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Alternative learning media post-covid-19: uncertainty reduction theory perspective

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Abstract

This study aims to determine how users respond to the use of social media during online learning after the COVID-19 pandemic from the perspective of uncertainty reduction theory. This study uses a phenomenological research method, where data collection is carried out by means of Focus Group Discussion (FGD), which was conducted twice on 15 users of online learning applications. Through this research, it is known that the user's response from the compulsion in using the online learning model is that the subject tends to feel mostly bored, difficult to discipline, tendency to be lazy, and has the proclivity to be dishonest. In addition, in terms of emotional connection, teachers and students do not have a good bond, which is far different when using the offline learning modality. The majority of users prefer to utilize the offline learning system when the pandemic ends. One person prefers to use a hybrid system which is a combination of online and offline learning method.

Keywords: online learning media; phenomenology; the COVID-19 pandemic; uncertainty reduction theory

INTRODUCTION

The outbreak of the COVID-19 pandemic has changed the challenges of learning media and social interaction in the classroom (Zhu & Liu, 2020). Since it was announced by the government regarding the positive case of COVID-19 in Indonesia on March 2, 2020, the country has experienced significant events which initiated major changes in many aspects in the lives of every citizen of Indonesia. Not long ago, the central government and regional governments made a policy of Large-Scale Social Restrictions (PSBB), where this policy aims to limit all forms of activities that involve crowds in order to prevent the transmission of COVID-19 (Susilo et al., 2021; Susilo & Putranto, 2021). Educational

institutions are directly affected by the PSBB policy which forces the teaching and learning system to switch and adapt to an online-based system (online = in a network).

The purpose of education based on the 1945 Constitution of the Republic of Indonesia is an effort to educate the nation's life. Intelligence is not only intellectual, Intelligence is not only intellectual, but also emotional. However, Indonesia's national education is still far from ideal because unresolved problems have an impact on achievements that should be realized (Alkhowailed et al., 2020). Because it still focuses on intellectual intelligence in reasoning and solving problems by using elements of mathematics and logic rather than in understanding, controlling, evaluating, and expressing emotions. Other factors that influence education include communication technology, transportation, escalation of international markets, and the development of science (Suyitno, 2012). In addition, the government's role in finding solutions is crucial in solving problems in its community as the government does in resolving conflicts in other sectors (Fernando et al., 2019).

Initially, online education in Indonesia was seen as an alternative in learning activities. However, during the COVID-19 pandemic, the online-based learning system became a priority. This is so that students can continue to carry out teaching and learning activities when social distancing and physical distancing policies are enforced by the government (Simpson et al., 2020). So it can be said that humans are required to be closer to technology (Marta & Christanto, 2015). It is also a challenge for online education practitioners to realize online education properly and correctly. This sudden shift often causes many users (teachers, students, and parents of students) to become stressed, and often results in disrupted learning processes and results in learning objectives that cannot be achieved optimally (Angdhiri, 2020).

Stress is seen as a condition that arises because of problems in a person's life, both prthat from that come within (internal) and pressure or problems that come from outside (external). Stress can also be interpreted as an unpleasant condition that occurs because of the interaction between a person and his environment, which then causes various demands and creates an impact on the psychological, biological, and social life of a person or individual (Syahrani et al., 2021). In this study, the stress in question is pressure that arises from an academic process, in another explanation, it is a pressure caused by an online-based learning process where participants are required to continue to excel with all their limitations (Samovar et al., 2014; Steele et al., 2019).

The shift in learning methods has been going on for about a year, various ways have been carried out by educational institutions as an adjustment effort, but a number of students complain about these conditions so that disturbances arise which cause students to experience academic stress (Dhawan, 2020; Kumar & Nanda, 2018). This condition is experienced by students as they are required to continue to excel even with limited conditions. It is undeniable that the online learning process is more tiring and boring, because there is no direct interaction with teachers or even with their classmates. Moreover, there is a load

of tasks that must be completed. This condition if continued, it can certainly cause stress which then has an impact on the expected learning outcomes.

The theory used in this research is Uncertainty Reduction Theory (URT) which was first developed by (Berger & Calabrese, 1974). Uncertainty is a central theme of this theory, and looks at how people deal with it early in a relationship. "Uncertainty" can mean different things to different people, therefore a systematic arrangement is needed to interpret uncertainty (Kundzewicz et al., 2018). Uncertainty literature can help reduce product uncertainty and foster trust for consumers with similar physical properties and values (Lu & Chen, 2021). Uncertainty is significantly and negatively associated with knowledge sharing (Presbitero & Attar, 2018). Cognitive factors are more effective than affective factors in reducing uncertainty (Wang et al., 2021). Logic and approach to dealing with uncertainty are interrelated and have an influence on organizational practices (Maiorano, 2019). Uncertainty reduction strategies influence perceptions (Shin et al., 2017). By embracing uncertainty and adapting innovatively, complexity thinking enables systems actors to engage meaningfully and comfortably in systems transformation (Khan et al., 2018). In the use of crowdsourcing, it is seen to reduce the uncertainty of matching schemes (Zhang et al., 2018). Through URT, uncertainty is a pervasive experience for language learners. They experience uncertainty related to courses, cognitive processes, and social factors and they develop a positive and negative appreciation of uncertainty (Dağtaş & Şahinkarakaş, n.d.). Social media has the potential to reduce uncertainty. Managing uncertainty is the basis for educational practice (Wilson et al., 2021). To ensure that all students have the opportunity to develop CT skills based on cultural affiliation (Liyanage et al., 2021). In addition, students are assisted in managing uncertainty and promoting health services throughout the year (Romo & Luurs, 2021). In language learning as uncertainty reduction plays an important role prediction error in studying linguistic generalizations, and has implications for how generalizations interact with learning items (Vujović et al., 2021).

Based on the description above, the researcher sees that there are changes in culture or learning patterns that can occur in the future. This research is important to do to see how the response is experienced by students and see changes in educational or cultural patterns in the future due to the COVID-19 pandemic. Where digital-based learning is no longer considered as an alternative but as an important component in a learning system (Brevik et al., 2019). The long-term goal of this research is that the findings which will be obtained during this research can be used as a reference for other researchers or as a reference to prepare for a new era in education where the delivery of messages from teachers/lecturers to students/students is no longer conventional in the classroom, but there is also collaboration between conventional and digital systems reflecting future learning activities that occur due to the COVID-19 pandemic (Iivari et al., 2020). With a systematic mapping of stress management handling for each user of online learning, it will be able to facilitate the planning of modeling and adaptation of existing online learning media.

RESEARCH METHODS

This study uses a qualitative method with a phenomenological approach model. Qualitative research produces and processes descriptive data, such as interview transcriptions and observations. Qualitative research as a way to make direct observations on individuals and relate to these people to extract the data (Moleong, 2017). Phenomenological research seeks to uncover and explain the meaning of phenomena experienced by a group of individuals consciously. Researchers have the freedom to analyze the data obtained because there are no limits in the meaning and understanding of the phenomena studied in depth. The phenomenological approach describes the meaning of a life experience of several people about a concept or phenomenon (Tuela & Susilo, 2017).

This study uses a phenomenological approach model for several supporting reasons including: (1) The data obtained are in the form of descriptive narratives extracted from individual experiences in the interview process using the Focus Group Discussion (FGD) instrument. (2) this study reveals the meaning of a group of individuals related to the phenomena experienced in the level of consciousness.

FINDINGS AND DISCUSSION

Social distancing as one of the efforts to prevent the spread of the COVID-19 outbreak, making restrictions on space and time. This can also be felt in all routine activities in the learning system at every level of education. From pre-school to higher education. Many things become clear after observing carefully the changes in the learning system at each of these levels.

“Actually, I got a lot of opportunities to reflect during the online learning process, especially seeing how my child learns, how the teacher handles the class, and interacts with the students. In fact, one thing that I am grateful for is that I am directly involved with the learning process, right, because before the pandemic I only picked up the children because I was not allowed to go to class, so I only read from the daily activity diary reports, the same during the conference with the teacher, well, but from what I learned from this, I saw it firsthand, oh, this is what the teacher teaches and how do they interact... Even my child's teacher communicates if for example there is one child who breaks down, yes, the one who cries what is it,

"When it was announced if I'm not mistaken on March 31, PJJ started, now we used a whatsapp group, it was amazing until the teachers including me, especially me, it made me sick to read that whatsapp many children's assignments. Finally, we consulted with the school using classroom, which at that time we used google classroom.. It was a bit loose, meaning it was more directed at the child per class, yes, sir.. Then also for assignments, there was already a separate place, so it's rather good compared to using whatsapp what's amazing is that we have to see one by one, pictures of children's assignments sent via whatsapp.. When we use classroom, starting from March-June it's better than using whatsapp, we take Microsoft Teams training.. Then we decide on That July we used Microsoft Teams, where the

application is complete, besides we can give assignments to children, there is also a meeting." (Informant Ta)

Learning activities that usually take place in classrooms with a certain schedule, turn into learning in their respective rooms with an impractical time according to the learning schedule. This was born as a result of the call for social restrictions, which then created operational restrictions on education. This condition is better known as learning in the network (online). Actually, this learning system is very familiar and has often been done before, but only as an alternative among several forms of learning that are more effective.

"The positive side is that we as teachers are sometimes like the old generation... They can understand all kinds of applications, such as Google Classroom or Zoom, Google Meet. Technology, that's the positive side.. Keep in touch with

Why are our parents becoming more intense?... Why did we have this before, there was a barrier between parents and guardians and teachers?... So there are many perspectives from parents." (Informant Ar)

"I don't think Distance Learning is a bad thing, it means it's not always negative, right.. There's a lot that we learn and actually the challenge is that it should make us reflect like that.. Oh, that means this problem is this shortcoming, what should be improved .. If I see it because of that earlier, there is inequality in access to resources, inequality in knowledge and mastery of technology, because it's not even.. I also see this as a challenge for us as teachers, that we can't take approaches with the old paradigm here.. we have to leave that." (Informant Si)

"I hope so.. I want to be face-to-face, so that my child can wake up in the morning.. Then he can also interact with his friends. The game doesn't really come out of the house.. It's already a pandemic like this, it's forbidden, so the hope is that.. Can meet the teacher face to face so he can learn, he's actually a smart kid

only now because maybe it's online like this so it depends on google so he doesn't sharpen his brain, I think so.." (Sy informant)

As the sole choice in the context of preventing the spread of COVID-19, online learning gives its own color. The form of online learning can also be interpreted as limiting access to education. Teaching and learning activities that usually take place with direct face-to-face interactions between educators and students turn into indirect interaction learning. Restrictions on direct interaction in education sometimes occur in certain situations, but not in the context of social restrictions such as what people live in an effort to prevent the spread of the virus. In an effort to achieve learning objectives, this limitation has positive and negative impacts.

"Maybe some schools don't have a good system or the teachers are also age right, if I have to have movements from the government that make the teachers excited and the children too... So for learning problems, I really want a free application from the government." (Informant Ar)

"Under normal circumstances I prefer face-to-face, why... Because we can interact directly with students, sir.. So for example, if they have a problem, we can immediately deal with it, it's different sometimes when online, sometimes they are shy, some are shy those who won't ask anything are silent, even though if they chat, they will actually be answered, it's just that there are children who really don't want that, if we meet face to face, we can approach the reason why we can slow down like that.. (Informant Ta)

*"I hope so.. I want to be face-to-face, so that was so my child can wake up in the morning.. Then he can also interact with his friends. The game doesn't really come out of the house.. It's already a pandemic like this, it's forbidden, so the hope is that.. can meet the teacher face to face so he can learn, he's actually a smart kid
only now because maybe it's online like this so it depends on google so he doesn't sharpen his brain, I think so.."* (Sy informant)

Social restrictions have an impact on education policy. Learning must continue to be pursued, even with various consequences that may arise. Of course this is very influential in the adaptation period due to changes in the management of the learning system.

"Actually, I got a lot of opportunities to reflect during the online learning process, especially seeing how my child learns, how the teacher handles the class, and interacts with the students. In fact, one thing that I am grateful for is that I am directly involved with the learning process, right, because before the pandemic I only picked up the children because I was not allowed to go to class, so I only read from the daily activity diary reports, the same at the conference with the teacher, well, but from this lesson, I saw it firsthand." (Informant Si)

*"We as parents now know what the teachers have been teaching us so far... So we can see how they handle small children, who
Actually I don't have that knowledge basically.. then later, watching them grow and develop how the teachers take care of the children, then what is the position of my child in the class like, so I can see oh it turns out my child number three is shy even though he's a bit chatty at home, then the second one looks at my second child to be precise, he's also a bit shy but in class he's quite polite, right, he's pretty smart, then the first one is more attractive to his teacher and friends -His friends and thank God he got so many awards, so I know that there are so many things that I know from there.."* (Informant Kr)

The positive impact that is seen is evident in the condition of education practitioners who carry out academic activities with Work From Home (WFH). WFH makes each individual more independent in optimizing the use of Information Technology (IT). In the past, not all individuals had the habit of working with IT devices. However, the pandemic conditions have made them more accustomed to completing work with IT devices. Educational practitioners are subjected to coercive conditions that require them to instantly become proficient. Several practitioners' confessions show that this social distancing makes their creativity and competence increase in carrying out their respective duties.

"There is inequality in access, inequality in resources, inequality in knowledge and mastery of technology because it's not even.. I see also this is a challenge for us as teachers, that we can't take approaches with the old paradigm. We have to leave that behind, for example, like earlier, oh, there's a problem, there are many students whose answers are just google it. the internet is a necessity these days, you know." (Informant Si)

"Since lectures went online, other electronic consumption, such as cell phones, usually social media, for a few hours, it seemed like it was reduced, because I was already tired, looking at this... Looking at the screen zoomed in..." (Informant Au)

Educators and students at all age levels, merge themselves to recognize the ease of IT-based teaching and learning activities. Education personnel complete and tidy up their administrative work with the help of IT. Students, who are generally millennials, are increasingly in sync with their skills in completing IT-based learning activities and tasks. This wisdom is an unplanned and unexpected step, as an effort to develop the skills and knowledge of every element of education practitioners relevant to the times.

"When it comes to going online, at first, it's zooming, because elementary school kids are afraid of being bored, what are they afraid of, then they are given assignments, then nowadays it's every day and that's a burden. For parents, it's just like that, zoom every day, but For children, it turns out that they are stressed, even though it takes 2 to 3 hours to zoom in at most. It's better if the school meets with friends instead of zooming in every day with a lot of assignments, right", so for the country that I saw, most of the teachers just gave assignments but without any explanation so at home they weren't asked. again because most of the people who do the work are the parents, which I see like that..." (Informant Ka)

"The government promised to give quotas to lecturers and students or students but at this time I haven't received it, it hasn't been realized, yes, it's okay for me, it doesn't matter, but for people whose economy is mediocre, it's a pity, for

example there are five children then each one has to fill out a quota for online learning, now for me it's very unethical to study or study online, that's what I think, sir.. Yes, I do hope that this pandemic will end quickly, yes, although it may still take a while yes, maybe once a week there should be a face-to-face meeting, yes, with a record of 70% of vaccinations running... or the location must be tightened, so yes there will be setbacks if this continues online, because yes, honesty will be very difficult to account for, the quality of thinking will also be very difficult to work on.. That's me, I think sir..” (Informant Ri)

In addition to the positive impact, there are also negative impacts on the limitations of education practitioners in responding to conditions, personal readiness that requires assistance, even special guidelines for understanding IT as a preferred path to work. However, basic abilities are very diverse, resulting in non-uniform responses and the potential to create gaps in the achievement of learning targets.

The positive and negative response to the form of online learning was found in the comment variants of the following elements: students, parents, and teachers-lecturers on the results of the FGD. The comments of each of these elements have a strong message that represents their opinion in responding to online learning system-based learning activities during the pandemic. Students (pre-school level to middle level) express their expression on the technical arrangement of the implementation of learning activities and the completion of learning assignments, all of which feel like homework (PR) because all learning and learning activities last longer and can even interact more intensely with small communities (families) in a more meaningful learning situation.

Furthermore, the phenomenon is reviewed from the perspective of Uncertainty Reduction Theory. The life that humans lead often presents uncertainty (Yusmam, 2019). One form of uncertainty that can arise in human life is when humans are faced with new situations or people that make humans have to adapt, social life is filled with ambiguity (Berger & Calabrese, 1974). In the book Dainton & Zelle (2017), it gives an example of ambiguity or uncertainty in life with several examples of conditions, namely when a new individual works in a company, the individual wonders what suit to wear for the first day of work? How should he react to his superiors? and other questions related to the individual's adjustment to the new environment (Dainton & Zelle, 2017). In the context of this research, alternative learning media by utilizing online learning models demands adaptation. This is because online learning has never been done before. Through adaptation to online learning media, it will encourage the emergence of student understanding in participating in online learning. So that students' understanding that arises from the adaptation process will reduce errors (uncertainty) in the material presented by the teacher.

The theory that further explains the uncertainty in early relationships is the Uncertainty Reduction Theory (URT), which was first developed by (Berger & Calabrese, 1974). This theory focuses on the uncertainty that arises in the early stages of a relationship and how individuals use strategies to reduce that

uncertainty.

There are seven assumptions related to uncertainty reduction theory (West & Turner, 2019), that is:

1. People experience uncertainty in interpersonal contexts.
2. Uncertainty is an unpleasant state that produces cognitive stress.
3. When strangers meet each other their main concern is to reduce their uncertainty or to increase their ability to predict.
4. Interpersonal communication or interpersonal communication is a developmental process that occurs through several stages.
5. Interpersonal communication or [interpersonal communication](#) is the primary means of reducing uncertainty.
6. The amount and nature of information shared by individuals may change over time.
7. It is possible to predict the behavior of others in a legal fashion.

Uncertainty reduction theory presents a set of axioms about the relationship between uncertainty and communication. An axiom specifies a causal relationship that is assumed to exist between two variables. In fact, there are only 7 (seven) axioms in the uncertainty reduction theory proposed by Charles Berger and Richard Calabrese. However, with various studies conducted by several other experts, the seven axioms have been added.

Thus, the axioms in the theory of uncertainty reduction according to experts are as follows:

- Axiom 1: Verbal communication. The higher the amount of verbal communication that occurs between communication interactants, the level of uncertainty for each communication interaction will decrease.
- Axiom 2: Nonverbal expression of affiliation. Included in nonverbal affiliation expressions are eye contact, head nodding, hand gestures, and physical distance between communication interactions. The more the expression of nonverbal affiliation, the lower the level of uncertainty in the initial situation. Reducing the level of uncertainty can lead to an increase in the expression of nonverbal affiliation.
- Axiom 3: Information seeking. High levels of uncertainty can lead to increased information seeking behavior. The lower the level of uncertainty, the search for behavioral information will decrease.
- Axiom 4: The degree of closeness of the content of the communication. The high level of uncertainty in a relationship causes a decrease in the level of closeness of the communication content. The lower the uncertainty, the higher the degree of closeness.
- Axiom 5: Reciprocity. High levels of uncertainty result in high trade-offs. The lower the level of uncertainty, the lower the reciprocity. One of the easiest ways to reduce mutual uncertainty is through giving and receiving the same information at the same level of exchange. With less uncertainty, there is no need to exchange symmetrical information at a rapid rate.
- Axiom 6: Similarities. The similarity that occurs between the interactants reduces uncertainty, while the inequality results in an increase in uncertainty.

The difference in inequality between the interactants will increase uncertainty because the number of alternative explanations for behavior also increases.

- Axiom 7: Passion. An increase in the level of uncertainty results in a decrease in liking, whereas a decrease in uncertainty results in an increase in liking. Several theorists have presented evidence to suggest that there is a positive relationship between similarity and desire. In the view of Axiom 6, the tendency that people seek is similarity with others in order to reduce the uncertainty that tends to produce liking.

- Axiom 8: Shared networks. A shared communication network reduces uncertainty, while a lack of network sharing can increase uncertainty. This axiom is based on further research conducted by Berger and William B. Gudykunst in 1991.

- Axiom 9: Communication satisfaction. There is an inverse relationship between uncertainty and communication satisfaction. Communication satisfaction is defined as an affective response to the achievement of communication goals and expectations. This axiom was suggested by James Neuliep and Erica Grohskopf in 2000 and is an important axiom because it relates to the uncertainty of certain communication outcome variables.

Along with the development of the times and technology, the application of URT is increasingly being developed by researchers. The theory that started from explaining the initial relationship between individuals face to face, developed and applied to online-based research (online).

Passive strategies (reading or watching) and interactive strategies (such as giving comments or communicating with other users) that are taught by participants in an online learning media, are closely related to the high or low level of uncertainty about the information contained in the online learning media. Information developed by both parties (between the teacher and the students) has an important position in reducing uncertainty.

The interactive strategy carried out by the teaching participants can provide information to the teacher, so that online learning media can display learning materials that are in accordance with the tendency of the interest of the teaching participants. Through the display of learning materials that are considered by the teaching participants to be more relevant to their interests, it makes the teaching participants eager to take part in learning. Because they feel what they are looking for is already available in the learning material.

CONCLUSION

There has been a change in culture or learning patterns that have occurred due to the COVID-19 pandemic. Digital-based learning is no longer considered as an alternative, but as a major component in the current learning system. User responses from the compulsion in using online learning models are users mostly feel bored, difficult to discipline, has the proclivity to be dishonest, and tendency to become lazy. In addition, in terms of emotional connection, teachers and students do not have a good bond, unlike when using the offline learning model. The majority of users prefer the offline learning system when the pandemic ends

later. Only one person chooses a hybrid system which is a combination of online and offline method.

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