



Students' perception on the use of video in learning about reproductive system



Ruqiah Ganda Putri Panjaitan ^{a, 1, *}, Titin ^{a, 2}, Yohanes Gatot Sutapa Yuliana ^{b, 3}, Galih Albarra Shidiq ^{c, 4}

^a Department of Biology Education, Faculty of Teacher Training and Education, Universitas Tanjungpura, Indonesia

^b Department of English Education, Faculty of Teacher Training and Education, Universitas Tanjungpura, Indonesia

^c Department of Natural Science Education, Faculty of Education, Kasetsart University, Thailand

¹ ruqiah.gpp@fkip.untan.ac.id *, ² titin@fkip.untan.ac.id, ³ gatot@fkip.untan.ac.id,

⁴ galihalbarra1@gmail.com

* Corresponding author

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ABSTRACT

Description of students' responses on film media implementation in reproductive system materials. One of the variations in the implementation of learning biology is using the learning media that can be used as a tool for teachers in the process of delivering messages and learning information to their students. In this research, we used the concept of reproduction system which is considered as one of the materials that required by students as an effort to improve attitudes to avoid risky behavior against disorder behavior toward reproductive organs. The purpose of this study is to describe students' perceptions in Pontianak City on the implementation of film media on the reproduction system material. The type of research used quantitative in the form of survey research. The numbers of subjects in the study are 291 students of second year- senior high from nine senior high schools (SHS) in Pontianak. The research instrument used a closed response questionnaire. We constructed the questionnaire into two aspects, namely clarity and impact on learner with five criteria. The analysis of questionnaire showed that students gave a positive response to the implementation of film media on the reproduction system material by 74.16% with a response to aspects of clarity reaching an average of 74.71% in the positive category, and the impact on learner aspect reached the average of 73.61%. It can be concluded that the students' response to film media on reproduction system is positive.



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Introduction

Within the last few years, the use of media has been widely carried out to increase quality of student's

understanding in learning. For instance, [Laurillard, Oliver, Wasson, and Hoppe \(2009\)](#) explains that the use of media in learning can help increasing student's creativity and intellectuality in

comprehending the lesson material. Further, [Wyner \(2013\)](#) found that the use of media in learning implementation can impact positively for teacher in determining lesson plan by providing scientific evidence between examples of science connected into the real world. Moreover, [Price and Kirkwood \(2011\)](#) accounted that the use of technology as learning medium found have effective potential to support biology teaching in several situation, such as (a) the ability to involve student actively in learning; (b) support appropriate assessment and feedback for student; (c) support development of student's skill and professional through virtual environment; (d) support student's reflection in personal development and learning.

Learning media is supporting tool used by teacher in intermediary learning process, that works to deliver message and information from sources which will be received by message receiver occurred in the learning process. Furthermore, from various studies it is reported that there are many learning media advantages, such as; in order learning process becomes clearer then improves the quality of learning outcomes, media also can make abstract lesson material becomes more concrete ([Ahdiyah, Kuswanti, & Indana, 2015](#); [Baharuddin, 2015](#); [Desriana, Amsal, & Husita, 2018](#); [Mutia, Adlim, & Halim, 2017](#); [Panjaitan, Savitri, & Titin, 2016](#); [Qumillaila, Susanti, & Zulfiani, 2017](#); [Yendrita & Syafitri, 2019](#)).

Reproduction system material is one of the lesson materials taught in biology subject in XI grade. Based on curriculum syllabus analysis of grade XI Senior High School 2013, the scope of reproduction system covers men reproductive organ, women reproductive organ, fertilization process, menstruation process, embryo development process, the usage of contraception, and also health disorders on reproduction system. Competency achieved by student includes, able to analyze relation between reproductive organ tissue structure with its function in human reproductive process through literature study, observation, experimentation, and simulation; applying comprehension on human reproduction principle to avoid over population through family planned program and improve life quality of human recourse by giving exclusive breastfeeding; and presenting

analysis result on abnormality on organ function and structure that causes human reproduction system disruption.

Reviewed from its competency, this material has characteristic, for instance in its learning reproduction system material, it needs supporting tool for student can understand the concept delivered. Through the concept, various phenomena that hard to be observed such as sperm cell and ovum formation process, fertilization, pregnancy, birth, and ovulation can be observed directly by student. In line with [Deadara, Suyanto, and Ciptono \(2017\)](#) that one of the difficulties in human reproduction system process is many of the process that cannot be observed directly by the student.

Based on interview with some biology teachers of Senior High School in Pontianak city, it is derived information that dominant teaching media used in learning reproduction system is power point. Furthermore, it is stated that the usage of power point media tends to make learning process become less variation with one-way interaction because it is only teacher centered. Besides using power point media, teacher also uses textbooks. However, reproduction system material includes material about process that is surely need better visualization than just image presented in textbook or slide show in power point media. Therefore, it is considered needs to present this material in the form of film, so the process can be visualized much clearer. It is not just that, in textbook or power point media, teacher has not given complete information yet, on the importance to maintain reproductive organ. Therefore, the film media developed presented more complete information on the importance of maintaining reproductive organ through video contained interview with doctor's and bridemaids. Therefore, the result of initial study, it is needed assisting tool that can support learning process expected that knowledge concepts can be seen clearly and cover all competency that must be achieved in learning reproduction system material. In addition, media arranged by adjusting the needs in the field is also expected can grow student's self-awareness to maintain their reproductive organ as well as to build responsibility for avoiding disease/ abnormality in reproduction organs.

One of the media compiled from film is an example of audio media visual (Panjaitan, Wahyuni, & Mega, 2019). Accordingly, Munadi (2012) stated that in the use of audio visual media in involving sight and listening senses simultaneously. Arsyad (2016) also expressed that direct learning process will ease to absorb information compared to only involve one sensory. It is because through listening activity, student can receive learning message; while through visualization type, it can be created learning message. In connection with the usage of film media in learning process, Ariwibowo and Parmin (2015) stated that the use of technology can change learning environment that is conventional. Moreover, through the use of technology it also can construct student's knowledge and comprehension on the material learned, they are not just seeing, hearing of what delivered by the teacher, and read the textbook (Pradilasari, Gani, & Khaldun, 2019; Pramana & Dewi, 2014; Riska, Syafruddin, & Lisa, 2018; Wahyuni, Emda, & Zakiyah, 2018; Yendrita & Syafitri, 2019).

From several previous studies, it is stated that film media may in the form of audio visual story arranged to deliver a concept. In the appearance, film media has its own theme and quite clear plot of the story, because in making a film, all of scenario has been prepared carefully (Ihsan, Rusdi, & Sartono, 2017; Titin, Panjaitan, & Yuliana, 2018; Yendrita & Syafitri, 2019). In line with the statement, then it is developed film media on reproduction system, which is the one that can present reproduction system organ structure and function and visualize process such as; spermatogenesis, oogenesis, fertilization, pregnancy, birth, ovulation in the real form or animation. In addition, in the film media also presents the importance of breastfeeding for baby, describes contraception tool, and presents abnormality occurred in reproduction system. It is not just that, the film media also presents information about the danger of unwanted pregnancy for teenager and positive activities can be done in youth age in filling their youth time. Overall information presented in this media is considered important and useful for student because it can build positive character inside the student.

In the relation with the usage of learning media, it also can be seen from

student's feedback / response on the learning media (Raisa, Adlim, & Safitri, 2017). According to Hidayati and Nur M. (2013), response appears if there is object observed, there is attention toward an object observed, and there is sensory system to catch object observed. On the other hand, Misliani and Panjaitan (2013) stated that teacher can see student's response in the usage of learning media through student's expression, student's opinion about the interest toward the media, the hard or easy comprehend learning message in media, and also motivation of the student after following the lesson using media. Based on the description above, the objective of the research is to describe student's response of the grade XI Senior High School in Pontianak city toward film media implementation on reproduction system material.

Method

The type of the research used is quantitative. The focus of the quantitative research stated as working process that is lasted briefly, limited, and selected problems as a part that can be measured or stated in numbers (Departemen Pendidikan Nasional, 2008). Quantitative research used to observe on certain population or sample, data collection using instrument, and data analysis is qualitative/statistic in nature. Research method used is descriptive using survey. The advantages of descriptive research is, it can make systematic description about facts occurred in a certain population or area. Meanwhile, research technique used is survey by taking some samples (Suryana, 2010). In this research, it was used nine Senior High Schools located in Pontianak city, which in every school was taken one class. As for film media used in this research is film media developed by the researchers themselves, and film media was declared valid (Titin et al., 2018).

Research subjects were 291 students, consists of 114 male students and 177 female students from nine Senior High Schools in Pontianak city. Distribution of research subject can be seen in the Table 1.

The research used instrument in the form of questionnaire. The questionnaire consisted of closed response in checklist form. Steps in developing instrument are: 1) analyzed variable/aspect that will be

measured. There were two aspects measured on questionnaire response according to [Oyelekan and Olorundare \(2009\)](#) which are: clarity and impact on learner. 2). Described the aspect/variable into indicator. Clarity aspect consists of two indicators, which are easiness for student to memorize and understand lesson material and the easiness for the student in observing video, image, record, and writing, and also voice on visual media in learning process. Impact on learner aspect consist of three indicators, which are relation between material with student experiment and its usefulness, material suitability with necessity, and also increasing curiosity and participation of student on their learning experience. 3) From indicator arranged and presented into 15 questions items. The content of the questionnaire consists of two type statements, positive statement and negative statement. 4) To see the validity, it was made validation by expert before conducting research.

Table 1. Distribution of research subject in every high school in Pontianak City

No	School Name	Student Amount
1	SMA N 1 Pontianak	27
2	SMA N 3 Pontianak	35
3	SMA N 4 Pontianak	34
4	SMA N 9 Pontianak	33
5	SMA Santo Petrus	35
6	SMA Gembala Baik	31
7	SMA Immanuel Pontianak	33
8	SMA Mujahidin Pontianak	29
9	SMA Muhammadiyah 1 Pontianak	34
Subject Total		291

Filling questionnaire carried out by student after following learning process by teacher using film media about reproduction system in each school. Every item of questions in response questionnaire consists of 4 alternative

answers, which are; Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), that must be selected by the students.

Steps conducted to analyze response questionnaire is by recapitulating score attained in every student. As for the score for every answer is as follows Positive statement: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1; and Negative Statement: Strongly Agree (SA) = 1, Agree (A) = 2, Disagree (D) = 3, Strongly Disagree (SD) = 4.

Calculation of score interpretation for every statement item refers to [\(Riggs & Enochs, 1989\)](#). Then, average determination of student's response and response category determination or response given by the student toward a criteria by matching percentage result referring to [Yamasari \(2010\)](#).

Afterward, it was conducted recapitulation data through per item average calculation for every statement, average per indicator, average per aspect, later on it was obtained student's average total and response criteria. Average per indicator is calculated from overall answer percentage given by student in every statement divided with total overall indicator in every aspect. Questionnaire average total given by student in every aspect is divided with overall total aspect.

Results and Discussion

Result of student measurement toward the film media in learning process of reproduction system material can be utilized to find how student's opinion toward the media. As for student's questionnaire response analysis of grade XI Senior High School from nine schools in Pontianak city after film media implementation on reproduction system material is presented on [Table 2](#).

Table 2. Result of senior high school student's response questionnaire analysis in Pontianak City toward film media on reproduction system material

Aspect	Indicator	No. Item	Average Per Item (%)	Average Per Indicator (%)	Average Per Aspect (%)
Clarity	Easiness in memorizing and understanding material	6	74.46	75.82	76.65
		9	74.29		
		10	75.51		
		11	78.02		
	Student's easiness in observing video, image, writing and also sound on film media in learning process	3	77.74	77.48	
		12	76.88		
		13	73.60		
		14	81.69		

Impact on Learner	Connection of material with student's experience and its usefulness	7 8	71.22 79.83	75.53	75.52
	Material Conformity with student's requirement, as well as enhancing student's curiosity and participation	2 5	79.09 71.98	75.53	
	Student's feeling on their studying experience	1 4	73.72 75.82	75.49	
		15	76.94		
Questionnaire Average Total (%)					76.08
Criteria					Positive Response

From Table 2, it can be seen that student's response toward film media implementation on reproduction system material is as much as 76.08%, which is categorized with positive response. The highest percentage was obtained on clarity aspect, which is on student's easiness indicator in observing video, image, writing and also sound in the film media during learning process. Conversely, the lowest percentage was obtained on impact aspect to the learner, which is on student's feeling indicator on their studying experience.

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According to Oyelekan and Olorundare (2009), clarity describes learning media clarity for student, both from the image or content contained within the media. Student's average response for the first indicator on clarity aspect is as much as 75.82% and included positive response criteria. It means, when student gave positive response for statement item (number 6, 9, 10, and 11) means the student became easier to memorize material and if reproduction system material was delivered using the film media. Film media arranged attractively by displaying many images and videos related with reproduction system to ease the student in building imagination according to the material they seen. Accordingly, Husmiati (2010) stated that

the use of film media can build imagination suitable with film watched by student. Even though, according to Deadara et al. (2017) reproduction system material is very wide scope and inside it contains about reproductive organs function and concepts, besides that there are also various terms that is hard to be memorized. Not just that, film media contains reproduction system also being considered can describe abstract concept, cannot be observed directly, into easy understandable and observable concept. The example presented in the film media is the formation of spermatogenesis, oogenesis process, menstruation process, and fertilization. The occurring processes within the reproduction system tends not to be observed directly and takes long time, however, using film media the process can be enjoyed in short notice and also can be re-played if it is required. Husmiati (2010) stated that film media can concrete (presenting reality) from abstract in a short notice. One of the examples is process presented in image at Figure 1.



Figure 1. Fertilization process (Source: www.youtube.com)

The second indicator on clarity aspect is easiness in observing video, image, writing and also sound on film media within learning process. Result from

student's average was as much as 77.48% obtained positive response. The research result also showed that students give positive response for overall questions which is number 2, 12, 13, and 14. According to Panjaitan et al. (2019) an audio video declared complete if it consists of video, image, narrator explanation, back sound, and supporting text. Film media about reproduction system is considered has met the criteria. Lightning quality on every image and video presented, the narrator voice heard clearly, back sound music sound is assessed good and the usage of letter in the text can be read clearly and give easiness to student in observing the film media. The good media quality is expected can draw student's attention and help student's understanding toward the message that try to be delivered (Panjaitan et al., 2019).

The positive response means that the displaying image and video presented on film media was very clear, the sound and writing for material delivered were appropriate, and language used was easy to be understood. Language is determining factor in delivering message. Thus, language used in the reproduction system film media has been adjusted with child's cognitive development stage. According to Sawitri, Subchan, and Asyiah (2017) who stated that language as a mean of communication to deliver learning material that must be adjusted with student's socio emotional development. As expressed by Titin et al. (2018), by using audio visual media then material presentation can be given completely as well as gives easiness in studying for the student.

The second aspect of impact on learner consists of three indicators. Oyelekan and Olorundare (2009) stated that impact on learner is aspect that is described the impact on the usage of the media in learning activity and delivering student's feeling toward the usage of the media. Research result showed that student's average response for the first indicator was as much as 75.53% and got positive response from student. The first indicator consisted of two items which is statement number 7 and number 8. In the item number 7 which was the reproduction system material delivery was relevant with student's requirement, and for this indicator students also gave positive response as much as 71.22%. Response given was assumed because within the

media there were some new information presented in the form of explanation about the danger unwanted pregnancy for teenager and mentioned positive activities that can be done in the youth (Figure 2). Some information or important and danger event that need to be known by student was presented anytime and directly in classroom through film media, so that, the media can assist overcome time and space limitation (Mukhlisoh & Khisbiyah, 2015). The consequence of abortion (unwanted pregnancy process) to the teenager can be seen directly by students. As for the objective of displaying new information does not only gain new information, but students are also expected to have character values in order to keep themselves from it and also avoid from abnormality and disease disruption on the reproduction organ. As what is expressed by Fitriyah, Made D.P, and Yulianto (2017) that in learning, it should be inputted problems related with character values. The same opinion also stated by Ryandi (2019) whereas film will be easy to be reminded and direct student to take moral lesson of a film. As comparison, the scope of reproduction system material delivered this whole time includes structure and function identification of human reproduction system; explains formation of sperm and ovum; identify fertilization process, pregnancy, and birth; explains ovulation process and its influencing factors; explains menstruation process to women; describes contraception tools; explain the importance of breastfeeding; and also identify abnormality occurred in the reproduction system, however information related to instill character value has not presented well yet. There is lesson information that is presented using the right media will give a deep impression and much longer stored in student's mind (Mukhlisoh & Khisbiyah, 2015).

Item number 8 was able to maintain and foster reproduction organ in daily life after film media was implemented, and students gave positive response as much as 79.83%. This reflects that information within the film media is useful and give experience for student in learning process. Media is a tool to describe an information in order it can be understood and comprehended clearly. The reproduction system film media is displayed with interesting information and qualified design; thus, it is expected that student will

be more interested to learn the material. One of the clips that reflect item number 8 is clips on some of things that can be done by boys or girls' teenager to keep and maintain reproductive organ they have in daily life (Figure 3). Material brought in the film on reproduction system is close related with student's daily life and experience. In line with Ryandi (2019) in order film can be optimum used as learning media, then material chosen is the one that is related with daily life. The information directly gives understanding and useful for student. The statement is in line with the opinion of Panjaitan et al. (2019) stated the need of close relation between material learned with daily life.



Figure 2. Unwanted pregnancy in teenage

The second indicator on impact on learner aspect is material conformity with students need, and also enhances student's curiosity and participation. On the indicator student gave average positive response as much as 75.53% for item number 2 and number 5. This result shows that reproduction system material within the film media is suitable with the need of student in achieving competence, spiritual, knowledge, and skill. Besides that, through film media, it is also achieved learning objectives that is wanted to be achieved, excavates curiosity, and involves student actively in learning process.



Figure 3. Information on maintenance of reproductive organ

According to Rozalinda, Albeta, Masnaini, and Sulismawati (2018) in the digital era, the presence of learning media

is very needed by student in order to excavate curiosity, optimize ability in listening, and also make student more active and creative. Related with spiritual competence and skill wanted to be achieved through this film media, then within the film media has displayed character values (Figure 4). Through presentation within the film media, it is expected after student learned structure and function of every reproductive organ, the student is required to keep and maintain their own reproductive organ to avoid from abnormality and disease in their reproductive organ. Moreover, within the film media, it is also contained explanation on the impact of abortion for reproductive organ health and also valid law regulation for abortionist.

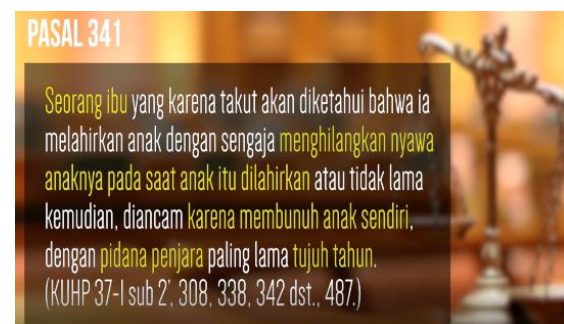


Figure 4. Information on law information for abortionist

Fim is included into learning media that utilizes information technology, and communication. According to Wahyuni et al. (2018); Restiyani, Juanengsih, and Herlanti (2014) the utilization of technology has good impact, which is clarify the concept, so it is not verbalistic. Not merely that, through the use of media, it also can overcome environment and human being limitation that is observed and also obstacles of space, time, and senses (Panjaitan et al., 2019), and student also can be motivated in learning activity and also sets the appearance of the same perception and learning experience (Pradilasari et al., 2019). Therefore, in the third indicators on impact on learner aspect is student's feeling on their studying experience. The third indicator obtained average positive response as much as 75.49%. All of question items in the third indicator also obtained positive response from the student. This result also showed that film media clip is varied in the documentary film, not boring; conversely, it is increased student's attention in the

study. Other advantages from the film media of reproduction system also make various real image record, animated image, motion video, or writing that is arranged in a plot story, in order it can deliver information to the student. As expressed by [Maidiyah and Fonda \(2013\)](#) that the use of illustration in the form of image or video by teacher in learning can draw student's attention. Not just that, learning using learning media will run maximally if the learning message is delivered clearly, orderly, and interesting ([Wahyuningsih, 2012](#)).

Conclusion

Student's average response for film media in clarity aspect is as much as 76.65% and included positive, and for impact on learner aspect is as much as 75.52%, it is also included positive. Overall, from the student's average response for this film media is considered positive response with average percentage as much as 76.08%.

It is suggested to do research about effectiveness or influence of film media on reproduction system lesson material toward student's study result and motivation.

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