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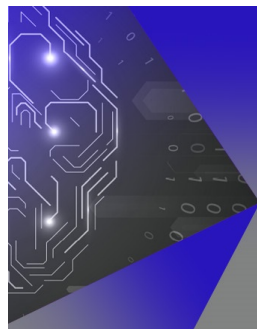
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# Religious Values in Biology Learning: A Need Analysis of an Islamic-Integrated Reference Book of Medicinal Plants Typical of Central Kalimantan

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**Abstract.** People of Central Kalimantan have knowledge and utilization of plants as a medicine for generations inherited from their ancestors orally with no written archives. The research aims to find out the potential of the importance of developing an Islamic-integrated reference book of medicinal plants typical of Central Kalimantan. The book is a supplement in a lecture that contains the utilization of medicinal plants in the people of Central Kalimantan integrated with the utilization of plants as a medicine according to Qur'an and Hadith with to instill religious values of a healthy lifestyle and the relationship between humans and natural environment. The research is descriptive qualitative research using observation method, interviews, and surveys. The data collection uses Google Form questionnaire distributed to 24 students of semester 6. The interview question sheets are given to three lecturers of Biology Education Study Program FTIK IAIN Palangka Raya including the observation sheets. The survey result indicates that 68% of respondents know information about medicinal plants typical of Central Kalimantan from websites, 48% of respondents know the information from research journals, and 28% from their families. All respondents (100%) state the need for developing a reference book of medicinal plants typical of Central Kalimantan. The reference book is expected to become an additional information material on the utilization of medicinal plants by the people of Central Kalimantan and the utilization of medicinal plants described in Qur'an and hadith as support in lecture to train religious values of a healthy lifestyle and the relationship between humans and natural environment.

**Keywords:** Reference Book, Medicinal Plants, Central Kalimantan, Integrated Islam

## INTRODUCTION

Healthy lifestyle trend by going back to nature drives society to shift to using natural ingredients to minimize chemical drug's side effects [3]. It is necessary to study and maintain the local wisdom utilizing plants as a medicine [17]. The government emphasizes the need for local potentials to be included in learning [13]. The inclusion of local wisdom into learning is feasible due to the support from the government, private sector, education institutions, and communities [7]. The implementation of local wisdom-based learning through the utilization of plants as a medicine aims to introduce and maintain the existence of local wisdom amid the incessant modern medicine. The implementation is realized in the form of a reference book. The content of the reference book has the discussion substance focusing on the path of the field of science [16]. Studies disclosed in the reference are innovations in the

discussion of medicinal plants typical of Central Kalimantan as support in learning process according to the vision and mission of the Biology Education Study Program, Department of PMIPA, FTIK IAIN Palangka Raya to perform a superior and characterized local wisdom-based learning. Having character in developing understanding related to biology concept based on Islamic religious values that founded on Qur'an and hadith [6]. Biology of Islamic integration aims to build spiritual and intellectual morals towards modern knowledge, for example, the Qur'an explains the benefits of plants as a medicine.

Character education through the integration of Islamic values can be done not only through religious education but also by training in daily life through learning, such as healthy living habits and the relationship between humans and the natural environment [9]. A healthy life is part of Allah's command. As God's command, His servants are given a chance to maintain their bodies earnestly and totally. The current healthy lifestyle (back to nature) trend brings society back to using natural ingredients including treatment with medicinal plants [14]. The relationship between humans and the universe stated in the Qur'an indicates humans who play more roles in creating prosperity. Humans need nature to live and perform their activities; vice versa, nature needs humans to maintain and preserve it so it remains in a condition suitable for habitation. Allah orders humans to preserve and prosper the earth as their footing wisely and not to damage the environment.

## METHODOLOGY

The research was a stage of development research according to ADDIE, namely analysis stage, especially need analysis. Need analysis aimed to identify problems and needs related to the necessity to integrate Islam in learning and look for potential solutions to the problem. The research took place in March and April. The research respondents were determined using purposive sampling that consisted of students of semester 6 and lecturers of TBG FTIK IAIN Palangka Raya. The data collection technique used observation in botany and ethnobotany courses, surveys using a need analysis questionnaire, and semi-structured interviews. The analysis technique employed qualitative descriptive by analyzing collected data to identify problems and potential solutions found.

## RESULT

The observation results in the learning process found a fact that learning sources that give rise to local wisdom were not available in the botany course, especially in ethnobotany study. Ethnobotany is botanical science that studies the utilization of plants for the daily necessities of an ethnic group. Traditional knowledge of each tribe or ethnic group is passed down from generation to generation including the utilization of plants as a medicine to treat a disease [1]. The non-existence of local wisdom and Islamic integration in the learning sources does not comply with the vision and mission of the Biology Education study program FTIK IAIN Palangka Raya to perform a superior and characterized local wisdom-based learning. The local wisdom, in this case, is the utilization of plants as a traditional medicine that existed in Central Kalimantan. The goal is to introduce and maintain the existence of local wisdoms amid the incessant modern medicine. The number and types of medicinal plants in Indonesia, however, are still unknown; therefore, it requires thorough documentation on the utilization of plants as medication raw materials [4].

The results of the interview with Biology Study Program lecturers obtain a fact that to support the vision and mission regarding Islamic characters, the lecturers asked students to recite the Quran at the beginning of the lecture and quote Quran verses or hadith related to learning materials. The availability of learning sources that promote local wisdom was minimal. Based on this fact, the lecturers expressed the need for developing a learning source in the form of a reference book that can accommodate local wisdom and integrate Islamic religious values according to the vision and mission of the study program.

The analysis result of the questionnaire distributed to students found that students mostly acquired information about the medicinal plants typical of Central Kalimantan from information sources of websites and research journals, as presented in Table 1.

**TABLE 1.** Data of Information Sources on Medicinal Plants Typical of Central Kalimantan

| Type of Information Sources | Total |
|-----------------------------|-------|
| Website                     | 17    |
| Reference Book              | 7     |
| Text Book                   | 4     |
| Research Journal            | 15    |
| E-Books                     | 4     |
| Family                      | 8     |

The trusted sources of information on medicinal plants typical of Central Kalimantan, according to the students, were those from the research journals and reference books as indicated in Table 2.

**TABLE 2.** Data of Trusted Information Sources on Medicinal Plants Typical of Central Kalimantan

| Type of Information Source | Total |
|----------------------------|-------|
| Website                    | 2     |
| Reference Book             | 12    |
| Text Book                  | 2     |
| Research Journal           | 20    |
| E -Books                   | 3     |
| Family                     | 3     |

Regarding the source of information on the utilization of medicinal plants typical of Central Kalimantan that has integrated with Islam, 4 students found the source, whereas 21 students did not find the source as indicated in Table 3.

**TABLE 3.** Source of Information on Medicinal Plants Typical of Central Kalimantan that has Islamic Integration

| Islamic Integration | Total |
|---------------------|-------|
| Yes                 | 4     |
| No                  | 21    |

Students needed the Islamic integration in the reference source on the utilization of medicinal plants typical of Central Kalimantan since they considered them important to understand the utilization of plants as a medicine based on Qur'an and hadith. Moreover, they need to know the formulation process per the Islamic law to determine whether the drug formula is feasible and *halal* to consume. These reasons are part of religious values triggers the need for the application of religious values in the Biology learning process. Performing God's orders according to Islamic law is the reflection of worship value. Using plants as a medicine to treat a disease is part of moral value to the fellow human being [12] and religious value in the relationship with the environment. Based on the analysis results, the following data are obtained as presented in Table 4.

**TABLE 4.** Data of the Need for Information Source on Islamic Integrated Medicinal Plants

| Integration of Islamic Religious Values | Total |
|-----------------------------------------|-------|
| Yes                                     | 25    |
| No                                      | 0     |

The need analysis identify the unavailability of learning sources that contain the utilization of medicinal plants typical of Central Kalimantan as local wisdom in learning. Therefore, educational facilities for students as a group of the academic community are necessary to support college learning in relevant courses, such as Plant Systematics, Higher Plant Botany, and ethnobotany that discuss medicinal plant description, benefits, and the process in the form of specific reference book in the people of Central Kalimantan.

The reference book can be used as a reference to support lecturing activities in the higher education. The development of the reference book is essential as a learning source for students to increase knowledge of medicinal plants typical of Central Kalimantan and raise student awareness to utilize, maintain, and process medicinal plants as an effort to preserve the plants. The reference book is expected to provide learning motivation for students and opportunities to learn independently, adjust to students' psychological development, utilize plant natural resources, and be capable of making positive impacts by raising student awareness to preserve nature.

The reference book is chosen since discussion in the book focuses on certain studies thoroughly. Local wisdom studied is related to botany, namely the potential of the utilization of plants as a medicine by the people of Central Kalimantan since to preserve the knowledge of medicinal plants. The integration of Islamic religious values related to local wisdom is regarding the utilization of plants as a medicine to treat disease and the relationship between humans and the natural environment to preserve the medicinal plants. It is important to apply religious values for the heterogeneous people of Central Kalimantan that consist of various ethnicities since Indonesia has a strong philosophical foundation in religious life [10].

These substances are summarized in a reference book that is expected to be additional information material on the utilization of medicinal plants by the people of Central Kalimantan. Moreover, the utilization of medicinal plants explained in the Quran and hadith will support educational activities to train religious values of worship value, character value of the relationship between humans and between human and natural environment. The cultivation of religious values is not merely the duty of religion teachers since the dichotomy of religious sciences and non-religious sciences will lead to a lack of understanding [5].

Knowledge of the natural environment is not separated from Islamic religious sciences. The Qur'an teachings about natural environment need to be integrated into education; hence, student insight becomes complete between religion that comes from revelation and knowledge from sense [11]. Integration in science learning, especially biology, is important to foster students' religious values. Therefore, it requires reading materials such as reference books that discuss medicinal plants that are integrated with Islamic values. As a basis, development is carried out, such as research on the development of the Science Modules Integrated with Quran and Hadith to Improve Student Religious Character [8].

## **CONCLUSION**

Based on the need analysis, there is a need to develop a reference book on medicinal plants typical of Central Kalimantan that is integrated with Islam. The reference book will be an additional information material on the utilization of medicinal plants by the people of Central Kalimantan and the utilization of medicinal plants as explained by Quran and hadith as support in lecture to train religious values of worship value, morality towards fellow human beings and human and the natural environment.

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