



The Use of PopUp Book Media on the Material Structure and Function of Plants to Improve Student Learning Outcomes

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Abstract: This study aims to determine the use of pop up book media on the material structure and function of plants to improve student learning outcomes. The method used in this research is quantitative method with meta-analysis, using statistical data from various sources to obtain a data. The results of this study are that pop-up book media improves student learning outcomes in the material structure and function of plants by looking at the statistical data obtained there is an increase in student learning outcomes from 30% to 60%.

Keywords: Learning outcomes; Pop up book media; Structure and function of plants

Introduction

Material on the structure and function of plants is found in class VII odd semester where the subject matter discusses the structure and function of the plant body, namely the structure of roots, stems, leaves, flowers, fruits, and seeds as well as material about tissues in plants such as root, stem and leaf tissues. Students still find it difficult in learning material because the material is less effective because there is quite a lot of material, which results in many students not completing learning. During teaching and learning activities, students are more silent, passive and feel less enthusiastic about the material presented by the teacher so that teaching and learning activities run in one direction, are monotonous, and are boring. Everything happens due to a problem in determining teaching and learning to run in one direction, monotonous, and saturating. Everything happens due to a problem in determining the strategy which includes the models and media used in learning that are not appropriate with the class situation and the characteristics of students and their subjects.

From this explanation, one alternative solution to the problem above is that it is necessary to develop interesting learning media so that students can complete learning on the material structure and function of plants. The role of learning media One interesting form of learning media is the Pop Up Book.

Method

This study uses the method of meta-analysis. Meta-analysis is a form of research, using data from other existing studies (secondary data) (Khan, 2020; Shah et al., 2020). Therefore meta-analysis is a quantitative research method by analyzing quantitative data from the results of previous studies to accept or reject the hypotheses proposed in these studies. Meta-analysis is one way to summarize research results quantitatively (Hansen et al., 2022; Mikolajewicz et al., 2019).

Result and Discussion

The material on the structure and function of plant tissue is a sub-material that requires clear visualization,

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considering that the objects studied in this sub-material have small parts and are located inside plants which cannot be seen with the naked eye so that in this sub-material three media are needed. dimensions, where the three-dimensional media in question is able to represent the original object.

Media Pop Up book is a card or book that can display a 3-dimensional shape or arise when opened (Anggrasari et al., 2022; Khamidah et al., 2022; Nabila et al., 2021). As a researcher, of course, you need to know the history of the emergence of the Pop Up book. When viewed from the history of its development, the Pop Up book began with a simple construction, around the beginning of the 13th century. At that time this technique was called a movable book, involving a mechanical role on paper arranged in such a way that an

image or object or several parts on the paper appears to move, has a shape or dimension Apart from being attractive, Pop Up Books also have an entertainment element in the form of images whose effects can be shaped, move, and create an epic impression on every page of the paper when opened. learning takes place. The information presented will give a deep impression and be stored longer on students and can increase the attention of each student

After conducting a search related to the use of Pop-Up Book Media in improving student learning outcomes, 5 journals were obtained, including on the basis of predetermined criteria. The 5 journals are used because there are complete data in accordance with the criteria needed by the author for studied.

Table 1. Five Journals on the Use of Pop-Up Book Media to Improve Student Learning Outcomes

Research Title	Research	Result			
Pengembangan Media Pop-Up Book Untuk Pembelajaran Lingkungan Tempat Tinggalku Kelas IV SDN 1 Pakunden Kabupaten Ponorogo	Dewanti et al. (2018)	Before 55.625	After 82.5	comparison 26.875	Percentage (%) 48
Pengaruh Penerapan Media Pembelajaran Pop-Up Book Terhadap Hasil Belajar Siswa Sekolah Dasar	Simbolon et al. (2021)	52.15	83.69	31.54	60
Pengembangan Media Pembelajaran Pop-Up Book pada Mata Pelajaran IPA Kelas III Sekolah Dasar	Masturah et al. (2018)	53.33	88.21	34.88	63
Pengaruh Media Pop-Up Book Terhadap Hasil Belajar Siswa Sekolah Dasar Tema Indahnya Keragaman Di Negeriku	Arum et al. (2019)	57	76	19	33
Pengaruh Model Pembelajaran Terpadu Tipe Shared Berbantu Media Pop- Up Book Terhadap Hasil Belajar	Nikmah et al. (2019)	59.7	82.6	22.9	38

From a review of the research results, it can be seen that the use of learning media on learning outcomes can have a positive impact and progress. The 5 sample journals show the magnitude of the influence of the use of learning media. Based on the data contained in the table it turns out that the use of media in learning can improve learning outcomes. Ranging from the lowest 33% to the highest 63%. The use of pop-up book media in learning includes media that is effectively used by teachers to improve student learning outcomes.

Conclusion

Based on the results of the analysis that the use of Pop-up Book learning media during learning can make it easier for students to understand the subject matter so as to obtain satisfactory learning results. Besides that, it can provide a fun and not monotonous learning atmosphere because they look curious about the pages on the Pop-Up Book media which can give the impression of arising from the pictures and illustrations. With satisfying learning outcomes, the learning objectives can be achieved maximally. In addition, the use of learning media provides a pleasant learning

atmosphere so that students are not fixated on the teacher presenting the material.

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Author Contributions

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Conflicts of Interest

No conflict interest.

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