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Development of the TALUBA Model to Increase Science, Islam, and Local Wisdom and Instill Taluba Character

Lutfiyanti Fitriah^{1*}, Agil Karwi Wadila Vanianingrum¹, Rini Wulan Sari¹,
Risda Rokhmania Nur Hikma¹, and Fahmi Yahya²

¹Tadris Physics Study Program, Faculty of Tarbiyah and Teacher Training
UIN Antasari Banjarmasin, Banjarmasin, Indonesia

²Program Studi Pendidikan Fisika, Faculty of Teacher Training and Education
Universitas Samawa, Sumbawa, Indonesia

*lutfiyanti@uin-antasari.ac.id

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Abstract

This research aimed to create TALUBA learning model-assisted modules that enhance three different forms of literacy. These were the literacy of science, Islam, and indigenous wisdom. The other was to maintain honorable character. The South Kalimantan people's local characters, especially *Baiman* (faithful), *Bauntung* (fortunate), and *Batuah* (dignified), are known as the *taluba* (three 'ba') characters. Using the ADDIE design, this study was a research and development project. Twenty-eight students studying work and energy in Basic Physics served as the research sample. The study instruments were the validation sheets, observation sheets, test questions, and questionnaires. Tests, observations, and surveys were the methods utilized to acquire data. The Aiken formula, N-Gain, mean, and percentage were employed in the data analysis. With a value of 0.92-1.00, learning models and modules were known to be valid based on the data analysis results. In the very good category, the average application of the learning model by lecturers was 4.85, while for students, it was 4.30. According to the test findings, the N-gains for literacy in scientific, Islamic, and local wisdom were 0.93, 0.92, and 0.94 in the high group, respectively. The very good category's average *taluba* character was 4.61. Additionally, there was a good reaction from students to the learning models and modules. This suggests that the proposed TALUBA learning model is appropriate for lecture use.

Keywords: Islamic literacy; Local wisdom literacy; Taluba learning model; Science literacy; Taluba character

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INTRODUCTION

Education is not only tasked with creating an intelligent generation but also with culture and noble character (Sari et al., 2023; Vitrianingsih et al., 2021). Character education is becoming more and more popular, and the profile of Pancasila students demonstrates that this country is making a sincere effort to produce the next generation of Indonesian leaders. Pupils who will be the country's future leaders are also instructed and trained to become cultured, clever, and morally upright individuals (Fitriyawany et al., 2022; Vitrianingsih et al., 2021).

One of the physics topics taught to university students is Work and Energy. This topic discusses the law of conservation of mechanical energy, kinetic energy, potential energy, and work. However, the results of a preliminary study of students taking Basic Physics courses found that students had difficulty with this topic. These difficulties include identifying the concepts and principles contained in the topic, formulating physics equations, and solving related physics problems. Students also have difficulty associating the topic of work and energy with the resources in their surroundings.

The interview results also revealed that the student's prior courses had only covered subjects related to work and energy. They never learn it by linking local wisdom and character. As a result, they have only studied physics content without acquiring religious knowledge relevant to the topic. In addition, they also said that students had never studied the topic based on local wisdom in their area. Because of this, they are still ignorant of the local cultural norms and the mindset required to value the local knowledge of work and energy. So, scientific, Islamic, and local wisdom literacy on work and energy is insufficient.

Based on this, the development of the TALUBA learning model was carried out. This learning model consists of six activity stages: Take and Give Information, Apply Knowledge, Learn in Group, Use All Information, Buzz in Group (in small groups with different discussion themes), and Assess Assignment. This model is based on constructivist learning theory, emphasizing students' activeness in building knowledge (Pande & Bharathi, 2020; Shah, 2019). The learning model is structured based on learning theory constructivists can help students obtain effective learning outcomes (Khalil & Elkhider, 2016) and encourage active student learning (Campbell et al., 2019; Tholibon et al., 2022).

The TALUBA learning model is also structured to include the local character of the Banjar people, namely *taluba* (three 'ba'). These *taluba* characters include *baiman* (faithful), *bauuntung* (lucky), and *batuah* (dignified) (Salbella & Kumalasari, 2020; Sarbaini, 2022; Prilia et al., 2022). So, this model trains students to acquire knowledge independently and builds noble character. This character is relevant to Islamic teachings (Mastuang et al., 2019; Abdurrahman & Abduh, 2019; Sarbaini, 2022).

In addition, at this stage of the model learning activities, students are invited to explore the religious values of the topics discussed. Thus, the TALUBA learning model is full of religious insights. Farhan & Rofi (2021), Syihabuddin & Khalid, (2022), and Nurhasnawati et al. (2023) state that learning with Islamic values increases motivation, learning achievement, and interest in learning. In addition, learning like this can instill noble character (Fitriah, 2020b; Syihabuddin & Khalid, 2022).

This learning model also requires lecturers to link lecture topics with local wisdom. Local wisdom associated with the topic of work and energy includes the

efforts of horse carts and oxcarts when moving while carrying cargo, kinetic energy in *jukung* (traditional transportation for the Banjarese tribe) when the *jukung* moves at a certain velocity across the river and kinetic energy in rope jumping games when children jump over the rope at a certain velocity, potential energy in pinang climbing games when the climber is at a certain height relative to the ground, mechanical energy in *bekel* ball games when the *bekel* ball moves vertically and mechanical energy in the *baayun Maulid* tradition when the baby swings.

Rahayu et al. (2021) and Padmini et al. (2022) prove that learning that contains local wisdom can increase cultural literacy (including local wisdom) and the character of loving the motherland. It also increases scientific literacy (Rahayu et al., 2021; Nugraha & Prabowo, 2022) and attracts students' attention to learning (Fitriah, 2020a; Nugraha & Prabowo, 2022).

Based on the explanation above, it can be seen that science literacy is important to study because students still have difficulty mastering the principles of Work and Energy. In addition, Islamic literacy is equally important to study because, so far, students have studied the topic without obtaining Islamic values that are meaningful for their lives. The literacy of local wisdom is also important to study because, so far, students have not been able to link the topic with local wisdom, so the knowledge gained is not meaningful and contextual. Finally, the TALUBA learning model is thought to be able to cover all three literacy areas, so this model needs to be studied further.

This research was different from previous studies. This research was the first study to develop the TALUBA learning model, which consists of six learning stages. The previous research only developed guidance and learning programs containing *taluba* characters (Prasetia & Haryadi, 2020) or modules

filled with these characters (Mastuang et al., 2019).

The TALUBA learning model, when implemented in lectures, is also equipped with modules that are arranged based on each learning stage of the model. Any research has never developed modules like this.

Models and modules developed simultaneously include scientific literacy, Islam, and local wisdom of South Kalimantan for Basic Physics lectures on Work and Energy. Both of them try to instill the character of *taluba* in students. The previous research only examined aspects of scientific literacy (Yuberti et al., 2022; Anas & Hasibuan, 2023; Kamila et al., 2023; Siswanto et al., 2023), only cultural literacy (Buddhayanti et al., 2022; Padmini et al., 2022; Udiyana et al., 2022), and Islamic literacy only (Diani & Hartati, 2018). In addition, these models and modules are intended for students in tertiary institutions. Previous studies used samples from elementary schools (Udiyana et al., 2022), junior high schools (Asyhari, 2019; Mujahidin et al., 2023), and senior high schools (Fajaryanti & Hertanti, 2022).

This research aimed to create a module-assisted TALUBA learning model that would help students acquire noble character and increase their literacy in science, Islam, and local wisdom. The validity of the learning model, the module's validity, the learning model's implementation, the efficacy of learning, admirable character, and student responses are the main topics of this article.

METHODS

This study used research and development using the ADDIE design methodology. There were five phases to this study project: analysis, design, development, implementation, and evaluation (Dick et al., 2001; Welty, 2007). Before entering the five steps, the

research team held a joint meeting to discuss the division of labor that would be carried out so that the research ran smoothly. This was the preparation stage carried out by the research team.

The sample of this study were students at an Islamic university in South Kalimantan, totaling 28 people. This sample was selected using *purposive sampling* because, at that time, they were attending a Basic Physics lecture on Work and Energy. The products resulting from this research were learning models and modules.

The research instruments were learning model validity sheets, module validity sheets, learning implementation observation sheets by lecturers, student learning implementation observation sheets, scientific literacy test questions, Islamic literacy test questions, local wisdom literacy test questions, *taluba* character self-assessment sheets, questionnaires student responses to

learning models, and module practicality questionnaires. The data collection techniques used in this research were tests, observations, and surveys. The even semester of the 2022–2023 academic year was used for this investigation.

Data analysis techniques used include validity analysis with Aiken formula (Aiken, 1985), N-gain (Hake, 1998), and the mean and percentage (Widoyoko, 2019). In addition, the results of the analysis were put into several categories. These categories were based on criteria (Widoyoko, 2019).

RESULTS AND DISCUSSION

Learning Model Validity

The validation findings of three physics education experts on the Weekly Learning Plan provide information on the validity of the learning model. The validation results are displayed in Table 1.

Table 1 The validity of the TALUBA learning model

No.	Assessed Aspects	V_{count}	V_{table}	Validity Categories
1.	Each RPM component is listed in full	1.00	0.92	Qualify
2.	Graduate Learning Outcomes are clear and logical	1.00	0.92	Qualify
3.	There is a content of character education and national culture	1.00	0.92	Qualify
4.	State-of-the-art learning models	0.92	0.92	Qualify
5.	The learning model uses a <i>student-centered approach</i>	1.00	0.92	Qualify
6.	Learning activities include apperception, giving motivation, and presenting information	0.92	0.92	Qualify
7.	The learning stage is suitable for achieving Graduate Learning Outcomes	0.92	0.92	Qualify
8.	The learning stage is systematic, coherent, and clear	0.92	0.92	Qualify
9.	The learning strategy is reflected in the learning stage	1.00	0.92	Qualify
10.	The learning stage is by the level of student development	1.00	0.92	Qualify
11.	The learning stage is contextual	1.00	0.92	Qualify
12.	The time allotted is adequate for the learning model's implementation	0.92	0.92	Qualify
13.	The learning stages vary, so it is not boring	1.00	0.92	Qualify
14.	The learning stage is by the constructivist learning theory	1.00	0.92	Qualify

No.	Assessed Aspects	V_{count}	V_{table}	Validity Categories
15.	The learning stages are arranged according to the six activities of the TALUBA learning model	1.00	0.92	Qualify
16.	Aspects of Islam, local wisdom, and scientific literacy are covered in the learning stage.	1.00	0.92	Qualify
17.	The learning stage contains the aspects of the <i>taluba</i> characters	1.00	0.92	Qualify
18.	The learning stage is implemented with the right media and learning resources	0.92	0.92	Qualify
19.	Assessment of learning processes and outcomes according to the TALUBA learning model	0.92	0.92	Qualify
20.	The assessment instrument is suitable for measuring Graduate Learning Outcomes	0.92	0.92	Qualify

Based on the validation results for twenty indicators adapted from Ita & Fitriah (2022) and Fitriah et al. (2023). The validity of the constructed learning model is established. All indicators meet the validity criteria because the validity coefficient calculated by the three validators is equal to or greater than Aiken's validity coefficient (Aiken, 1985). Therefore, the learning model listed in the Weekly Learning Plan can be used in lectures.

Asmar & Suryadarma (2021), Ita & Fitriah (2022), and Fitriah et al. (2023) stated that the results of expert validation of the learning model stated that the learning was theoretically valid and feasible to try. Furthermore, this validity indicates that the learning model can potentially increase student competency, is effective, and is practically applied (Asmar & Suryadarma, 2021; Ita & Fitriah, 2022; Fitriah et al., 2023). Ita & Fitriah (2022) and Hanum et al. (2023) also added that this validity shows that the Weekly Learning Plan, which includes each stage of the activities of the learning model, is feasible to implement. This result also strengthens and enriches the results of previous studies, namely Fitriah (2021) and Fitriah et al. (2023),

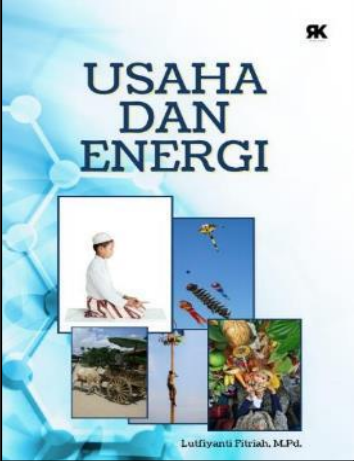
which proved that the learning model that included the regional traits of South Kalimantan was appropriate for use in lectures.

Learning Module Validity

A learning module is a tool of the learning model that functions as a medium and a source of student learning. Figure 1 shows the module section.

The module consists of front and back covers, a table of contents, an introduction chapter containing the course description, a description of the module content, and instructions for using the module; the main chapter consists of three chapters, a bibliography, and an author profile. The main chapter consists of three chapters: Work, Energy, and Power; Kinetics and Potential Energy; and Conservation of Mechanical Energy.

The unique thing about this module is that the three chapters are organized based on the six steps of the TALUBA learning model and contain indicators of science literacy, Islam, and local wisdom. The three literacies can be seen in the presentation of physics principles, problem examples, and exercises.



BAB I PENDAHULUAN

A. DESKRIPSI MATA KULIAH
Fisika Dasar merupakan mata kuliah yang wajib dipelajari oleh mahasiswa Program Studi Tadris Biologi, Program Studi Tadris Fisika, dan Program Studi Tadris Kimia FK UN Antares Banjarmasin. Fisika Dasar ini membahas berbagai konsep dan prinsip dasar serta hukum yang berkaitan dengan mekanika dan termodinamika. Kedua materi ini dibahas dengan mengaitkan kearifan dan potensi lokal Nusantara, khususnya Kalimantan Selatan. Dengan demikian, pengetahuan yang diilhamkan merupakan pembelajaran kontekstual.

Materi fisika pada mata kuliah ini juga bermuatan nilai-nilai Islam yang berakar dari kearifan lokal Kalimantan Selatan. Nilai-nilai karakter tersebut di antaranya adalah beriman, beruntung, dan bermah. Dengan demikian, setelah mengikuti pembelajaran Fisika Dasar ini mahasiswa akan mempunyai hasil belajar, literasi sains-islam-kearifan lokal, dan karakter mulia yang baik. Berikut berbagai Capaian Pembelajaran pada mata kuliah ini.

1. Capaian Pembelajaran Lulusan Prodi
a. CPL (Sikap dan Tata Nilai)
1) Bertalawa kepada Tuhan Yang Maha Esa dan mampu menunjukkan sikap religius. (ST 1)
2) Berperan sebagai warga negara yang bangga dan cinta tanah air, memiliki nasionalisme serta rasa tanggungjawab pada negara dan bangsa. (ST 4)

DOA SEBELUM BELAJAR

رَضِيتُ بِاللّٰهِ رَبًّا وَبِالْإِسْلَامِ دِينًا
وَبِمُحَمَّدٍ نَبِيًّا وَرَسُولًا رَبِّ زِدْنِي
عِلْمًا وَارْحَمْنِي قَلْبًا

Artinya: "Kemi ridho Allah sebagai TuhanKu, Islam sebagai agamaku, dan Nabi Muhammad sebagai Nabi dan RasulMu. Ya Allah, tambahilah pengetahuan lilm dan berilah aku kesehatan serta baki."

1 TAKE AND GIVE INFORMATION
(Mengambil dan Memberi Informasi)

Bacalah wacana berikut dengan seksama!

BAAYUN MAULID, TRADISI BANJAR YANG SARAT NILAI ISLAMI

Merupakan Banjar yang bermukim di Kalimantan Selatan terkenal sebagai salah satu suku di Indonesia yang mempunyai tinggi nilai agama. Masyarakat Banjar beragama Islam. Walaupun demikian, unsur Banjar tetap melekatkan adat istiadat, budaya, dan tradisi dari nenek moyang. Hal ini terwujud dalam upacara adat yang berada di pedalaman.

Pemerup adat istiadat, budaya, dan tradisi dapat dijumpai pada siklus kehidupan: umur Banjar termasuk suku Dayak, yang dahulu memegang kepercayaan Kaharingan. Kedua suku ini berpaduan pada kehidupan.

2 APPLY KNOWLEDGE

(Menerapkan Pengetahuan)

Perhatikan contoh-contoh soal berikut!

CONTOH SOAL 2

Rendi sedang menadi roller coaster di taman hiburan. Kecepatan roller coaster sebesar 10 m/s ketika ia di ketinggian 100 m. Tentukan besar kecepatannya saat berada pada ketinggian 50 m!

Pemecahan:
Diketahui: $v_1 = 10 \text{ m/s}$, $h_1 = 100 \text{ m}$, $h_2 = 50 \text{ m}$
Ditanya: $v_2 = ?$
Jawab:
 $Ek + Ep = Ek + Ep$
 $\frac{1}{2}mv_1^2 + mgh_1 = \frac{1}{2}mv_2^2 + mgh_2$
 $\frac{1}{2}v_1^2 + gh_1 = \frac{1}{2}v_2^2 + gh_2$
 $\frac{1}{2}v_1^2 + gh_1 - gh_2 = \frac{1}{2}v_2^2$
 $\frac{1}{2}v_1^2 + g(h_1 - h_2) = \frac{1}{2}v_2^2$
 $v_2 = \sqrt{v_1^2 + 2g(h_1 - h_2)}$
 $v_2 = \sqrt{10^2 + 2(10)(100 - 50)}$
 $v_2 = 33,17 \text{ m/s}$
Jadi, besar kecepatannya saat berada pada ketinggian 50 m adalah 33,17 m/s.

3 LEARN IN GROUP

(Belajar di Kelompok)

Berapakah dalam kelompok kelompok kecil bersama teman-temanmu! Bacalah wacana berikut ini dengan seksama!

KALAYANGAN DANDANG, LATANG LATANG KAIRASA DARI KALIMANTAN SELATAN



Gambar 55. Kalayangan dandang berasal dari Kalimantan Selatan, tepatnya Kabupaten Hulu Sungai Selatan. (Sumber: <http://wisatakalimantan.com/index.php>)

Kalayangan dandang yang juga disebut layang-layang beredang dalam bahasa Indonesia merupakan layang-layang khas Kalimantan Selatan. Layang-layang ini berwujud tradisional. Biasanya kalayangan dandang digunakan saat panen padi, yakni di musim kemarau. Tradisi ini telah ada sejak dulu, khususnya di Desa Paring Agung dan Desa Bani Kecamatan Sungai Raya Kabupaten Kabupaten Hulu Sungai Selatan. Pematuan kalayangan

4 USE ALL INFORMATION

(Menggunakan Semua Informasi)

Kerjakanlah soal-soal latihan berikut bersama teman-teman di kelompokmu! Gunakan berbagai sumber referensi untuk menyelesaikan soal-soal tersebut!

- Rudi telah berlari 800 g-jam lebih dari bangunan yang tingginya 80 m. Tentukan!
a. Kecepatan budi saat berada di setengah pertamanya menuju tanah.
b. Kecepatan budi tepat saat di tanah.
(Jawaban: a. $10\sqrt{5} \text{ m/s}$, b. $10\sqrt{6} \text{ m/s}$)
- Tentukan kelajuan awal yang dimiliki oleh samit saat meluncur dari permukaan Bumi supaya samit dapat lepas dari gaya gravitasi Bumi!
(Jawaban: 11,2 km/s)
- Ani berlari dengan kecepatan maksimum sebesar 4,9 m/s. Kelajuan Ani saat tanah selah 0,7 m pada tina berendah. Jika percepatan gravitasi adalah 9,8 m/s², maka tentukan ketinggian Ani di atas tanah pada titik tertinggi!
(Jawaban: 1,7 m)

5 BUZZ IN GROUP

(Belajar di Kelompok Kecil dengan Tema Diskusi yang Berkesan)

- Berapakah dalam kelompok kelompok kecil bersama teman-temanmu!
- Perhatikan informasi singkat berikut!
- Jawablah pertanyaan berikut sesuai pembagian tugas dari dosenmu!

PANJAT PINANG, PERMAINAN TRADISIONAL YANG MENILIKI MAKNA FILOSOFIS



Gambar 59. Panjat pinang merupakan permainan tradisional yang tetap relevan. (Sumber: <http://asetkomponen.com/>)

Salah satu hal yang diingat saat perayaan Hari Kemerdekaan Republik Indonesia adalah permainan panjat pinang. Bagaimana tidak? Permainan ini membuat hati masyarakat yang menyaksikan deg-degan sekaligus membuat mereka tertawa gel.

6 ASSESS ASSIGNMENT

(Menilai Tugas)

Periksalah jawaban kelompok lain dan berilah penilaian terhadap jawaban tersebut! Berikan komentar terhadap jawaban tersebut pada kolom di bawah ini!

SIMPULAN

Simpulan yang dapat diambil dari materi yang telah dibahas adalah sebagai berikut:

- Hukum kekekalan energi mekanik berbunyi: "Energi mekanik yang dimiliki oleh benda adalah tetap (konstan)".
- Pernyataan hukum kekekalan energi mekanik adalah $Ek + Ep = Ek + Ep$.

UJI KOMPETENSI

Jawablah soal-soal di bawah ini dengan benar secara mandiri!

- Sebuah benda bergerak vertikal ke atas dengan kecepatan awal v . Pernyataan yang benar tentang energi mekanik benda tersebut adalah...
A. Energi mekanik bernilai sama di setiap posisi dengan syarat gaya gesek diabaikan
B. Energi mekanik di titik tertinggi lebih besar daripada energi mekanik di titik terendah
C. Energi mekanik di titik tertinggi lebih kecil daripada energi mekanik di titik terendah
D. Energi mekanik di titik setengah perjalanan merupakan setengah dari energi mekanik di titik tertinggi
E. Energi mekanik di posisi awal sama dengan nol
- Benda bermassa 1,0 kg bergerak vertikal ke atas dengan kecepatan 20 m/s. Energi kinetik benda saat ketinggiannya 25 m adalah...
A. 5 J
B. 10 J

Figure 1 Part of the learning module based on the TALUBA learning model

An *Information Exploration* presents the discourse of South Kalimantan's local wisdom related to the physics material discussed in each chapter. There is also an *Internalization of Islamic Values* that presents the discourse of Islamic values that students in life can implement. In

addition, there is also an *Integration Insight* that contains the integration of Islamic values and physics principles.

The validation results of three physics education experts have established the learning module's validity. The

validation results are displayed in Table

2.

Table 2 The Validity of the TALUBA Learning Model-Based Module

No.	Assessed Aspects	V_{count}	V_{table}	Validity Categories
1.	Content Validity			
	A. Coverage of material	1.00	0.92	Qualify
	B. Material Accuracy	1.00	0.92	Qualify
	C. Contextual	1.00	0.92	Qualify
	D. Compliance with laws and regulations	1.00	0.92	Qualify
	E. Appropriate Material	1.00	0.92	Qualify
2.	Presentation Validity			
	A. Presentation Techniques	0.92	0.92	Qualify
	B. Material Presentation Support	0.92	0.92	Qualify
	C. Learning Presentation	1.00	0.92	Qualify
	D. Completeness of Presentation	1.00	0.92	Qualify
	E. Formats	1.00	0.92	Qualify
	F. Organization	0.92	0.92	Qualify
	G. Attractiveness	0.92	0.92	Qualify
	H. Letter Shape and Size	0.92	0.92	Qualify
3.	Language Validity			
	A. By the development of students	0.92	0.92	Qualify
	B. Communicative	0.92	0.92	Qualify
	C. Dialogic and Interactive	0.92	0.92	Qualify
	D. Coherence and Consistency of Thought Flow	1.00	0.92	Qualify
	E. Compatibility with Indonesian Language Rules which correct	1.00	0.92	Qualify
	F. Use of terms and symbols/symbols	1.00	0.92	Qualify
	G. Straightforward	1.00	0.92	Qualify

Based on the results of the validation of each aspect of the validity of the module adapted from (Badan Standar Nasional Pendidikan, 2014), it is established that the created module satisfies testing requirements, is valid, and can be used in educational (Fitriah & Ita, 2022; Zohdi & Azmar, 2023). Mastuang et al. (2019) and Yuberti et al. (2022) also stated that the validity of the module indicated that the module was successfully developed, suitable for use, appropriate for teaching materials, and relevant to research variables so that it can be used in the learning process. Mastuang et al. (2019), Wahab et al. (2021), Fajaryanti & Hertanti (2022), and Udiyana et al. (2022) also added that this validity also shows that the modules compiled are based on scientific literacy, Islam, and local wisdom, the content

contained is by the expected Learning Outcomes and meets the criteria as third teaching material the literacy. These results also strengthen and enrich previous research by Fitriah (2020b) and Fitriah et al. (2023), proving that the teaching material developed based on local South Kalimantan characters is valid for lecture use.

Implementation of the Learning Model

Implementing the learning model in class is known from the observations of each stage of activities carried out by lecturers and students. Figure 2 shows the implementation of the learning model in lectures.



Figure 2 Implementation of the TALUBA learning model in lectures

Meanwhile, the lecturer's implementation of the learning model is depicted in Figure 3. Students'

implementation of the learning model is depicted in Figure 4. Here are the two pictures.

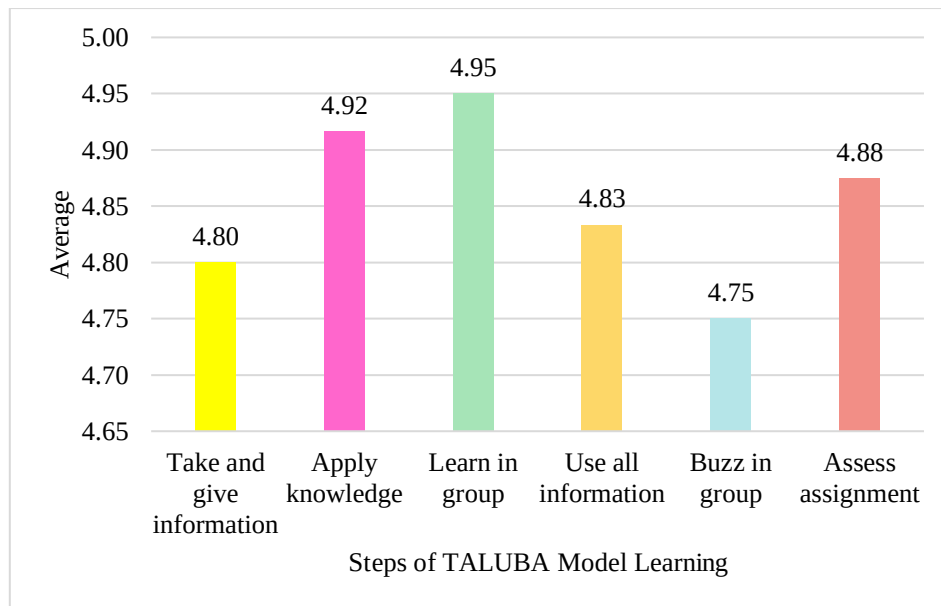


Figure 3 Implementation of the learning model by lecturers

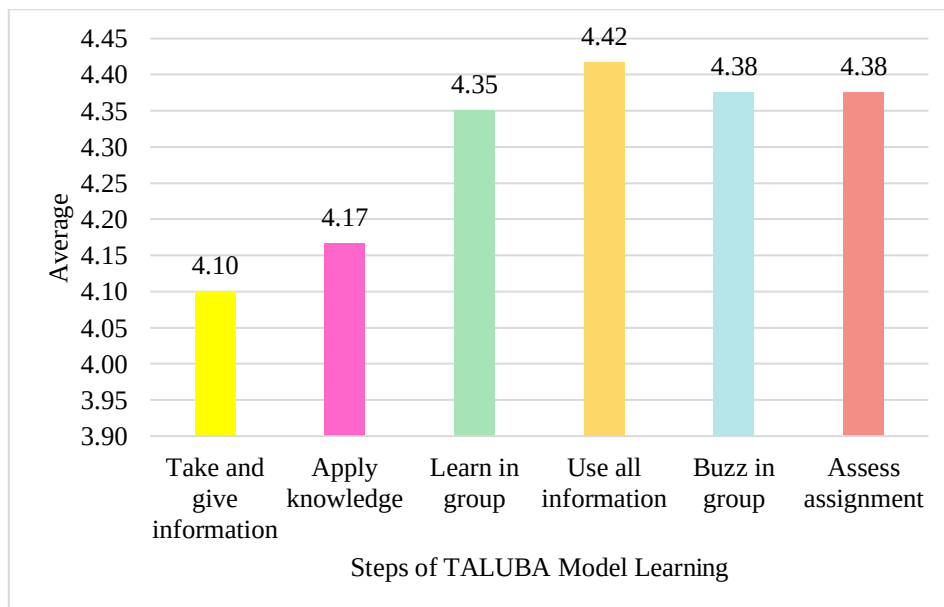


Figure 4 The implementation of the learning model by students

Figure 3 shows that the lecturer has executed every step of the TALUBA learning model activity according to the criteria extremely successfully (Widoyoko, 2019). When averaged, the average application of each level of the TALUBA learning model by lecturers is 4.85, falling into the very good category.

Likewise, with the implementation of each stage of activity by students.

Based on Figure 4, it is known that students have carried out each stage of the activity from the TALUBA learning model very well based on the criteria (Widoyoko, 2019). It is known that lecturers use the TALUBA learning model on average at each level (4.30), with a very good category. The average scores of Buzz in Group and Assess Assignment were the same because

students carried out both stages equally well. Students followed the Buzz in Group stage as carefully as the Assess Assignment stage.

These two results show that lecturers can manage lectures in the setting of the TALUBA learning model, and students can implement this learning model very well (Ita & Fitriah, 2022; Sartika et al., 2022). In line with this, it states that this result means that the learning model is implemented by the weekly learning plans prepared (Arrozaqu & Setiawan, 2022; Ita & Fitriah, 2022). Fitriah et al. (2023) and Fitriah et al. (2023) also found similar results, demonstrating the effectiveness of using learning models based on the Banjar people's character in lectures.

Learning Effectiveness

Learning effectiveness is seen from the N-Gain of scientific literacy, Islam, and local wisdom. The indicators of scientific literacy are based on the OECD (2017), indicators of Islamic literacy are based on (Mubarok, 2022), and indicators of local

wisdom literacy are based on (Budhayanti et al., 2022). Furthermore, this can be seen in Table 3.

Based on the N-Gain test, it can be seen that the TALUBA learning model applied with the help of modules has high effectiveness in increasing literacy in science, Islam, and local wisdom. Student literacy is highly effective because the TALUBA learning model, which is based on constructivist learning theory, can encourage students to form new knowledge independently by using previous learning experiences so that their thinking skills develop (Dökmecioğlu et al., 2022; Tadesse et al., 2022). The results of this study are in line with the research of Subaedah et al. (2023) and Fatmawati & Khotimah's research (2023), which proves that students who use the constructivist learning theory-based learning model gain knowledge, the capacity to apply scientific ideas, enthusiasm for learning, high academic achievement, and increased scientific literacy.

Table 3 N-gain literacy in science, islam, and local wisdom

Aspect	Details	N-Gains
Science Literacy	A. Explain Phenomena Scientifically-Effort and Energy	0.94
	B. Explain Phenomena Scientifically-Kinetic Energy and Potential Energy	0.94
	C. Explain Phenomena Scientifically-The Law of Conservation of Mechanical Energy	0.92
	Average N-Gain	0.93
	Effectiveness Category	High
Islamic Literacy	A. Noble Rituals to Animals	0.93
	B. Knowledge-Islamic teachings related to the Qur'an	0.93
	C. Knowledge-Islamic Teachings Relating to the Prophet's Life	0.91
	Average N-Gain	0.92
	Effectiveness Category	High
Local Wisdom Literacy	An Understanding-Local Wisdom Value	0.96
	B. Interpreting-Values and Attitudes of Appreciating Local Wisdom	0.91
	C. Interpreting-Values and Attitudes Preserving Local Wisdom	0.95
	Average N-Gain	0.94
	Effectiveness Category	High

Constructivist learning theory enables students to build, integrate, and integrate knowledge that is supported by

social contexts and real experiences so that they obtain very good learning outcomes (Mohammed & Kinyó, 2022;

Noguera et al., 2022; Hasibuan & Nugraha, 2023). This social context in the TALUBA learning model is in group discussions at the stages of Learn in Group, Use All Information, Buzz in Group, and Assess Assignment activities. So, knowledge is built by students personally and socially (Shah, 2019; Pande & Bharathi, 2020; Fatimah et al., 2022).

Constructivist learning theory also emphasizes that lecturers must create a conducive learning environment and encourage students to be involved in lectures to build their knowledge (Wang, 2022; Özkan, 2022). So, this learning theory centers learning on students so that students are not given knowledge but the facilities to build it and are encouraged to interact with their learning environment (Pande & Bharathi, 2020; Fatimah et al., 2022). Thus, students gain meaningful learning experiences, and their learning outcomes increase (Shah, 2019; Bariham et al., 2022). In the TALUBA learning model, the lecturer provides information and questions that interest students' thinking, for example, regarding analyzing the principles of work and energy in the local wisdom of the area and identifying religious teachings related to these two principles. As a result, they are involved in student group discussion forums, which are warm and interesting.

Students' scientific literacy has also increased because the TALUBA learning model combines physics concepts with local wisdom. During lectures, students are invited to think and solve problems related to the principles of energy and work contained in the local wisdom of South Kalimantan. Pratama & Jumadi (2023) and Sari et al. (2023) state that local wisdom learning can improve scientific literacy, problem-solving, thinking, and process skills. They also stated that learning that links science with local wisdom positively influences scientific literacy, trains noble character,

and improves understanding of concepts. The local wisdom discussed in physics learning trains students' competencies, improves learning quality, and makes learning more meaningful (Sholahuddin et al., 2022; Fitriah et al., 2023).

This high effectiveness is also due to the module-assisted learning model containing Islamic literacy, which contains religious values. Students are given insights and questions that train them to analyze religious values in the principles of effort and energy and local wisdom related to these two principles. With Islamic religious content, the Qur'an, and questions about Islamic values, students are assisted and motivated to study so naturally high N-gain (Fitriah, 2021; Kusuma et al., 2022).

In addition, Islamic literacy content associated with physics creates harmony between scientific logic and truth that originates from Allah SWT. so that students understand physics by relying on religious values while increasing their religious knowledge (Asyhari, 2017; Fitriah, 2020b). This is what makes students' Islamic literacy increase. Islamic literacy improves the ability to think comprehensively and forms noble character in children (Mubarok, 2022; Utami, 2022). Islamic literacy in physics learning is an effort to make students religious Indonesian citizens (Asyhari, 2019; Mubarok, 2022).

Based on Table 3, it is also known that local wisdom literacy has an increasing effectiveness. This is due to the local wisdom studied in learning, improving learning outcomes, making learning interesting and meaningful, and motivating students to learn local wisdom (Fitriah, 2020a; Udiyana et al., 2022). Local wisdom content also encourages students to be cultured (Asyhari, 2019; Budhayanti et al., 2022). In line with this, Fitriah (2020a) and Rahayu et al. (2021) stated that the relevance of physics and local wisdom studied by students increased scientific

literacy and love for the motherland and encouraged students to appreciate, maintain, and preserve local culture.

Noble Character

The *taluba* character, which consists of the traits *baiman* (faithful), *bauntung* (fortunate), and *batuah* (dignified), is the

noble character that is ingrained. This noble character is known from the results of students filling in the self-assessment sheet, which contains questions about these characters. The indicators for the character of *taluba* are adapted from Sarbaini (2014) and Sarbaini (2022). This can be seen in Table 4.

Table 4 Characteristics of student *taluba*

No.	Statement	Average Score
<i>Baiman</i> (Believe)		
1.	I always pray before and after studying	4.57
2.	I always try to respect the lecturers who teach me	4.53
3.	I am increasingly convinced of the existence of Allah SWT after studying science	4.64
4.	I give thanks for all His Gifts	4.61
5.	I express my admiration both orally and in writing for the majesty of Allah SWT when I see His greatness	4.61
6.	I am increasingly convinced that all the knowledge learned comes from Allah SWT	4.66
7.	I felt the presence and greatness of Allah SWT while studying science	4.64
8.	I believe more and more in the power of Allah SWT as the Creator through the knowledge I have learned	4.66
9.	I am always aware that what I do during the learning process in class is under the supervision of Allah SWT	4.66
10.	I believe that whatever I do now will be rewarded by Allah SWT	4.64
<i>Lucky</i> (Lucky)		
11.	I believe that what I have obtained so far is a gift from Allah SWT with the blessings of the prayers of my parents	4.67
12.	I am sure learning will be more useful	4.66
13.	I believe that by studying, you will have good luck	4.59
14.	I believe that by learning, I can spread goodness more and more	4.61
15.	I think that if I have trust and knowledge, I will be more valuable	4.63
16.	Armed with knowledge and trust, I think I'll be successful	4.61
17.	I am sure that armed with knowledge and faith, I will spread goodness more and more	4.61
18.	I feel surrounded by good people, and the lecturers and friends around me like my presence	4.56
<i>Batuah</i> (Dignity)		
19.	I have a talent (expertise) that Allah SWT gifted to help and be a blessing to others	4.54
20.	I try and keep learning to develop my potential to become a useful person	4.61
21.	I behave well so that I can be an example for others in everyday life	4.56
22.	I study the life of Prophet Muhammad SAW. to get good in this world and the hereafter	4.57
23.	I made the Prophet Muhammad SAW. a role model so that I can be a person of noble character	4.60
24.	I try to develop myself so that I have the advantage of getting good in this world and the hereafter	4.59
Average		4.61
Category		Very good

Based on Table 4, it is known that the characters of *Baiman*, *Bauntung*, and *Batuah* students are very good. These results reinforce the results of previous research that learning models that contain local wisdom can make students have noble character (Fitriah, 2021; Saphira, 2022; Imradewi et al., 2022; Yanti et al., 2022; Mashami et al., 2023). Likewise, learning assisted by modules filled with local wisdom can instill good character in students (Fitriah, 2020b; Asrial et al., 2022). Other research results also show that teaching materials containing local wisdom have succeeded in instilling noble character (Fitriah, 2020b; Zainuddin et al., 2020; Fitriah, 2021; Fitriah & Ita, 2022). This noble character becomes very good because integrating physics with local wisdom makes learning more meaningful, giving students good cognitive and affective abilities (Zainuddin et al., 2020; Fitriah, 2021).

The noble character of very good students is also caused by learning about religious values. Namely, students are

given religious insights; the compiled modules also contain these values. Farhan & Rofi (2021), Fitriyawany et al. (2022), and Zohdi & Azmar (2023) state that learning that integrates science with Islam makes students have noble character. Furthermore, Diani & Hartati, (2018) and Utami's (2022) noble character in students can be formed through Islamic literacy education, which lecturers facilitate. The results of this study strengthen and enrich the results of previous research by Fitriah (2020b), Fitriah et al. (2021), and Fitriah & Ita (2022), which show that learning that is supported by teaching materials containing Islamic values can instill noble character in students.

Students Responses

The response of 28 students to learning was divided into two. First, students respond to the learning model. Second, student responses to practicality. Both responses were obtained from the results of student questionnaires. Table 5 and Figure 5 show this.

Table 5 Student responses to the TALUBA learning model

No.	Statement	Percentage of students stated Yes
1.	The learning model is fun and interesting	100%
2.	The learning model is a novel approach that greatly facilitates student learning	100%
3.	Students are given the freedom to express their opinions	96.43%
4.	During learning, students are assisted in becoming more literate in science, Islam, and local wisdom	100%
5.	Students are interested again in participating in learning activities as they have been implemented	100%
6.	Students can reflect on the usefulness of the knowledge learned so that they are encouraged to behave positively	96.43%
7.	The TALUBA model and module can direct students to become superior and moral individuals	96.43%

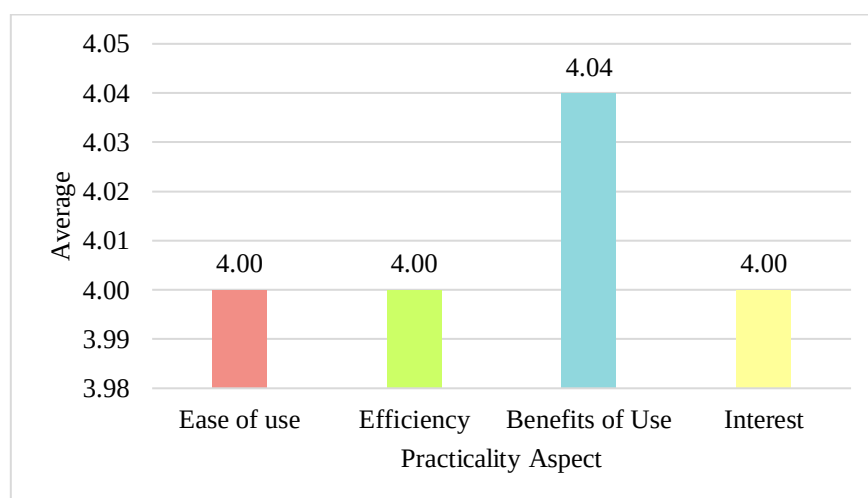


Figure 5 Practicality of the TALUBA learning model-based module

Student responses are known from a questionnaire adapted from Fitriah (2020), Fitriah et al. (2023), and Fitriah, Divine, et al. (2023). These two pieces of information demonstrate that students have responded favorably to the model and module that have been created. This is so students can become more independent and adaptable learners and feel content with their education. The TALUBA learning model is founded on constructivist learning theory (Noguera et al., 2022; Hasibuan & Nugraha, 2023).

The very good response was also due to the module-assisted learning model loaded with local wisdom. Learning like this attracts curiosity, fosters interest, and motivates learning (Ita & Fitriah, 2022; Nugraha & Prabowo, 2022; Fitriah, Firdaus, et al., 2023; Sari et al., 2023). Learning like this also benefits students (Sumarni & Kadarwati, 2020). As a result, the student response was very good.

The content of Islamic values in learning also makes students respond very well because learning is interesting, and they feel that learning benefits their lives (Fitriah, 2020a; Farhan & Rofi, 2021; Kusuma et al., 2022). In addition, practical modules are used. This means the module is easy to use, efficient, useful, and attractive (Wati et al., 2017; Fitriah, 2021).

The limitation of this study was that the sample trial was only in one class. There was no comparison class. This causes researchers to be unable to compare this study's results with learning without applying the TALUBA model. Future research is expected to test the experimental and control classes to make the research results more reliable.

CONCLUSION

The TALUBA learning model, assisted by the module, improved science literacy, Islam, and local wisdom. This is indicated by the N-Gain of the three literacies in the high category. In addition, the TALUBA learning model implemented with the module can instill *taluba* character very well. So, the TALUBA learning model and the module are suitable for Basic Physics lectures on Work and Energy, so they can be applied in lectures. As for further research, we can develop the TALUBA learning model and its module for other physics topics and test them with more samples.

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