



Integrating islamic values and ecopreneurship in biology: E-lkpd as a learning tool

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ABSTRACT

Integrating entrepreneurship into various subjects, particularly biology, helps foster creativity and problem-solving skills. Often seen as theoretical, biology can link to entrepreneurship through eco-friendly activities. This study aims to develop electronic worksheets (E-LKPD) as a learning tool based on ecopreneurship to increase students' interest in entrepreneurship, especially in waste recycling, within an Islamic context. The method used is Research and Development (R&D) with a 4-D development model Thiagarajan (Define, Design, Develop, and Disseminate), which is modified into 3D (without Disseminate). The instruments used in this research included a checklist of student's worksheets, interview sheets, content validity for student worksheets, teacher and student response questionnaires, and pre-questionnaire and post-questionnaire entrepreneurship interests. The development process involved validity testing by nine experts, readability testing by 15 students, and field trials by one biology teacher and 36 students. The results showed that the E-LKPD had a very high validity and readability. Teachers and students gave positive feedback during the field trials, and the entrepreneurial interest of students increased significantly, moving from a high to a very high category after using E-LKPD. It indicates that the electronic worksheets are valid and practical for enhancing entrepreneurial interest within biology, particularly in environmental awareness and sustainability. E-LKPD based on ecopreneurship also successfully integrates Islamic values, such as responsibility and concern for the environment. In this way, students not only get academic knowledge, but also entrepreneurial skills.

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INTRODUCTION

Data from the Central Statistics Agency (BPS) shows that the percentage of unemployed high school graduates (Senior High School) is quite high, namely 8,57% in 2022. The high unemployment rate of high school graduates is caused by several problems, including a lack of knowledge and skills, lack of information, and unequal distribution of employment opportunities (Franita & Fuady, 2019). As well as higher education institutions and employers play a role in maintaining social inequality through graduate recruitment services and practices (Baldry, 2016). The high unemployment rate can be overcome through school learning, changing students' mindsets from looking for work to creating jobs (Margahana, 2020). Schools and Teachers have a role in creating a learning atmosphere that can foster students' interest in entrepreneurship. Schools and employers can work closely together to design a curriculum that suits business needs; employers can even participate in teaching by providing instructors (Mourshed et al., 2014).

The principles of learning in schools in Indonesia are primarily oriented towards memorization. It is time for education in Indonesia to change to a more innovative and creative learning process. Through the application of innovative and creative learning, it is hoped that students will have important values in entrepreneurship such as self-confidence, task and results-oriented, brave to take risks, future-oriented, creativity and innovative (Ramdhani et al., 2021), and increase students interest in entrepreneurship (Suryaningsih & Aripin, 2022). Ecopreneurship is the type of entrepreneurship that can be implemented in biology learning at school. Efforts to realize this require trained biology teachers who have entrepreneurial skills. The ability of biology teachers is needed so that students can exhibit micro-bio entrepreneurship before graduating from secondary school (Wokocha, G.A, 2020).

Ecopreneurship is a type of entrepreneurship that offers profits and pays special attention to environmental sustainability. The special characteristic of ecopreneurship is developing something new by utilizing the surrounding environment and generating financial profits (Pradifta, Suryaningsih, Aripin, 2023). Waste management is one of the activities to preserve the environment. Allah SWT said in the Qur'an Surah Hud verse 61 regarding the mandate and responsibility of humans to protect and preserve the environment to fill, manage, and empower the earth.

... هُوَ أَنشَأَكُم مِّنَ الْأَرْضِ وَاسْتَعْمَرَكُمْ فِيهَا ...

The Meaning: "He is the One Who produced you from the earth and settled you on it." (QS. Hud [11]: 61).

Humans are encouraged in the Qur'an to pay attention and learn about nature, to obtain benefits and ease of life. Besides that, it makes humans aware of the Oneness and Almighty of Allah SWT. Based on this order, knowledge arises about human potential and the use of nature based on various laws in managing nature (Komariah, 2023). However, in reality, humans have done a lot of damage to the earth as stated in the words of Allah SWT in the Qur'an Surah Ar-Rum verse 41:

ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ لِيُذِيقَهُمْ بَعْضَ الَّذِي عَمِلُوا لَعَلَّهُمْ يَرْجِعُونَ

The Meaning: "Mischief has appeared on land and sea because of (the deed) that the hands of men have earned, that (Allah SWT) may give them a taste of some of their deeds so that they may turn back from evil." (QS. Ar-Rum [30]:41).

Regarding the problem of environmental pollution, schools can be an educational means to convey how important it is to preserve the environment. Educational content and instructions related to waste recycling are contained in the Al-Qur'an and Hadits. Teaching materials are needed to help students understand environmental pollution material and its relevance. The words of the Prophet Muhammad SAW in the form of Hadits and the verses of Allah SWT in the form of the Qur'an are two examples of learning sources that can be combined to create instructional materials. Both of these sources include facts, events, messages, and events (Dewi, 2017).

There is a lot of research on the development of teaching materials that provide real experiences through interdisciplinary integration. The research results show that the development of E-Modules based on Islamic values produces teaching materials that are categorized as valid or suitable for use in learning. In this way, integrated teaching materials become a learning innovation to increase meaningful understanding for students (Dewi, 2017).

Observations carried out at MAN A showed that the percentage of students who continued to university was only 43,25%. Meanwhile, 56,75% did not continue their education and were looking for work. Therefore, it is essential to equip graduates with additional competencies to create their jobs, including by instilling an entrepreneurial spirit in students before graduating from high school. This PKM program combines the PBL and PJBL models with an integrated farming-livestock

entrepreneurship Life Skills Education approach by introducing food crop cultivation (Febrio & Taali, 2022). This is what researchers are considering when developing ecopreneurship-based E-LKPD integrated with biology material in an Islamic context, which can provide character strengthening. Observation results show that the LKPD that is usually used only contains questions and is still in printed form with an unattractive color combination and is not linked to the Islamic context. This is supported by the results of observations on students which stated that printed LKPD made learning boring. Therefore, it is necessary to change from printed LKPD to electronic student worksheets. E-LKPD is an innovative teaching form of developing electronic-based and interactive teaching materials that have various multimedia components (Saifuddin & Kuntjoro, 2021).

E-LKPD teaching materials can be designed using the Canva application. Apart from functioning as a design application, students can use Canva to fill in answers to questions on the E-LKPD. Students can access these answers via links distributed by the teacher (Putri & Wuyung, 2023).

The results of a literature review from several relevant research, development of ecopreneurship-based LKPD material for waste recycling to train entrepreneurial interest (Saifuddin & Kuntjoro, 2021) and development of bio entrepreneurship-based LKPD to train mushroom life skills (Utami, 2019). However, there has been no research regarding the integrating islamic values and ecopreneurship in biology with E-LKPD as a learning tool. Based on the description that has been presented, the author is interested in conducting research on the development of E-LKPD based on ecopreneurship as a learning tool with integrating islamic values and ecopreneurship.

METHODS

Research Design

The research was a research and development with Thiagarajan 4D (Define, Design, Develop, and Disseminate) development model (Thiagarajan, 1974). The definition stage is the initial final analysis, student analysis, concept analysis, task analysis, and formulation of learning objectives. The design stage is test preparation, media selection, format selection, and initial design of learning media. Development stage is producing teaching materials or products that are feasible, including expert validation and readability tests. however, this research was only carried out in 3D; the dissemination stage was not carried out due to limited research time and technical obstacles in licensing the location research.

Population and Samples

The subjects of this research were class X biology teacher and class X7 students at MAN A to ask for responses to the E-LKPD that would be developed. Teacher and student responses are used to determine the feasibility of the E-LKPD being developed. Apart from that, expert validation of E-LKPD was carried out which was given to 9 expert validators namely two media experts, one material expert, 3 three Islamic religious education (PAI) experts, two language experts and a practitioner who is a biology teacher regarding the quality of E-LKPD.

Instrument

Instruments are tools used to collect data research. Instruments are used to ask or observe respondents to obtain data or information. In this research, instruments were used to collect data and see the feasibility of the E-LKPD which was developed based on the responses given. The instruments in this research consisted of checklist sheets, teacher and student interview sheets, validity test instruments, teacher and student response questionnaires, readability test instruments and entrepreneurial interest questionnaire sheets.

Procedure

Define Stage

Define means identifying analyzing conditions and analyzing problems that must be solved or conditions that encourage development activities. This stage includes 5 main steps: (1) front-end analysis, (2) learner analysis, (3) concept analysis, (4) task analysis, and (5) specification of objectives.

Design Stage

Design means preparing a device prototype learning. This stage includes 4 main steps: (1) criterion-test construction, (2) media selection, (3) format selection, and (4) initial design.

Develop Stage

Develop means to produce learning tools that have been received based on input from experts. This stage includes 2 main steps: (1) expert appraisal and (2) developmental testing.

Data Analysis Techniques

The instruments used in this research include LKPD checklist sheets, interview sheets, validity tests, readability tests, responses questionnaires and entrepreneurial interest questionnaires. Data processing in this research uses the Guttman scale and Likert scale. The measurement scale in the Guttman scale includes yes or no; true or false, ever or never, positive or negative and others. The data obtained can be interval data or dichotomous ratio (two alternatives). The reason researchers use the Guttman scale is because want to get a firm answer to a problem being asked.

Meanwhile, the Likert Scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena. In research, this social phenomenon has been specifically determined by the researcher, which is then referred to as a research variable. In this study, the researcher used a Likert scale to measure entrepreneurial interest. The answers to each item of the instrument using the Likert scale have a gradation from very positive to very negative, which can be in the form of words. In this study, the word gradation used was Very Good (Score 5), Good (Score 4), Enough (Score 3), Not Good (Score 2), Very bad (Score 1) (Sugiyono, 2013).

The assessment criteria for describing and concluding the quality of media for the development of ecopreneurship-based E-LKPD are based on the following Table 1. If it has a suitability of 81-100% it will get very good criteria, 61-80% good criteria, 41-60% enough criteria, 21-40% not good criteria, and 0-20% very bad criteria.

Table 1.
Criteria for Quality Interpretation Assessment

Percentage Interval (%)	Criteria
81 – 100	Very Good
61 – 80	Good
41 – 60	Good Enough
21 – 40	Not Good
0 – 20	Very Not Good

(Suharsimi, 2016).

Meanwhile, the criteria for assessing entrepreneurial interest in the following Table 2. If it has a suitability of 81-100% it will get very high criteria, 71-80% high criteria, 54-70% neutral criteria, 37-53% low criteria, and 20-36% very low criteria.

Table 2.
Entrepreneurial Interest Category

Percentage Interval (%)	Criteria
81 – 100	Very High
71 – 80	High
54 – 70	Neutral
37 – 53	Low
20 – 36	Very Low

(Hayati & Fitriyah, 2021).

RESULTS AND DISCUSSION

The research that has been integrating islamic values and ecopreneurship in biology with E-LKPD as a learning tool. Content of E-LKPD discusses recycling activities and product manufacturing that are linked to the Islamic context. Student worksheets (LKPD) can increase student activity and make students less bored and more easily master the learning material (Mumtaza & Zulfiani, 2023). E-LKPD based ecopreneurship was developed to improve the previous LKPD used in schools, because based on the checklist sheet analysis the structure of the LKPD is generally still within the criteria of being quite feasible. The results of the checklist sheet can be seen in Table 3.

E-LKPD development uses a 4D development model. Define stage begins by conducting interviews with teachers and students and analyzing the LKPD that has been used in schools. Based on this

interview, several conclusions that can be drawn, namely E-LKPD based on ecopreneurship has not been implemented in an Islamic context in an effort to increase interest in entrepreneurship in schools. Ecopreneurship can encourage students to think creatively and innovate in making products that have high economic value (Pradifta, Suryaningsih, Aripin, 2023).

Table 3.
Summary of LKPD Checklist Results

Aspect	Percentage (%)	Criteria
Structure LKPD in general	50	Good enough
Ecopreneurship indicator	20	Very Not Good
Average percentage of LKPD quality	35	Not Good

In addition to conducting interviews with teachers, researchers also conducted interviews with students. This aims to determine the characteristics of students and the learning process experienced or expected. Interviews conducted with students are also one of the requirements in preparing E-LKPD, namely didactic requirements (Tohiroh, Isnawati, Dewi, 2020). LKPD must be universal so that it can be used while still paying attention to differences in students' level of understanding.

The second stage is design or planning. In this research, the type of LKPD used is electronic based. Technological advances that have occurred recently have pushed LKPD which are generally in printed form to become electronic (Ardiansah & Zulfiani, 2023). E-LKPD is a student practice sheet that can be done digitally and is carried out systematically and continuously over a certain period (Yuzan & Jahro, 2022). E-LKPD has several advantages compared to printed LKPD, namely that E-LKPD can display images, videos, text and questions that can be done anytime and anywhere. E-LKPD can be designed according to the wishes and creativity of educators so that it can attract students' attention and optimize the teaching and learning process (Kholifahtus, Agustiningih, Wardoyo, 2022).

The last stage in this research is development because the dissemination stage was not carried out. The dissemination stage could not be completed due to limited research time and available budget allocation. However, the researcher focused on the development stage, which includes two main steps: (1) expert assessment and (2) development testing. In the development testing, the researcher implemented e-LKPD in small classes. Developers often have to prioritize the development of high-quality products when there is limited time and funds. Focusing on product quality is often chosen with the hope that dissemination can be done later with available resources (Reeves, 2006). The development stage is divided into several activities, including validation by experts, readability testing, and wider field trials. Expert validation aims to assess the design of a product so that it will produce a product that is feasible and can be used in learning (Pada, Bare, Putra, 2021).

Table 4.
Results of Validation

Aspect	Percentage (%)	Criteria
Material Expert	89.60	Very Good
Media Expert	82.60	Very Good
Linguist	92.00	Very Good
PAI Expert	84.00	Very Good
Percentage and Total Criteria	87.10	Very Good

There are validators divided into 4 experts, namely media, material, language and PAI experts. The average percentage of validation results is 87,1% with very good criteria. The aspect with the highest average percentage of material expert and practitioner validators is the content feasibility component of 95% in the very good category. The contents of the ecopreneurship E-LKPD are more appropriate than the LKPD previously used in schools. The quality of E-LKPD can be seen in terms of the completeness of its components (Setiyaningsih, Yuwono, Wijayanti, 2022). The completeness of the contents of the E-LKPD is one of the factors that influences the quality of the E-LKPD to achieve effective learning goals.

If viewed from media validation, the component with the highest average percentage is graphic feasibility of 88% with very good criteria. The cover design and images used in preparing E-LKPD can make it easier for students to better understand the material presented (Vitasari & Rohayati, 2018).

Language validation with the largest percentage component is the presentation component of 96% with very good criteria. Indicators in the presentation component consist of the order of the E-LKPD, ease of reading the text and clarity of instructions or direction in working on the E-LKPD. Meanwhile, in the validation process the Islamic context obtained a percentage of 84% with very good criteria. Validation was carried out by three PAI experts. The criteria for PAI expert validators include having an Islamic education background and teaching experience in Islamic education courses (Idris, 2021).

The validity process shows that the E-LKPD needs to be revised according to input from the validators. The validation is carried out to determine the suitability of the product to be developed, both in terms of material, media, or language (Maulani, Kelana, Jayadinata, 2022). Apart from that, validation by experts aims to provide an assessment of the teaching materials that are being developed (Aidin, Indahwati, Priambodo, 2020).

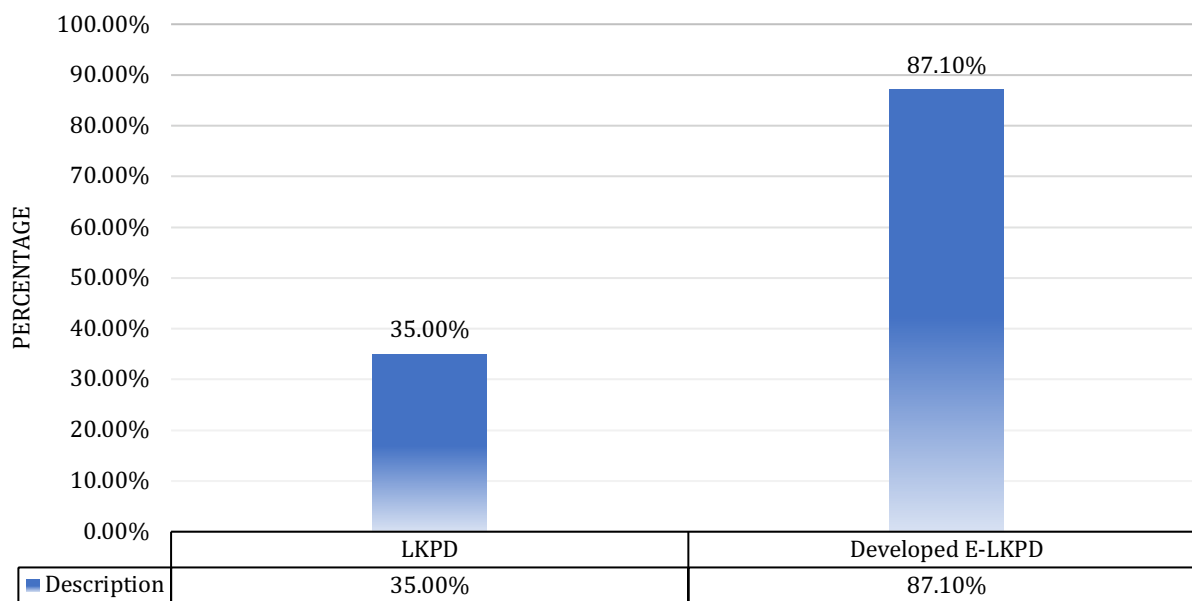


Figure 1. Comparison Chart of LKPD Quality

After the revision is carried out, readability test will be carried out by 15 students. The readability test aims to see the presentation, suitability of appearance, language and ease of use. The readability test results can be seen in Table 5.

Table 5.
Readability Test Results

Aspect	Percentage (%)	Average Percentage (%)	Criteria
Presentation	90.90	93.80	Very Good
Appearance Compatibility	92.20		
Language	97.20		
User Ease	95.90		

Table 5 shows the average percentage of the overall readability test 93,8% with very good criteria. This shows that E-LKPD based on ecopreneurship can be used by students more widely. However, it still requires some improvements obtained from suggestions and comments on the readability test. the lowest indicator is found in the dish with a percentage of 90,9%. Suggestions and comments received from students included adding 1 blank sheet to attach documentation and changing the product manufacturing box to be larger.

Table 6.
Results of Teacher Response Analysis

Aspect	Percentage (%)	Criteria
Material	94.50	Very Good
Language	90.00	Very Good
Graphics	96.00	Very Good
Percentage and Total Criteria	93.50	Very Good

Based on the analysis of teacher responses, the average percentage was 93,5% with very good criteria. The aspect that received the highest percentage was graphics 96%. This shows that the design, image layout, color, letter shape and size of the E-LKPD are attractive, easy to read and can be used for learning.

The resulting LKPD-based ecopreneurship is also in accordance with research conducted by (Eurika & Melasari, 2023) that biology can be developed as an entrepreneurial opportunity, including recycling waste materials. E-LKPD facilitates students to recycle waste and make products that have selling value. (Wilantari et al., 2023) Waste can generate quite a large income if managed well.

The design used in E-LKPD is also considered very good. Design and color variations are aspects that make students interested in carrying out the activities in E-LKPD (Laili & Kuntjoro, 2020). Apart from that, the writing, images and appearance in the E-LKPD are one of the requirements for preparing the LKPD. The purpose of the technical requirements in preparing E-LKPD is so that students do not get bored while studying (Lase & Zai, 2022).

E-LKPD-based ecopreneurship developed in this research is electronic based. This is due to the fact that electronic-based LKPD has not been implemented at the research location. Apart from that, using E-LKPD can reduce the use of paper and also the ability to track progress and learning outcomes digitally. One of the advantages of E-LKPD is the ease of access for students and teachers (Nurulia & Qomariyah, 2022).

Table 7.
E-LKPD Design

The figure displays six screenshots of the E-LKPD design:

- Font Cover:** A colorful cover page titled "DAUR ULANG LIMBAH" (Waste Recycling) with a circular diagram showing recycling stages.
- List of Contents:** A table of contents listing sections like "Daftar Isi", "Pendahuluan", "Pembentukan Konsep", "Konteks Keislaman", and "Penutup".
- Instructions for use:** A page titled "LKPD ELEKTRONIK BERBASIS ECOPRENEURSHIP KONTEKS KEISLAMAN" containing "Daftar Isi LKPD-El", "Pendahuluan", and "Pembentukan Konsep".
- Introduction and Short Information Column:** A page titled "1 Pendahuluan" with a "TAHUKAH KAMU?" (Do you know?) section.
- Concept formation of waste recycling:** A page titled "2 Pembentukan Konsep" featuring a pie chart and text about waste recycling.
- Islamic context and Short Information Column:** A page titled "KONTEKS KEISLAMAN" with a "DID YOU KNOW?" section.

3 Integrasi Konsep

Alat dan Bahan

- Ames
- Penggaris
- Penghapus

Prosedur

1. Amatilah gambar yang terdapat di setiap petak sebagai rangkai gambar di setiap petak.
2. Buatlah gambar yang terdapat di setiap petak tersebut ke dalam kolom yang telah disediakan pada lembar kerja. Hasilnya akan diintegrasikan ke dalam kolom yang telah disediakan.
3. Setelah selesai, buatlah kesimpulan dari hasil integrasi tersebut.

Hasil Pengamatan

Tabel 3. Hasil Pengamatan

No	Nama Limbah	Jenis Limbah	Proses		
		Orang	Interaksi	Reaksi	Tindakan
1					
2					
3					
4					

Integration of concepts and observation result column

5

Pertanyaan

1. Dari hasil pengamatan tersebut, apa saja yang dapat kalian simpulkan? Tuliskan jawaban kalian pada kolom yang telah disediakan!

Diskusi

1. Apakah semua limbah tersebut sama? Apa saja yang sama? Apa yang berbeda?
2. Bagaimana hasil pengamatan tersebut akan memengaruhi kalian? Tuliskan jawaban kalian pada kolom yang telah disediakan!

Question box

Alasan

Manfaat

REASON/BENEFIT:

Reason, benefits and product sketch

4 Aplikasi Konsep

KONTEKS KEISLAMAN

DO YOU KNOW???

Hadis di atas mengajarkan tentang etika, menghormati hak orang lain, dan menjaga kebersihan. Hal ini menunjukkan bahwa Islam sangat memperhatikan aspek-aspek kehidupan sehari-hari, termasuk dalam hal kebersihan dan kesehatan.

Warisan paling berharga untuk generasi berikutnya adalah lingkungan yang bersih dan hijau.

Islamic context and Short Information Column

Alat dan Bahan

Daftarlah alat dan bahan yang akan kalian gunakan untuk membuat produk yang akan kalian buat!

Tabel 2. Alat dan Bahan

No	Alat	Jumlah	Keterangan
1			
2			
3			
4			
5			

Jumlah Alat yang dibutuhkan:

Tabel 3. Bahan dan Kuantitas

No	Bahan	Jumlah	Keterangan
1			
2			
3			
4			
5			

Jumlah Bahan yang Dibutuhkan:

Tables of product tools and materials

Langkah Kerja

Daftarlah langkah-langkah yang akan kalian lakukan untuk membuat produk yang akan kalian buat!

1

2

3

working step column

Kode

Produk: ...

DROP YOUR CREATIVITY!!!

Product photo column

5 Pameran Produk

KONTEKS KEISLAMAN

DO YOU KNOW???

Hadis di atas mengajarkan tentang etika, menghormati hak orang lain, dan menjaga kebersihan. Hal ini menunjukkan bahwa Islam sangat memperhatikan aspek-aspek kehidupan sehari-hari, termasuk dalam hal kebersihan dan kesehatan.

Islamic context and Short Information Column

4 Sifat Rasulullah SAW yang Harus Diteladani Oleh Para Wirasaha

- 1 Siddiq** - Sifat yang menunjukkan kejujuran dan kepercayaan.
- 2 Amanah** - Sifat yang menunjukkan tanggung jawab dan kepercayaan.
- 3 Tabligh** - Sifat yang menunjukkan menyampaikan pesan-pesan Allah.
- 4 Fathanah** - Sifat yang menunjukkan kecerdasan dan kebijaksanaan.

Islamic context

Melarang Angaran Biaya

Tabel 4. Rancangan Angaran Biaya

No	Auxiliary	Jumlah	Harga	Keterangan
1				
2				
3				
4				
5				
6				

Rancangan Pemasaran

Tabel 5. Rancangan Pemasaran

Apakah efektif?	Keterangan
Ya	
Tidak	

Product modal

PROFIT

Uraian	Uraian

Diskusi Hasil Pengamatan

1. Bagaimana hasil dari pengamatan tersebut? Apa saja yang dapat kalian simpulkan? Tuliskan jawaban kalian pada kolom yang telah disediakan!
2. Bagaimana hasil dari pengamatan tersebut? Apa saja yang dapat kalian simpulkan? Tuliskan jawaban kalian pada kolom yang telah disediakan!
3. Apakah hasil dari pengamatan tersebut akan memengaruhi kalian? Tuliskan jawaban kalian pada kolom yang telah disediakan!

Profit product and discussion

RUBRIK PENILAIAN

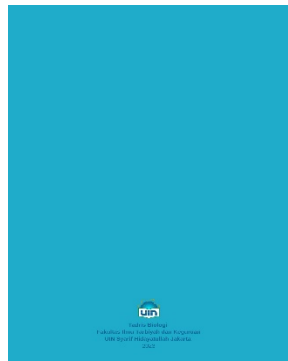
Kategori	Kriteria Penilaian	Skor
Desain Produk	Keindahan	5
	Kebermanaknaan	5
Fungsi Produk	Kebermanaknaan	5
	Kebermanaknaan	5
Aspek Sosial	Kebermanaknaan	5
	Kebermanaknaan	5
Fungsi Produk	Kebermanaknaan	5
	Kebermanaknaan	5

Nilai

Assesment rubric



Bibliography



Back cover

Canva application has tools or editing tools to create various kinds of graphic designs (Muna & Mulyani, 2022). Teachers and students can use various features such as adding text, images and video as shown in Figure 2. The tasks in the E-LKPD-based ecopreneurship require students to insert images in the product manufacturing process. Therefore, Canva application is deemed appropriate for use in developing E-LKPD.

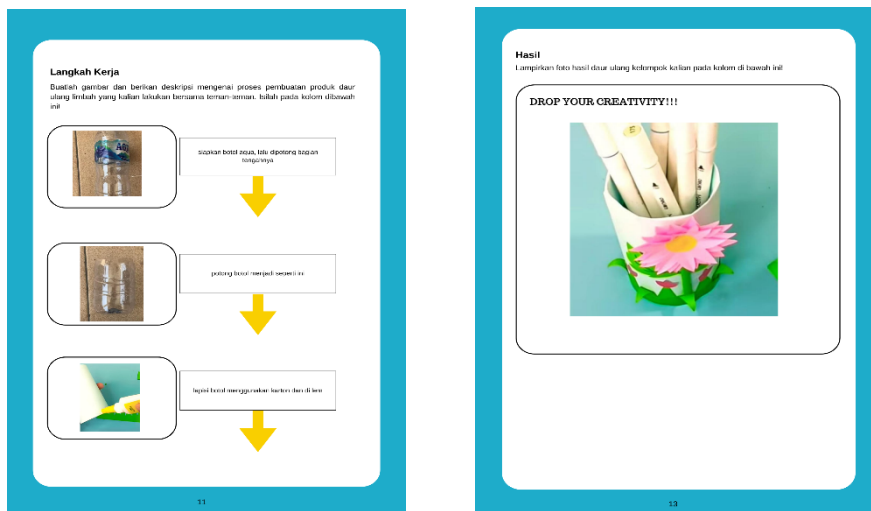


Figure 2. Adding Images in Canva

E-LKPD-based ecopreneurship is carried out in groups via the Canva application. The contents of E-LKPD are divided based on the syntax of ecopreneurship namely introduction, concept formation, concept integration, concept application and product exhibition. E-LKPD assessment based on an assessment rubric that has been agreed with the subject teacher. After students complete E-LKPD-based ecopreneurship, the next step is to fill out the entrepreneurial interest post-questionnaire to find out whether there is an increase in students' entrepreneurial interest. Pre-questionnaire on entrepreneurial interest was given to students before working on the E-LKPD.

Increased Interest in Entrepreneurship

E-LKPD teaching materials which have been through the validation and readability stages, will then be implemented to measure entrepreneurial interest before and after working on E-LKPD. The research subjects are class X6 students with a total of 36 students. The entrepreneurial interest questionnaire has gone through validity and reliability testing using SPSS software. The results of the reliability test can be seen in Table 8.

Table 8.
Reliability Test Results

Cronbach's Alpha	N of Items
.772	20

Based on [Table 8](#), the Cronbach's Alpha value is 0.772. it can be concluded that the instrument is reliable. After the validity and reliability test requirements have been met, the instrument can be used in research. A recapitulation of the entrepreneurial interest questionnaire scores can be seen in [Table 9](#).

Table 9.
Recapitulation of Entrepreneurship Interest Questionnaire Score

Interest Category	Pre-Questionnaire		Post-Questionnaire	
	Number of Students	(%)	Number of Students	(%)
Very Low	0.00	0.00	0.00	0.00
Low	0.00	0.00	0.00	0.00
Neutral	4.00	11.10	1.00	2.80
High	29.00	80.50	26.00	72.20
Very High	3.00	8.40	9.00	25.00
Total	36.00	100.00	36.00	100.00

[Table 9](#) shows a decrease in the Neutral category. It is known that four students are in the Neutral category, however in the next comparison there is a decrease in the number of students from initially 4 students (11,11%) to only one student (2,78%). In the next category, namely the High category, it is known that before learning there were 29 students (80,55%) who showed the High category, while after implementing E-LKPD in learning there were 26 students (72,22%). The Very High category shows an increase in the percentage before and after using E-LKPD. 3 students were classified into the very high category before the learning took place (8,34%), this number increased after the learning took place, namely 9 students (25%).

Based on calculations using Microsoft Excel, there was an increase in accumulative points on the pre-post questionnaire. In the phase before the learning took place, the total accumulative points in the pre-questionnaire were 2833, while the accumulative points in the pre-questionnaire were 3039. After calculating the accumulative points, there was an increase of 206 points or 7,27%. The average pre-questionnaire point result was 78,69, while the average post-questionnaire point was 84,42 ([Figure 3](#)).

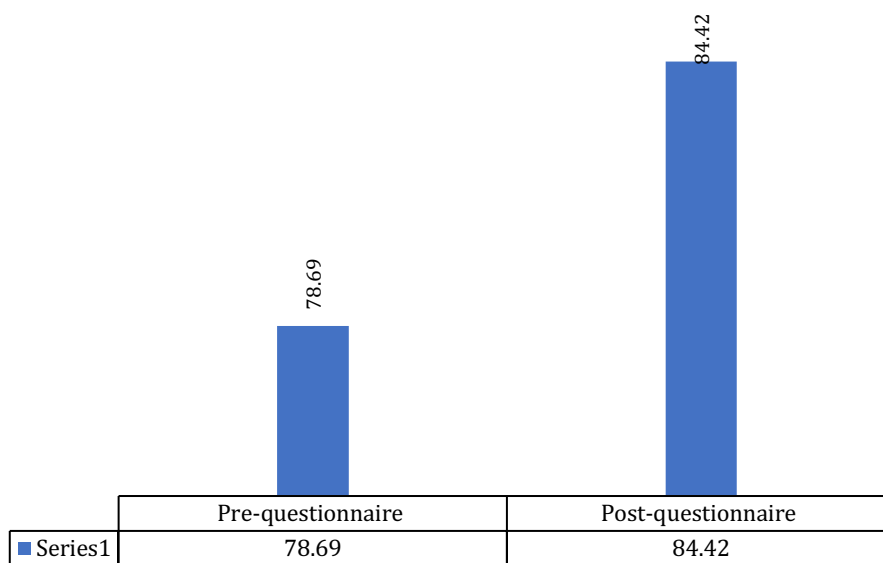


Figure 3. Entrepreneurship Interest Comparison Chart

The E-LKPD developed in this study effectively increases students' interest in entrepreneurship. It is essential to consider the increasing importance of entrepreneurship education in Islamic values and

environmentally friendly initiatives. The growth in interest in entrepreneurship shown by the results of this study emphasizes the importance of using this tool in educational environments to foster environmentally conscious future entrepreneurs.

CONCLUSION

The research results on "Integrating Islamic Values and Ecopreneurship in Biology: E-LKPD as a learning tool" showed that the E-LKPD produced had outstanding criteria. From the validation results carried out by nine validators, the average percentage of E-LKPD eligibility level reached 87.10%. Meanwhile, the overall percentage of teacher responses to E-LKPD was 93.5%, and student responses were 91%, which is a very good criterion. There was an increase in the average pre-questionnaire and post-questionnaire interest in entrepreneurship. So, it can be concluded that ecopreneurship-based E-LKPD is suitable for learning and can increase entrepreneurial interest.

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