

## Research and Development of Seduboo as A Sex Education Media for Teenager

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### ABSTRACT

*The era of globalization causes people, especially teenagers, to quickly get information through the internet. It impacts the mindset and lifestyle of teenagers who tend not to filter information correctly and adequately. Misperceptions about sex issues encourage teens to try sex issues without realizing the dangers. This study aims to develop a Sex Education Book (SEDUBOO) as a medium for adolescent sex education. This study uses ten youth cadre respondents to use a Research and Development (R&D) design. The instruments used are expert questionnaires, user response questionnaires, and pre-test and post-test post-test to measure adolescent knowledge related to knowledge of sex education. The results of the study stated that the developed media could be categorized as very feasible, based on the results of the assessment of material experts (90.7%), media experts (94%), and respondents' assessments (94.2%). Adolescent knowledge increased with the pre-test results of 2 respondents in the excellent category and the post-test results of 10 respondents in the excellent category. Media is an essential factor in providing health education. Appropriate media help convey information about sex that can be received appropriately to prevent deviant behaviour.*

**Keywords:** SEDUBOO; sex education; teenager

### ABSTRAK

Era globalisasi menyebabkan masyarakat terutama remaja dengan mudah mendapatkan informasi melalui internet. Hal ini berdampak pada pola pikir dan gaya hidup remaja yang cenderung tidak menyaring informasi dengan baik dan benar. Pemahaman yang salah mengenai masalah seks mendorong remaja untuk mencoba mengenai masalah seks tanpa menyadari terdapat bahaya yang ditimbulkan. Penelitian ini bertujuan untuk mengembangkan *Sex Education Book* (SEDUBOO) sebagai media *sex education* remaja. Penelitian ini menggunakan desain *Research and Development* (R&D) dengan menggunakan 10 responden kader remaja. Instrumen yang digunakan yaitu kuesioner para ahli, kuesioner respon pengguna serta *pretest* dan *posttest* untuk mengukur pengetahuan remaja terkait pengetahuan pendidikan seks. Hasil penelitian menyatakan bahwa media yang dikembangkan dapat dikategorikan sangat layak, berdasarkan hasil penilaian ahli materi (90,7%), ahli media (94%) dan penilaian responden (94,2%). Pengetahuan remaja terjadi peningkatan pengetahuan

dengan hasil *pretest* 2 responden dalam kategori cukup menjadi hasil *posttest* 10 responden dalam kategori baik. Media merupakan salah satu faktor penting dalam memberikan pendidikan kesehatan. Media yang tepat membantu agar penyampaian informasi tentang seksual dapat diterima dengan tepat, sehingga dapat mencegah perilaku yang menyimpang.

**Kata Kunci:** SEDUBOO; pendidikan seks; remaja

## INTRODUCTION

According to the Indonesian Demographic and Health Survey (IDHS) in 2017, the most common physical changes in female puberty known to women are menstruation, what is known to men is breast growth. The most common physical changes in male puberty known by women and men are voice changes. As many as 28% of women experience their first period when they are 13 years old, and 27% of men experience their first wet dream when they are 14 years old. Regarding the knowledge of places for discussion on male reproductive health, it is lower by 6% and women by 12% (BKKBN, 2018).

According to the 2017 IDHS, the experience of premarital sexual intercourse in women aged 15-19 years was 0.9% and men 3.6%. Teenagers who have not graduated from high school who have had premarital sexual intercourse are 0.9% for women and 4.6% for men. Unwanted pregnancies often end with abortion to cover up embarrassment. Pregnancy in adolescents aged 10-19 is at risk of

pregnancy complications that can cause maternal death (BKKBN, 2018). Sexual education in Indonesia has not run optimally, and some research results state that adolescent knowledge about sexuality is still low. The United Nations Population Fund Association (UNFPA) and BKKBN stated that around 15 million adolescents aged 15-19 years give birth each year. Approximately 2.3 million cases of abortions are 20% carried out by adolescents. Another incident was found that out of 52 million teenagers, around 15% have had sex outside of marriage at the age of 10-24 years (Kementerian Kesehatan RI, 2020).

Deviant sexual behaviour in adolescents increases due to a lack of knowledge about sex education. Adolescents have a high risk of early and unsafe sex, resulting in pregnancy and HIV/AIDS infection, and sexually transmitted infections. Therefore it is necessary to know about sex education or sex education and education about reproductive health to prevent unwanted things and form a healthy and quality generation (Mediastuti, 2019).

Correct and appropriate sexual education will prevent adolescents from risky behaviour that threatens their future (Sebayang and Saragih, 2020). Early sex education is an effort to prevent adolescents from free sex behaviour. In reproductive health, avoiding premarital sex is the best way to prevent the transmission of sexually transmitted infections and unwanted teenage pregnancy (Ardianti, 2020). There are many gaps and inadequacies in sex education in the places under review. Given the importance of sex education, it is advised that more efforts and actions are required. Mainly, sex education policies and programs should be developed based on scientifically evidence-based theories related to contemporary adolescent development theories and ecological models. Moreover, there is a dire need to equip implementers (e.g., teachers and social workers) and parents with the necessary skills to enhance the effectiveness of sex education programs (Leung *et al.*, 2019).

Media is the most crucial factor to support knowledge about sex (Maharani and Sanyata, 2019). Currently, the delivery of sex education through the media must be considered to have successful learning.

Maharani, Sanyata and Nanda (2020) stated that the media used was one of the essential components observed to successfully deliver sex education.

Based on previous research conducted by Wicaksana, Atmadja and Asmira (2020) regarding the development of character education-based reproductive health posters using Canva at school-age teenagers in high school. This research uses poster media with the topic of reproductive organ disorders, tips on maintaining the health of reproductive organs, and how to be a healthy teenager accompanied by quite exciting animations. Teenagers' perceptions of the posters that have been developed are good. Edi and Taufik (2019) state there is a significant relationship between the knowledge and attitudes of students with snake ladder sexuality media. Other research conducted by Heri *et al.* (2019) regarding the use of booklet media as a medium for sexual education for adolescents can be an alternative media because of the increase in knowledge of the respondents by 96.4%. After being introduced to early sex education through the media of picture stories, children's knowledge increased compared to before being given media introductions (Oktarina and Liyanovitasari,

2019). Banurea and Abidjulu (2020) researched comprehensive sexual education for high school students using PowerPoint media and accompanied by exciting pictures. An attractive PowerPoint shows that students are enthusiastic, and the post-test results have increased.

Based on research conducted at MAN 1 Malang Gondanglegi of 152 students, 132 students (86.84%) knew information related to changes in adolescents, then 56 students (36.84%) knew information related to the ideal age for marriage. Educational media used by teachers or health workers in providing education about reproductive health in the form of videos (61.84%), power points (58.55%), teaching aids (26.32%), leaflets (11.84%), and even without using any media by (31.58%). It will undoubtedly impact the attractiveness of students related to the material presented.

The researcher concludes that teenagers will be more enthusiastic about learning when using engaging media based on this description. The researchers propose an innovation using pop-up book media with attractive image designs. It has 3D properties or effects that arise when the book is opened, which will make the public, especially teenagers, more

interested in reading and can increase imagination related to educational materials. In developing this product, researchers also added material related to the ideal age for marriage. In the research data, there is no pop-up book media used as an educational medium. Therefore, researchers want to research "Development of SEDUBOO as a Media for Teen Sex Education".

## **METHOD**

The design used in this study is a research and development (R&D) method. The subjects of this study were ten youth cadres. The research was conducted from September 2020 - to May 2021. The techniques used in data collection were (1) Literature study and data collection, (2) Product development consisting of product design and design validation, (3) Trial or evaluation. The data collection tool used was a questionnaire. The results of data collection will be analyzed qualitatively and quantitatively. Data were analyzed and described for easy understanding. Qualitative data were obtained from material experts, media experts, and respondents. In contrast, quantitative data analyses the percentage and instrument's score given to media experts, material experts, and user responses. Then analyzed the level of knowledge before and after

giving the pop-up book. This research has passed the Health Research Ethics Commission of Malang Health Polytechnic's ethical clearance with No. 095/KEPK-POLKESMA/2021.

The results of the assessment of each media expert, material expert, and user response will be matched with the product eligibility criteria as follows:

Table 1. Product Eligibility Criteria

Achievement Level	Qualification	Decision
80 - 100%	Very well	Very decent, no revision needed
60 - 80%	Well	Decent, no revision needed
40 - 60%	Enough	Not worth it. It needs revision
20 - 40%	Not enough	Not worth it. Need revision
<20%	Not much	Very unworthy, needs revision

(Source: Sugiyono (2016))

The results of the knowledge questionnaire percentage are then matched with the knowledge level category according to three categories as follows: well ( $\geq 76 - 100\%$ ), enough ( $60 - 75\%$ ), not enough ( $\leq 60\%$ ).

## RESULTS AND DISCUSSION

This SEDUBOO media is made using a pop-up book design where on each page there is an image that appears. The material about changes in adolescents includes the introduction of reproductive organs, adolescent physical changes and psychological changes in adolescents, and the ideal age of marriage and related to the impact of early marriage accompanied. Each page contains pictures that can arise to increase the imagination power in accepting and understanding the content. About the material,

SEDUBOO size is 20 cm x 20 cm using AP 260 paper with BB Glossy lamination and has 13 pages. SEDUBOO contains material regarding adolescent changes, including the introduction of reproductive organs, adolescent physical changes and psychological changes in adolescents, and the ideal age of marriage and related to the impact of early marriage.

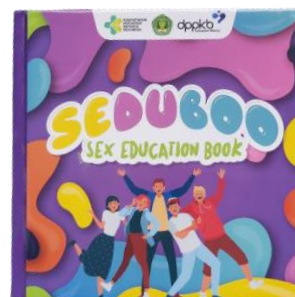


Figure 1. Front Cover

The front cover has the title SEDUBOO, and then it is equipped with logos from the Ministry of Health, Poltekkes, Ministry of

Health of Malang, and dppkb of Malang Regency.



Figure 2. Inner Cover



Figure 3. Opening Page

The opening page has the words "Let's recognize changes in teenagers" and a picture of teenagers hanging out with a pop-up image.

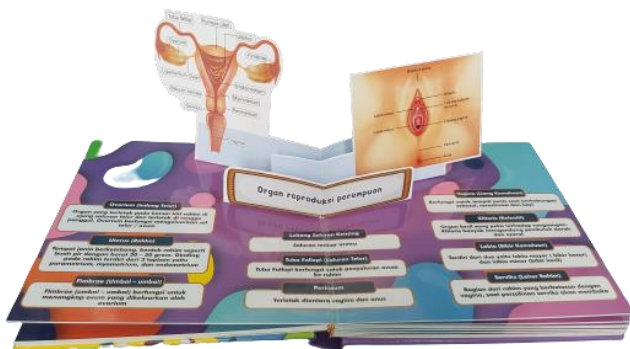


Figure 4. Pages of Female Reproductive Organs

This page contains the title and pictures of female reproductive organs in the form of a pop-up to show more clearly and interestingly. It is followed by a

description of the function of each of these reproductive organs.

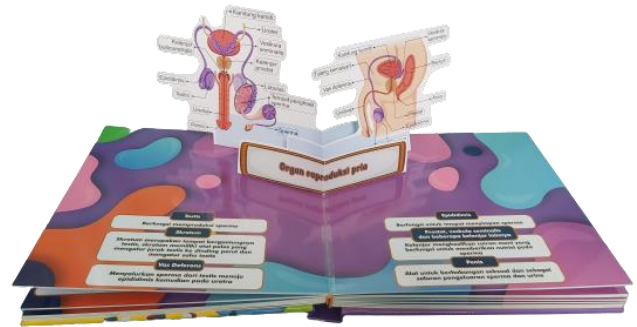


Figure 5. Pages of Male Reproductive Organs

This page contains the title and picture of the male reproductive organ in the form of a pop-up that aims to show it more clearly and attractively, followed by a description of the function of each of these reproductive organs.



Figure 6. Page Characteristics of primary sex in adolescents

This page contains writing on primary sex characteristics in adolescents pictures of male and female adolescents showing that they experience primary sex characteristics, namely wet dreams and menstruation. The images and text are made in the form of a pop-up.



Figure 7. Page Characteristics of secondary sex in adolescents

This page contains writing on the characteristics of secondary sex in adolescents. There is a picture of a male and female teenager with a pop-up image, and then there is a description of what the secondary sex characteristics of adolescents are.



Figure 8. Page Psychological changes in adolescents

This page contains pictures of teenagers gathering and chatting in one place in a pop-up form, followed by descriptions of psychological changes in adolescents.



Figure 9. Pages Ideal Age for Marriage

This page contains a picture of a married couple, followed by a picture of the ideal age for marriage with the aim that when you see the picture it will be easy to remember and there is a description of getting married at the ideal age.



Figure 10. Pages Impact of Early Marriage

This page contains a description of the impact of early marriage, and then it is equipped with a picture of a pregnant teenager and is sad with the aim of showing how the impact of early marriage is using pop-up images.



Figure 11. Back Cover Page

The back cover of SEDUBOO contains a summary of the book's contents accompanied by the name of the researcher, study program, and department as the researcher's identity.

The next stage is design validation and product revision.

Table 2. The Result of Material Expert Validation

No	Aspect	Score
<b>Content Eligibility</b>		
1	Material Equipment	5
2	Material Depth	4
3	Systematic presentation	4
4	Easy to understand	4
5	Concept accuracy by definition	5
6	The suitability of the material with the source	5
7	The suitability of the material with the theme	4
<b>Language Eligibility</b>		
8	Appropriateness of the language used	5
9	Easy to understand language	5
10	Encourage curiosity	5
11	Creating the ability to ask questions	5
12	Correct spelling of the author	5
<b>Content Execution</b>		
13	It makes you want to understand	4
14	Make it more interactive	4
15	It makes you want to ask questions	4
<b>Total number</b>		<b>68 (90.7%)</b>
<b>Product Eligibility Criteria</b>		<b>Excellent (Very decent, no revision needed)</b>

Table 3. Media Expert Validation Test Results

No	Aspect	Score
<b>Physical Attractiveness</b>		
1	Pop – up Book quality of media materials	5
2	Pop – up Book material safety	5
3	Pop – up Book media appeal	5
<b>Appearance</b>		
4	Pop-up Book media form	5
5	Pop – up Book media size	5
6	Pop – up Book media thickness	5
7	Composition and layout of the writing on the cover	5
8	The letters in the title are attractive and easy to read	5
9	Attractive cover illustration	4
10	The typeface used in Pop – up Book media	5
11	The font size used in Pop – up Book media	5
12	The writing colour used in the Pop-up Book	5
13	Clarity of writing used in Pop–up Book	5
14	The background colour used in the Pop-up Book media	5
15	Placement of writing in Pop – up Book media	5
16	The language used is clear and easy to understand	5
17	Quality images used	5
<b>Learning</b>		
18	Media relevant to the material	5
19	Clarity of instructions for using media	5
20	Media support to help students learn	4
<b>Amount</b>		<b>94 (94%)</b>
<b>Product Eligibility Criteria</b>		<b>Excellent (Very decent, no revision needed)</b>

The validation results from media experts obtained a percentage of 94%, so it can be concluded that the SEDUBOO media as a youth sex education media is in the very good/very decent category. The next stage is the validation of SEDUBOO media. This step aims to get input and advice from material experts and media experts so that researchers can find out the strengths and weaknesses of the products developed so that the resulting products are helpful. Material experts and media experts carry out this stage. Validation results from material experts are obtained. The percentage is 90.7%, which is in the excellent/very decent category. The materials expert suggested, "add a page for the introduction to SEDUBOO and the user guide of the book". The media is in the appropriate category, namely content-worthy, linguistically appropriate, and content-worthy implementation, which means that the media makes respondents want to understand, and respondents are more active.

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**Table 4. Respondents' Assessment Results**

Rated aspect	Average	Maximum Value	Score percentage	Information
The results of student responses related to media, materials and technical use of media	47.1	50	94.2%	Excellent (Very decent, no revision needed)

This trial was conducted on ten respondents by distributing user response questionnaires related to SEDUBOO media. The results of the user's response obtained an average of 47.1 with a percentage of 94.2% in the excellent/very decent category. The researcher received suggestions from respondents: "maybe the picture is upheld again, Sis", "short,

concise, easy to understand", "very colourful, "not too sensual", "very practical to carry", "can be used without the help of others", "no the picture immediately becomes interesting", "if the picture doesn't want to go up the writing is difficult to read". Respondents' interest in SEDUBOO can shape their reading behaviour.

**Table 5. The Pretest and Posttest Results**

<b>Category Knowledge Level</b>	<b>Pre-test f(%)</b>	<b>Post-test f(%)</b>
Well	8 (80)	10 (100)
Enough	2 (20)	0 (0)

In this study, researchers also saw changes in adolescent knowledge as evidenced by pre-test and post-test with the results after the post-test all respondents had good knowledge. Following research conducted by Hanifah (2014) explains that the use of pop-up book media provides a significant increase in verbal-linguistic intelligence after being treated with pop-up books. Knowledge of the respondents increased after using SEDUBOO media. The results of this study are the same as Hamid *et al.* (2020), who say that media has benefits. It can help the ongoing learning process increase interest and motivation in the learning process. It is supported by research by Utami, Zen and Baihaqi (2020), which states that pop-up learning media can improve student learning

outcomes. This media is suitable for use as learning media. This media development includes print-based media, namely pop-up books. A pop-up book is a type of book with a fold of images and appears to form a three-dimensional image when the page is opened. Illustrations from pop-up books that can be shaped and cause effects to arise when the page is opened create interesting elements (Alviolita and Huda, 2019; Elfiani, Taufik and Baiduri, 2019).

SEDUBOO has advantages, namely SEDUBOO is a book that is easy to carry, pictures look clearer, interesting to read and understand. Following the research of Damayanti, Jayanta and Yudiana (2021), pop-up book media can provide a memorable experience for students

because it involves students in opening books such as sliding, opening, and folding pop-up books. It will make a particular impression on the reader, making it easier to enter memory using dimensional visualization-based media. It can make the appearance of books are attractive, so the message conveyed will be easy to understand by readers. According to Halisah (2018), pop-up books are concrete or realistic rather than verbal media. It can be a source of learning for all ages because each book page can be filled with pictures and information according to the concept. The pop-up book has dimensional spaces where this book can be in the form of a three-dimensional structure so that this book is more interesting to read. SEDUBOO also has a drawback related to book material that it is easy to torn. Based on the results of the validity tests conducted by material experts, media experts, and the respondents' assessments, it can be concluded that the developed SEDUBOO media is feasible to use.

## CONCLUSION

The first step is to identify potentials and problems as an analysis of the needs of SEDUBOO as a media for youth sex education. The development of

SEDUBOO follows the Research and Development steps starting from a literature study in the form of a journal with the results of a study search that was previously using 2-dimensional media. There was no 3-dimensional media and data collection, product development, trial, or evaluation. The results obtained were 90.7% for material experts 94% for media experts. The assessment can be concluded that the media developed is in the very good/very feasible category. The results of the assessment of the respondents obtained 94.2%. This assessment can be concluded that the media developed is in the very good/very feasible category. Changes in adolescent knowledge were proven by pre-test and post-test with the result that there was an increase in knowledge before and after using SEDUBOO media.

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