RORO JONGGRANG: ANIMATION OF FOLKLORE FOR NATIONAL CULTURAL EDUCATION MEDIA

Nurlaila
Department of Fine Art Education
Faculty of Arts and Design
Universitas Pendidikan Indonesia
Jalan Dr. Setiabudi No.229, Isola, Kec. Sukasari, Kota Bandung, Jawa Barat 40154
No. Tlp.: +62 815-6777-4175, E-mail: Laila9652@gmail.com

ABSTRACT
This research was initiated by the author’s concern for the spectacle of children today. At times, they watch fewer educational shows. With all these spectacles, today’s children have also begun to forget their own culture, folklore. Folklore is one of the cultural and historical treasures of the Indonesian nation. As an entertainment medium, there should be a moral education message that can be delivered to the next generation of this nation. This research aims to create a cultural education media using folklore with animated films to attract more attention from children. The form of presenting folklore through animated films is a medium favored by children so that the delivery is more readily accepted. The method used in this research is a historical approach that uses past events as a source of data by taking the background in Java in the 9th-century era. For the design, this animation is in the form of a 2D animated film using the local language, namely Javanese.

Keywords: folklore, animation, culture, education, media

ABSTRAK

Kata Kunci: dongeng, animasi, media, pendidikan, budaya
INTRODUCTION

The changes in information flow make the barrier between countries disappear. Globalization creates a new challenge that must be coped with for the benefit of a better life (Setiawan, 2019). The rapid development of science and technology results from the globalization process (Yulianjani et al., 2019). However, there has not been a god filtering (Prabandari, 2020).

Today’s society runs in a large community, or it can also be called a global society. This impacts people’s lives, especially on their live relationships with others. Consumptive culture is getting higher, individualistic attitude that makes people tend to be selfish, and the level of social inequality is increasingly felt (Nasution, 2017). In addition, globalization also presents a bad influence: the fading sense of nationalism and patriotism. The occurrence of morals in the young generation and the socio-cultural have been degrading.

Several benefits can be taken from the influence of globalization. One of those advantages is making communication easier (Kusuma & Sugandi, 2019). Globalization also facilitates the acculturation of cultures between countries and the development of tourism potential in an area. They also get motivated to learn about foreign cultures.

Moreover, this generation is the group that has been in touch with technology. The purpose of technology itself also intends to provide significant changes, dominate, and destroy the previous order of life, so there needs to be foresight and criticality to respond to it (Gutandjala, 2020).

The use of technology can be a boomerang for those who are not wise in using it. Lack of self-control and insight will make them drift and fall asleep and later destroy society’s fabric. People will find it challenging to obtain a safe and stable life.

In these obstacles, good human resources are essential. Improving the quality of human resources is the answer to this problem (Harding et al., 2018). Competent humans must be able to combine thinking (knowledge) and physical experience (skills) when interacting with other people. So, their movements carried out can positively impact progress in society.

Paying attention to the quality of human resources is an essential thing to do. Suppose we can take the benefits of the demographic bonus, which will be the key to achieving the nation’s prosperity (Kemendikbud, 2017). However, if we fail to utilize the demographic dividend optimally, it will be a disaster for the country. Thus, the importance of character education must be carried out early in their golden age.

Fig. 1 Indonesia Demographic Bonus 2045

The inculcation of the nation’s character can begin by understanding their national identity. This character can be taught through the culture in Indonesia. Learning the culture will undoubtedly give them a sense of ownership and love for their homeland.

Culture is a parameter to see the progress of civilization. A nation with a variety of cultures shows the nation’s wealth. This cultural diversity can have the potential to strengthen the nation’s development (Widiastuti, 2013). It is not uncommon for conflicts to arise between multicultural societies. Mutual understanding and respect are needed, so that the nation’s society can work together to become united to face all the challenges that are increasing during this era.

Not to mention that culture is a manifestation of a nation with virtuous values. The existing culture develops from time to time, one of which is through
oral intermediaries (Idawati & Verlinda, 2020). People preserve it for the next generation, sometimes not only in the tangible form, but also intangible one. However, some cultures exist in immaterial forms, such as folklore.

Oral tradition is a cultural force in Indonesia. This oral tradition is passed on by word of mouth to mouth for the next generation. There are several forms of oral tradition, such as folklore, folk language, and folk poetry. All of these types involve all activities in each person’s everyday life.

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As an oral culture, folklore or legends spread mythical stories about an area, it is challenging to prove its liability. It may happen because the information in the community overlaps and becomes an unclear origin (Anwar, 2019). To maintain the existence of folklore, a preservation effort must be made so that it is not lost by time.

Folklore has become one of the cultural and historical treasures of the Indonesian nation (Amboro & Adityayoga, 2020). The excellence of folklore, apart from being a medium of entertainment, there is also a moral message that the young generation can use as an example. In addition, folklore can also be used as a communication to teach the values and culture of the nation. One form of folklore presentation is in the form of animated film (Suratinoyo et al., 2013).

Folklore is a story that develops in society from generation to generation and spreads throughout the country (Michael et al., 2019). This makes folklore one of the cultures of the nation. Folklore also has an essential role in conveying moral values as a learning character for children (Nanda et al., 2021).

These stories develop freely without knowing who the author is. Sometimes the story only develops in the area of its origin and is less prevalent in other areas. Therefore, the preservation of folklore is very necessary to maintain and spread the values contained in it for the next generation.

An effort is desperately needed to increase knowledge, and the right media must support it to help teachers use it in learning so that the learning atmosphere becomes more fun and not monotonous (Putri et al., 2020). Educational media is expected to help the process of interaction in learning activities so that it is more effective and efficient.

Positive stimulation must be given to children through these educational media. Moral and character development included in the media can make them behave well by reflecting on the thoughts, attitudes, and behaviours directed at children when they interact in society (Sukmana et al., 2021).

The teaching method that is carried out manually using instructional media in books is considered monotonous and less attractive. With the rapid development of technology, instructional media that is of interest to them can be made (Bahari et al., 2021). Multimedia can be an exciting option to increase students’ interest in learning. Multimedia itself usually comes from the work of a collection of software in the form of animation, graphics, audio, etc.

Animated films are an interesting choice of instructional media to use. The main function of instructional media itself is as a learning aid that affects the conditions of the learning environment created by educators. Its use in the teaching and learning process can generate interest and motivation in students in the form of stimulation to learn (Tandilangi et al., 2016) dental health is still an issue dominated by caries and periodontal disease. The poor behavior of dental health maintenance plays an important role in the occurrence of these two diseases. Intervention through education can improve the behavior. Educational success in terms of behavior change is influenced by using auxiliary media. Animated cartoon is an auxiliary media that is more attractive than the other media because it combines sound and moving images in the delivery of information. This study aimed to obtain the effectiveness of dental health education using cartoon animation media to behavioral change of oral health maintenance among students of SD Advent 02 Sario. This was a quasi-experimental study with a nonequivalent control group design. Samples were students of SD 02 Advent Sario aged 10-12 years obtained by using the purposive sampling method. The samples were divided into two groups: the treatment group using cartoon animation media
and the control group without auxiliary media. The measurement of the behavior of dental and oral health care of children resulted in an increase in the scores of pre-test to post-test 2 by 633 which was categorized as good. Statistical analysis showed that the p-values (significance. Even educational media can bring a psychological impact on students.

Animation comes from the Latin word *anima*, which means soul, life, and spirit. In English, the word animation comes from the basic word ‘to animate’, which means life. A medium that has the ability to describe a visual phenomenon in its entirety that carries a moral message from generation to generation (Michael et al., 2019). It can be concluded that animation is a moving picture that contains a moral message.

There are three types of animation, still image animation, traditional animation, and computer animation (Muhdaliha et al., 2017). Still, image animation (stop motion) is a technique of making animation by making inanimate objects seem capable of moving on their own. Traditional animation uses a frame by frame technique system with manual depictions of each frame. While for computer animation, the making of animation uses a computer assistance

Animation is a series of images that are in motion. In addition, animated films also use audio-visual media which is very useful and effective to reach the public so that the message is easier to be accepted (Handani & Nafianti, 2017). Therefore, animation media is certainly very appropriate to be used as a medium for preserving folklore. Creating an animation for children that can build their character is crucial. The animation must be able to improve morale and foster a sense of love for their nation’s culture.

In making animated films, there is also one important element that must be understood, which is the cinematography. Cinematography is the science, technique, and art of shooting films with cinematography for filmmaking (Mahendra et al., 2018). A film must use cinematography that has the valuable characteristic. Each component used in cinematography contains a certain meaning or value. This message can be realized through the basic component, such as space, line, shape, tone, colour, movement, and rhythm (Sulistiyawati, 2019).

Creating a film that can be liked by young people is very challenging. All aspects of the builder must be thoroughly considered and planned carefully. The most important thing is how the packaging of the moral value can be understood by a community.

The generation in this era is currently experiencing the onslaught of cultures from all over the world. One of them is through the spectacles or films that are presented to them (Penezic, 2020) as a kind of contemporary phenomenon, which follows the outlines of dominant global trends, but which, therefore, causes various consequences for individuals, groups and entire societies. It is the result of the analysis of this phenomenon done during the preparation of the master thesis “Sport as a Phenomenon of Contemporary Culture” at the Faculty of Political Sciences, University of Belgrade, and therefore includes one part of it. In considering the phenomenon itself, it starts from the perspective of contemporary cultural studies and tries to see the place of sport in current social movements. Thus, the accent is on its place and role, and also on the causes and consequences of the process of which it is obviously a part of. Starting from its primary features and functions, the focus is on those elements that are an evident part of every sporting event today; the positive ones, which encourage models of behaviour that bring the modern individual closer to the ancient ideals of the athlete, but also the negative ones, which are the reverse of such aspirations, and which today, due to these global trends, are accompanied by the race for money and popularity. These are negativities that have become a completely acceptable component of sport over time, and the consequences of which, however, are not talked about enough, although they are often in the foreground, pushing to the margin those original motives of chivalry and Olympism. In that way, the very essence of the existence of sport and sports competitions is gradually being suppressed.”,
Sport in The Trap of Globalization: a Media Spectacle, an Ideological Instrument and Universal Means of Communication

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As an answer to the problems that arise, this research will produce an educational media in the form of animated folklore film. It is hoped that by using audio-visual media with the aim of making the younger generation more interested and feel at ease to capture the message delivered by the film.

In addition to that, animated folklore films can be a medium for promoting the culture of a certain area to improve the standard of living of the community (Bintarto & Lestari, 2020). By raising the existing local wisdom, it can attract tourists to visit the area. The more visit from the tourist, the more income the people will get. In other words, it makes the culture will remain sustainable.

RESEARCH METHODS

The research was conducted using a qualitative method with a historical approach and a quantitative method for the feasibility test. The focus of the research is on the form of past events and reconstructing the past with data sources that still exist today (Anjirbag, 2018). Data were collected through observation, literature study, and visual analysis on several social media. Then, the data were analyzed to solve the research problem. With the rapid development of technology, folklore began to be displaced and less attractive to the younger generations. Thus, the solution to this problem was obtained by making 2D animated films to preserve folklore, especially in “The Story of Roro Jonggrang”.

For the design of this research, it began by formulating the problem, and it was the fading interest of the younger generations in the folklore. The researcher observed some of the current trend deemed not to provide good education for them. Apparently some children prefer other or foreign culture rather than their own culture (Susim et al., 2019). Responding to this problem, it is necessary to carry out an effort to introduce culture through interactive media.

Cultivating a sense of love for cultures is the focus of this research. Creating a film that contains elements of community culture or precisely to raise the interest in folklore is considered crucial. Local wisdom usually share social norms and values that regulate how one should live in society. The values contained in a culture also build a balance between the carrying capacity of the natural environment with human lifestyles and human needs.

The next process is to determine the purpose of the research in the form of making interactive media that can attract interactive media that can attract the attention and interest of the younger generation in folklore. Animated film is the medium used in the research. This media combines audio and visual is considered to be effective in delivering messages...
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(Patmawati et al., 2018). Beside that, animation was also chosen because it is suitable and easier to accept the research target, namely children to teenagers.

The next step is in the form of data collection and data analysis. After all the data was collected, a solution was derived for solving the problem in the form of making 2D animated folklore films. For the realization of the animated film, it is divided into three stages, namely the pre-production stage, the production stage, and the post-production stage (Thifala et al., 2021).

The story of Roro Jonggrang is explored much deeper and it determines the concept of the film to be made. The concept presented is the story within the story or in other words the story of Roro Jonggrang is told by character in the animated film. The characters in the first story consist of a mother and her child. In the story of Roro Jonggrang there are several characters, namely Roro Jonggrang, Prabu Baka, Bandung Bandowoso, dayang, and genie.

In the pre-production stage, an in-depth and development of the animated film will be elaborated accordingly. This stage becomes an important root for the whole animation production process (Mulyani, 2019) efforts to improve the competitiveness of local animated film and one of these efforts is by analyzing the stages of the manufacturing process and apply it to the process of making the actual 3D animated film. Although this time the animation industry in Indonesia has not been detailed separates each of these stages, but still be important for designing detail the activities of these stages, in order to see the strengths and weaknesses of each process that existed at that stage. Therefore, this study was conducted with the hope to provide recommendations to improve the local animation industry. Keywords: 3D Animation, Animation Film Pre-Production Stage, Princess Peacock Orange


In general there are three stages of the filmmaking process, namely the 3D animation pre-production, production and post-production. Although this time the animation industry in Indonesia has not been detailed separates each of these stages, but still be important for designing detail the activities of these stages, in order to see the strengths and weaknesses of each process that existed at that stage. Therefore, this study was conducted with the hope to provide recommendations to improve the local animation industry. Keywords: 3D Animation, Animation Film Pre-Production Stage, Princess Peacock Orange.

Fig. 2 The Character of child
(a sweet and innocent little girl, but still loves to play until she loses track of time)

This character is a little girl who is still very spoiled by his mother. It can be seen from the design
of the child’s body gesture, eyes, and faces. The addition of property to the tied hair ornament gives a sweet impression for the little girl.

**Fig. 3** The Mother and her child  
(a mother who loves and cares for her child)

The character of the mother is a loving and gentle figure to her child. Even though the mother shows a compassionate nature, she is also a disciplinary mother who always directs her child to do the right thing. Mother’s hair in untied to make it look more feminine and elegant. Her clothes which has no pattern also adds reinforcement to her character traits.

The researcher as the director in this production of this animated film is responsible for the whole process. During film production, the director is a person who provides direction and is responsible for artistic and technical matters in the content of the film made. All plans must be ensured to run smoothly from start to finish. The final quality of this film is in the hands of the director. Therefore, a director must have vision, tenacity, creativity, and ability to work hard.

The director also provides director’s statement and director’s treatment for the animated film (Jackson, 2020). The film that is built a film that gives a warm impression and has family theme. One of the steps taken to achieve this goal is through the mood and tone chosen by director. Color grading of pink, orange, and yellow became the right choice to make it happen.

The director used several films that re used as references for making this film. Disney and Pixar style films were also used as references. It is certainly undoubted that these two biggest animation film companies in the world have excellent quality. The director also took references from several film festival that were considered suitable and interesting. One of the animations that became a point in the production of Roro Jonggrang’s film was the animated film entitled “Love is Small Thing” by Puuung, an animator from South Korea. This animation shows a warm and calm impression in accordance with the goals of the director.

In addition to character design, there is also a process of entering characters in a script that has been made, or often referred to as a storyboard. The process of making storyboards will implement cinematography sciences. From choosing a point of view, angle, compiling a shot list, until to the camera movement that will be made (Choi & Cho, 2014).

**Fig. 4** Sample of storyboard  
(several segments from The Roro Jonggrang animated film scenes)

The storyboard is a representative of every scene in the entire animated film. The depiction of the atmosphere that forms the basis motion in the film. There are character poses, character positions, voice over setting, dialogue, etc. The storyboard is the key in the animatic stage which is a reference for all stages of the production process.

**Fig. 5** Animatic process  
(merging all storyboards in a video form that has been added with voice over)
To calculate the estimated duration of the film, the next step was to combine a series of storyboards that had been made into a video. This stage was the last part of the pre-production process. The director and the team used that video for the final reference in the production stage. The video created can be combined with voice over or dialogue in the script. It can be said that this animatic video is an initial picture of the final animation.

The next step was the film production stage. Roro Jonggrang animation used a frame by frame system (Rodrigues & Lavino, 2020). Each existing shot list was moved by drawing one by one manually. In this process, each team member had their own job desk. The team must also understand a good workflow of the production so that there is no overlap during the work.

The production team is named “Dua Srikandi” which consists of three members. The number of the members is actually far from the ideal number for a film production. To cope with this problem, the members had a double role so that they could take several job desks to work on. There were several production processes as layout preparation, coloring, merging, etc.

This project took place in the midst of the Covid-19 pandemic, so that production was carried out remotely from their respective homes. This production used Google Drive for data storage of every finished work. Each job is uploaded in a folder that was named according to the job. Each folder consisted of subfolders according to the shot list sequence that was made from the previous storyboard in pre-production. If there are any shots in the folder completed, the color of the shot list folder changed according to the agreed color.

At the production stage there were several software which were used. The first step was making the line art and motion for the movement object for every frame using the Ibis Paint X application on android. Next, for coloring each frame the Medibang application on computer was used. Then there was also the making of the background using the Sketchbook application on android. After all the frames had been colored and the background was set, then continued by merging the movement with the background. Ensuing all frames are installed, it was then followed by the merger of frames process using the Toon Boom Harmony application on the computer. All demerged frames became a scene for each shot list in video form.

The post-production stage was an editing process of the film. In this section, the post-production stage sorted out the scenes that was made in the form of video scenes that were adjusted back to the plot on the script. It is also possible that the structure which was previously created can be completely overhauled in this process.

Structural changes were made by the editor after several discussions with an approval from the director. Scenes which were at the end of the story can be moved to the beginning of the story. The moving was made to get a more structured film storytelling than the previous result. The director reviewed if the message conveyed from the arrangement of the edited story was already appropriate. Next, the editor added voice over, music, visual effects, etc.

Post-production is the last part of making an animated film. Artistic touches were given in this phase. The merging of the entire scene was then being corrected for color. The colors and visual effects were adjusted to the toon manner that had been made by the previous director in the pre-production stage. Sound effects and music were important things to build the atmosphere of the story in this case. This process
becomes the final peak of producing the final output.

When the production of the film was completed, the next thing to do was the feasibility test for the animated film. This test used a qualitative method by distributing questionnaires using a Likert scale. The selection of the measurement scale with Likert aims to accommodate the reliability of the respondents by providing several choices. Thus, respondents can provide clearer information about the problem being studied.

RESULT AND DISCUSSION

This research created instructional media in the form of a 2D animated film about the folklore of Roro Jonggrang. Javanese language is the language used in this film, based on the original language of the story. In order to make other people outside Java understand this story, the animated film is also equipped with Indonesian subtitles. The video format used is MP4 FHD (1080p) with 25 fps and 16:9 resolution. Roro Jonggrang animation had 20 scenes consisting of 53 shots with a duration of 4:03 minutes.

Roro Jonggrang animated film has several unique features that make it interesting to review. In this film, the plot of story presented to the audience is a flashback. The mother character in the film becomes the narrator to tell the story of Roro Jonggrang to her child. The visual of the film is very supportive in building the atmosphere. The making of original soundtrack for this film also adds to the uniqueness of the Roro Jonggrang film.

At the beginning of the film shows a little girl who just comes home from playing. When she got home, the child’s clothes and body full of mud. Previously, she had promised her mother not to come home late again. Her mother who saw her daughter in such a state could only help her to clean up. After that, she ran down the hall of the house and saw a book on the table. When she tried to reach the book, the little girl fell down and cried.

Fig. 8 Middle Scene
(Bandung Bandowoso proposed to Roro Jonggrang and got conditions to build a temple)

The next part of the film, her mother helps the little girl to take the book and read the story of the book. The story is about Roro Jonggrang and Bandung Bandowoso. The child pays attention to her mother who is telling the story carefully.

Fig. 9 Last Scene
(Mother closing Roro Jonggrang’s Story and gives advice back to her child)

The last segment, mother finished telling the story of Roro Jonggrang. Mother gives the message of the story. One of the messages is for the child to keep the promise she makes. The little girl understood
her mother’s intentions and was determined not to do the same mistake again. They both smile and hug each other in the end.

After the folklore animation film has been produced, a feasibility test of the work is carried out (Muhdaliha et al., 2017). This test used a questionnaire distributed to 33 respondents from three categories, namely children, young adults, and adults. All of these respondents were selected based on their experience with/often in contact with technology. Given the strong flow of technology, it is one of the factors that erodes the sense of love for the homeland.

The author conducted a survey on the effectiveness of The Folklore Animated Film “Roro Jonggrang” to find out if the film is interesting according to the audience. Analysis of the data used a Likert Scale with several choices or categories (Retnawati, 2015). The survey is divided into five assessment aspects, namely visual appearance, color composition, scene movement, background music, and moral messages. Respondents were given assessment on a scale of 1--5 for each aspect.

Likert scale was chosen for this test because it is more flexible for respondents in providing the assessment. This scale using a gradations of the values given that can make it easier for respondents to measure their reaction towards the question given. The reliability of the Likert scale is also considered relatively higher than other types of measurements scales. In addition, the Likert scale provides several alternative responses. The researchers can input items related to the realm being studied. The information given by the respondents regarding the attitude of his assessment can also be understood more clearly.

Respondents filled out the answers for the five items that had been provided. The system of filling out the data questionnaire was done through the google form media. This method was chosen to facilitate the distribution of questionnaires in the midst of the current pandemic. In addition, respondents and researchers can be more flexible and free, not limited to one space and time that usually limits them.

Based on the results of testing effectiveness level of the Roro Jonggrang Animated film in attracting the interest of the audience, all categories of making this film show a good rating. From of the 33 respondents who participated in the study, 25 people gave a very high rating on the item studied. In fact, almost no respondents gave an assessment score below 3 point. These results show that the Roro Jonggrang Animated Film can be the best choice for the educational media to use.

Animation is an interesting choice for channeling massages, it can stimulate the thoughts, feelings, and willingness of students so that it can encourage their interest. Respondents gave a fairly good rating for the Roro Jonggrang animation. That way, the respondents can receive the messages they want to convey in this film according to the purpose of making it.

In addition, a test has been carried out using a questionnaire. The animated Film Roro Jonggrang was also included in the folklore animation film festival organized by Badan Bahasa Kemendikbud. The process of the flow of this festival activity began with the selection of proposals that have been submitted.

Furthermore, the team whose proposal passes can proceed to the film production stage. Until the final announcement of this festival, the animation of Roro Jonggrang was included in the top five categories. From this festival, it can expand the publication and the implications given can be felt more deeply for this animation.
The folklore animation festival held by the Ministry of Education and Culture is one proof of the feasibility of the Roro Jonggrang animated film. As for some elements of the animation festival, it can be seen from the script writing process, cinematography, visual appearance, until to the music used in the animated film.

**CONCLUSION**

Based on the research that has been done, the proper use of technology with the intention of preserving local wisdom will produce mutual supportive relationships and later it will obtain optimal results, one of which is this animation media. The story of Roro Jonggrang is visualized in an animated film, making it more interesting to learn. Therefore, it is hoped to generate interest for the audiences from the wider scope. The instructional media can improve the quality of education carried out to be in higher quality. By using animation media in appropriate and varied learning, it can overcome passive, bored, and then it can motivate the younger generation.

In addition, animated works can also be easily disseminated through various social media or included in film festivals so that folklore gets even higher attention from the public. The animation festival is a manifestation of an effort to increase insight, motivation, interest, and talent for the community through animated films. Through the animation festival, filmmakers will also make their animated films known by more people. In addition, as a media for documenting animation works, they are surely recorded and published.

**IMPLICATION**

For the development of further research, the production of animated films can continue to improve the quality and feasibility standards of animated films. By digging deeper into all aspects of the builder in animation, from cinematography, characters, music, etc., it is hoped that the next animation can be produced even better. To sum up, the use of this animation media can be a good alternative in empowering the local wisdom’s story especially in the field of education.

With this research, it is hoped that it can become a reference in the selection of learning or instructional media, especially in the field of animation. It is because the learning media is one important aspect in supporting the achievement of educational goals.
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Berbasis Multimedia. *JUTSI (Jurnal Teknologi Dan Sistem Informasi)*, 1(1). https://doi.org/10.33330/jutsi.v1i1.1026


