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The TALUBA Learning Model for Fostering Talu Ba (*Baiman, Bauntung, Batuah*) Character in Biology Learning

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Abstract: Character development remains a challenge in higher education science learning, which often emphasizes cognitive outcomes while neglecting affective aspects rooted in local wisdom. In biology education, learning models that systematically integrate authentic character values are still limited. This study examines the implementation of the TALUBA Learning Model, designed to develop Talu Ba (*Baiman, Bauntung, Batuah*) character in biology learning. Using a quantitative descriptive design, the study involved 28 students in a General Biology course in the Biology Education Department. Model implementation was observed through structured observation sheets across three meetings, while students' Talu Ba character was measured using a validated self-assessment questionnaire. Results show that the TALUBA model was implemented very well by lecturers (M = 4.86) and students (M = 4.44) across its six learning steps. Students' Talu Ba character also reached a very good category (M = 4.63). These findings indicate that the TALUBA model is highly practical and supports character development based on local wisdom in higher education biology learning.

Keywords: TALUBA Learning Model; Talu Ba's Characters.

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Introduction

Several phenomena in the higher education environment indicate that student character issues remain a serious challenge in higher education practice. Indications such as low academic responsibility, lack of ethics in communication, weak social awareness, and a pragmatic tendency in completing tasks reflect that affective competencies have not developed optimally. This situation suggests that the learning process tends to emphasize cognitive achievement, while the development of attitudes, values, and character has not been integrated in a planned and sustainable manner. In fact, universities have a mandate not only to produce graduates who are intellectually intelligent, but also strong in character, integrity, and noble morals (Law Number 12 of 2012 concerning Higher Education) so that systematic and innovative efforts are needed through the development of learning models that explicitly place affective competencies as the main objective, so that the character building of students can take place in a structured, measurable, and sustainable manner in every lecture process.

Learning models are one of the strategic instruments in optimizing the educational process in higher education (Bin, 2019). Ideally, higher education should not only produce graduates who are cognitively superior and psychomotorically skilled, but also have affective competencies reflected in their character, attitudes, values, and morality. However, the reality of classroom learning is often still predominantly oriented towards mastery of concepts and technical skills, while the development of student character has not been systematically integrated into learning design. This condition shows a gap between the holistic goals of higher education and the learning practices that take place.

As professionals, lecturers have a responsibility to design learning that not only transfers knowledge but also shapes students' character. The learning model serves as a conceptual and operational framework that guides lecturers in planning, implementing, and evaluating learning (Octavia, 2020). The development of learning models is a form of innovation that can direct the lecture process to be more conducive, creative, and meaningful, thereby improving students' overall learning outcomes, including cognitive, psychomotor, and affective aspects (Djalal, 2017). Therefore, the development of learning models that explicitly target affective competencies is an urgent need in the context of higher education.

The issue of low attention to affective aspects is also reflected in the relatively low quality of attitude assessment implementation (Megawati, 2022). In fact, learning success is not only measured by academic achievement, but also by the internalization of values and attitudes that are evident in students' behavior after participating in the learning process (Nasution, Rahmanita, & Muzaini, 2023). In the context of biology learning, for example, the material not only contains scientific concepts about living things but also has reflective and spiritual dimensions that can foster awareness of order, complexity, and divine values in life (Inneke, Adinugraha, & Silalahi, 2022). If designed appropriately,

biology learning has great potential in shaping religious character, scientific responsibility, concern for the environment, and an attitude of respect for life.

This is in line with the vision of UIN Antasari Banjarmasin, which emphasizes excellence in knowledge and moral character. Thus, strengthening students' affective competencies is not merely a supplement, but rather the core of learning outcomes in Islamic-based higher education. A learning model is needed that is capable of integrating mastery of biological concepts with the contextual and systematic internalization of character values.

The TALUBA learning model can be an alternative to facilitate the cultivation of student character (affective aspects) during the learning process in addition to supporting the development of students' cognitive and psychomotor aspects. The learning model contains aspects of local wisdom because it intends to instill character inspired by the character of the Banjar society. This is part of the lecturer's innovation in integrating local knowledge into the learning process. Ansori (2020) mentioned that through learning biology students are able to increase faith in God. This is in accordance with the baiman character that is expected to emerge through the TALUBA learning model. Through faith, students will better understand the power of God and their luck to get the favors and benefits of all God's creations on earth (bauntung) and become a way for students to be useful people and bring benefits to other living things and their environment (batuah).

Thus, this study focuses on the development and implementation of the TALUBA learning model as a solution to the suboptimal development of students' affective competencies in biology learning. The novelty of this study lies in the systematic integration between the development of a structured operational stage-based learning model and the internalization of Banjar local wisdom values (*Baiman, Bauntung, Batuah*) as indicators of students' affective competencies in higher education. This approach places affective competence not as a side effect of learning, but as the main objective that is designed from the planning stage, consciously implemented in the learning process, and evaluated in a measurable manner through contextual character indicators based on local culture.

Methods

This study uses a quantitative descriptive approach that aims to describe the implementation of a previously designed learning model, thus falling into the category of non-experimental research. After the process of developing the model and its supporting tools was completed, the next stage was to implement it in lecture activities as a form of feasibility test. This application allows researchers to obtain an empirical picture of the implementation process in the classroom while assessing the extent to which the developed design is capable of instilling character in accordance with the predetermined

objectives. The effectiveness of the implementation of this learning innovation is then analyzed based on the achievement of the expected student character indicators.

The population in this study were 28 students who took General Biology courses in the Biology Education Department. The implementation of the model was observed using an observation sheet for the implementation of learning syntax on Tadris Biology students for three meetings. Researchers are interested in conducting research on the implementation of the TALUBA learning model in Biology learning with the aim of describing the implementation of the TALUBA learning model and describing the Talu Ba character profile of students in Biology learning. The observation sheet is adjusted to the learning syntax on the weekly lesson plan which has been assessed as valid by the validator team. Observations were made by three observers. The character of Talu Ba students was measured through a self-assessment questionnaire adapted from Sarbaini (2016) with a Likert scale of 1-5 and filled out by students themselves.

The TALUBA learning model consists of 6 (six) learning stages which is the acronym of each initial letter of the learning stage. The six stages are: 1) Take and give, 2) Apply knowledge, 3) Learn in group, 4) Use all information, 5) Buzz in group (learn in small groups with different discussion themes), and 6) Assess assignment. These six steps also contain 3 (three) local characters of the Banjar community, namely baiman, bauntung, and batuah. The three characters are commonly called talu ba, which means three ba (talu = three, ba = letter ba) (Sarbaini, 2016). The character of baiman means faith, that is, faith and pious to Allah swt. (Sarbaini, 2016). Character bauntung means lucky (Sarbaini, 2016). The character of batuah means dignified (Sarbaini, 2016). These three characters contained in the TALUBA learning model. These three characters are also manifestations of affective attitudes that are expected to emerge as outcomes of biology learning that have been described previously. Therefore, the researcher intends to describe the implementation of the TALUBA learning model and describe the *baiman, bauntung, batuah* (Talu Ba) character of biology students. The results of observers' observations related to the implementation of the TALUBA learning model using a Likert scale which is then categorized based on the following table 1.

Table 1.
Categories of Implementation of Learning Model

Score	Classification
$X > \bar{\bar{X}}_i + 1{,}8 \times sb_i$	Very practical
$\bar{\bar{X}}_i + 0{,}6 \times sb_i < X \leq \bar{\bar{X}}_i + 1{,}8 \times sb_i$	Practical
$\bar{\bar{X}}_i - 0{,}6 \times sb_i < X \leq \bar{\bar{X}}_i + 0{,}6 \times sb_i$	Practical enough
$\bar{\bar{X}}_i - 1{,}8 \times sb_i < X \leq \bar{\bar{X}}_i - 0{,}6 \times sb_i$	Less practical
$X \leq \bar{\bar{X}}_i - 1{,}8 \times sb_i$	Very less practical

(Widoyoko, 2019)

Then, self-assessment by students for TALUBA characters then became the basis for classifying the profile of Talu Ba characters that emerged in students. The result obtained scores taken from a Likert scale which were then categorized based on Table 2 below.

Table 2.
Categories of Character Talu Ba

Score	Classification
$X > \bar{\bar{X}}_i + 1{,}8 \times sb_i$	Very good
$\bar{\bar{X}}_i + 0{,}6 \times sb_i < X \leq \bar{\bar{X}}_i + 1{,}8 \times sb_i$	Good
$\bar{\bar{X}}_i - 0{,}6 \times sb_i < X \leq \bar{\bar{X}}_i + 0{,}6 \times sb_i$	Good enough
$\bar{\bar{X}}_i - 1{,}8 \times sb_i < X \leq \bar{\bar{X}}_i - 0{,}6 \times sb_i$	Less good
$X \leq \bar{\bar{X}}_i - 1{,}8 \times sb_i$	Very less good

(Widoyoko, 2019)

Results & Discussion

The research results present data related to the implementation of the TALUBA learning model and the profile of Talu Ba characters in students after the implementation of the TALUBA learning model. Data related to the implementation of the TALUBA learning model are presented in Figures 1 and 2 below.

Figure 1.
Implementation of TALUBA Learning Model by Lecturers

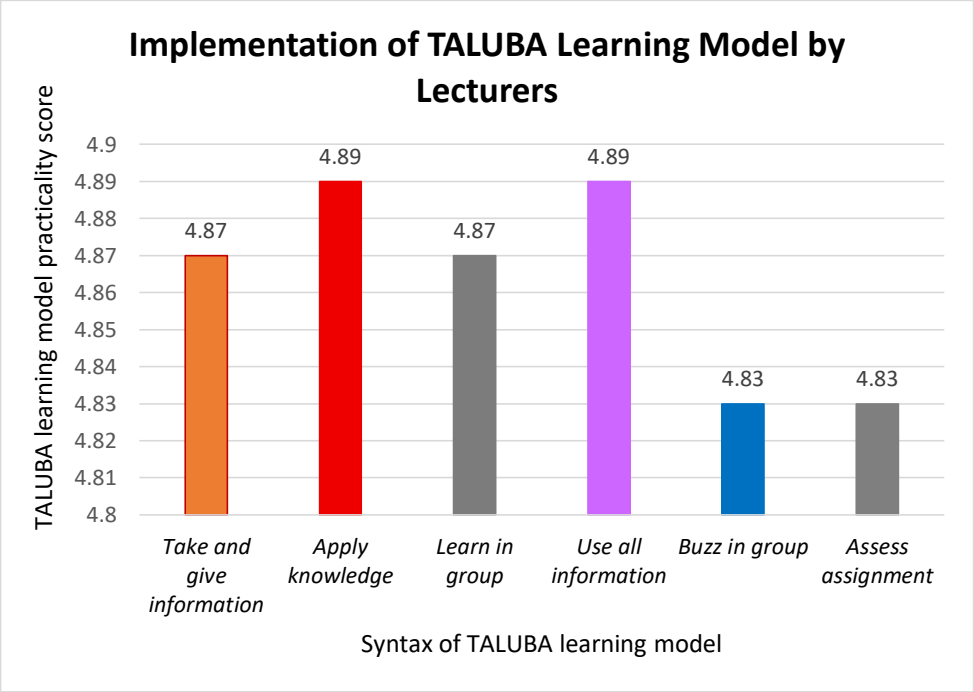


Figure 1. is an overview of the implementation of the learning model by lecturers. Lecturers have implemented each activity stage of the TALUBA learning model very well

based on the criteria (Widoyoko, 2019). When averaged, it is known that the average implementation of each stage of the TALUBA learning model by lecturers is 4.86 in General Biology lectures with very good categories (Dumiyati, Wardhono, & Nurfalah, 2019; Oktafianti, Purwoko, & Astuti, 2019). Lecturers can manage lectures in the TALUBA learning model setting very well (Sartika, Efendi, & Wulandari, 2022). Similar results were also obtained by Fitriah et al. (2023) which showed that the learning model prepared based on the character of Banjar society can be implemented very well during the lecture process.

All six stages of the TALUBA model were implemented very well by the lecturers. The first stage, namely take and give information, received an average of 4.87. In this stage there are 5 activities carried out by lecturers, namely providing insights into local wisdom, asking about biological concepts in the local wisdom presented, asking about Islamic values in the local wisdom presented, writing student answers on the blackboard and telling the correct answer.

Next, in the apply knowledge stage, the lecturer carries out 3 activities, namely: giving examples of problems about the material discussed, assigning students to do practice problems and discussing the correct answers with students. In the third stage of learn in group, the lecturer forms students into small groups, presents 1 (one) local wisdom, assigns each group to identify biological concepts, local wisdom, and Islam in the local wisdom presented, asks group representatives to present their work, gives feedback on student work.

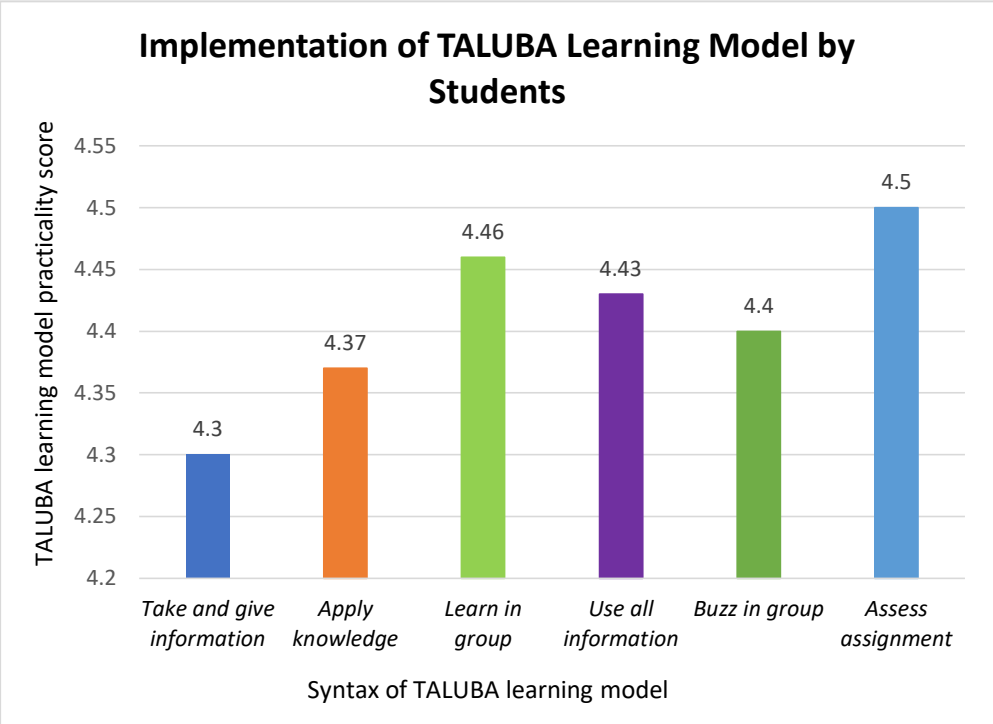
The implementation of activities at the stages of the TALUBA learning model is a manifestation of the lecturer's duties as a facilitator in increasing student activity (Sahrul, et al., 2022). For example, entering the use all information stage, the lecturer directs students to work on exercise questions in groups that are more difficult than the previous questions, asks each group to collect answers and provides feedback on student work. At the buzz in group stage, the lecturer presents 1 (one) local wisdom in class and assigns each group to solve problems related to the local wisdom from different perspectives, namely local wisdom, Islamic values, and biological concepts. Finally, at the assess assignment stage, the lecturer asked each group to check the answers of other groups and gave scores as well as providing feedback and reflection to students.

The implementation of the six stages of the TALUBA model very well corresponds to previous research by Firman, Nurqalbi, & Hisbullah (2022) which states that the learning model is very well implemented during lectures so that it can create optimal learning conditions in achieving learning objectives. The observer's observations showed that the lecturer had successfully carried out one by one the stages that had been set. Each meeting in the general biology course has been carried out referring to the syntax of the TALUBA learning model (Shellawati & Sunarti, 2018).

Lecturers are able to create a conducive learning environment to instill the character of Talu Ba students through the steps of the implemented development

learning model (Kua, 2019). The learning model implemented very well by lecturers will certainly be more complete if it is also seen from the student side. Figure 2. below shows an overview of the implementation of the TALUBA learning model by students during the lecture process.

Figure 2.
Implementation of TALUBA Learning Model by Students



Based on Figure 2. above, it is known that students have implemented each stage of the activities of TALUBA learning model very well based on the criteria (Widoyoko, 2019). The average implementation of each stage of TALUBA learning model by students is 4.44 in General Biology lectures with a very practical category.

Learning appears to be student-centered as seen from the various activities carried out (Riyanti & Setyawan, 2021). Students can easily follow the learning flow with the directions given by the lecturer so that learning takes place smoothly (Nuzalifa, 2021). Students can follow one by one the learning stages without significant obstacles. The six stages of the model can be followed systematically and very well. This shows that the stages of the TALUBA learning model are very practical to implement in learning.

The syntax of TALUBA learning model encourages students to be active during learning (Prayogi, et al., 2016). Lecturers who have implemented the entire learning syntax very well encourage students to easily implement each learning syntax. The learning model is very practical as seen from the enthusiasm of students following the learning process (Yakop, Yusuf, & Buhungo, 2024). Thus, it can be said that this learning

model is easy to apply and implement. TALUBA can be used as an alternative model in the implementation of teaching and learning activities in higher education.

The implementation of TALUBA learning model as described earlier can encourage the realization of the Talu Ba character of students. The character of Talu Ba biology students through learning TALUBA model is presented in Table 2. below.

Table 3.
Talu Ba Character of Students

No.	Statement	Average
Baiman		
1	I always pray before and after studying	4.71
2	I always try to respect the lecturers who give me lessons.	4.64
3	I am more convinced of the existence of Allah SWT after learning science.	4.61
4	I express gratitude for all His Gifts	4.61
5	I express my admiration both verbally and in writing for the greatness of Allah SWT when I see His greatness.	4.57
6	I am increasingly convinced that all knowledge learned comes from Allah SWT.	4.64
7	I feel the presence and greatness of Allah SWT when studying science.	4.61
8	I increasingly believe in the power of Allah SWT as the Creator through the knowledge I learn.	4.68
9	I am always aware that what I do during the learning process in class is under the supervision of Allah SWT.	4.64
10	I believe that whatever I do today will be rewarded by Allah SWT.	4.61
Bauntung		
11	I believe that what I have obtained so far is a gift from Allah SWT with the blessing of my parents' prayers.	4.61
12	I believe that learning will be more useful	4.54
13	I am sure that by studying, I will have good luck	4.50
14	I am sure that by studying, I will be able to spread goodness.	4.57
15	I am sure that armed with knowledge and faith, I will be more useful.	4.68
16	I am sure that armed with knowledge and faith, I will have good luck	4.68
17	I am sure that armed with knowledge and faith, I will spread more kindness.	4.79
18	I feel that I am surrounded by good people and that my presence is favored by lecturers and friends around me.	4.71
Batuah		
19	I have talents (skills) granted by Allah SWT to help and be a blessing to others.	4.57
20	I try and keep learning to develop my potential to be a useful person.	4.54
21	I behave well so that I can be a role model for others in my daily life.	4.57
22	I study the life of the Prophet Muhammad Saw. to get good in this world and the hereafter	4.61
23	I make the Prophet Muhammad Saw. as a role model so that I can be a person with noble character.	4.68
24	I try to develop myself to have advantages to get good in this world and the hereafter.	4.68
Average		**4.63**
Category		**Very Good**

Based on Table 1. it is known that the character of Talu Ba students is very good. This result strengthens the results of previous research that the learning model containing local wisdom is able to make students have noble character (Fitriah, 2020; Zainuddin, dkk., 2020; Fitriah, 2021; Fitriah & Ita, 2022).

The implementation of the right learning model affects the improvement of quality and values related to local wisdom closely related to daily life so that it can instill noble character values in students (Nuralita, 2020). The characters of *baiman, bauntung, batuah* (Talu Ba) are embedded in students through learning biology using the TALUBA learning model. There are 10 (ten) items that are indicators of students having baiman character based on self-assessment instruments. The ten indicators get an average score above 4.21, which means they are categorized as very good. Likewise, the character of bauntung can be assessed based on 8 (eight) indicators. The average score is also classified as very good. The character of batuah also received a very good category for 6 (six) items that became its indicators.

When connected to the TALUBA learning model, baiman character is manifested in 4 (four) stages such as take and give information, learn in group, buzz in group and assess assignment. The character of bauntung is realized through 6 stages, namely take and give, apply knowledge, learn in group, use all information, buzz in group and assess assignment. While the character of batuah is realized through 3 (three) stages, namely learn in group, use all information, and assess assignment.

Activities carried out by students at the take and give information stage are paying close attention to the lecturer's explanation of local wisdom. Furthermore, students will be asked questions and they answer the lecturer's questions about the link between the biology concepts being studied with local wisdom based on their prior knowledge. Not only the link with local wisdom, students are also invited to connect learning materials with Islamic values contained in the local wisdom. Students in the next activity will listen to further explanation from the lecturer. These activities encourage the growth of faith values in students (Ramadhani, Vebrianto, & Anwar, 2020). When they are invited to connect the material with Islamic values, that is actually when they will refresh the value of faith that already exists in each of them (Nurjanah, Triwoelandari, & Nawawi, 2018). The Islamic values that they can find in the material will greatly support their belief in the power of the creator.

Bauntung character is also accommodated through the syntax of take and give information. Students get an explanation from the lecturer, have the opportunity to answer questions given by the lecturer and get a counter explanation by the lecturer to strengthen the understanding of being lucky obtained by students. Through this stage, students gain insight into the integration between material, Islamic values and local wisdom (Asyhari, 2017). This indicates that the learning process brings benefits to each student.

The second stage, namely apply knowledge, facilitates students in realizing the value of profit. Activities in this stage such as students paying attention to sample problems from lecturers, doing practice problems and discussing the correct answers with lecturers. These activities provide benefits for students in order to add insight and knowledge.

At the learn in group stage, students learn in small groups, listen to the lecturer's presentation, discuss in each group to learn to identify biological concepts, local wisdom and Islamic values in local wisdom presented by the lecturer. There is a task that is presented after discussion in the group. This stage refreshes the value of baiman in students. Linking the material studied with Islamic values makes students feel the existence and greatness of Allah SWT when studying science. Learning becomes holistic (Chanifudin & Nuriyati, 2020) and students are increasingly convinced that the knowledge they learn comes from Allah. Students also increasingly believe in the power of Allah as the creator. With these beliefs, students are increasingly aware that whatever is done during the learning process is always under the supervision of Allah and whatever is done today will be rewarded by Allah.

Entering the use all information stage where students are assigned to work on exercise questions. The process of exchanging information between students in one group and in the discussion forum when the lecturer provides feedback makes students believe that if they learn it will be more useful, learning becomes an asset for students to increasingly spread goodness and benefits to others, in this case, their peers and lecturers. Students also believe that their existence in the group is liked by their friends and lecturers so that they feel surrounded by good people. Group cooperation in working on problems is a manifestation of sharing knowledge and benefits for others. This condition shows that the character values of bauntung and batuah have been realized very well.

In the fifth stage of buzz in group, the characters of baiman and bauntung are realized in student activities listening to lecturers' explanations and group work to solve problems related to local wisdom from the perspective of local wisdom, Islamic values and biological concepts. This activity actually directs students to think that science and religion are always in line and do not conflict (Ihsani, Al Idrus, & Jamaludin, 2020). Thus, the more they learn, the more faith each individual.

The last stage, namely assess assignment, accommodates all the expected character values, namely baiman, bauntung and batuah. The activity of students checking each other's answers and giving scores certainly raises awareness in themselves in order to provide objective assessments because they believe that whatever they do is under the supervision of the creator (baiman). The opportunity to keep the lecturer's feedback is an advantage in learning (bauntung). The process of checking other groups' answers is an indicator that each group provides benefits to others (batuah).

The TALUBA learning model was implemented in general biology lectures for three meetings with materials such as: 1) organizational structure of life, 2) ecosystem, and 3) interaction between living things. During the learning process, students also get a companion module in which the material studied is presented and arranged by following the syntax of the TALUBA learning model itself. The character of Talu Ba (*Baiman, Bauntung, Batuah*) which is targeted to appear in students during the implementation of

the learning model can be realized very well. The information presented related to the organizational structure of life, ecosystems and interactions between living things on earth greatly supports the internalization of baiman characters where students can learn and prove the existence and power of the creator in regulating life on earth. Learning biology is a means of studying His creatures and at the same time learning more about the creator.

Talu Ba's character is actually also part of a scientific attitude. Indicators that show someone has the character of baiman, bauntung and batuah are examples of scientific attitudes, such as believing in the existence of God by studying various natural phenomena (baiman). Believing that by learning, having an attitude of always working hard and diligently, there will be many benefits obtained (bauntung). Next is the attitude of wanting to continue learning (a manifestation of high curiosity) in order to develop one's potential to become a useful person (batuah). These attitudes arise with the support of the application of the TALUBA learning model, where students are directed to take and give information (accommodating answers to their curiosity), use all knowledge (to be objective), learn in groups (cooperation, open-mindedness), use all the information they get, buzz in groups (as a means of answering skepticism, collaboration, flexibility, open-mindedness and respect for others) and assess assessment of the tasks done by others (as a form of instilling an attitude of responsibility and objectivity). All of this reinforces that the TALUBA learning model can facilitate the development of Talu Ba characters in biology learning.

Conclusion & Recommendation

The conclusion that can be obtained from this research is that the implementation of the TALUBA learning model by lecturers and students is categorized as very good. In addition, the implementation of the TALUBA learning model in the classroom supports the formation of the Talu Ba character of students who are also categorized as very good.

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