that originate from everything, both through sight, hearing and feeling (Januari & Murtafi'atun, 2019). Provision of space to ask questions for students is an urgency. Interactive and reciprocal communication is not only constructed for the benefit of learning and increasing student participation, but also creates pleasant and comfortable situations. There is room to ask questions and mainstream social interaction in the middle of science learning, the information conveyed by the teacher influences students in the form of changes in behavior for the better. Given that the content of the Science of Science is a link between natural and social subjects, the opportunity to ask questions is the easiest way to bridge this bias.

Learning is a system that not only contains systematic and comprehensive steps, but also has components to support its implementation. The challenge of the research subject lies in evaluating affective aspects, while evaluation occupies an integral part in the learning process. Objectives, materials, media, strategies, and evaluation are components of learning (Hernawan & Susilana, 2006). Learning components are not only measured and selected for formal purposes. This needs to be carried out properly through actions that mutually form integrity, interact with each other, influence each other, depend on each other, and break through each other (Riyana, 2011). Between components influence by forming a chain until it ultimately leads to educational goals. Evaluation in the affective domain allows teachers to pay attention to the internalization and characterization of students. This is because this domain is the most dominant in controlling the attitudes and actions of students (Magdalena, 2020). In line with that, the subject utilizes the media as an auxiliary instrument in the learning process. Based on the findings, the subject conducts an analysis and conformity with the characteristics of students, human resources, and other considerations. Furthermore, the teacher can consider theoretical reasons (the crucial role of the media in increasing the meaningfulness of learning outcomes) and practical reasons, namely demonstrations, familiar to the teacher, being able to clarify the teacher's verbal messages, and creating active learning (Susilana & Riyana, 2009).

This research found the challenges experienced as well as the solutions created by teacher. Based on the findings, the consideration of solutions lied to students. While dealing with problems can consider (1) the health, mental and thinking abilities of students, (2) economic conditions and parents' knowledge, and (3) time, situation and geographical layout of the area where students live (Umam, 2020). Based on the findings, the teacher focuses on considering the first condition. It is evident from the answers to the subject interviews that emphasize the condition and position of the students as the primary points. Improving the quality of education is in line with improving the quality of education so that graduates are able to compete with other nations (Sani, 2013).

The teacher's consideration of the continuity of the learning process begins with an analysis of the needs of students. This findings is corroborated by Banathy, Romiszowski, Dick and Carrey, Gagne and Degeng's view positioning the analysis stage of student characteristics in a crucial and principal position (Septianti & Afiani, 2020).

In connection with the differentiation of student development, manifestation teacher's creativity is through the emergence of something that is better than before (Atmodiwiro, 2000). The success of the learning process lies in the flow that students can follow. Teachers should be able to establish and maintain harmonious relationships with love, a sense of comfort, a sense of calm, and familiarity, as well as fulfilling interpersonal relationships with students (Arfandi & Samsudin, 2021). The relationship between students and students is not just patron-client, but teachers know all their students individually (Ainiyah, 2016).

4. CONCLUSION

This study found that the Science of Science was carried out with a particular plan because it has characteristics other than other subjects, integration of learning elements, and reviews the diversity of students, facilities and infrastructure, effectiveness, and time efficiency, the suitability of the elements with the material. The IPAS policy paradigm should not be thematic learning. Natural Sciences and Social Sciences as two subjects that act as the dominant subject and one of them acts as a support that is linked to one another

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