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Development of Motion Graphic Video (MGV) Based Nutrition Education Media for Young Women to Prevent Anemia

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ABSTRACT

Adolescent girls are one of the groups that are prone to anemia. Therefore, to increase the knowledge of young women, nutrition education is held. The media used for nutrition education is motion graphic video. Motion graphics are an alternative to video shows that are widely used by the media. Media with motion graphics was chosen as one of the effective and interesting educational media because of the combination of text, pictures, colors, sound, in conveying messages about anemia and explaining food ingredients that can prevent anemia. This study aims to produce nutritional education media based on motion graphic videos for young women to prevent anemia. The development process uses the Research and Development (R&D) model. D) the lowest (level 1) to produce a design but not proceed with field testing. The instruments used in this research include storyboard motion graphic video validation sheets and motion graphic video media validation sheets. The results of the validation of nutrition education media based on motion graphic videos by material experts are seen from the aspects of content and language, namely with an overall score of 3 with appropriate criteria and with conclusions the media can be used. While the results of the validation of nutrition education media based on motion graphic video by media experts, namely the score on the audio aspect is 3 with appropriate criteria and the score on the visual aspect is given an average score of 3 with appropriate criteria.

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1. INTRODUCTION

Adolescence is a transitional period experienced by a person with physical and psychological changes (Indrawatiningsih *et al.*, 2021). With the changes in adolescence cause health problems. One of the main health problems experienced by adolescents is anemia (Kurniawati and Sutanto, 2019). Anemia is a condition in which the number of red blood cells or hemoglobin is less than normal (Rahayu, *et al.*,, 2019).

According to Basic Health Research Data for 2018, the prevalence of anemia in Indonesia is 23.7%, the prevalence of anemia in women is 37% higher than that of men, which is 20.3% and the prevalence of anemia in young women aged 15-24 years reaches 32%. . Nevertheless, anemia is said to be a public health problem if it is above 20% (Rahayu et al, 2019).

Adolescent girls are a group that is prone to suffering from anemia, because young women experience menstruation every month so they need twice as much iron and are in a period of rapid growth so that the need for iron also increases and they often do wrong diets aimed at losing weight, including reduce the intake of animal protein needed for the formation of blood hemoglobin (RI Ministry of Health, 2018).

Anemia in young women has a negative impact on reducing body endurance, fitness and thinking agility as well as affecting a decrease in learning achievement and productivity. In addition, the long-term impact of anemia on young women who will later become pregnant will cause a risk of stunted fetal growth (IUGR), premature, low birth weight (LBW), stunting and neurocognitive disorders (Ministry of Health RI, 2018). One of the factors that influence anemia is knowledge about anemia. Lack of knowledge about anemia, its signs, effects and prevention results in adolescents consuming foods with low iron content so that the intake of iron needed by young women is not met (Listiana, 2016).

In an effort to successfully prevent and treat anemia in young women, it is necessary to support management that is SMART (Specific, Measurable, Attainable, Relevant, Timely), namely behavior change interventions starting from providing management and developing media communication, information and education (IEC) (Ministry of Health Republic of Indonesia, 2018). Therefore nutrition education is very important to increase adolescent nutrition knowledge. Education carried out with the help of the media will make it easier and clearer for the audience to receive and understand the material presented (Safitri and Fitrianti, 2016).

The development of media by combining media elements into one unit has been made in order to create interesting media in the educational process. One of them is motion graphic media consisting of a combination of visual media-based animation pieces that combine film with graphic design by incorporating a number of different elements such as two or three dimensional objects, animation, video, illustrations and music (Fitriani *et al.*, , 2019).

Therefore, media with motion graphics was chosen as one of the effective and interesting educational media because of the combination of text, images, colors, sound, in conveying messages about anemia and explaining food ingredients that can prevent anemia.

Based on the explanation above, the author as a student of culinary education specializing in diet is interested in doing "Development of Motion Graphic Video (MGV) Based Nutrition Education Media for Young Women to Prevent Anemia".

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2. METHOD

Research on the development of motion graphic video-based nutritional education media (MGV) uses research and development (Research and Development). This study uses the lowest research and development (level 1) position, this research is carried out to produce a design but is not followed up by conducting field tests. In this case the research was carried out only to produce product designs, and these designs were validated internally (expert and practitioner opinions) but were not produced or tested externally (field testing). The software used to create motion graphic video media is Microsoft PowerPoint 2013, the application used to create motion graphic video slides and the InShot application, which is used to add audio and music.

1. Potential and Problems
   The potential and problem identification stage was carried out by analyzing the needs for the development of motion graphic video (MGV)-based nutritional education media for young women to prevent anemia.
2. Literature Study and Information Gathering
   Information gathering and literature study was carried out by conducting literature studies on young women, anemia, media, video media, motion graphics and nutrition education to study the theoretical foundations that underlie the development of motion graphic video (MGV)-based nutritional education media for young women. to prevent anaemia.
3. Product Design
   Making product designs for making nutritional education media including preparing storyboards. The process of making a storyboard includes a summary of the storyline about anemia which is shown in the motion graphic video.
4. Design Validation
   Product design validation is carried out by media experts and material experts to assess the feasibility of the product design. The validation process is carried out to ensure that the stories and material that will be made in the form of motion graphic videos are compatible with anemic content for young women.
5. Design Revision
   After validating and obtaining an evaluation from the validator regarding the motion graphic video storyboard, revisions and improvements were made based on input from the validator.
6. Product Manufacturing
   This stage is the stage of making motion graphic video media about anemia in young women which refers to the storyboard and concepts that have been validated. The stages of making motion graphic video media include looking for image illustrations, animating a combination of several images, making sound recordings that are used as narration in the video, adding background music and combining everything as a whole to become a motion graphic video.
7. Product Validation
   Product validation is carried out by media experts and material experts to assess the feasibility of the product. At this stage, media experts are asked to provide an

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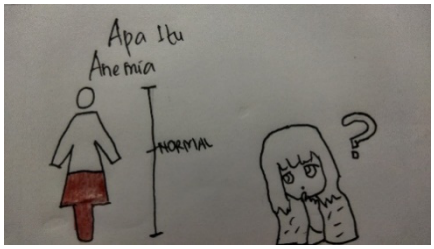
assessment and suggestions for improvements to the product for improvement by the author.

3. RESULT AND DISCUSSION

3.1. Planning to develop motion graphic video (MGV) nutritional education media for young women to prevent anemia

1. Making Flowcharts
   The first step in the design stage is to create a flowchart. A flowchart is a chart consisting of certain symbols that show the steps of a program that can facilitate media development. The flowchart that has been made will be used as a guide to make it easier to make media.
2. Storyboarding
   Furthermore, to visualize media development, a storyboard is made which is a visualization using pictures to facilitate the creation of media which serves as a reference for making media. The process of making a storyboard contains material that is visualized by pictures and made in the form of a storyline.



Picture 1. Definition of Anemia

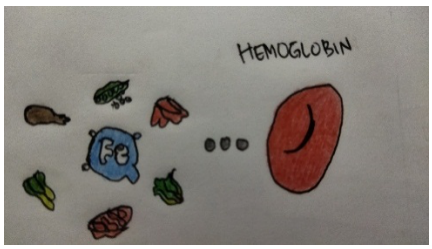


Figure 2. Formation of Hemoglobin

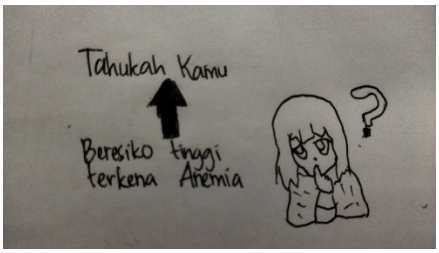


Figure 3. Adolescent girl anemia

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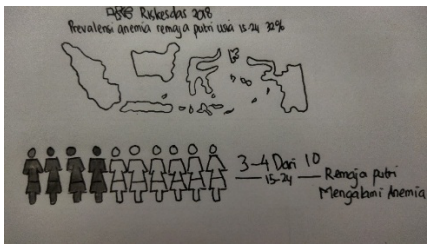

Figure 4. Prevalence of Anemia

Figure 5. Causes of Anemia

Figure 6. Effects of Anemia

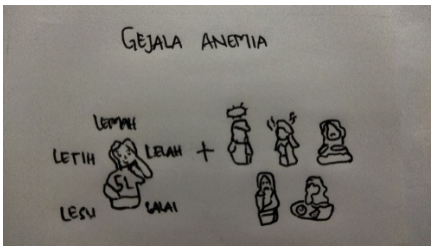

Figure 7. Symptoms of Anemia

Figure 8. The First Step to Prevent Anemia

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Figure 9. Step Two Prevention of Anemia

Figure 10. Closing

3. Storyboard Validation
   *Storyboard motion graphics*The video that has been made is then validated regarding the storyline in the storyboard motion graphic video and its suitability with anemic content. The validation process was carried out by one material expert and media expert using storyboard motion graphic video validation sheets for young women to prevent anemia. Storyboard Validation Expert, Dr. Rita Patriasih, S. Pd, M. Si., and Dr. Ai Mahmudatussa'adah, M. Si as a lecturer in Culinary Education. Validation is done by filling in the storyboard validation sheet. The validation sheet uses a Likert scale with 3 alternative answers, namely appropriate, inappropriate and inappropriate.

The results of the storyboard assessment are feasible to be used as a reference for making nutritional education media based on motion graphic videos. The assessment is based on each scene in the storyboard.

3.2. Creating Motion Graphic Video (Mgv) Nutritional Education Media For Young Women To Prevent Anemia

At this stage, nutritional education media based on motion graphic videos were developed according to the storyboard that had been designed previously.

1. Looking for images used in the development of nutritional education media based on motion graphic videos.
2. Insert images and apply letters that will be used to convey messages and animate or move images into a video based on the storyline on the storyboard motion graphic video using Microsoft PowerPoint 2019.

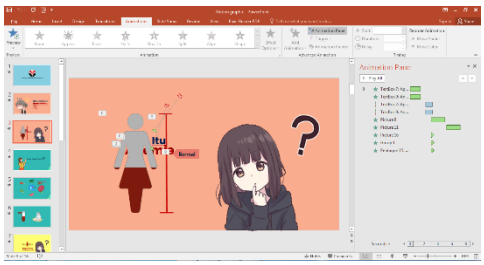

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Figure 11. Insert images, fonts and animate using Microsoft PowerPoint 2019.

3. Combine the overall animated image with the narrator's voice and background music using the InShoot application on a mobile phone.

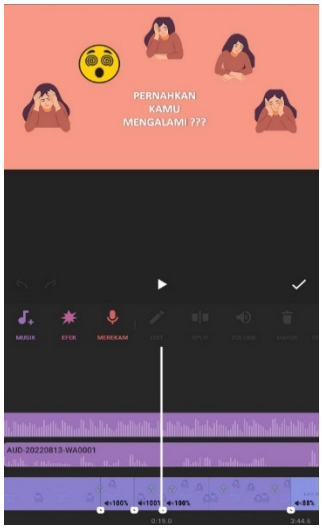

Figure 12. Combine images, narrator's voice and background music using the InShoot application

After all the parts have been combined, the motion graphic video is saved in mp4 format and an examination is made of the motion graphic video's running. Then after that, to make it easier to access, the motion graphic video is uploaded via YouTube directly using the Maya Amini channel / the following YouTube linkhttps://youtu.be/pQrCmlq9Dlw.

4. Nutrition Education Media Validation Motion Graphic Video
   Material validation in the nutrition education media involved a material expert lecturer to provide assessments, suggestions and comments on the nutrition education media that was developed. The assessment of the previous material was carried out during the development of the motion graphic video storyboard. However, re-validation is carried out when the video has been developed. The aim of revalidating the material on preventing anemia in young women in motion graphic videos is to ensure that the material developed is in accordance with the content that should prevent anemia in young women. When validating the material, a Likert scale was used by reviewing two main aspects, namely aspects of content and language. Based on the results of validation by material experts, the score given to the content aspect as a whole gets a score of 3 with appropriate criteria, and on the aspect of language as a whole get a score of 3 with appropriate criteria. So based on these results nutritional education media based on motion graphic videos can be used.

Further media validation was carried out by a media expert to provide an assessment of the nutrition education media that was developed. When validating the motion graphic video media, the Likert scale was used by reviewing 2 aspects, namely the audio aspect and the visual aspect. Based on the results of validation by media experts, scores on the audio aspect of each point get a score of 3 with appropriate criteria, and on the visual aspect as a whole from several points get a score of 3 with appropriate criteria and one point gets a score of 2

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with inappropriate criteria regarding color suitability, letters and backgrounds. The comments and suggestions from the validator are used as input for revising the developed media.

4.CONCLUSIONS

This study aims to develop nutritional education media based on motion graphic video (MGV) for young women to prevent anemia. Based on the results of the study it can be concluded: The planning stage for the development of motion graphic video-based nutrition education media for young women to prevent anemia includes several activities, namely making flowcharts, storyboards, validating storyboards and revising motion graphic video storyboards. In the storyboard validation stage, it can be concluded from the two validators that it is appropriate and can be used as a reference for making motion graphic video media with several scenes that must be added and updated. In the Stage of Making nutritional education media based on motion graphic video there are several activities, namely finding and creating images, providing animations or moving Microsoft PowerPoint 2019 and combining images, narrator's voice and backsound using the inShoot application. Then, the motion graphic video nutritional education media was validated.

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