


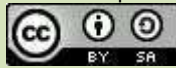


Validity of ESQ booklets about structure and function of animal tissue as biology learning supplement

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Article Information	ABSTRACT
Submitted: 2021-01-19 Accepted: 2021-03-31 Published: 2021-05-02	<p>The development of an ESQ booklet on the structure and function of animal tissues to empower students' emotional-spiritual attitudes in schools has not been maximized. This research aims to develop an ESQ booklet about the structure and function of animal tissue and to determine the validity of the booklet. This research type is research and development (R&D). This learning media was developed using three stages of the 4D model namely define, design, and develop. The research instruments used are observation sheets, interview transcripts, and validity test sheets. The research data collected through questionnaires of validity test sheets to content expert, media expert, ESQ expert (Islamic religion teacher), and biology teacher. The assessment of each validator was analyzed and processed using the validity formula and adjusted to the validity category. Based on the analysis of the validity test questionnaire, it was found that the validity percentage of the content eligibility was 92.05%, the linguistic aspect was 92.16%, the presentation aspect was 93.33%, and the graphics aspect was 95.83%, all of the criteria is very valid. It was concluded that the ESQ booklet about the structure and function of animal tissue as a biology learning supplement was categorized as very valid with an average score is 93.34%. Thus, the conclusion of the research is that the ESQ booklet about the structure and function of animal tissue as a biology learning supplement is declared very valid from the aspects of content, language, and media.</p> <p>Keywords: Booklet; ESQ; animal tissue; learning media</p>
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INTRODUCTION

The current curriculum in the Indonesian Education System is Curriculum 2013 (C-13). The aspects of assessment reviewed in C-13 are spiritual, attitude, knowledge, and skills. [Permendikbud No 35 \(2018\)](#) describes that one of the characteristics of C-13 is to develop the balances of spiritual

and social attitudes, knowledge, and skills of students and apply them in various situations in schools and communities. According to [Riyana \(2012\)](#), one of the efforts that can be carried out to balance these aspects is through learning media, the success of the learning process is supported by the learning media used. The functions of visual learning media according to [Ismail \(2020\)](#) are attention, affective, cognitive, and compensatory functions. The attention function serves to attract the attention and concentration of students, the affective functions provide students with emotions or attitudes towards images on the media, cognitive functions to accelerate students to understand information, and the compensatory function is to make it easier for students with weak abilities to remember information.

The use of visual learning media will help students understand pictorial content in lessons. Biology learning in High School requires appropriate learning media to help students understand biology content. According to [Sepriadi et al. \(2018\)](#), biology lessons require the ability to think critically, inductively, and dedicate students to solve problems regarding phenomena in living things at various levels of life. Therefore, learning media that are suitable for biology content are needed to make it easier for students to understand abstract material and cannot be observed directly. Based on observations for 30 students at SMAN 1 Pulau Punjung on 28 September 2020, it was revealed that students felt bored, unmotivated, did not like reading existing biology learning media, and had difficulty understanding the material in the learning media, as a result, in the learning process students became less active and students' daily tests are low.

Based on an interview with one of the biology teachers in SMAN 1 Pulau Punjung on 25 September 2020, it was revealed that the learning media used in biology learning are PowerPoint slides, animated videos, student worksheets, and modules containing learning materials prepared by the teacher. This learning media is always used in every biology material, so the teacher reveals that students seem bored and unmotivated in using existing learning media. Biology teachers stated that the lack of time and the lack of competence of teachers in developing interesting and varied learning materials was the cause of using the same learning media in every biology topic. Therefore, teachers need a new interesting learning media and able to increase student motivation and make it easier for students to understand biology content. According to [Nurseto, \(2011\)](#), current learning emphasizes process skills and active learning, demanding that the use of lecture methods be reduced and replaced by the use of various learning media. Various learning media can provide new learning experiences for students, besides that, it can increase students' motivation in reading learning materials. The biology teacher also stated that the allocation of time is not by the amount of Biology content causes students to need independent learning time out of the class, but students do not have independent learning media. Students need independent learning media in the form of supplements that are used side by side with the main learning media. The solution to the limited allocation of learning time in schools according to [Warliah et al. \(2018\)](#), is to use learning media that allow the learning process to be carried out anytime and anywhere and can be used independently for students as a learning supplement.

One of biology material that is difficult for students to understand in grade XI based on observation is the material on the structure and function of animal tissue because there are many pictures of animal tissue structures that are difficult to distinguish by students. The images presented in the existing learning media used by students do not have good quality pictures and seem unattractive and unclear and do not explain the structure of animal tissue well. The structure and function of animal tissue material is the most difficult material evidenced by the low test scores of

students on animal tissue material compared to other materials in the first semester in class XI. Students stated that they had difficulty understanding the material on existing learning media, and the existing learning media do not make students interested and motivated to read.

According to [Maemunawati & Alif \(2020\)](#), the use of instructional media serves to raise students' interest and motivation, with the use of interesting learning media that will provide a sense of enthusiasm and a pleasant atmosphere for students in learning. Based on the problems experienced by students and biology teachers regarding the use of learning media, one of the learning media that can attract reading interest, motivate students, has high-quality images, attractive appearance, and suitable to be used as a learning material supplement that can be used independently by students is a booklet. According to [Atiko \(2019\)](#), The advantages of booklets for students are forming confidence in the notes provided by educators, promoting booklets to other students, so that students are curious and interested in reading booklets, arousing students interest in reading to completion, as well as with the pictures on the booklets, students easier to understand learning material. Based on interviews with teachers, booklets have never been used as biology learning media. According to [Gilissen et al. \(2020\)](#), teachers must be able to professionally develop learning materials innovatively and creatively.

Based on literacy studies, some biology materials have been developed in the form of a booklet and obtained valid values. Several booklets that have been developed are human motion system booklets, cell division booklets ([Fitri, 2020](#)), hereditary patterns booklets ([Samhuliya, 2019](#)), pteridophyta diversity booklets [fitriasih et al. \(2019\)](#), phylum echinodermata booklet ([Indasari, 2016](#)), immune system booklet [Puspita et al. \(2017\)](#), dragonfly species diversity booklet ([Purnomo & Rahayuningsih, 2020](#)) and other booklets. Based on literacy studies, there have been various valid media developed regarding animal tissue materials. Several media developments are in the form of catalogs ([Nurhidayah & Haryunita, 2020](#)), inquiry-based modules ([Natsir, 2016](#)), interactive multimedia ([Kinanti, 2015](#)), illustrated pocket books ([Yulmi, 2018](#)), Android-based m-learning ([Arifuddin & Bahri, 2019](#)), LKPD based on Paikem Gembrot ([Hasim, 2020](#)), integrated worksheet ([Kotimah & Ambarwati, 2020](#)) and other media. As far as the literacy study conducted by the author, there has not been any development of booklets on the structure and function of animal tissues, therefore this booklet has been developed as a complement to the collection of learning media for material on animal tissue structure and function.

Based on an interview with one of the Islamic religious teachers on 18 February 2021, it was revealed that there were still many students' emotional-spiritual attitudes that were not in accordance with the essence competencies in the C-13. According to [Permendikbud No 37 \(2018\)](#) the spiritual aspects expected in the first essence competencies of the 2013 curriculum is to live and practice of the religion they adhere to, the emotional aspects of students that are expected in the C-13, namely showing honest, disciplined, responsible, caring behavior (cooperation, tolerance, peace), polite, responsive, and pro-active as part of the solution to various problems in interacting effectively with the social and natural environment and placing oneself as a reflection of the nation in world relations. The obstacle experienced by religious teachers is the difficulty in increasing the emotional-spiritual value of students because many factors affect students.

Family environmental factors, friendship, daily viewing, and upbringing of the closest people affect the emotional-spiritual attitude of students. The Islamic religion teacher stated that he had tried to increase the emotional-spiritual value of students by holding religious extracurricular activities. Islamic religious teachers need support from other subjects teachers to increase the emotional-spiritual value of students by providing an ESQ nuanced on the learning materials used, this can be an

effort to increase the emotional-spiritual value of students. According to [Mirza et al. \(2018\)](#), learning media with ESQ nuances can make it easier for students to learn and generate spiritual values that are expected to create valuable and meaningful learning. Learning media with emotional spiritual quotient (ESQ) values can be combined with biology content to generate gratitude for students for the power of God, balance the spiritual, affective, and cognitive abilities of students, and create valuable and meaningful lessons.

Based on previous research literacy studies, there are several valid biology learning media with ESQ values. Some of the ESQ nuanced learning media that have been developed are ESQ nuanced modules on circulatory system material [Putra et al. \(2017\)](#) ESQ nuanced modules on evolutionary material [Rahmadhani et al. \(2019\)](#), interactive multimedia with ESQ nuances on system materials human circulation ESQ-nuanced Biology module on material coordination systems in humans and other ESQ nuanced media. Based on the literacy search by the author, there has been no research on the development of ESQ Booklet as a learning media. Biology teachers revealed that biology learning media used so far did not have ESQ nuances, so students had never had an ESQ value learning experience.

According to [Herwati \(2016\)](#) ESQ (Emotional Spiritual Quotient) consists of emotional intelligence, namely the ability to understand, manage, motivate self, and know the emotions of others, spiritual intelligence is the ability to manage the spiritual values of human life, emotional intelligence, spiritual, and intellectual are interconnected and lead to success. According to [Fauziyati \(2019\)](#), one way to increase intelligence is through literacy, education does not only rely on intellectual intelligence but also requires emotional and spiritual intelligence, is expected to provide student learning experiences and increase students' gratitude towards Allah SWT and have better emotional intelligence. Using ESQ learning materials is an effort to balance all of the essential competencies in C-13 that are spiritual, affective, cognitive, and skill values of students.

Based on the problems by students, biology teachers, and Islamic religion teachers obtained from observations and interviews, the author aims to develop and determine the validity of learning materials in the form of ESQ booklets on the structure and function of animal tissue. The absence of previous research on ESQ booklets on the structure and function of animal tissue as described above is also the reason for the author in developing an ESQ booklet. The ESQ nuanced booklet is expected to increase the spiritual and emotional value of students to provide a valuable and meaningful learning experience by generating gratitude to Allah SWT and being responsible for the health of the body. Students are expected to be motivated and have new learning experiences and prefer to read learning materials. This learning material supplement is expected to assist teachers in explaining the material on the structure and function of animal tissue with high-quality images.

RESEARCH METHODS

This research is development research that aims to produce a new product, namely an ESQ booklet about the structure and function of animal tissue as a biology learning supplement for grade XI science of high school students. The development model used is three stages of the 4D development model, namely define, design, and develop. The defined stage carried out the preliminary and final analysis, student analysis, concept analysis, task analysis, and analysis of learning purpose. The design stage includes media selection, format selection, and initial design. The development stage includes the validity test stage. The product developed will be validated by four validators consisting of two lecturers from the Department of Biology, Faculty of Mathematics and Natural Sciences as a

content expert and media expert, one Islamic religion teacher as ESQ expert, and one biology teacher. The research instrument used was a product validity test questionnaire by the product validity grid.

The ESQ booklet about the structure and function of animal tissue was tested on the validator. The results of the validity test from the validator will be analyzed to see the validity of the designed product. Analysis of the results of the validity test was carried out in the following stages.

- a. Provide an answer score with a modified Likert scale from (Purwanto, 2018) as follows.
STS (Strongly Disagree) : Score 1
TS (Disagree) : Score 2
S (Agree) : Score 3
SS (Strongly agree) : Score 4
- b. The validity value of the product developed was determined by the modified content validity coefficient from the research from Rehusisma et al. (2017), with the following formula.

$$V = \frac{Tsr}{Tms} \times 100\%$$

Explanation:

V = Validity

Tsr = Total Score Result

Tms = Total Maximum Score

- c. Provide a validity assessment according to the modified criteria of (Arikunto, 2010) as follows (see Table 1).

Table 1. Product Validity Criteria

Validity Value Range (%)	Criteria	Conclusion
81-100	Very Valid	Products can be used without revision
61-80	Valid	Product requires minor revision before use
41-60	Less Valid	Product requires multiple revisions before use
≤40	Invalid	Products still need intensive consultation

FINDINGS AND DISCUSSION

The results of the study were obtained from four validators, namely content experts, media experts, ESQ experts, and biology teachers. The development model used is three stages of the 4D development model, namely define, design, and develop. The defined stage carried out the preliminary and final analysis, student analysis, task analysis, concept analysis, and analysis of learning purpose. The design stage includes media selection, format selection, and initial design. The development stage includes the validity test stage (Fransisca, 2017).

Define stage, includes preliminary and final analysis, student analysis, concept analysis, task analysis, and analysis of learning purpose. The preliminary and final analysis stage aims to determine the problems that occur at SMAN 1 Pulau Punjung during the Biology learning process. Based on interviews with Biology teachers at SMAN 1 Pulau Punjung, it was revealed that students were less motivated in the learning process because the learning media did not vary. Islamic religion teacher stated that students behavior during learning is also not following the affective spiritual indicators required in the K-13.

The instructional media used by teachers in the form of LKPD, modules, Powerpoint slides, and animated videos do not have ESQ nuance. Based on the results of the student observation questionnaire analysis, it is known that 67% of students feel bored with the learning media used, 70% of students are not focused, unmotivated, and have difficulty understanding the material in the learning

media. During the learning process, students often do not bring the learning materials that have been provided by the teacher because of forgetting, and the size is large and heavy. It is known from the results of interviews with teachers that booklets have never been used as teaching materials for biology, 100% of students have never used booklets as independent teaching materials. The complexity of the material with the time allocation provided for Biology learning according to the Biology teacher is not yet commensurate, where students need independent learning time to understand Biology content that is pictorial, and cyclical. Based on the results of interviews and student observation questionnaire analysis, the development of learning media with the nuances of ESQ was chosen as a Biology learning media to help students understand learning materials independently, increase motivation, and provide a new learning atmosphere for students.

Student analysis is obtained based on the analysis of student observations, it is known that most students learn visually. 87% of students stated that easier to understand the material if the learning materials used are colorful and interesting, students also find it easier to remember material that is pictorial and colored. 93% of students like learning materials that are given additional external information, and are given ESQ nuances. 73% of students liked learning materials that contained explanations for difficult terms, 100% of students liked learning materials that were equipped with concept maps. According to [Harahap et al. \(2020\)](#), the learning media criteria that students want for learning media still do not have existing learning media. Based on the student's analysis, one of the interesting media, which can be equipped with a concept map, the nuances of ESQ, new information, and explanations for difficult terms, as well as pictorial and colorful is a booklet. Therefore, the booklet was chosen as a media that fulfills the desires of students to increase student's motivation in learning.

Concept analysis aims to identify the main concepts in Biology learning materials. Concept analysis was obtained from the results of interviews with Biology teachers and student observation questionnaires regarding material that were difficult for students to understand, so it was necessary to develop booklets as a supplement to teaching materials. According to ([Fakhrurrazi, 2018](#)), the success of the learning process does not always depend on the educator but involves many factors including the activeness of students, the availability of learning facilities, safety, and classroom safety to create effective learning conditions. As many as 63.33% of students chose the structure and function of animal tissue material which was difficult for students to understand in class XI, this is in line with the interview with the biology teacher, this material is considered difficult because many animal tissue images are difficult to distinguish by students. Material structure and function of animal tissue includes epithelial tissue, connective tissue, nerve tissue, muscle tissue, and disorders of each tissue, the complexity of the material, and the cognitive level of analysis (C4), causing this material to become considered difficult by students. The average daily test for class XI students of SMAN 1 Pulau Punjung in 2019 the lowest was in the material structure and function of animal tissue, namely with an average of 70.50, while the KKM set was 75 can be seen in [Table 2](#). The average of less score than KKM of students in daily tests of animal tissue structure and function in 2019 was 67.15%, while in 2020 as much as 68.08% can be seen in [Table 3](#), more than half of the students did not complete daily tests on structure and function material animal tissue. Based on the data obtained, learning materials were developed in the form of ESQ nuanced booklets on animal tissue structure and function materials which are expected to be able to improve students understanding of animal tissue structure and function material.

Table 2. Average Daily Test Class XI Semester 1 Year 2019

KD	Topics	Natural Sciences Grade XI				Average
		1	2	3	4	
3.1	Cell	78	75	76	65	73,50
3.2	Transport of substances	76	74	74	75	74,75
3.3	Plant tissue	74	68	71	70	70,75
3.4	Animal tissue	74	70	70	68	70,50
3.5	Motion system	77	74	70	72	73,25
3.6	Circulatory system	78	74	73	73	74,50
3.7	Digestive system	71	73	74	70	72,00

Table 3. Percentage of Less of KKM score in Animal Tissue Daily Test

Year	Natural Sciences Grade XI	The number of students	Score		Percentage of Less of KKM score (%)
			<KKM (<75)	≥75	
2019	1	34	20	14	58,82
2019	2	36	23	13	63,88
2019	3	34	23	11	67,64
2019	4	33	26	7	78,78
	Count	137	92	45	67,15
2020	1	31	18	13	58,06
2020	2	32	21	11	65,62
2020	3	31	25	6	80,64
	Count	94	64	30	68,08

Task analysis aims to detail the booklet material being developed. This analysis identifies and analyzes basic competencies and indicators of competency achievement by the essential competencies in the 2013 Curriculum. Essence competencies of material structure and function of animal tissue (see Table 4), basic competencies of material structure and function of animal tissue (see Table 5), and Indicators of competence achievement on material structure and function of animal tissue (see Table 6).

Table 4. Essence Competencies of Material Structure and Function of Animal Tissue

Aspects	KI
Spiritual	1. Living and practicing the teachings of the religion they adhere to
Affective	2. Demonstrate honest behavior, discipline, responsibility, care (mutual cooperation, cooperation, tolerance, peace), courteous, responsive, and pro-active as part of the solution to various problems in interacting effectively with the social and natural environment and placing self as a reflection of the nation in world relations
Cognitive	3. Understand, apply, analyze factual, conceptual, procedural knowledge based on their curiosity about science, technology, arts, culture and humanities with insight into humanity, nationality, statehood and civilization related to the causes of phenomena and events, and apply procedural knowledge to the field of study that devoted to the talents and interests of solving problems
Psychomotor	4. Processing, reasoning, and presenting in the realm of the concrete and the abstract realm related to the development of what they learn in school independently and being able to use methods according to scientific principles

Table 5. Basic Competencies of Material Structure and Function of Animal Tissue

Aspects	KD
Cognitive	3.4 To analyze the relationship between cell structure in animal tissues and organ functions in animals
Psychomotor	4.4 Presenting data from observations of tissue and organ structures in animals

Table 6. Indicators of Competence Achievement on Material Structure and Function of Animal Tissue

Aspects	IPK
Cognitive	3.4.1 Identifying tissues in animals.
	3.4.2 Analyzing the relationship between the structure, location, function of the epithelium based on the shape and number of cell layers.
	3.4.3 Linking the structure and location of various types of connective tissue and their functions.
	3.4.4 Linking the structure and location of various types of muscle tissue and their functions.
	3.4.5 Linking the structure of various types of nerve cells and their functions.
Psychomotor	4.4.1 Observing animal tissue preparations using a microscope

Analysis of learning purpose is used to analyze what learning purpose must be achieved by students in learning. In the material on the structure and function of animal tissue, the learning objectives that must be achieved by students are to analyze the relationship between cell structure in animal tissue and the function of organs in animals. Therefore, a booklet was developed that makes it easier for students to understand images that are abstract and cannot be observed directly with an attractive appearance to achieve predetermined learning objectives.

Design stage including media selection, format selection, and initial design. Media selection is based on the results of interviews with biology and Islamic religion teachers and observations with students. It is revealed that there is no available learning media that is interesting and ESQ nuanced on the structure and function of animal tissue material. 100% of students have never used learning media in the form of booklets. Teachers use media in the form of LKPD, modules, PowerPoint slides, and animated videos which are still not varied and make students feel bored and unmotivated by using existing learning media. The teacher stated that the lack of time and the lack of teacher competence in developing attractive teaching materials became obstacles in creating interesting teaching materials for students. Therefore, an ESQ nuanced booklet on the structure and function of animal tissue was developed as a supplement to Biology teaching materials for students in class XI IPA SMA. The format selection stage aims to choose an appropriate format for making booklets to create attractive booklets, while the format specified in the format of the type of font, the size of the font, and everything related to the format of the booklet. The initial design stage aims to design, create, and develop a content outline for the booklet.

The stages carried out at this stage are determining the application to be used, the type of paper, reference sources, high-resolution images, ESQ values, the estimated number of pages, cover design and content display, color, to produce a prototype booklet. At the initial design stage, the Microsoft Publisher 2010 application was used to compile the booklet, the Remini application to increase the image resolution in the booklet, the PicsArt application, and Paint to design the suitability of the image. The type of paper used is white manila paper with a size of A5 148 x 210 mm. The estimated number of booklet pages is no more than 30 pages. The cover is designed by selecting the image of a tiger in a head arrangement of the skeleton, muscles, and full head tiger to symbolize that the animal's body is composed of various tissues. The content framework of the booklet that is designed is cover, introduction, learning competence, concept map, material, ESQ nuances, Bio info, glossary, and bibliography. The theme colors in the booklet are navy blue, gray, crème, and other colors that are adjusted to the appearance of the booklet. The types of writing used are Arial Narrow and Berlin sans FB with sizes adjusted to the appearance of the booklet. According to [Pralisaputri et al. \(2016\)](#) booklets as effective and efficient learning media that contain important information, are uniquely designed, clear, and easy to understand, so that booklets can be used as companion learning tools for learning activities in class or independently.

The third stage is developed where validity tests. The product resulting from the design stage is revised according to suggestions by the validator. The content validator is responsible for checking content appropriateness, language, and presentation. The media validator is responsible for checking the graphics of the product. The ESQ validator is responsible for checking the appropriateness of the ESQ content, ESQ language, and ESQ presentation. The biology teacher validator is responsible for checking the appropriateness of the content, language, presentation, and graphics of the product. Validators for media experts and content experts from biology lecturers, FMIPA, UNP, namely Ganda Hijrah Selaras, M.Pd, and Sa'diatul Fuadiyah, M.Pd. The expert validator of ESQ from the Islamic religion teacher at SMAN 1 Pulau Punjung, Ahmad Husen, S.Ag., M.PdI. The validator from a biology teacher is Desi Dahlan, M.Pd. At the validity stage, several revision stages were carried out to improve the booklet in terms of material and graphics. The improvements made are reevaluated until the product is declared worthy of being assessed for its validity aspect. The front cover of the booklet before and after revision (see [Figure 1](#)). Display of booklet mind map before and after revision (see [Figure 2](#)). Display of booklet material before and after revision (see [Figure 3](#)).

Analysis of the validity test questionnaire from content experts can be seen in [Table 7](#). The results of the validity of the media experts can be seen in [Table 8](#). The results of the validity of the ESQ experts can be seen in [Table 9](#). The results of the validity from biology teachers can be seen in [Table 10](#). The results of the questionnaire analysis of validity test are obtained from the acquisition score on the validity test questionnaire with a Likert scale, then uses a formula to determine the validity value, and categorized according to the criteria described in the research method above. The summary of the validity tests of the four validators can be seen in [Table 11](#).



Figure 1. The Front Cover of the Booklet Before and After Revision

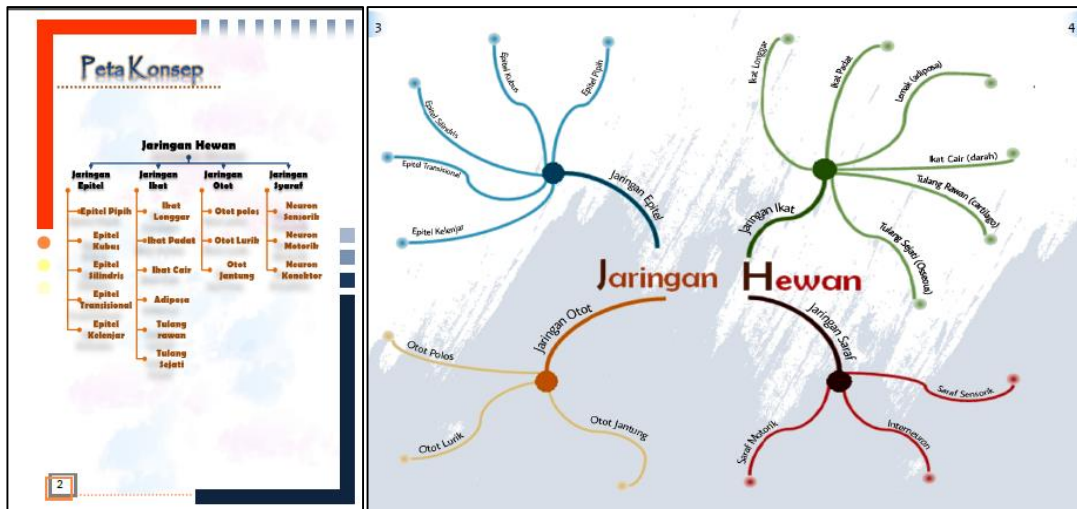


Figure 2. Display of Booklet Mind Map Before and After Revision

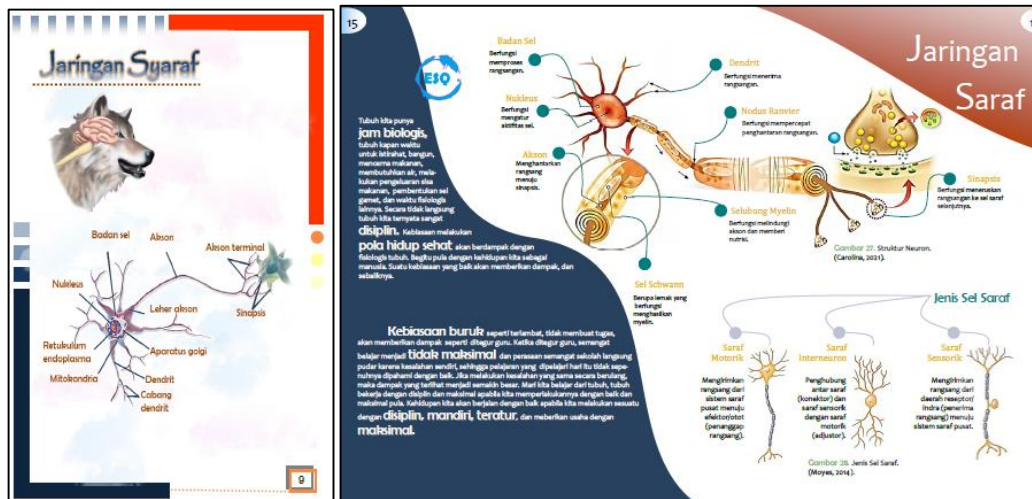


Figure 3. Display of Booklet Material Before and After Revision

Table 7. Content Validity Analysis from Content Experts

Aspects	Score Result	Maximum Score	Validity Score %	Criteria
Content eligibility	32	27	84,38	Very Valid
Language	40	34	85,00	Very Valid
Presentation	20	19	95,00	Very Valid

Table 8. Media Validity Analysis from Media Experts

Graphic Aspects	Score Result	Maximum Score	Validity Score %	Criteria
Font	12	12	100,00	Very Valid
Colour	8	8	100,00	Very Valid
Layout	11	12	91,67	Very Valid
Pictures	8	8	100,00	Very Valid
Display Design	37	40	92,50	Very Valid

Table 9. ESQ Validity Analysis from ESQ Experts

Aspects	Score Result	Maximum Score	Validity Score %	Criteria
Content eligibility	27	28	96,43	Very Valid
Language	31	32	96,88	Very Valid
Presentation	18	20	90,00	Very Valid
Graphics	20	20	100,00	Very Valid

Table 10. Booklet Validity Analysis from Biology Teacher

Aspect	Score Result	Maximum Score	Validity Score %	Criteria
Content eligibility	27	28	96,43	Very Valid
Language	29	32	90,63	Very Valid
Presentation	19	20	95,00	Very Valid
Graphics	19	20	95,00	Very Valid

Table 11. Booklet Validity Analysis From Four Validators

Variabel	Validators				Total Score Result	Maximum Score	Validity Score %	Criteria	
	1	2	3	4					
Content eligibility	27		27	27	81	88	92,05	Very Valid	
Language	34		31	29	94	102	92,16	Very Valid	
Presentation	19		18	19	56	60	93,33	Very Valid	
Graphics		76	20	19	115	120	95,83	Very Valid	
		Average						93,34	Very Valid

Explanation:

Validator 1= Sa'diyatul Fuadiyah, M.Pd (content expert)

Validator 2= Ganda Hijrah Selaras, M.Pd (media expert)

Validator 3= Ahmad Husen, S.Ag., M.PdI (ESQ expert)

Validator 4= Desi Dahlan, M.Pd (biology teacher)

Based on the analysis of the validation test questionnaire by the validator on the aspect of validation assessment, it was found that the ESQ booklet about the structure and function of animal tissue obtained a very valid value with an average of 93.34%. Aspect indicators of the content eligibility, language, and presentation were obtained from assessments by a content expert, ESQ experts, and biology teachers. The graphic aspects were obtained from assessments by media experts, ESQ experts, and biology teachers. The validity value of the content eligibility aspect is 92.05% with very valid criteria, the language aspect is 92.16% with very valid criteria, the presentation aspect is 93.33% with very valid criteria, and the graphic aspect is 95.83% with very valid criteria. Several booklet developments also obtained valid to very valid categories such as research by [Rusmana et al. \(2019\)](#)., [Paramita et al. \(2019\)](#) and some research on the development of the booklet previously described. The aspect of the content eligibility is the suitability of KI and KI in C-13, suitability to the needs of students, suitability to the needs of learning media, the truth of material substance, benefits to increase knowledge, suitability with morality and social values, and suitability with student development. The content expert gave a score of 4 (strongly agrees) on the aspects of suitability with KI, suitability with social norms, and suitability with the development of students, another indicator on the content eligibility is worth 3 (agree). The ESQ expert gave a score of 3 (agreed) on the benefits of the booklet to increase students' ESQ scores, another indicator on the content eligibility of ESQ in the booklet was worth 4 (strongly agree). The biology teacher gave a score of 3 (agree) on the suitability of the booklet with the development of students, another indicator on the content eligibility is 4 (strongly agree). In total, the content eligibility aspect is very valid, with a score of 92.05%.

Linguistic aspects include legibility, clarity of information, conformity with Indonesian language principles, effective and efficient use of language, and the correctness of theoretical references. The content expert gave a score of 4 (strongly agrees) on the readability indicator, the suitability of the language rules used, the theoretical reference rules, other indicators have a score of 3 (agree). The ESQ expert gave a score of 3 (agree) on the indicator of information clarity, the other indicators are worth 4 (strongly agree). The biology teacher gave a score of 3 (agree) on the aspect of using

sentences effectively and efficiently, the other indicator is worth 4 (strongly agrees). In total, the linguistic aspect obtained a very valid value, with a score 92.16%.

Presentation aspects include clarity of objectives, order of presentation, provision of motivation, interactivity, and completeness of the information. The content expert and biology teacher gave a score of 3 (agree) on the presentation of the booklet interactivity, other indicators have a value of 4 (strongly agree). The ESQ expert gave a score of 3 (agree) on the clarity of the objectives and completeness of the ESQ information in the booklet, the other indicators are worth 4 (strongly agree). Overall, the linguistic aspect obtained a very valid value, with a score of 93.33%.

Graphic aspects include the use of letters, color selection, layout, image selection, and display design in the booklet. Media experts gave a score of 3 (agree) on the indicator of ease of understanding the layout of the booklet, attractive cover design, attractive mind map display, and interesting bio info display, other indicators score 4 (strongly agree). The biology teacher gave a score of 3 (agree) on the suitability of the letters in the booklet, the other indicators are worth 4 (strongly agree). The ESQ expert gave a score of 4 (strongly agreed) on all indicators on the graphic aspect. Overall, the graphic aspect obtained a very valid value, with a score of 95.83%. All aspects of evaluating the validity of the ESQ nuanced booklet on the material of structure and function of animal tissue are very valid, so the booklet developed is categorized as a very valid development product. According to (Sari & Iza, 2018) with the validation test, the product is deemed appropriate to be used to expand knowledge, provide learning experiences, and products are developed according to student needs.

CONCLUSION

Based on the research that has been done, it is concluded that the average validation of the ESQ booklet about the structure and function of animal tissue with a percentage of 93.34% is categorized as very valid. The average validity score of content eligibility aspects 92.05%, linguistic aspects 92.16%, presentation aspects 93.33%, and graphic aspects 95.83% with the percentage is very valid. The validity of the product is obtained after going through the revision stage from the advice of content experts, media experts, ESQ experts, and biology teachers to produce a final product with a very valid category. The ESQ nuanced booklet is expected to increase learning motivation, be interesting to read, increase student's ESQ scores, help Islamic religion teachers improve students' ESQ scores, and assist teachers in explaining material about the structure and function of animal tissue.

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