

Research Article

Integrating Local Wisdom and Character Education in Biology Learning during the COVID-19 Pandemic

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Cultural and character issues are problems that must be resolved through education, namely the learning process. Learning today is a shift from traditional learning to online-based learning. These problems can be solved by making innovations in online learning, one of which is by integrating local wisdom and character education. This study aims to determine the integration of local wisdom and character education in online learning-based biology learning. The samples in this study consisted of 20 biology teachers from 20 high schools in West Aceh and Nagan Raya districts. The instruments used were interviews and observation sheets. The data analysis used was qualitative data analysis which consisted of three stages, namely (1) data reduction, (2) data presentation, and (3) concluding. The results showed that the biology teacher in the research sample had integrated local wisdom and character values through assignments, material explanations, and teacher behavior. Biology teachers do not fully understand the understanding of local wisdom and character education so that teachers are still hesitant in making decisions to integrate local wisdom and character values in learning.

Keywords: Local wisdom; biology learning; covid-19 pandemic

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1. Introduction

The issue of culture and character in recent decades is still hotly discussed, both in print and electronic media. Various alternative solutions have been proposed, one of which has been proposed to overcome, at least reduce, problems of knowledge, culture, and national character through education [1]. In the education system, teachers are the driving force of education. Teachers play a key role in bringing about successful change in education [2]. Teachers represent a subsystem in classroom management as a whole system, and they take full responsibility in many roles [3].

Quality teachers are teachers who can solve student problems and can carry out the learning process by the demands of the times and national education. Musfah stated

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that teachers must have competencies by national education standards so that they can carry out their duties and roles properly and successfully [4].

Teachers as the vanguard in implementing and or implementing government programs through the teaching and learning process must always strive to make innovations [5]. One of the innovations that teachers can do is to integrate local wisdom and character values in learning. The integration of local wisdom is carried out to present a real learning process so that students can easily understand the material presented. Furthermore, local wisdom is important for students to stay close to the school and for teachers to engage with most learners [6].

In addition to local wisdom, Katilmis, A., et al stated that the integration of character education can have a positive impact on students, namely: (1) Character education program affects the students positively and considerably in a statistical way to gain scientific value., (2) Character education program affects the students positively and significantly in a statistical way to gain the value for being justness., (3) Character education program affects the students positively and considerably in a statistical way to gain the peace value., And (4) Character education program affects the students' academic success positively and significantly in a statistical way [7].

The COVID-19 pandemic has created a major wave of a paradigm shift in the Indonesian education system from physical classrooms to internet-based classrooms [8]. The wave of school closings prompted the use of online education platforms [9]. Yengin, et al stated that educators should be more intensive to adapt to the new learning environment [10]. Online learning can be defined as teaching and learning that involves the application of various technological applications. These applications can be in the form of WhatsApp, Edmodo, google class, zoom meeting, and so on.

Online-based learning does not reduce the role of the teacher in integrating local wisdom and character values to students. There are various ways that teachers can do it, for example, including local wisdom and character values in the electronic module. Real teachers are teachers who prepare to learn activities by considering how students can process the information conveyed [11]. Therefore, this research needs to be done to determine the integration of local wisdom and character values in learning biology in high schools during the Covid 19 pandemic.

2. Method

2.1. Approach and Types of Research

This research uses a qualitative approach with the descriptive type of research, which aims to systematically, factually, and accurately describes the facts about the integration of local wisdom and character education in the online-based learning process.

2.2. Sample

The sample in this study amounted to 20 biology teachers who teach in class X of 20 high schools in West Aceh and Nagan Raya.

2.3. Instrument

The research instrument used in this study was the observation sheet of online-based learning documentation and the interview sheet.

2.4. Data analysis technique

The data analysis technique used in this study is a qualitative data analysis technique consisting of three stages, namely (1) data reduction, (2) data presentation, and (3) concluding.

3. Result and Discussion

3.1. Integration of Local Wisdom

To streamline the implementation of learning activities, it is very important to pay attention to and apply aspects of local culture that support learning [12]. Local wisdom can help students connect knowledge and develop a positive cultural identity so that lessons are more meaningful [13]. Students can learn science by using more objects found in the environment, and the selection of objects is adjusted to their needs and understanding of concepts and learning styles [14]. Culture has the potential to be developed in Indonesia. The physical and socio-cultural environment has various potential aspects that can be integrated as additional teaching science materials [15].

In implementing the online-based learning process, the biology teacher as a sample in this study has integrated local wisdom in learning biology. The local wisdom that is most

widely used in biology lessons is in the form of plants and animals that are near and or that are often seen by students. Local materials can be sourced from all conditions and real-life and phenomena that exist in the environment around students. Local materials consisting of local wisdom, local potential, and local environment can be implemented in learning components to achieve the desired learning objectives for both general and specific purposes [16].

The integration of local wisdom is integrated through the assignments given by the teacher to students. The teacher also integrates local wisdom through material explanations by providing real examples to students. Local wisdom is integrated by the material being taught. The biology teacher as a sample in this study encountered a problem in integrating local wisdom because they did not understand the definition of local wisdom itself. So that the wisdom that is integrated into the learning process has similarities between materials.

From the results of the researcher's analysis, local wisdom in biology learning, especially in the districts of West Aceh and Nagan Raya, can be integrated into the form of (1) animals and plants that are often found in the communities of West Aceh and Nagan Raya; (2) Aceh Barat Qanun and Nagan Raya regarding protecting the environment; (3) Current conditions of West Aceh and Nagan Raya and natural disasters that have been experienced by the community; (4) The values / customs of the Acehnese people towards environmental preservation; (5) the value of deliberation to get a mutual agreement; (6) Plant and animal icons of Aceh province; (7) Mount Leuser biodiversity; and (8) social between communities.

3.2. Integration of Character Values

In Indonesia, character values based on national culture consist of religion, honest, tolerance, discipline, hard work, creativity, independence, democratic, curiosity, national spirit, love for the country, respect for achievement, friendly/communicative, love peace, love to read, care about the environment, care about social, and responsibility. Sugiyo, R stated that if the teacher consistently integrates character education in the subject matter, it will most likely produce students with good character [17].

The biology teacher as a sample in this study has integrated character values in biology learning in the form of:

1. Honesty. Honest character values are behaviors based on efforts to make themselves trustworthy in words, actions, and work. The integration of honest character

values is carried out by the teacher by directing students to fill online attendance at the beginning and end of learning with a predetermined time.

2. Responsibility. The character value of responsibility is a person's attitude and behavior to carry out his duties and obligations, which he should do, towards himself, society, the environment (natural, social, and cultural), the State, and God Almighty. The integration of the character values of responsibility in online learning is carried out by the teacher by giving time to collect assignments given to students. The teacher also directs students to do their assignments. Also, to train student responsibility in participating in online learning the teacher directs students to be actively involved in the learning process by directing each student to provide arguments related to the material being studied.
3. Religious. The value of the religious character is the attitude and behavior that is obedient in implementing the teachings of the religion they adhere to, is tolerant of the implementation of the worship of other religions, and lives in harmony with followers of other religions. The integration of religious values is carried out by the teacher by inviting students to pray before and after learning. At the beginning and at the end of the lesson the teacher wrote a short message inviting prayer through the WhatsApp application.
4. Cooperation. The character value of cooperation is an effort that is carried out jointly on duties and or orders wholeheartedly. In integrating the character values of cooperation, the teacher invites students to have discussions in learning.
5. Discipline. Discipline character values are actions that show orderly behavior and obey various rules and regulations. The integration of teacher discipline values carries out the online learning process according to the predetermined time.

4. Conclusion

The teacher has integrated local wisdom and character education in learning biology during the pandemic using distance learning (online). Local material that is integrated by the teacher in biology learning is fact material known to students. The integration of local wisdom is done through assignments and material explanations. While integrating character values, biology teachers have integrated character values in the form of honesty, responsibility, religion, cooperation, and disciplinary values. The integration of character values is integrated through assignments, material explanations, and teacher behavior.

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