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Integration of Islamic Concept in Teaching Biology at the University

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ABSTRACT

Biological science that is taught in most learning institutions has been secular in nature. Almost all of the biological processes, theories and principles are taught without referring to Islamic concept. The biological Science teachers need to apply and integrate the Islamic context in teaching biology in order that biological teaching in the university will be accepted under Islamic view, and biological teaching of Islam becomes part of the curriculum. This study aimed to describe the Islamic concept of teaching biology in Mindanao State University, Sulu, Philippines. This study is an observational descriptive study. The respondents were the biology teachers and students and other faculty members of Mindanao State University, Sulu, where this study was conducted. A set of questionnaires were the research data gathering instruments. The questionnaire was composed of three major parts: relevance of Qur'anic verses and biological concept, integration of Islamic context in the curriculum and awareness and perception toward integration of Islamic concept. The results stated most of the respondents are aware and have agreed on the relevance of biological and Islamic concepts. Therefore, integration of Islamic concept in teaching biology is necessary and the verses must be cited for recasting the biological concepts, theories and principles to avoid misconception on Islamic and biological science concepts.

1. Introduction

Biological science that is taught in most learning institutions has been secular in nature. Almost all of the biological processes, theories, and principles are taught without referring to Islamic concepts. There has been no integration or fusion of the biological science of Islam in the curriculum. At any rate, Islam is yet to become the complete alternative in responding to the rapid development of the secular-oriented curriculum of contemporary science. It is very unpromising that many of the researchers today have remained unfamiliar and passive toward the integration of the Islamic view in the teaching of biological science. Consequently, western knowledge continues to be victorious from one generation to the next. This resulted in the formation of a fragmented understanding of the reality of biological science.¹⁻⁵

Thus, the biological teaching of Islam must be integrated into the University, hence recognizing the unity of life and unity of knowledge in order to accept the true definition of life. Islam is a complete way of life, and biology is a science of life. Biological science teachers need to apply and integrate the Islamic context in teaching biology in order that biological teaching in the university will be accepted under the Islamic view and for biological teaching of Islam becomes part of the curriculum.⁶⁻¹⁰ This study aimed to describe the Islamic concept of teaching biology at Mindanao State University, Sulu, Philippines.

2. Methods

This study was a descriptive observational study. The respondents were the biology teachers and students, and other faculty members of Mindanao

State University, Sulu, where this study was conducted. A set of questionnaires were the research data gathering instruments. The questionnaire was composed of three major parts: relevance of Qur'anic verses and biological concepts, integration of Islamic context in the curriculum, and awareness and perception toward integration of Islamic concepts. An interview with the different educators was conducted. The generative approach was used to analyze the data. This was to expound the ideas presented by various scholars.

3. Results and Discussion

Biological teaching is found to be consistent with the Islamic context. Biological teaching of Islam is one approach to redirecting or reforming the recent curriculum adopted by Muslims in the university in order to bring Biology to Islamic principles. Biological teaching of Islam in the curriculum is to recover and attain the accepted and right principles of biology. The biological teaching of Islam is for everybody to recognize the creator of life.

An expert said biology is a science of life and Islam is a complete way of life. The learners who recognize Divine Power will think that life is but Allah's creation. Their biological knowledge may lead them to confirm their belief in Islam. The inclusion of the biological teaching of Islam in the curriculum is very much needed by Muslim teachers and learners in their journey for scientific advancement and moral discipline.

As far as the level of awareness is concerned, as found out from the responses of both students and teachers, the majority of the students and teachers are aware and agree. In other words, they are not innocent of the conformity of biology to the Islamic context. Most of them perceived that Biology is also under the teaching of Islam, provided all wrong concepts are recast or checked to eradicate the misunderstanding or wrong perception. They are aware and agree that there are verses from the Holy Qur'an as the basis for biology.

Of the teacher respondents, the majority of them are found "aware" and agree on the conformity of biological science to Qur'anic verses. In fact, they claim that most areas of biology are in accordance with the Islamic view as reflected in their response to the questions posed to them by the researcher in relation to sex determination, functions of the genes, theory on the origin of life, characteristics of life, vegetative reproduction, germination and seedling development, cerebrum, and creation of man and embryonic development.

On the gender determination, among the student respondents, only 25 % of them are found to be very aware, 68.75 % of them are aware, 6.25% of them are moderately aware, and none of them is unaware. This indicates that the majority of them have the knowledge that biology is in accordance with Islam. In other words, they have the idea that the sperm and the eggs, as explained in biology, are also mentioned in the Qur'an. Also, they are aware and agree that the biological explanation that the sperm is the determinant of gender has long been emphasized in the Islamic context. Also, they are aware that when the Y-bearing sperm fertilizes the egg, then the zygote is male. From this, the respondents perceived that these two processes are related.

Only 25 % of participants are very aware of adaptation, 68.75 % of them are aware, only 6.25% are moderately aware, and none is unaware. It can be said that they are "aware." This points out that the student respondents have the knowledge that any living thing must undergo changes to adapt in their environment in order to survive. This notion about adaptation is also reflected in the Islamic realm, as exemplified in verse 11 of chapter 13, which states that "*verily! Allah will not change the good condition of a people as long as they do not change their state of goodness themselves.*" Now, the students perceive that there is conformity of biological adaptation to Islam.

There are 12.5% of the respondents found themselves very aware of the special creation theory, 68.75 % are aware, 18.75% of them are moderately aware, and none is unaware. This implies that most of

them are aware. This means that the biology students have the knowledge of the statement about the special creation as explained scientifically is also under the context of Islam. This indicates that the selected biology learners believed that in the Holy Qur'an, Allah says, "*Verily, we have created all things with Qadar (Divine preordainment) of all things before their creation*".

Most of the selected biology students are aware that biogenesis origin is one of the accepted theories on the origin of life, which states that life comes from preexisting life. The respondents believe that this topic has a linkage with the Qur'anic verses. Because of the belief that biogenesis origin is accepted in Islam, 18.75% of the respondents are very aware, 68.75% are aware, 12.5% are moderately aware, and none are unaware. These are the responses and perceptions of the biology learners toward the conformity of biological principles to Islamic viewpoints.

The student-selected respondents are all knowledgeable enough about the cerebral part of the brain (cerebrum) and its conformity to the Qur'anic context. As a result, 68.75 % are very aware, 18.75% are aware, 12.5% are moderately aware, and none are unaware. This shows that these students have agreed and believed in the coherence and parallelism between the secular explanation and the biological teaching of Islam on cerebral functions. A study stated that the functions of the cerebral parts of the brain are the site of intelligence, memory, language, and human consciousness. It is analyzed that most of the respondents have agreed, favored, and believed that the selected biological processes, theories, and principles are relevant to the cited Qur'anic verses based on their responses.¹¹⁻¹⁵

4. Conclusion

Most of the respondents are aware of and have agreed on the relevance of biological and Islamic concepts. Therefore, the integration of the Islamic concept in teaching Biology is necessary, and the verses must be cited for recasting the biological concepts, theories, and principles to avoid

misconceptions about Islamic and biological science concepts.

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