An Interactive Animation Story of Malaysian Folklore (Pengembaraan Budak Ijat)

Faiz Afandi Bin Nong Nazari and Zuriani Binti Ab Ghani
Malaysian Institute of Information Technology, University Kuala Lumpur 1016 Jalan Sultan Ismail, 50200 Kuala Lumpur, Malaysia

Corresponding Author:
Faiz Afandi Bin Nong Nazari
Malaysian Institute of Information Technology, University Kuala Lumpur 1016 Jalan Sultan Ismail, 50200 Kuala Lumpur, Malaysia

Abstract: Malaysia is a country that is rich in cultural heritage in it. Each of the states in Malaysia has distinctive folklore. Every story people have certain functions as a media educator, moral teaching, entertainment, social processes and exemplary advice to the younger generation. However, in the new era of technology, this folklore is being forgotten. The purpose of this project is implementing interactive animation with folklore. Interactive animation story is one of the best ways to overcome the problem. By developing this project, it will make the folklore closer to society. Therefore, our cultural heritage will be preserved and will continue to constantly tell people's stories which represents and reflect the identity of a country and nation.

INTRODUCTION

Malaysia is a country that is rich in culture and traditions. Folklore is one of the elements in our culture. One of the intangible inheritances is folklore and its art symbolizes the cultural and social identity of a community[1]. These stories were passed down from generation to generation. The stories were brought down from generation to generation for the purpose of preserving the values in the stories.

Furthermore, every state in Malaysia has its own folklore. These stories contained full of values and messages. The stories have their own meaning and purposes of its existence. According to Wan Abdul Kadir, values that are absorbed by the medium the reader through the presentation of Malay folk tales will be able to instil a sense of humanity, soul, fineness, cultured, noble, civilized and highest religious factor. In the world of the internet and rapidly changing technologies, the folklore such as "Kelekatu Sombong", "Si Pintar" are being forgotten.

As we know, children always prefer to animated characters, a cartoon is a movie made by using animation instead of living actors, especially a humorous film intended for children[2]. So, the way to attract again the interest of these children to be more love on folklore.

This folklore is rarely heard compared to folk tales of a national in addition also makes this more interesting folk tales. Folktales packed with messages to deliver in a story, for example, the value of respecting neighbour. The value of respect is defined as a graceful refinement with the behaviour of noble and gentle to be practiced by an individual in relation to other members of society[3] corresponding to the strong construction the concept of its society.

MATERIALS AND METHODS

There are hundreds of folk tales that are transmitted orally. Folklore plays a crucial part in societies, this is because not every folklore is fiction, it's also full of good values that can act as a barometer within societies to our predecessor and this and coming generation. There are a few folk tales that are dying and forgotten.

Interactive video: Interactive video characterized as a sort of computerized video that uses the user as an interaction. These type of videos, play like standard video documents yet incorporate an interactive design that plays out an activity when you tap on them. For instance, when you tap on a button, the video may show data about the button you tapped on, bounce to a different piece of the video, or open another video record. Interactive videos are normal on the mobile application. They enable you to choose at least one alternatives while the video is playing. For example, towards the finish of a video, you might be requested to choose which character in the video you loved best. When you settle on your decision, another video will open and may give more data about the character you chose. Different examples of interactive video incorporate card tricks, pick your own adventure videos and interactive instructional exercises.

Interactive video has many possible applications. An interactive video for separation education, for example, could allow students to select among multiple channels for obtaining further information to focus, all throughout the presentation. It could also include a quiz after a lecture segment that evaluates responses and gives students immediate feedbacks[4].

The art of 2D Animation: 2D animation creates movement in a two-dimensional artistic space. Work in the field of 2D animation requires both creativity and technological skills. 2D animation focuses on creating characters, storyboards and backgrounds in two-dimensional environments. Often thought of as traditional animation, the figures can move up and down, left and right. They do not appear to move toward or away from the viewer as they would in 3D animation. The 2D animation uses bitmap and vector graphics to create and edit the animated images and is created using computer software programs such as adobe photoshop, animate and after effects.

Quantitative: The developer makes the poll and will convey it to target audiences which are guardians and teacher. Through the survey, the developer will realize what the target audiences will require as a direction for the analyst to build up the project. Quantitative information is any information that is in numbered shape, for example, statistics, rates and so forth. It is utilized to

Fig. 1: Mixed method

evaluate the issue by creating numbered information that will be changed into usable statistics. The analyst will give a survey and distribute to the target audiences to answer each one of the inquiries. Afterwards, the analyst will gather and examines every information with the assistance of statistics software.

Research and review: The developer uses the internet to do his research on the patterns of the existing interactive animation story. The developer also studies about folklore and the storyline that is appropriate to the children and the design interface with suitable colors and themes for the concept. As we all know, children have their own particular preferences that are different than the adult, so the type of color and background is a priority to attract children attention towards the project that is being developed.

For this research, the methodology uses mix method (Fig. 1), the combination of production step and mobile application method. This mixed method include six process that starts with ideation, pre-production, production, post-production, development and implementation.

Phase 1: Ideation Is a starting process in developing a project. Without idea and a good case study, some of the projects might not be able to become successful and cannot achieve the objective we want. Ideation is the process where you generate ideas and solutions through sessions such as Sketching, Prototyping, Brainstorming, Brainwriting, Worst Possible Idea and a wealth of other ideation techniques.

The narrative structure is about story and plot, the content of a story and the form used to tell the story. The story refers to the dramatic action as it might be described in chronological order. Plot refers to how the story is told. A story is about trying to determine the key conflicts, the main characters, setting and events. The plot is about how and at what stages, the key conflicts are set up and resolved.

Phase 2: pre-production: The first process in the animation pipeline and also one of the most important is pre-production. It begins with the main concepts which are initially turned into a full story and then, once the story has been finalized, other things such as the script, shot sequences and camera angles are worked on. Some major components of pre-production are story boarding, layouts, model sheets and animatics. is the development process where the animation will be converted.

The storyboard helps to finalize the development of the storyline and is an essential stage of the animation process. It is made up of drawings in the form of a comic strip and is used to both help visualize the animation and to communicate ideas clearly. It details the scene and changes in the animation, often accompanied by text notes describing things occurring within the scene itself such as camera movements. Not only can storyboards be especially useful when working in group environments but they also provide a visual reminder of the original plan; something that can be referred back to throughout the production.

Phase 3 production: Now that the storyboard has been approved, the project enters the production phase. It's here that the actual work can start, based on the guidelines established during pre-production. Some major parts are the layout, rigging and animation.

Phase 4: Post-production This is the third step in animation creation and it refers to the tasks that must be completed or executed after the production phase. These include the editing of animation footage to cut scenes together, inserting effects, working with voice and sound actors and dubbing just a few of the many post-production tasks. However, the three main phases of post-production are compositing, sound editing and video editing.

Video editing is the process of manipulating and rearranging shots to create a good quality final product and it is at this stage that any unwanted footage and scenes are removed. Editing is a crucial step in making sure the video flows in a way which achieves the initial goal. Other tasks include titling and adding any effects to the final video and text.

Phase 5: development: Development phases focus to build the output, after the completion of the animation phase. The next step is the development process where the animation will be converted into an interactive animation story and becoming mobile apps.

Phase 6: Implementation the implementation stage reflects the continuous modification of the program to make sure maximum efficiency and positive results are obtained. After everything has been set up and checked on development phases, implementation phases

are conducted where the product will begin a series of test run and whether it's function properly. Besides that it also to make sure that users understand the product and achieve the outcomes, objective, purpose, methodology, method delivery and lastly testing. There have two types of testing which are.

Alpha testing: This test will be done by the developer only. During this session, they will find the error and fix it until it functions properly. Check the setting and topics if that suitable for the project and its functionality.

Beta testing: This test will be done after the developer completes the "Alpha testing". This will be tested by the target audiences to get feedbacks and they will know more whether the project is a success or not or need to revise more.

The purpose of this interactive animation story is to interact with kids through this interactive story. Various factors need to be considered to ensure the applications meet the main objectives. Not only that, by developing this project it will encourage the future generation of children to know more about folklore in hope that folklore will not be forgotten anymore[5]. The application of this interactive animation story has been made to give more information in the most interactive way.

Prototype development: In order to develop the interactive animation story, Adobe softwares are needed, so that, the steps that are being taken can run smoothly. The step includes animation, video and creating the application. To breakdown the steps that are being used which are Adobe Illustator is to make the characters. Adobe After Effect is to develop the animation phases. Adobe Animate is to create the buttons in order to make the video flows in interesting ways and interactively. A lot of study is being involve during this prototype phase, so that, it will become an outstanding application for user.

Synopsis of the stories: There are two storie in this interactive storytelling of "Pengembaraan budak ijat" which is "Si Pintar" and "Kelekatu Sombong". But there is a twist in it because the user can choose toward which story they are incline to watch first. Furthermore, they can rewatch the story if they can't fully understand the flow or can't comprehend the moral value that are being told inside the story.

Design development: In a design and a work process, normally design development are based on basic information to developing detailed design and achieve the product how we want it to be. In other word, it is a way to think and solve any upcoming problems. Such process can

be duplicate and implement several time as much as we want for during an occurence of a problem in order to counter it.

Concept: Every animation story, they have their own concept. The target of these concept is to influence consumer and user attraction. For "Pengembaraan Budak Ijat", the developer has use the concept of simple 2D animation. Then, it would allow the developer to aim at the preferable people in certain demographic.

Color: The choices of color is an important aspect in Pengembaraan Budak Ijat". Not only that, color also include in the most suitable ways to approach children because it is the element that an early childhood can easily comprehend. They certainly like color and they gravitate around color in order to open their mind, stabilise their emotion or to increase their self-awareness.

Based on Fig. 2, the developer has chosen pastel color in the project. Pastel color is the combination of bright color and white color then it will produce a more softer color. Bright color such as maroon, blue or red tends to give a positive feedback toward children.

Character design: Every character play an important role in their story. By using a simple concept, the developer created several characters in the story. Adobe Illustrator is the chosen software because it is easily to work with and easy to do tracing.

Based on Fig. 3, this is the final character that have been created by the developer to play the role of "Ijat". As we all know, there are some character involve in the story. So, the developer chose to use the same simple concept when making those other characters.

Animating: The most crucial process on making animation is animating, the developer use the puppet tool in Adobe after effect to runs the animation smoothly.

Based on Fig. 4, the character effect works by deforming part of an image according to the positions of pins that you place and move. These pins define what parts of the image moves what parts remain still and what parts are to be in front when parts are overlap.

Compositing: The camera in After Effect mirror the way to real-life camera (Fig. 5). Concepts like sensor size, focal length and iris shape are all represented in the various camera menus in after effects. However, even if the user has a background in physical camera work they can definitely benefit from an overview of the various camera settings in after effects.

Fig. 2: Color

Fig. 3: Character design

3D EFFECT is being use in this step to make the background and animation runs smoothly and it will not be remain still. At the same time, it will narrate where our eye will look in the story.

Editing after the compositing process is done, the next step is editing. Developer use Adobe Premiere Pro to cut some footage if the footage seems to be not so, important in the story. The software also support color grading which mean the developer can choose the color that he want to include in the story.

Based on Fig. 6, the deveoper edit the prototype by using Adobe Premiere Pro. A good video consist of good background sound and good music score.

Sound editing: In order to create a perfect animation story, it needs to have a good combination of narrators and a good narration which can be easily understand. So, the developer have to choose the right person to portray the character. For "Ijat" character, a 9 year old kid have been chose to play the role. For the mother character, a woman age of 29 is chosen to play its part (Fig. 7).

The last phase in creating "Pengembaraan Budak Ijat" is to make it interactive. The most suitable software for this type of research is definitely Adobe Animate (Fig. 8).
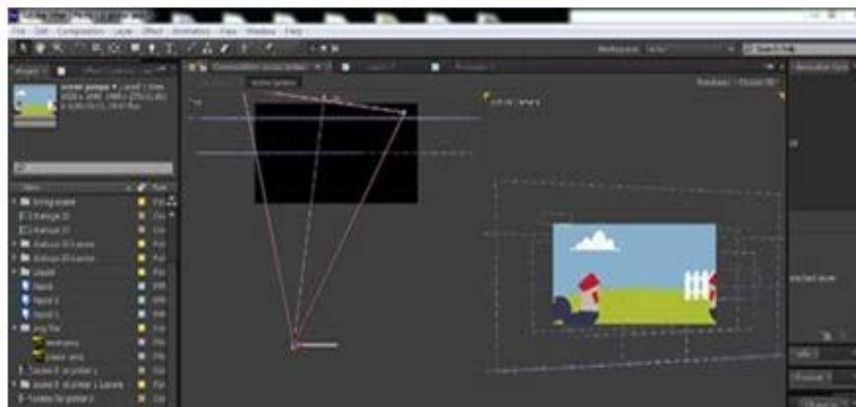
Fig. 4: Animating

Fig. 5: Compositing

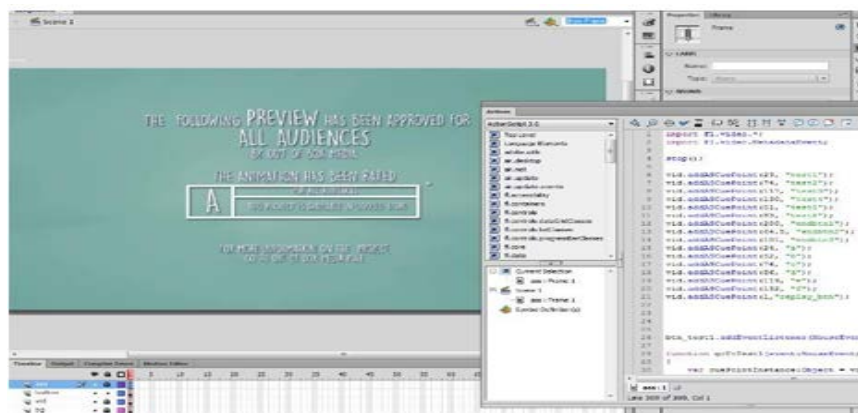Fig. 6: Editing

Fig. 7: Sound editing

Fig. 8: Adobe animate

Action Script 3.0 is the script that will make the button become interactive. It will direct the script and link it to the button, so user can click the button and go to where the button will lead. In other word, it will go to the page that the developer set on the button while linking it with Action Script 3.0.

Story workflow: "Pengembaraan Budak Ijat" have two sub stories in one main story. The main story is about the mother telling bed time story to "Ijat", then "ijat" will chose which one he wants to hear first either it is "Si Pintar" or "Kelekatu Sombong". So, it will choices to user on which one of the story to select.

RESULTS AND DISCUSSION

Alpha testing: The alpha testing is the test that takes place at the developer's site. The main purpose of alpha testing is to refine the software product by finding and fixing the error that were not discovered through previous .tests. This testing will be done before the project is released to the public. Alpha testing is done among mobile application developer. All of the feedback from the developers will be taken as a good advice to develop a good app.

Beta testing: The functionality of the app is moderate. Even though the developer creates all the page functionally, the developer still unsatisfied on certain pages due to lag and crashing the apps such as the swipe. This is the test that should be done prior to commercial release. It is important to pass through the first level which is alpha testing. This is the final stage to make changes based on the results of user feedback. Hence, the questionnaire was prepared for the user give feedback in order to make some improvement for this project.

Results: Developer make some simple question to make the target audience easy to answer because there are children among the respondent. The objective of this product testing is to identify the user understandings and perspectives on the application regarding the animation,
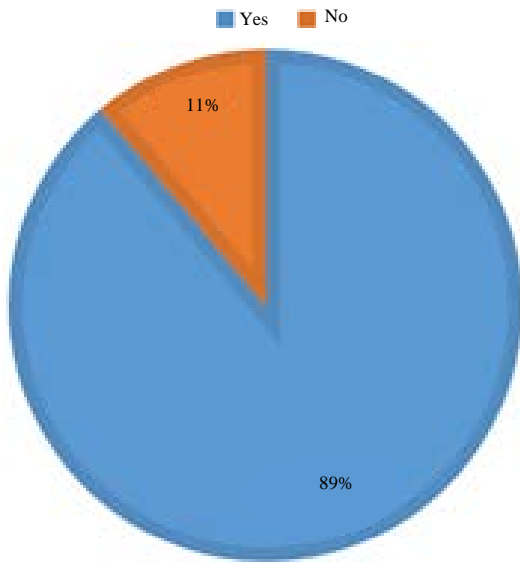
Yes No

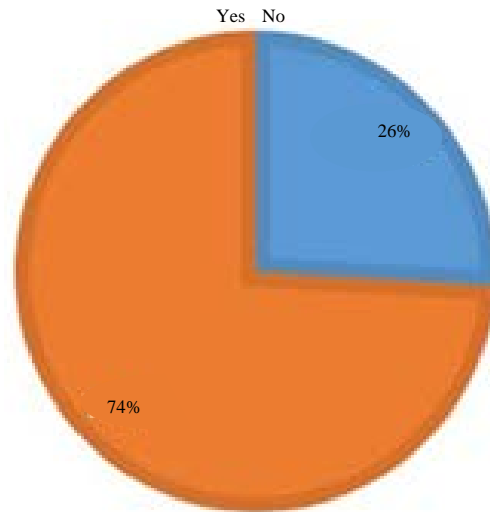Fig. 9: Q1: Have you heared about folklore?

Yes No

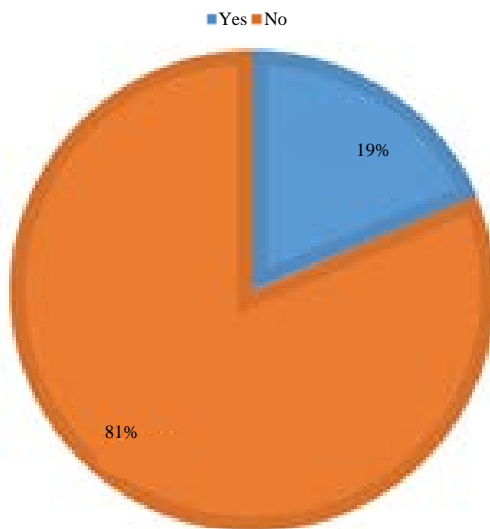Fig. 11: Q3: Have you ever heared a story about "Kelekatu Sombong"?

Yes No

Fig. 10: Q2: Have you ever heared a story about "SI pinter"?

Yes No

Fig. 12: Q4: Do you find the stories interesting?

narration and moral value. About 27 sets of questionnaire have been given to the target audience which include family that have children. The results are as below. According to this question in Fig. 9, all the 89% respondent have heard about foklore and only 11% doesn't ever heard about folklore. Out of all of the respondent have heard about folklore.

This question, we can see that most of the respondent never heard the story about "Si Pintar" (Fig. 10). Those that never heard about the story consist of 81%. This can strengthen my research on why this story is
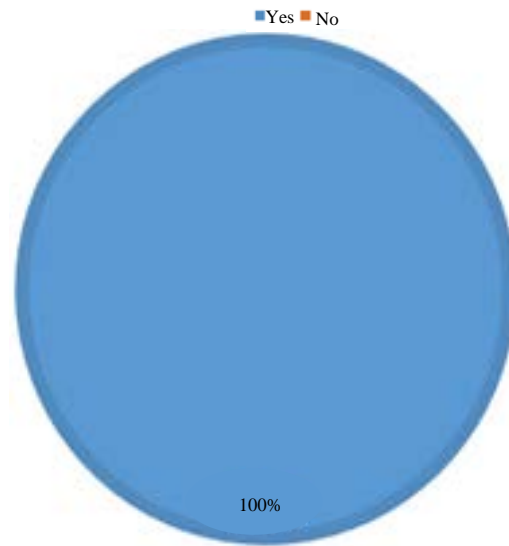
chosen. Question in Fig. 11 that are being is about story on "Kelekatu Sombong". Around 74% of the respondent never heard about it.

Accoding to question number 4 in Fig. 12 and 13, all of the 27 respondent find the story interesting. Maybe the simple storyline and the not so heavy animation make them all felt attracted to it.

All of the respondent felt that they can learn something from "Pengembaraan Budak Ijat". We all know that every folklore that their own message that they want to deliver. The simple concept makes the respondent easier to grab the moral value of the story.
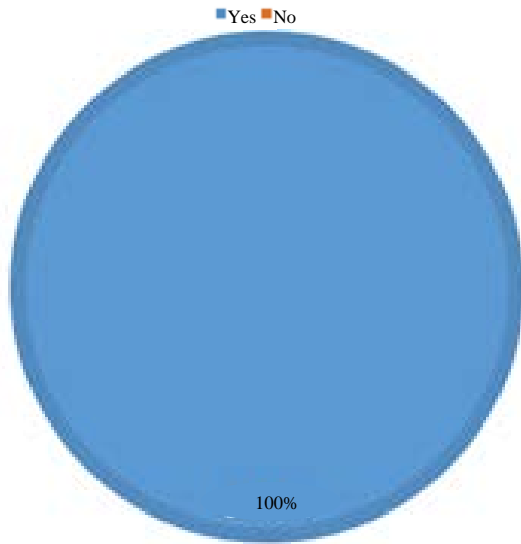
Yes No

100%

Fig. 13: Did you learn something from pengembaraan Budak Ijat story?

CONCLUSION

From overall view from the survey that had been conducted, the developer gets a satisfactory evaluation from the target audience. Besides that the survey was conducted to identified whether the interactive animation story is the best way to convey some of the folklore to the future generation by using the application. Based on the survey, we know that a lot of people doesn't know the story about "Si Pintar" and "Kelekatu Sombong". In conclusion, we also know that majority of the respondent satisfied with the "Pengembaraan Budak Ijat" interactive animation story.

REFERENCES

01. Abd Rahim, N., 2014. The nearly forgotten Malay folklore: Shall we start with the software. Turk. Online J. Educ. Technol.-TOJET., 13: 216-221.
02. Thompson, A., 2010. Pros & cons of cartoons on kids. Leaf Group Ltd, Santa Monica, California, USA. https://ourpastimes.com/pros-cons-of-cartoons-on-kids-12364801.html.
03. Noordin, T.A. and N. Dan, 1992. [Education and Insight 2020]. Arena Ilmu, Kuala Lumpur, Malaysia, ISBN: 9789838050043, Pages: 158 (In Malay).
04. Rashid, A.R.A., 2001. [Pure Values in Education: Facing Change and the Challenges of the New Millennium]. Utusan Publications & Distributors, Kuala Lumpur, Malaysia, ISBN: 9789676111265, Pages: 170 (In Malay).
05. Bogdanova, G., T. Todorov and N. Noev, 2010. Digitalization and security of Bulgarian folklore heritage archive. Proceedings of the Joint 11th and PhD Students International Conference on Computer Systems and Technologies (CompSysTech'10), June 17-18, 2010, ACM, Sofia, Bulgaria, pp: 335-340.