Agility, Innovations & Prospects - Virtual Pedagogy During Physical Distancing
Case: Primary Education in Semarang, Indonesia

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ABSTRACT

Public policy, especially in the educational field, is essential to protect life in society. Public policy is closely related to government administration that aims to obtain public values, both related to public goods and public services. These values are needed to improve the life quality of both physical and non-physical. During the current pandemic, policies taken in the education field are essential to be addressed wisely in policy-making and its application. Physical distancing implemented in the COVID-19 pandemic has an impact on the students' learning quality and the implantation of educational values that shared responsibility between parents and teachers with a full comparison of time and space around parents. Independence and various innovations emerge using makeshift resources. This cultural change in virtual learning is the main objective of this paper. The qualitative research method collects data through in-depth interviews with several students, parents, and teachers as interviewees. This study found that the Indonesia Government has done several public policies by eliminating final examinations on necessary education students in primary education. Physical distancing is prioritized to break the corona virus's spread chain and not provide a new burden of quality testing to obtain general standards. However, there are some changes in the significant values implantation that arise; families and educators are not only as friends and parents in learning but also as "healers" for each other of psychological factors that occur due to an outbreak.

Keywords: agility, virtual place, virtual pedagogy

1. INTRODUCTION

Pedagogy, often understood as an approach to teaching, refers to the theory and practice of learning and how these processes influence and are influenced by learners' social, political, and psychological development. Pedagogy, taken as an academic discipline, is the study of how knowledge and skills are imparted in an educational context and considers the interactions that occur during learning. Both pedagogical theory and practice vary widely, reflecting different social, political, and cultural contexts [1].

Pedagogy is often described as an act of teaching. The pedagogy adopted by the teacher shapes action, assessment, and other teaching strategies by taking into account learning theory, student understanding and their needs, and individual student backgrounds and interests. Its objectives can range from continuing liberal education (general development of human potential) to more specific vocational education (delivery and acquisition of specific skills). Conventional western pedagogy views teachers as knowledge holders and students as recipients of knowledge (described by Paulo Freire as a "method of banking" [2], however, current pedagogical theory increasingly identifies students as agents and teachers as facilitators. Instructional strategies are regulated by the students' background knowledge and experience, the situation, the environment, and the learning objectives set by students and teachers [3].

Covid 19, which has been taking place since the end of 2019, has forced a substantial change in the learning process for the existing pedagogy science. Face-to-face is expensive and rare; on the other hand, online learning using the internet and information technology is the only option that is considered the safest at this time.

This study intends to provide an overview of the problems that arise as a result of this online learning process for elementary education school students, where the difficulties are not only related to limited facilities and infrastructure and internet networks, but there is also a need for innovation in the existing pedagogical system to become a new system that can increase learning motivation and develop students' interests and talents in carrying out their learning obligations during the COVID-19 pandemic, which is not yet known when it will end.

2. LITERATURE REVIEW

Education policy consists of the principles and government policies in the education sector and a collection of laws and regulations governing the administration of the education system. Education is essential to our life. Education happens in many forms for various purposes through many institutions. Therefore, education policies can directly influence the education that people of all ages do [4]. Thus, educational policies in connection with the COVID 19 pandemic period are compiled on a literature review which is arranged based on a hierarchy of needs to find the structure of findings as expected, as showed in Figure 1.

2.1. Definition of online education and learning policies

According to the United Nations, Policy is a guideline for action. They can be very simple or group, general or specific, broad or narrow, vague or clear, loose or detailed, qualitative or quantitative, public or private [5]. In this sense, the policy may be in the form of a declaration regarding a basic guideline for action, a specific direction of action, a program regarding certain activities, or a plan. Educational policy is part of State policy or public policy in general. Education policy is a public policy that regulates regulations relating to the absorption of sources, allocation and distribution of sources, and regulation of behavior in education.
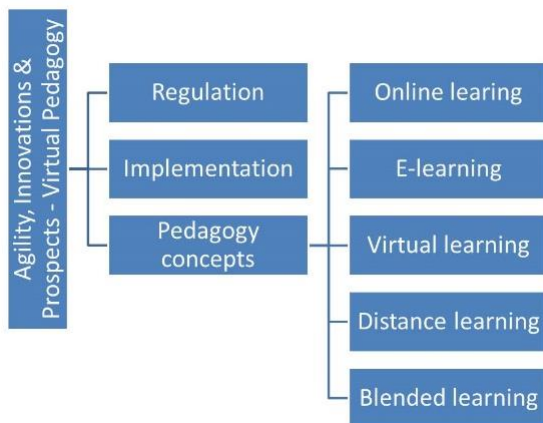

Figure. 1. Literature review diagram in online learning research. By Nursanty, 2020.

Educational policy is a decision in the form of guidelines for acting both simple and complex, both general and specific, detailed and loosely formulated through a political process for a direction of action, programs, and specific plans to carry out education [6]. In dealing with the Covid 19 virus, the Government, especially the Ministry of Education and Culture of the Republic of Indonesia, has issued several public policies in the form of regulations, namely: (a) Circular of the Minister of Education and Culture of the Republic of Indonesia Number 3 of 2020 concerning the Prevention of Corona Virus Disease (COVID-19) in the Education Unit and (b). Minister of Education and Culture Letter Number 36982/MPK.A/HK/2020 dated March 17, 2020, regarding Online Learning and Working from Home in the Context of Preventing the Spread of Covid-19. This policy is included in a reactive and proactive policy [7].

2.2. Implementation of Education Policies

No matter how good a public policy has been made will only be in vain if there is no effort to implement it because it will not have the desired impact or goal. Therefore, policy implementation is one of the crucial stages in the public policy process. It is consistent with the statement Edwards III edited from Akib [8] that policymakers' decisions will not be successful without effective implementation. According to Van Meter and Van Horn, as quoted by Arif Rohman, policy implementation is intended as an overall action taken by individuals (officials) or government or private groups directed towards achieving predetermined policy goals. The meaning of action here is actions that constitute a momentary attempt to transform decisions into operational terms, as well as ongoing efforts to achieve broad and small changes mandated by policy decisions [9].

As edited [10], Edward III proposes four variables or factors that influence the success of policy implementation, namely: a. Communication. To ensure the success of policy implementation, the implementer must know what he has to do concerning the policy's implementation. Besides, the target group must also be informed about the policy's goals and objectives. It is essential to avoid resistance from the target group. b. Resource factor. Without adequate resources, the implementation of policies will not run optimally. Resources can be human resources, namely implementor competencies, and financial resources. c. Disposition Factors. The disposition referred to here is related to the implementor's character and characteristics, such as; honesty, commitment, and more. The disposition of the implementor is one of the critical variables in policy implementation. If the implementer has a good disposition, he will carry out policies well as expected by policymakers' bureaucratic structure. The bureaucracy is an organizational structure in charge of implementing policies. It has a significant influence on policy implementation. To support the success of policy implementation, a Standard Operational Procedure (SOP) is needed as a guide for every policy implementer.

2.3. *Online learning*

Online learning (in a network) functions as a liaison between educators and students with an internet network that can be accessed anytime and anywhere. The online media used by research subjects can vary. For example, WhatsApp, Google Classroom, Website, a [11]. The terms online learning, virtual learning, e-learning, distance learning, and blended learning are all unique, each referring to using technology in learning, but the way students engage in the process is slightly different.

Several concepts need to be understood as part of online learning, including (i) Online learning, (ii) Virtual learning, (iii) Elearning, (iv) Distancing learning dan (b) Blended learning. Learning online has a broad meaning. Most of us would describe learning online in one specific way: studying on the computer. However, online learning is more nuanced and covers a spectrum of characteristics. The terms online learning, virtual learning, e-learning, distance learning, and mixed learning are unique; each refers to using technology in learning, but how students engage in the process is slightly different. In this research, the main principle that is tried to reveal is that education does not universally agree on what each term means. Some people use these terms interchangeably, while others have different definitions for the same term. According to professional opinion, the definitions below represent the most common, the most accurate, and the latest [12].

Online learning is learning, which always involves an internet connection and can include face-to-face virtual interactions (webinars, online lectures, virtual meetings). Use online tools for learning, such as online curricula or virtual rooms, or conferencing software. It can be considered as a mixture of virtual learning and blended learning.

Virtual learning is where instructions are delivered via the internet, software, or both. This method can be used within or outside the physical premises of an educational organization, using computers and online programs or software to enhance the learning experience. Often used in self-pacing (individual) formats or live web conferences between students and instructors. Students have remote access to content and instructors. Students can connect and interact with other students and their instructors online.

Whereas **E-learning** is a method that uses digital tools for teaching and learning, and technology facilitates the learning process. It can be used online or in the classroom. Its specific aim is to attract students from all locations and provide instruction to someone studying at a different time and place from the teacher and other students. Completion of courses, programs or degrees is distributed online. **Blended Learning**, the last concept, is mixed learning containing a combination of classroom and virtual learning. Ideally, integrate virtual learning in a way that individualizes and enhances teaching for students [13]. Figure 2 illustrates that all of the above meanings and concepts are a unity in the unified online learning concept, as expressed as the characteristics of learning using technology [14].

Figure. 2. The relationship between the various definitions of online learning. By Nursanty, 2020.

3. RESEARCH METHODOLOGY

This research is a descriptive study using a qualitative approach. This research was conducted in 2020, in a school environment in the city of Semarang.

The research duration was carried out for two months to quickly capture changes in learning methods and their impact on the effectiveness of the existing learning process—data obtained through in-depth interviews with informants who were taken purposively.

Thus, the research process and the results obtained refer to the case study research method, the results of which are a very in-depth exploration of a situation or event using systematic methods such as observation, data collection, information analysis, and crystallization of findings, as seen in Figure 3 above. It is hoped that the results of this case study will provide an in-depth understanding of why something happened and can be part of further research [15].
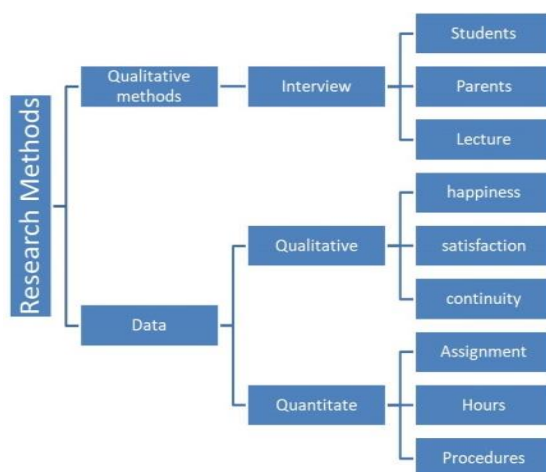

Figure. 3. Research methods of online learning systems. By Nursanty, 2020.

The research approach used is a case study on the problems that occur in students affected by the Covid 19 virus. This study aims to determine how teachers, students, and parents respond to online learning policies' application (implementation). The research was conducted in the city of Semarang. The informants in this study were teachers, students, and parents of students. The selection of subjects in this study was carried out by selecting subjects and informants based on the researchers' criteria. This study finds subjects that match the research theme by taking the subject purposively (based on specific criteria). The criteria for teachers who are the primary subjects are (1). Teachers who carry out the teaching process online, (2). Students who take lessons online (3). Parents of students.

The data collection of this research is using in-depth interviews, observation, and documentation. Interviews were conducted with teachers, students, and parents of students. Participant observation is carried out to find out the problems faced. This research uses the source triangulation technique to test the validity of the data obtained to fit the aims and purposes of the study. Data analysis procedures in this study include data reduction, data presentation, and conclusion drawing.

4. FINDING AND DISCUSSION

The Coronavirus or COVID-19 has been established by the World Health Organization (WHO) as a pandemic because it has spread to more than 100 countries in the world. A pandemic is defined as a situation when the entire world population is likely to catch this infection, and potentially some of them fall ill. Quoted from The Great Dictionary of the Indonesian Language of the Language Center (KBBI), a pandemic is an epidemic that coincides everywhere or covers vast geography.

Based on the diagram in Figure 4 above, the structure of the analysis was carried out on three groups of respondents, namely: (i) students are a group of secondary primary education students who are currently doing school from home, learning using various online methods according to their abilities that are not yet equal. The data collected is quantitative, which relates to the amount of learning time, how many tasks can be done, and how many steps need to be taken to get a perfect score or is considered complete in existing learning standards. Qualitatively, these data are then linked with other sources, namely parents and lectures.
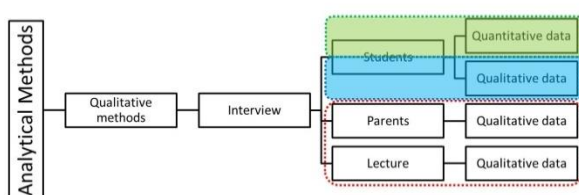

Figure. 4. Qualitative methods and results on various respondents By Nursanty, 2020.

This data collection technique refers to the Snowball sampling technique, a nonprobability sampling technique in which the existing study subjects recruit the next subject from among their acquaintances [16].

The COVID-19 pandemic has impacted various life sectors, such as the economy, society, including education. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) on Thursday (5/3) stated that the coronavirus outbreak impacted the education sector. Nearly 300 million students have disrupted school activities around the world and are at risk of impacting their education rights in the future. In Indonesia itself, the world of education has also felt the impact. If these conditions continue to increase, then it is confident that the education sector's impact will also increase. The most felt impact is students in educational service providers, such as schools at all levels, non-formal educational institutions to tertiary institutions. This study analyzes the impact felt by teachers, students, and parents.

The results showed data where the impact on teachers, students, and parents was as follows: The distance learning process when this research was conducted (April 2020) has been going on for almost two months since the implementation of the education policy "School from home" through the Ministry of Education and Culture Minister of Education and Culture Circular Number 3 of 2020 concerning Prevention of COVID-19 in the Education Unit, and Number 36962/MPK.A/HK/2020, teaching and learning activities are carried out online in order to prevent the spread of Corona Virus Disease. The readiness of teachers and students in-home learning varies, some are ready, forced to be ready, and they are not ready. Without any preparation, the teaching and learning system changes from face-to-face to online by utilizing technology. Several schools accustomed to using technological devices in the teaching and learning process certainly do not encounter any problems. However, the opposite applies to schools, teachers, and students running it for the first time.

Moreover, the area that has minimal facilities, both equipment and network. In this condition, various adaptation efforts were found in students in the form of an adaptation process. Meanwhile, adaptation itself is an essential part of cognitive development. Through the process of assimilation and adaptive accommodation, people can receive new information, form new ideas or change existing ones, and adopt new behaviors that make them better prepared to face the world around them [17], where the continuity of this research is depicted in Figure 5.

Educators/Teachers must ensure that teaching and learning activities continue even though students are at home; learning innovation is a solution that needs to be designed and implemented by teachers by maximizing existing media such as online media. The teacher conducts learning using the E-Learning method, namely learning to utilize information and communication technology.
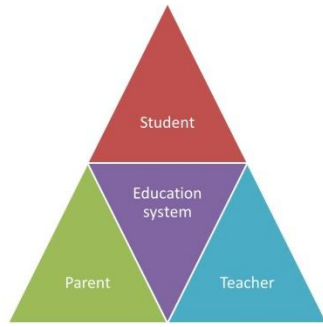
Figure. 5. The balance triangle of the education system for various respondents. By Nursanty, 2020.

The learning system is carried out through a computer (PC) or laptop connected to an internet network connection; the teacher conducts learning together at the same time using groups on social media such as Whatsapp (WA), telegram, Zoom application, or other social media as a learning tool so that they can ensure students learn at the same time even in different places. The teacher also gives measurable tasks but still ensures that the learners' learning is carried out step by step from the task each day.

Schools' problem is that there are still some teachers who do not master information technology, especially relatively senior teachers. Meanwhile, the teacher's problem cannot force students to take online lessons. From the results of interviews with teachers teaching grade 3 elementary school, they said that most parents still could not be invited to collaborate to support the online learning process because it turned out that there were still many parents who did not have an Android cellphone (SY, 20, 4, 2020). Another objection from parents is that they object to providing quotas. Meanwhile, interviews conducted with teachers who teach in relatively favorite schools where most students are from middle and upper economic families have almost no significant obstacles. Most of them have adequate support tools for online learning.

Most of the teachers use the Whatsapp group facility on their smartphones. The teachers give students assignments through the teacher's and parents' Whatsapp groups or their respective class groups. Assignments are given daily according to the schedule of the day's subjects and the hours that have been determined by the teacher. Students learn the material provided independently then work on assignments, which are then reported on the same day. The next day the materials and assignments will change again. Here it turns out that parents' role is enormous, especially for elementary school and junior high school students. Based on interviews with the parents of students, they did not mind helping their children do online assignments from school, but this was felt to be quite a hassle. Moreover, parents whose children are in junior high school tend to have more tasks than before learning through the online system because more than one teacher gives the assignments. Sometimes they even forget the assignments given by the teacher.
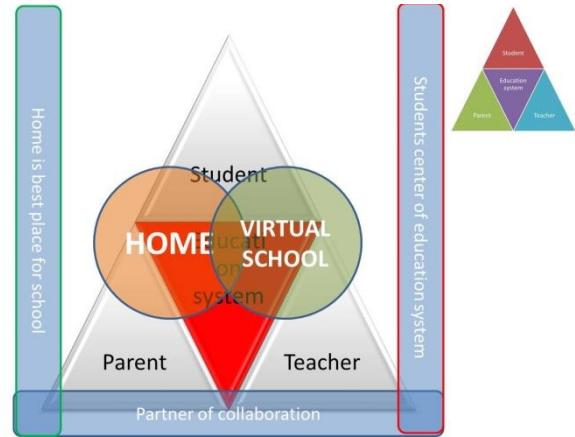

Figure 6. The Adaptation of SFH concept: The triangulation students – parent – lecture By Nursanty, 2020.

Most students feel bored; their enthusiasm for learning online is decreasing day by day. It is what the parents are mostly concerned. In the beginning, students were excited about using the online system, but it was decreasing every day, and tended to be bored. It is also felt by the parents of students, who are arranged in a triangular schema of parents and teachers' roles towards students. Schemas are cognitive frameworks or concepts that help organize and interpret information. Schemas can be useful because they allow us to take shortcuts in interpreting a large amount of information available in our environment [18].

This study's results are depicted in the form of the Figure 6 diagram above, where the resource triangle develops according to the research findings. In more detail, the roles and potentials of each will be explained. The diagram entitled The Adaptation of SFH Concept illustrates the adaptation process carried out by students, parents, and teachers in optimizing their common goals in educating the younger generation in this era of the COVID 19 pandemic. All learning experiences are demanding and requiring considerable enough adaptability. Adaptation is a term that refers to the ability to adjust to new information and experiences. Learning is adapting to our changing environment. Through adaptation, we can adopt new behaviors that will enable us to deal with changes [19]. Adaptation is one of the essential processes that guide cognitive development. The adaptation process itself can occur in two ways: through assimilation and accommodation [20].

In assimilation, students take information from the outside world and change it to fit existing ideas and concepts. Everyone has a mental category that functions as information, known as a schema, and is used to make sense of the world around them. When finding new information, sometimes, it can easily be assimilated into an existing schema. Think of it like having a mental database. When information fits easily into existing categories, it can be quickly and easily assimilated into a database. However, this process does not always run entirely, especially in early childhood.

One classic example: imagine a very young child seeing a dog for the first time. The boy already knew what a cat was, so he immediately considered him a cat when he saw the dog. After all, it fits into the existing schema for cats, as they are both small, furry, and have four legs. Correcting this error occurs through the next adaptation process, which we will understand better later.

Students also accommodate new information in the accommodation process by changing their mental representations to suit the new information. When someone comes across entirely new information or challenges their existing ideas, they often have to form new schemas to accommodate the information or change existing mental categories. It is like adding information to a computer database, only to find that no pre-existing category fits the data. In order to enter it in the database, one must create new fields or modify existing ones. For the student in the previous example who initially thought a dog was a cat, they may have begun to notice the main differences between the two animals. One barked while the other meowed. One likes to play while the other wants to sleep all day. After a while, he will accommodate the new information by creating a new schema for dogs and changing the existing schema for cats. Not surprisingly, the accommodation process tends to be much more complicated than the assimilation process. Individuals often refuse to change their schemas, especially if it involves changing deeply held beliefs.

Figure 6 above illustrates that the overall elements involved in the School from Home (SFH) process at the time of the COVID 19 pandemic consisted of students, parents, and lectures as a whole carrying out the adaptation process to their respective roles and places (location of existence). Students become the center of actors and subjects of online learning today. With the limited environment it can reach, the house becomes the whole place of study, the house as a home, a comfortable shelter with parents and family (home), and a virtual learning place with teachers and their parents. The education system becomes an equally essential and balanced field if the 3 (three) supporting elements function correctly, as seen in the triangular area in the middle and colored red.

Assimilation and accommodation both work together as part of the learning process. Some information is fed into an existing schema through the assimilation process, while other information leads to the development of new schemas or the total transformation of existing ideas through the accommodation process [21]. Likewise, what happened to students, families, and teachers during the COVID 19 pandemic. The limitations of technology become the accommodation process and the various learning methods that have become a habit at home for each other to become the basis for the assimilation process.

This study found that children do not just receive information passively. However, students also actively try to make sense of the world, continually forming new ideas and experimenting with them. In the diagram above, individuals add information to the existing schema. If a new experience causes the student to change or completely change existing beliefs, it is classified as accommodation, for example, using some new technology such as video makers, and more.

5. CONCLUSION AND FURTHER RESEARCH

From this research, it can be concluded that students face many obstacles in this learning system. Many parents also complain about this learning system. Ultimately it will have an impact on the quality of the learners. Especially for students whose homes are in the suburbs, they will find it more challenging to access the internet; thus, they will miss the information that has been conveyed or instructed. Positive impact; a greater sense of responsibility and desire to learn information and technology for teachers, students, and parents grows.

The negative impact that occurred, namely: (1) Less effective teaching and learning system; (2) Students find it more challenging to understand the material being studied; (3) Students overestimate this learning system, and as a result, they find it difficult to understand the lesson; (4) They sometimes forget the assignment given by the teacher or speaker.

The principal must innovate in carrying out supervising or coaching teachers to ensure that teaching and learning activities have been carried out by teachers and students even though using remote (online) methods. The principal can also provide solutions and motivation to teachers at school so that teachers who are not ready to use online media can be supervised and given solutions. For school supervisors under the auspices of the Provincial and City and Regency Education Offices, they can also innovate so that they continue to carry out supervision, and the objectives of their supervision can run well even though they do not always have to meet face-to-face.

Ultimately, it is believed that when students learn, they find a balance between the use of assimilation and accommodation. This process, known as equilibration, allows children to balance applying existing knowledge and adapting their behavior to new information. The learning process involves trying to interpret new information within the framework of existing knowledge (assimilation), making small changes to that knowledge to address things that do not fit into the existing framework (accommodation), and finally adjusting existing schemas or forming new schemas for adjusting to a new understanding (equilibration). Assimilation and accommodation are complementary learning processes that play a role at each stage of cognitive development. During the sensorimotor stage, some information is assimilated, while some experiences have to be accommodated. It is through this process that students acquire new knowledge and progress through the stages of development.

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