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Development of Phylum Mollusca Picture Cards as Learning Media

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Abstract: The process of remembering, understanding, and mastering the concept of material can be done more interestingly through pictures. Pictures can have a positive impact in helping the child's learning process in memory skills and can improve communication skills. This study aims to determine the feasibility level of the picture cards that have been developed. the research method used is research and devolopment (R&D). Research on the development of Phylum Mollusca picture cards using the application microsoft word and microsoft power poin. Medium assessment was carried out by one material expert, one medium expert, five peer reviewers, one biology teacher as a reviewer, and 15 grade x students. Meanwhile, the results of development research indicate that the quality of the invertebrates picture cards developed is in the very good category (SB) according to material experts with an ideal percentage of 89.33%, Good category (B) according to medium experts with an ideal percentage of 77.17%, Very good category (SB) according to peer reviewers with an ideal percentage of 90.8%, and biology teachers 86%. Thus it can be concluded that this media is declared fit for use as a medium for learning biology.

Keywords: picture cards, mollusca phylum, learning medium

Running title: Mollusca Picture Cards as Learning Media

INTRODUCTIONS

The phylum mollusca has a high degree of diversity. Mollusca are animals that do not have a backbone that live in almost all areas of marine waters. However, most of the mollusca species are found in coastal areas such as coral reef areas. The beach substrate is in the form of dead coral with a wide intertidal zone that allows viewing of marine life trapped in its basins at low tide. The characteristics of the beach with dead coral substrate and many basins make this beach a preferred habitat for marine life (Fortes, 1990).

Material objects from the Mollusca phylum are difficult to find and are rarely found around us and in studying them, complete information is needed about the material of the Mollusca phylum. The phylum mollusca is a material whose scope is very large. Students have difficulty in mastering the material starting from the characteristics of each class, classification and examples of the organisms that represent them (Sistriyani, 2012).

The learning process in biology has tended to be monotonous and less interesting. This is because in the biology subject the material presented is very complex and students tend to memorize when recalling the material provided by the teacher. Visual media (pictures or parables) play a very important role in the learning process. Images can provide direct experience to students so as to facilitate understanding and strengthen memory. Visual media can also foster student interest and can provide a real picture of the relationship between the content of the subject matter and the natural surroundings (Arsyad, 2010).

Learning that is carried out is limited to direct learning, does not yet meet the criteria of being effective, efficient, and practical. As students tend to be passive because they only listen and take notes, there are rarely activities that make participants active in the learning. A way is needed so that students can be more active when the learning process takes place, understand, remember, and master the concepts of the material being taught. One way that can be used is to take advantage of the five senses they have.

The process of remembering, understanding, and mastering the concept of material can be done more interestingly through pictures. Pictures can have a positive impact in helping the child's learning memory process and can improve communication skills. Picture cards are concrete in nature, the images that are displayed more realistically show the subject matter compared to verbal media. Images can overcome time and space constraints. Not all objects, objects or events can be brought to class, but pictures can always be carried with you. Image media can overcome the limitations of our observations, can clarify a problem in any field and at any age level, so that it can clarify our understanding (Arief, 2006).

Picture cards as learning media also have specificities and peculiarities in terms of attractive shapes, so that they can stimulate students to be active and explore knowledge. Reading annotations or picture captions repeatedly makes students easy to remember without having to force memorize subject matter (Karsono, 2014).

Based on the analysis description above, the conditions that occur in school are the consideration of this study to develop the Phylum Mollusca Picture Media Toolkit as a learning medium.

MATERIAL AND METHODS

Study area

Picture Card Media Development

The preparation of this research began in January 2020, the product validation began in April 2020, then it was tested in class X Mipa PP Al-Fadhilah Yogyakarta.

Procedures

The method used is Research and Development (R&D), a method used to produce certain products, and test the effectiveness of these products.

RESULTS AND DISCUSSION

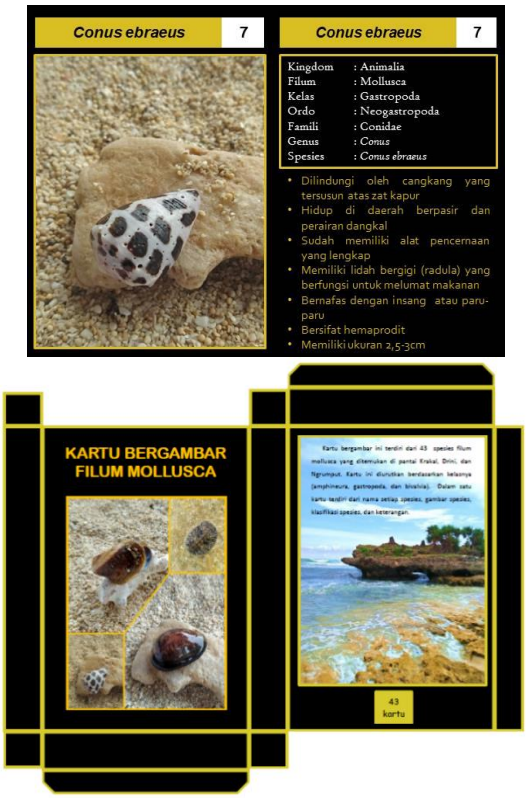
A. Picture Card Development

This research produces a product in the form of a

picture card about the diversity of the mollusk phylum. The manufacturing process of this product uses Microsoft Word and Microsoft Power Point software. Microsoft Word and Microsoft Power Point software were used to create a picture card box design. The Microsoft Power Point software is used to create a card design with the phylum mollusca image, both front and back.

The results of the picture card making design are then stored in pdf format with a total of 43 cards. Cards printed using 230 gram ivory paper with finishing cutting. The card box is printed with 310 grams of ivory paper with a glossy laminate finish. Based on the media development carried out, there are 43 species of phylum mollusca which are grouped into 3 different classes.

The final result of the development in the form of learning media for the phylum mollusca picture card is as follows



B. Product Feasibility Test Results

Based on the overall research results from experts, peer reviewers, biology teachers and student responses, it can be seen that overall the product of the mollusca phylum picture card that has been developed is declared fit for use as a learning medium with a very good category (SB) and student responses strongly agree (SS). This picture card is designed with a good layout and combination of colors and images so that it becomes attractive and makes it easier for readers to learn. Picture cards are arranged to present material based on real knowledge or events, not mere essays. So that users who use the phylum Mollusca picture card will get an accurate answer, because the material obtained is based on knowledge or facts. The picture card of the research results provides accurate information based on facts in the field, namely the mollusca phylum around Gunung Kidul Beach including Krakal, Drini, and Ngrumput Beaches (Suwarno, 2011).

The results of the quality assessment of the phylum Mollusca picture card can be seen in the following table:

No	Appraiser	Score Max	Score	Percentage (%)	Quality
1	Material Expert	75	67	89,33	Very Good
2	Media Expert	70	54	77,14	Good
3	Peer Reviewer	100	90,8	90,8	Very Good
4	Biology Teacher	100	86	86	Very Good
5	Students	60	52,93	88,22	Very Good

A picture card developed with the hope that it can be used as an alternative source of learning biology, making learning more interesting and improving the quality of biology learning. This picture card presents several aspects of learning, especially the mollusca phylum around Gunung Kidul Beach which includes the beaches of Krakal, Drini, and Ngrumput. According to Ahmadi (1995) learning resources that contain what is around students are learning tools that help students relate the material being studied to real conditions and encourage students to connect their knowledge with application in life and can make learning more meaningful. With this picture card, it is hoped that it can clarify the delivery of messages and information, and can overcome the limitations of senses, space and time, and represent what the teacher is unable to express through certain teaching media, so that abstract material can be concrete (Arsyad, 2013).

CONCLUSIONS

This phylum mollusca card float was developed from exploratory research. Then it was designed using Microsoft Power Point 2010 and Microsoft Word 2010. Making card products with the phylum mollusca image was carried out including making card boxes using Microsoft Power Point 2010 and Microsoft Word 2010 software, as well as making picture cards using Microsoft Power Point 2010 software.

The quality test of the mollusca phylum picture cards obtained a percentage of 89.33% (Very Good) from material experts, 77.14 (Good) by media experts, 90.8 (Very Good) by peer reviewers, 86 (Very Good) by teachers and 88.22 (Very Good) by students, so that the invertebrates picture cards are suitable for use as learning media.

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