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Promoting Socio-Cultural Values Through Storytelling Using Animation and Game-Based Edutainment Software

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1. Introduction

Rapid advancement in the field of Information Communication Technology (ICT) has also changed the landscape of education and entertainment. Instructions can now be delivered through well designed interactive multimedia application software. Multimedia technology enables instructional delivery through effective learning strategies such as digital storytelling using 2D or 3D animation or animated cartoons, simulation and digital games. Animation in the form of cartoons, anime and animated feature films are popular forms of entertainment and widely used in various fields such as advertisement, entertainment, education and science. In Japan, animation is known as Anime. Research showed that anime is an art that can help adolescents shape and build their identities based on their favorite anime (Mahar, 2003). Anime can also help develop various skills and abilities among children (Frey & Fisher, 2004). Therefore we can use animation based edutainment software to educate children about their socio-cultural values while entertaining them with interesting folklore at the same time.

Literature has always played an important role in our lives, especially from the cultural aspect, since it is rich with educational messages and socio-cultural values to be imparted to the people in a society. However, the emphasis placed on learning of sciences and technology at school has caused neglect to the formal teaching of literature except for the few hours allocated in language lessons and for students who take social science courses. Furthermore, local children are more familiar with Western's literature as presented by folktales and stories in Hollywood made movies such as *Robin Hood*, *Sleeping Beauty* and *Cinderella*. To promote local literature to the younger 'Net' generation, a more attractive way is needed, one of which is with the help of current available information technology tools. In this chapter we discuss the research carried out to develop edutainment software with contents from the Malay literature to help promote society's socio-cultural values to the younger 'Net' generation.

2. Traditional Malay literature and socio-cultural values

Traditional Malay literature is rich in variety and of beautiful forms which are differentiated based on their structures and contents. Folktales or folk stories, *syair* and *peribahasa* are some

examples of Malay literature which are considered as part of Malay cultural heritage (Muhammad, 2000; Braginsky, 2004).

Folktales are stories from yesteryear or a world of fantasy which usually consists of magical elements such as talking animals, fairies and healing powers (Thompson, 1978). The story contains custom elements that reflect a particular culture since the creation of these types of stories were influenced by factors such as geographical areas, languages, and social interaction. However, migration, religious preaching, trading, explorations and wars have caused stories to cross borders and spread throughout continents. That is why similar stories could be found in multiple locations around the world. However, the same stories may have slight differences due to modifications made to suit particular people where the story had reached (Thompson, 1978).

Stories were created for knowledge transfer and sharing (Machado et al., 2001; Madej, 2003). Before printing technology existed, storytelling were carried out verbally by storytellers. During those times, storytelling used to be practiced and has sociologically affected people around the globe (Thompson, 1978; Madej, 2003; Garzotto & Forfori, 2006). Storytelling was an activity during leisure time where old folks told stories to others especially young children for the purpose of educating them on matters related to culture, taboos, customs, and beliefs. Stories are capable of stimulating cognitive skills of listeners and emotionally influence them (Brand & Donato, 2001).

Syair, on the other hand, was created to narrate and express tales through rhythmic reading. The word "syair" originated from Arabic word "syi'r" which means "poetry". *Syair* then, is basically a traditional Malay poetry (Muhammad, 2000; Braginsky, 2004; Abdul Rahman, 1997). It was popular for educational purposes as well as for entertainment and religious activities among the Malays since the 15th century. Table 1 shows the different genres of *syair* in traditional Malay literature.

Narrative *Syair*	Non-narrative *Syair*
Romance	Religious
Historical	Advice
Religious	Others
Cynical	

Table 1. Genres of Malay *syair*

Peribahasa, another category of Malay literature are traditional verbal expressions similar to the English "sayings" (Fanany & Fanany, 2003). Metaphors are used in sentences to deliver the meanings of an expression or saying in a subtle and indirect way. For example, a *peribahasa "Ada gula ada semut"* which translated in English as "When there is sugar, there are also ants" refers to places with potential for making profits where many people are likely to gather. "*Bagai enau dalam belukar*" is another saying, which means "like an enau tree in a jungle" an advice against selfishness. The metaphor Enau is a palm tree growing tall in tropical forest, always managing to outgrow its shoots over other trees. These *peribahasa* were old sayings of advice, derived from observations of surrounding world consisting of elements such as trees and animals or things of daily use.

Socio-cultural values of a society as embedded in its literature are passed down through generations via oral storytelling and later on documented in books. However, the process of modernization and national development including usage of modern technology and changes in educational curriculum has caused our society to neglect our literature. Most

college students and school children no longer understand *peribahasa* or *syair* and are not familiar with local folklores or folk stories. The metaphors and terms used are unknown to them. We believe that multimedia technology can be used to promote traditional literature and hence socio-cultural values to the current Net generation. Animation and digital storytelling can help users visualize ancient terms and metaphors used in literature besides presenting content in an interesting, lively and dynamic manner.

3. Education and multimedia

In this era of ICT, multimedia-based contents such as digital games, animated stories and edutainment software are popularly in demand. Interactive information presentations and activities are designed to attract users, especially children. Multimedia with interactive elements allows users to actively interact with a system or a software. In the early 1990's, when ICT was accepted as a new way of communicating and knowledge sharing, the Malaysian government introduced the Smart School concept. Schools were provided with computers and educational software. Thus the demand for local content-based educational software has prompted research supported by government funding in software development.

The term "edutainment" was coined from the words "education" and "entertainment". Drawing from what the original words meant, edutainment is thus a concept for fun learning. Buckingham (2005) has defined edutainment as a hybrid genre that relies heavily on visual material and on more informal, less didactic styles of address. When using edutainment software, students will get to learn through the use of entertainment (Egloff, 2004; Klein, 2007). Children who enjoy learning will loosen up and learn better thus enable them to take things more easily and became more motivated to put forth effort without resentment and such software motivates students to explore topics in greater depths (Okan, 2003; Prensky, 2007).

Using ICT, multimedia-based education can be realized in a variety of ways, for examples through interactive story telling, simulation, games and animated story. Animation in the form of cartoons, anime and animated feature films are a popular form of entertainment, which can therefore be used as a means for education which is entertaining at the same time. Usually, children are animation-enthusiasts and easily drawn into watching animated-content programs. Folk stories, *syair* and *peribahasa* which used to be presented verbally or in printed forms can now be delivered and shared with other people using today's multimedia technology. Multimedia-based content for educational purposes will create a new dimension for traditional literature. By ensuring a program or software is suitable for young viewers, good values could reach them if the content of the program is designed to fit them. Presenting literature using multimedia technology is a way to revive traditional socio-cultural values.

3.1 Socio-cultural development

Social responsibility includes the development of social skills, ethics, characters, way of living with others and responsibility for furthering the common good (Berman, 1997). Transmitting good moral values could influence socio-cultural development. In general, education through teachers at school is seen as a commonplace idea to transmit values but with various media available today, teachers will have to compete with other influences in the young people's lives (Haydon, 2006). These influences could be from parents, siblings, peers and media such as television. In today's ICT era, people including children are

becoming more IT-dependent. They spend much of their time playing computer games and socializing with other people virtually. Therefore, children today are more exposed to digital materials which are being communicated through digital media. This certainly has influence on children's cognitive and socio-cultural development.

3.2 Media influence on socio-cultural development

Development is fostered by the interaction between a child who is cognitively maturing and actively constructing meaning from his or her experiences and the media is seen as one of the forces that influence the child's conceptions of the social world (Berman, 1997). Television for instance can serve as models for children, portraying family members managing their relationships and conflict effectively through weekly family series (Berman, 1997; Douglas, 1996). However, some programs have been reported to have negative values such as violence, aggressive behaviors and disrespect to parents or adults, which has to a certain extent influenced behaviors of our young generation today.

Various researches have shown that a child could be influenced by listening to stories and watching animated stories or anime (Mahar, 2003; Frey & Fisher, 2004). The influence could either be positive or negative, depending on the contents viewed. There are quite a number of children's animated television series which are based on superheroes stories involving violence and fighting scenes. This could convey wrong ideas to a child that a problem can be solved through aggression because children tend to imitate what they see and hear, including from television. Violence presented on screen such as movies or video games could lead to children's belief that being aggressive is a good way to get what they want (Haninger et al., 2004; Center on Media and Child Health, 2008).

Additionally, studies (Adam et al., 1999) have shown that many movies from Disney Studio and other production houses had influenced children negatively in certain aspects, such as smoking and alcohol abuse. A Review of 40 selected studies on smoking in the movies showed that smoking in movies increases adolescent smoking initiation. Exposure to movie smoking makes viewers' attitudes and beliefs about smoking and smokers more favorable and has a dose-response relationship with adolescent smoking behavior (Haydon, 2006). Through ICT which is available today, various resources could be accessed via the Internet and CD-ROMs. With a combination of text, audio, graphics and animation, computer technology enriches education in a way that traditional teaching media such as books, video, role-plays and so forth might look irrelevant and tedious (Okan et al., 2003). Children are now increasingly using media at schools, with family or friends. Research has also found that playing games is the most common way of users ages 2 to 18 years old using computers (Wartella et al., 2000).

Nonetheless, it is not the medium (media) itself that affects children's perceptions, attitudes or awareness but the content with which they carry out activities with specific conditions and goals (Berman, 1997; Wartella et al., 2000). Therefore, content developers should be more sensitive when creating a product especially for children and adolescents users so that positive messages are transmitted and also to bring about behavioural change by engendering specific socio-cultural attitudes and acceptable behaviours to them.

4. Animation

One of multimedia element is animation. Animation is often used in edutainment software for its capabilities to minimize users' cognitive load and enable users to focus on a long-

duration presentation (Jamaluddin & Zaidatun, 2003). Animation is defined as an art of movement expressed with static images. This illusion of movement is achieved by rapidly displaying frames of still images in a sequence (Kerlow, 2000).

Malaysia imported a lot of animation series from the United States and Japan. Some contents of imported animations are not suitable for local viewing in terms of the cultural values. During the 1980s and 1990s, locally produced short animation movies based on local folk stories were aired on education television channel. They were meant to educate children on moral values. The stories were "The Legend of a Mouse deer", "Mouse deer and a Monkey", "The Wise Crow" and "The Greedy Lion". Later in 1995 and 1998, "Usop Sontorian" and "Silat Lagenda" were produced. Usop Sontorian was Malaysia's first animation television series while the latter was a full-length digital animated movie (Perpustakaan Negara Malaysia, 2001). Currently there are efforts to produce local animation stories, an example of which is *Upin and Ipin,* a 3D animated story of twin brothers and their activities with family and friends.

In the following sections we discuss the research on designing and developing *MyEduTale*, an edutainment software based on Malay literature of folk stories, *syair* and *peribahasa* as the contents which aims to motivate socio-cultural awareness among children.

5. Research objectives

This study were carried out to design and develop edutainment software, *MyEduTale* (short for Malaysian Edutainment Folktale software) using Malay literature as contents. 2D animation was used for storytelling, in addition to interactive games, puzzles and activity modules. Specifically, the objectives of this research were to identify suitable method for the research of designing and developing a literature-based socio-cultural edutainment software focusing on moral and value aspects and to develop a conceptual model of the edutainment software. This research was also to recreate and present local folktales, folk stories, *peribahasa* and *syair* in the form of 2D animation created using simple and fast animation technique and interactive multimedia technology. The prototype software was also evaluated for usability in the aspects of user satisfaction, effectiveness and ease of use.

6. Research method

The research method identified and used was based on ADDIE Instructional Design (ID) model, taking into consideration the animation development processes of pre-production, production and post-production (see Fig. 1). ID model was used because we were designing instructional and entertainment software. The detailed explanation of the process, activities and output involved is further explained and shown in research framework, Figure 2.
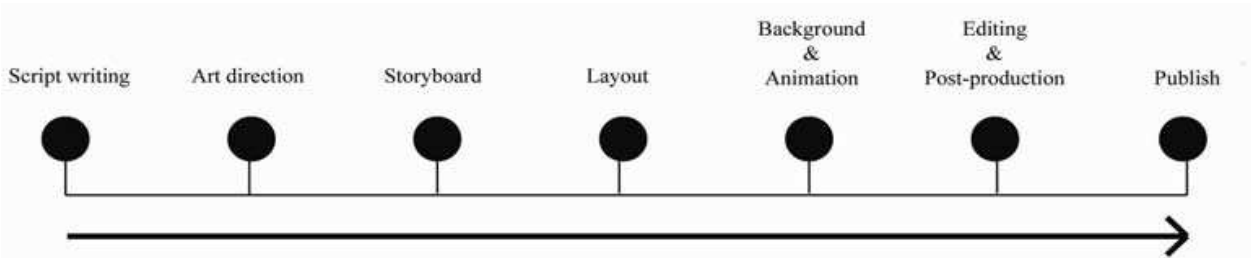

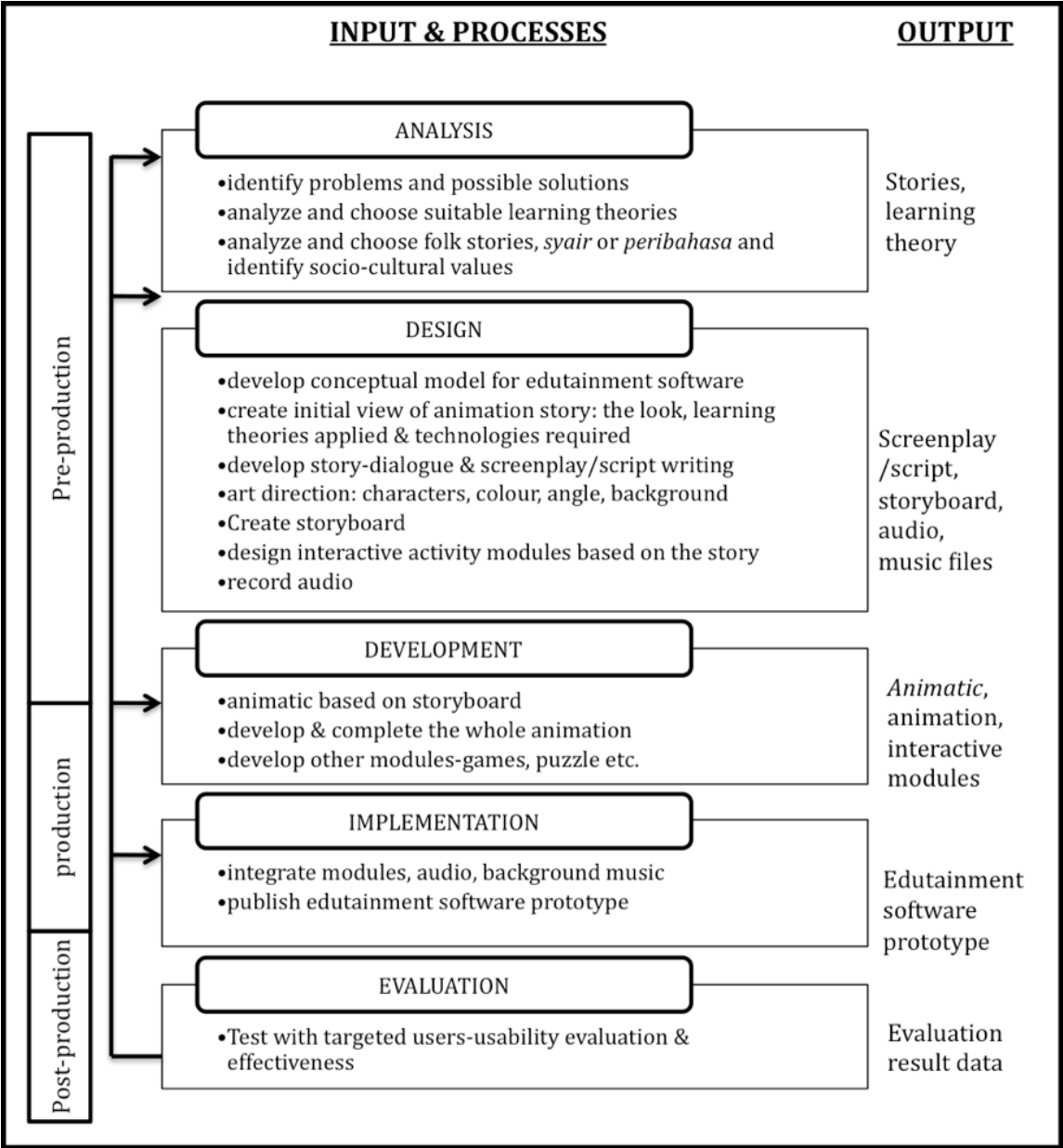Fig. 1. Activities in three phases of animation development

Fig. 2. Research framework

7. Design and development

The design and development process involves development of the conceptual model (Fig. 3) for the edutainment software, story development, screenplay or scriptwriting, storyboarding, character development, design and development of supporting elements and interactive module and animating (Nor Azan & Nur Yuhanis, 2007).

There are five components in the model, the first is the content. *MyEduTale* uses Malay literature of folktales, syair and peribahasa, as the content to educate users on socio-cultural values through story telling. Local folktale were chosen because learning using local-based content will be much easier for users to identify themselves through the course materials (Halimah et al., 2000). Folktale were also chosen because children love to listen to stories so it will be fun for them to learn through a content which is presented in the form they love

(Halimah et al., 2000; Madej, 2003) Furthermore, stories could help children to develop new experience and construct the meaning of their lives through stories (Madej, 2003).
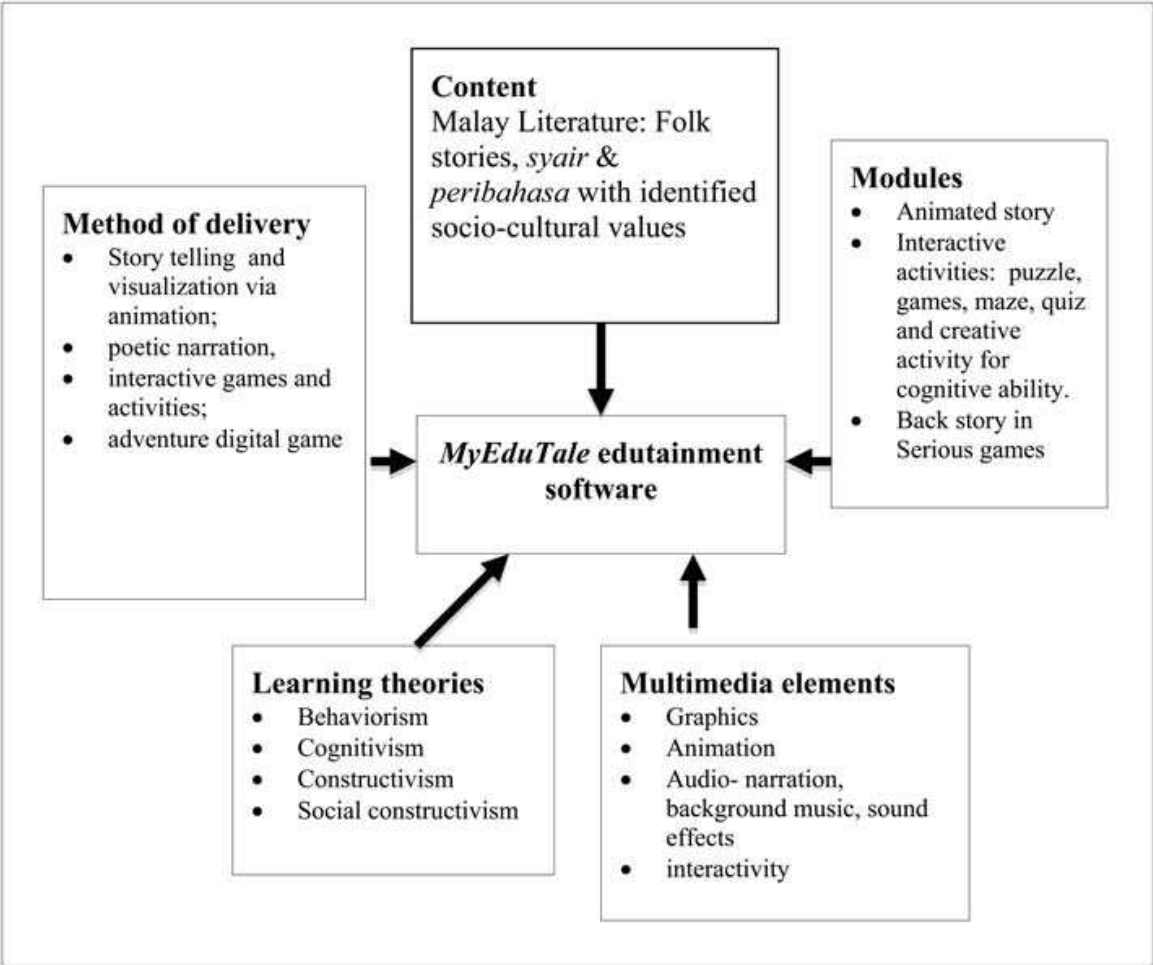

Fig. 3. The conceptual model of *MyEduTale* edutainment software

The second component is the learning theories. Learning theories applied in designing the activities in *MyEduTale* are behaviorism, cognitivism including constructivism and social constructivism. The purpose of applying these theories is to ensure the effectiveness of learning process using these edutainment software. Behaviorism states that learning happens when one receives stimulus or motivation (Ratten & Ratten, 2007). This theory is applied in "Know your characters" module. Four modules use cognitive learning theory which stated that learning is a process that combines previous and new information to solve problem (Schiffman & Kanuk, 2000). The modules are "Test your understanding", "Lost House", "Arrange the pictures" and "Create your own story ending" where users need to think of the correct answers and strategies for the challenges in each of module. Social constructivism is the learning theory applied in "Animated story" module. According to this theory, learning process happens when there is interaction between human, his behavior and environment (Davis, 2006). The last theory used in *MyEduTale* is constructivism which is applied in "Create your own story ending" module. Learning is said to happen when new knowledge or information is developed by the learner (Garde, 2007).

The third component in the model is the method of delivery which includes storytelling using animation, poetic narration, interactive games and activities and adventure games.

The fourth component is the multimedia elements. Since *MyEduTale* is meant to be an edutainment software for children, it is developed using multimedia elements of animation, graphic, various types of audio and interactive elements. MyEduTale are user-oriented environment, meaning that all modules in the software are provided with uniform and consistent interactive features and navigation elements so that users will be at ease to navigate from one module to another. Children tend to be attracted to dynamic, colourful and beautiful elements so multimedia is the best tool to get them into focusing on the content.

The fifth element is the modules available in *MyEduTale*. There are several modules in each *MyEduTale* edutainment software. The main module is a 2D animated story the module called "Animated story". Other modules are activity modules created based on the animated story. They are interactive activities of games, puzzle, maze, quiz, and creative activity. The activity modules in *MyEduTale* provide users with exercises and games. Garcia-Barcena & Garcia-Crespo (2006) and Liu & Chun (2007) reported in their researches that students are motivated to learn in a game-based learning environment. The activity modules are meant to review and reinforce users' understanding towards the message embedded in the animated story. In *MyEduTale*, there are several games or activity modules which are based on the main stories. These modules comprise of a simple drag and drop game (Know your characters), a quiz module consisting of ten comprehension questions (Test your understanding), maze game (Lost House), (Finding lost objects), picture puzzle (Arrange the pictures) and a story writing module where users can create and rewrite their own story ending for the folk story (Create your own story ending). This last module was desined to help users to be creative and imaginative by having them write the story ending the way they wish the story to end because children love reading their own stories (Halimah et al., 2000). Of all these activities, the picture puzzle module is the most challenging activity which requires users to rearrange pieces of cut pictures into one complete perfect picture. The level of complexity of activities increase from one module to another, from the simplest activity to suit younger-aged users to the most difficult activity for older users and those who like more mind-challenging activity.

There are four different versions of *MyEduTale* edutainment prototypes developed in this research. They are either folktale or story with 2D animation storytelling and interactive activity modules, a wholly 2D animation *syair*, an animated collection of *peribahasa*, and a serious game (game for education) prototypes, all have contents representing the Malay literature.

7.2 Story development

Folk stories, *syair* and *peribahasa* were studied and compared to identify for socio-cultural values. Two folk stories, "Si Bangau yang Membalas Budi" (The crane that rewards good deeds) and "Sumpah Sang Kelembai" (The curse of Sang Kelembai) were selected. The first story revolves around an era of yesteryear and consists of magical elements of a talking Bangau (flamingo) and its transformation into a human form. The setting of the story is in a rural Malay village. Based on the original storyline, a script was written with dialogues for each and every character in the story. The story started with panning around the village area to indicate the type of surrounding environment or the setting of scene of the story. Then, two of the main characters are introduced with a scene showing how they earn their living. This is to highlight the fact that the characters are people who live near poverty. As the story

moves on, enter the third character, the flamingo. Since this is a folktale, talking animal is not an oddity but is logical to the mind as does the flamingo's ability to communicate verbally with the human characters. As the story progresses, the fourth character is revealed and the central messages designed to be delivered through the story are shown bit by bit until the end of the story. Towards the resolution of the story, the climax is shown to create suspense. The ending of the story is narrated by a voice to ensure that all messages or moral of the story are transferred to the audience. The moral of the story include good deeds will be rewarded, don't break promises and be kind to people as well as animals.

The second story was about a poor woodcutter, Badek who was one day given some magical seeds by an unknown old witch, Sang Kelembai who magically disappear after saying that the man can become rich and made him promise to help other poor and needy people. Eventually Badek became a rich farmer as a result of selling his produce grown from the magic seeds. However, he forgot his promise, became arrogant and turned away poor or old people who came for his help. His friends were all rich people. One day during his daughter's wedding, an old woman who was actually Sang Kelembai was prevented from joining the feast. She wont leave until she meet Badek. Badek came to see the old lady, recognized her as the witch and remembered his promise, but unfortunately it was too late for regrets. The story ended with Sang Kelembai cursing Badek into a human stone. The moral of this story is that one must always be humble and help others in need.

One version of the software is a serious game using the folktale of Awang Miskin as the backstory. Awang Miskin was an orphan boy who lives with his mother. He wanted to be a learned man. In this game, players will help Awang Miskin pass through many obstacles in his adventure or quest for learning. The moral of the story and the game is hard work pays and players get to play many games at different levels which represent Awang Miskin's knowledge levels. Other values are also embedded in each game level.

The *syair* choosen was about an orphan girl who was mistreated by her stepmother. The girl was finally rescued from the house by a magic swing and was found by a prince whom she married at the ending of the story. This *syair* is a story told through poetic narration (similar to singing) using animation from beginning until the end. As for *peribahasa*, a few were selected based on the ease of visualizing them using animation. The animation tell the meaning of each *peribahasa*. Basically animation help in visualizing the *peribahasa* for easier understanding of their meanings.

7.3 Character development

The story "The Crane that Rewards Good Deeds" has four main characters which are an old man named "Pak Mat", Pak Mat's wife; "Mak Som", a talking flamingo and a young beautiful lady named "Mariam". Besides all these four characters, there are a few supporting characters towards the end of the story, which are the villagers. The main characters in Sang Kelembai are the farmer and Sang Kelembai. There are other characters such as the villagers and the farmer's wife and daughter. The syair has two main characters, the orphaned girl and the cruel stepmother. Supporting characters include the girl's father, the king and the prince. The main character for the serious game software is Awang Miskin. All characters were designed based on local identity in terms of physical appearance, attires, and styles. Figures 4, 5 and 6 are illustrations of the main human characters of each story while Figure 7 shows a traditional Malay house based on Malay architectural structure. The first step in designing these characters was to sketch on papers. Then, all characters and

props were designed, developed and edited directly in the graphic software Adobe Illustrator and Adobe Photoshop. However, most of the characters and props were developed and edited directly using Macromedia Flash MX Professional 2004.
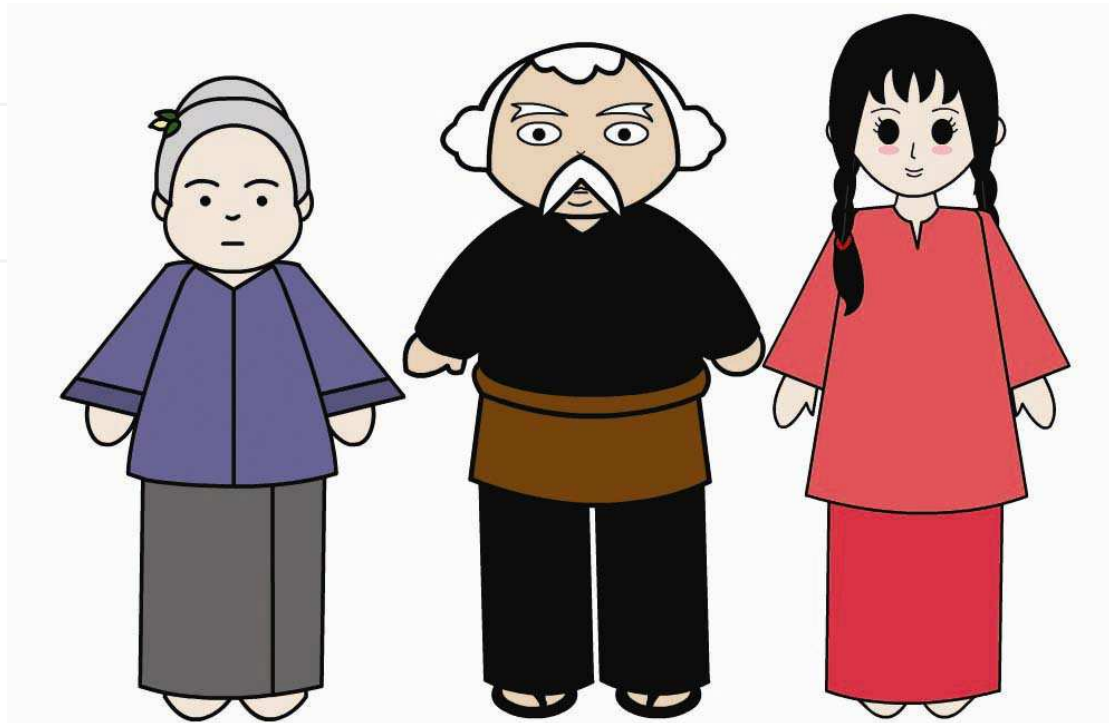

Fig. 4. Three main characters in "The Crane that Rewards Good Deeds" developed using Macromedia Flash MX Professional 2004.

Fig. 5. Characters in "The curse of Sang Kelembai" (the first character is a poor Badek while second is a rich Badek, a beggar and Sang Kelembai)

Fig. 6. The main character in serious game, Awang Miskin.

Fig. 7. Screen shot of a scene showing the Malay village house of Pak Mat and his wife.

7.4 Development of supporting elements

Elements such as audio and background graphics were inserted in the animation stories to make the presentation of the story more attractive and interesting. Most graphics were created directly in Macromedia Flash MX Professional 2004 while a few were edited in Adobe Photoshop and Adobe Illustrator. Different audios were used for different situations and according to the mood of the scene. Types of audio used for the animation story were

background music, dialogues, narration, poetic narration and sound effects. These audio files were recorded and edited using Cool Edit Pro Version 2.00. The background music used were Malay folk songs. Types of audio used are background music, dialogues, narration, poetic narration and sound effects. These audio files were either self-recorded or taken from available commercial sources. Audio editing was done using Cool Edit Pro Version 2.00.

Background music used in *MyEduTale* were folk and children songs reproduced by the Ministry of Unity, Culture, Arts and Heritage (KeKKWa). Titles of some of the songs used are "Burung Kakak Tua", "Chan Mali Chan" and "Bulan". As for graphics, most of the elements were created directly in Macromedia Flash MX Professional 2004 while the rest were edited in Adobe Photoshop and Adobe Illustrator.

7.5 Animation process

The animation process was carried out using Macromedia Flash MX Professional 2004. Limited animation technique (see Fig.8) was used since this technique allows development of animation in shorter times. A character is broken down into a few different parts and each part can be reused many times. For example, a human character can be divided into the head, hair, body, left hand, right hand, left leg and right leg. This can help save work space memory and time taken for drawing. Every part is saved as objects in Flash library.
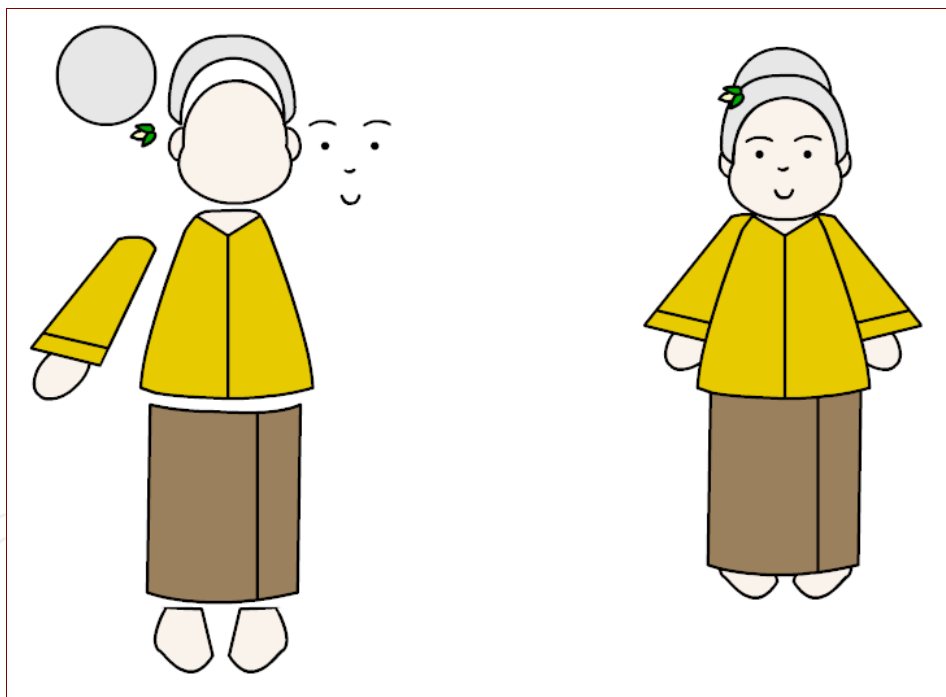
Fig. 8. Limited animation technique: graphics of a character were broken into several movable pieces for movement manipulation.

On stage in Flash, each part of a completed character is placed in different layers so that every part in each layer can be animated in different ways (Fig.9). A layer in Flash cannot have more than one graphic if the graphic is to be given moving effect. To create movement, frame is manipulated to give the best quality animation. The frame rate of the animated stories in *MyEduTale* is 25 fps (25 frames are played in a second). Figures 10 to 14 are typical sample screen shots from each type of edutainment software developed in this research.

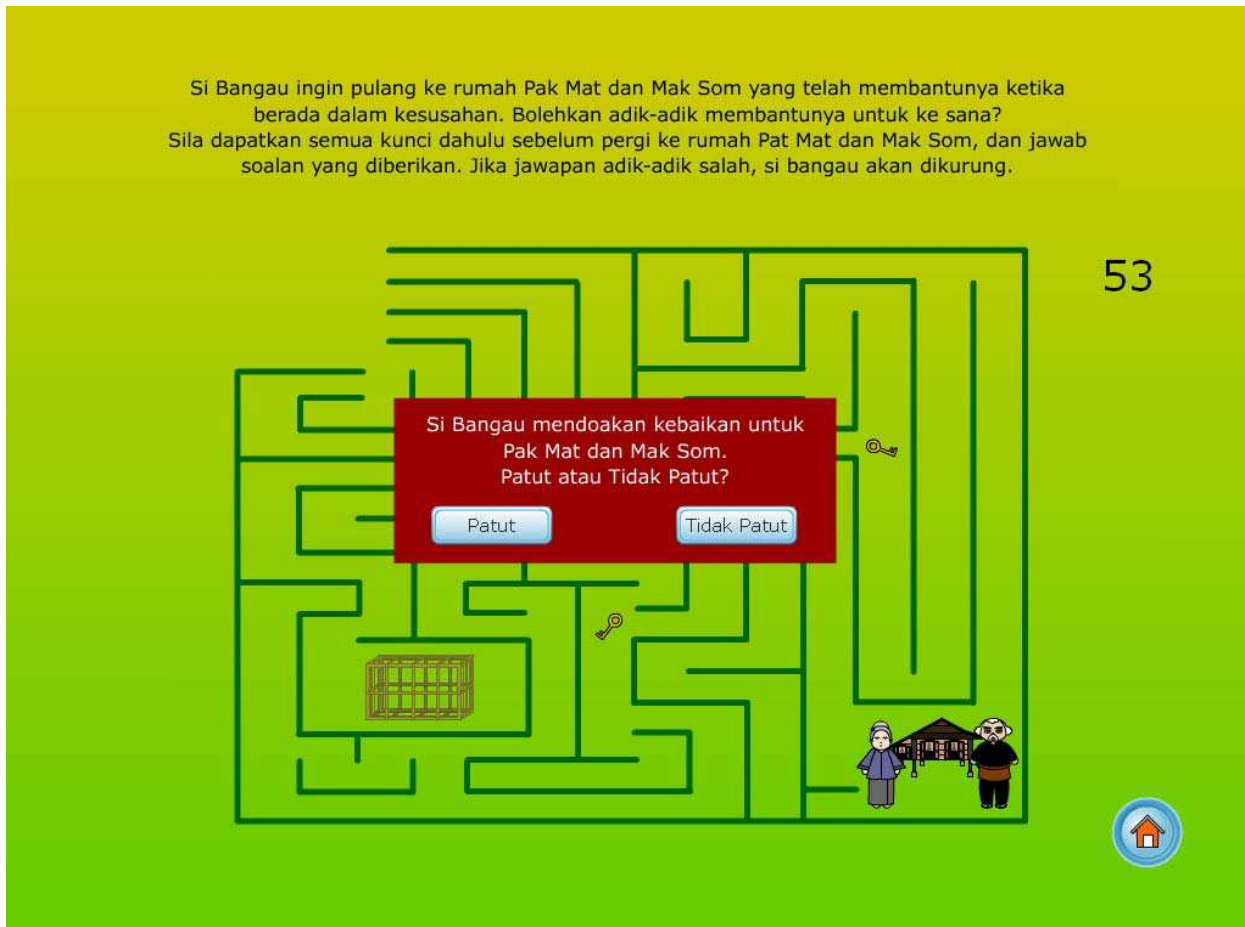Fig. 9. Screen shot of a workspace during animation process in Macromedia Flash MX 2004

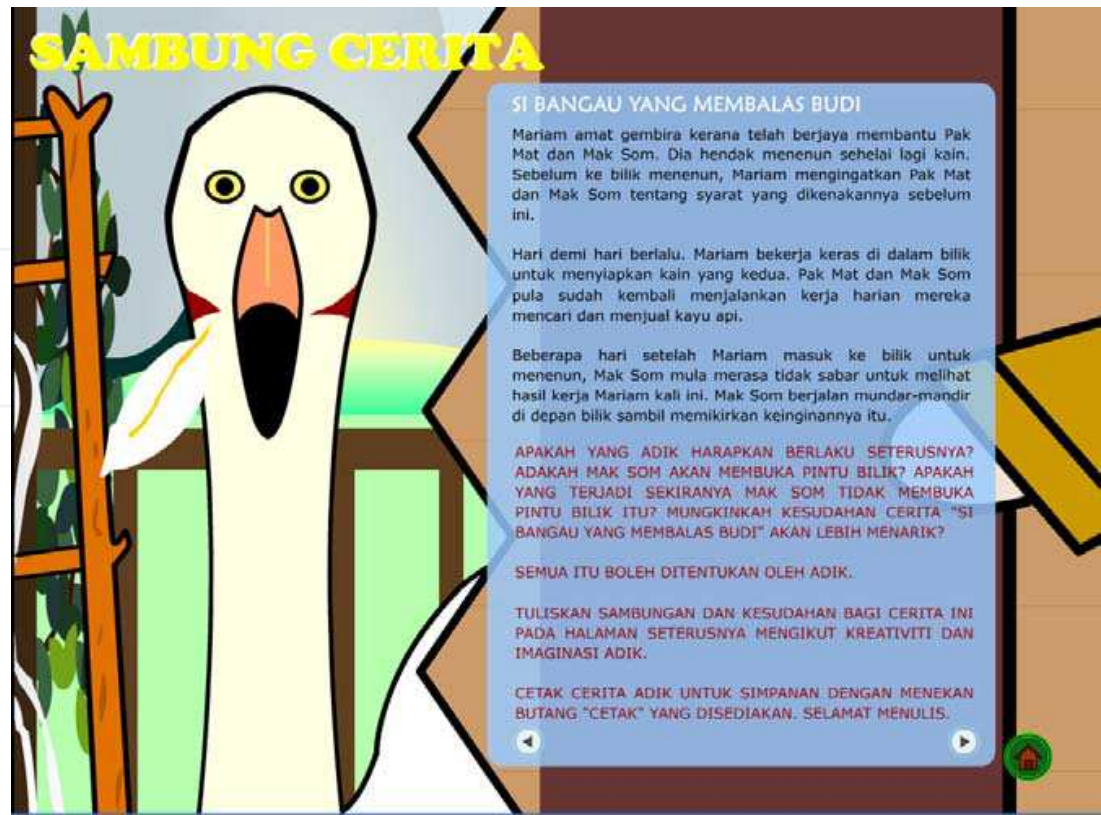Fig. 10. Screen shot of interactive modules: The maze "Lost House"

Fig. 11. Creative module "Create your own ending"

Fig. 12. A screen shot from "The magic Cradle" *syair*.

Fig. 13. A screen shot from *Peribahasa* " Where there is sugar, there are ants".

Fig. 14. A screen shot from the serious game software.

8. Evaluation of *MyEduTale*

Evaluation of the software as an alternative tool in socio-cultural education is not carried out because longer time is needed to observe any behavioural change due to exposure to values

embedded in the software. Furthermore, our concern in this research is on the design of the software as a tool to teach socio-cultural values, so we only evaluate users understanding of the message in the software through their perception of software effectiveness and usability testing of the interface design.

One of the *MyEduTale* prototype with the story "The Crane that Rewards Good Deeds" was tested on 30 users who were children ages 5 to 12 years old. The testing sessions were conducted in groups to get users' opinions and acceptance towards the software (Nor Azan & Nur Yuhanis, 2008.).

Users were allowed to explore the software on their own while being observed by the researcher to see how engaged they were while using it. Usability questionnaires were distributed to them after they have completed all the modules in MyEduTale. The scale used in the questionnaire is based on Likert Scale from 1 to 5, with scale 1 for "totally disagree" or "very poor" and scale 5 for "totally agree" or "very good". Findings from the testing indicated that 92% of users were satisfied using the software. 93% users reported that *MyEduTale* is easy to use while 95% agreed that the software is effective in delivering the intended values through the story and reinforced with the activity modules. Effectiveness of the software was rated at 4.8 out of 5, on Likert scale.

Our observations throughout the testing found that girls were more engaged and concentrated more on the 2D animated story and simpler activity modules while boys were more attracted to activity modules especially the maze and puzzle modules. Nevertheless, every user went through watching the animated folktale from beginning until the end and explored every module in *MyEduTale*. Respondents were also interviewed to get their personal opinions on *MyEduTale*.

Through questionnaires, observation and interviews, it is found that the most favourable module in *MyEduTale* is the maze game, while animated folktale module comes next, followed by the quiz, picture puzzle, story ending writing and finally drag and drop activity module. In terms of the physical look and appearances, respondents were all satisfied with the colour-scheme as well as the graphics in *MyEduTale*. However, respondents also commented on the challenge aspect of activity modules which they suggested could be improved by making it more interesting and challenging. On the whole, it is found that majority of respondents who evaluate *MyEduTale* gave positive responses and showed great interest towards the edutainment software. Other software prototypes are still being evaluated.

9. Conclusion

MyEduTale is developed to motivate socio-cultural awareness among children aged 5 to 12 years old using Malay literature. Literature used includes folktale or folk story, *syair* and *peribahasa* which have socio-cultural values in the form of morals of the story intended and designed to be transferred to users mainly through 2D animation. The values included are: do not break promise, be kind to people as well as animals, help those in need, work hard, and good deeds will be rewarded.

We have used Malay literature as contents for various types of edutainment software based on our conceptual model. Folktales which used to be the medium for educating people a very long time ago is reconstructed in this research for the exact same purpose, which is to educate people through stories. Designed to suit current technology savvy users' preferences using multimedia elements, an edutainment software provides an alternative for moral and socio-cultural education that aims to educate young children to adopt good values. In addition, the software can help to revive the popularity of local folktales among younger generations.

Findings from the software evaluation indicated positive signs for software acceptance, therefore it is hoped that *MyEduTale* can be an example for similar research on education using other literature heritage. Future research can look into other types of literature and stories or folklores to be used as edutainment software content.

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Convergence and Hybrid Information Technologies

Edited by Marius Crisan

Starting a journey on the new path of converging information technologies is the aim of the present book. Extended on 27 chapters, the book provides the reader with some leading-edge research results regarding algorithms and information models, software frameworks, multimedia, information security, communication networks, and applications. Information technologies are only at the dawn of a massive transformation and adaptation to the complex demands of the new upcoming information society. It is not possible to achieve a thorough view of the field in one book. Nonetheless, the editor hopes that the book can at least offer the first step into the convergence domain of information technologies, and the reader will find it instructive and stimulating.

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