Performing Arts via Digital Storytelling

by

Anfaal Binti Mohd Nawawi

Dissertation submitted in partial fulfillment of
the requirements for the
Bachelor of Technology (Hons)
(Business Information Systems)

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Universiti Teknologi PETRONAS
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CERTIFICATION OF APPROVAL

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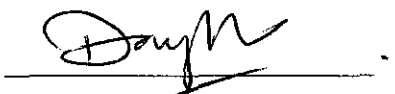
Approved by,

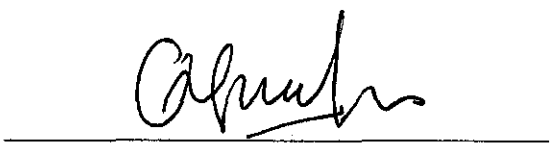


(Dr. Dayang Rohaya Awang Rambli)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK
July 2007

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.



ANFAAL BINTI MOHD NAWAWI

ABSTRACT

Digital storytelling uses digital tools to take storytelling to a whole new level. It is an emerging area of creative work, thus its definition is still being debated. Digital storytelling has already been applied by many to tell short stories about basically any topic of their desire. The performing arts are those forms of art which uses the artist's own body, face and presence as a medium, as opposed to plastic arts that uses materials to create a tangible art object. According to survey conducted, there exists a lack of interest and understanding in Malaysian cultural performing arts, thus there is a need to promote interest in this art so that it will still be around in the future. Thus this project intends to develop a digital story on Malaysian cultural performing arts. Digital storytelling is utilized in the MCGS, and would be used by the general public, and specifically those with a special interest in this form of art, in order for them to gain more knowledge and generate more interest in the said topic. The system covers music and dance performances captured in UTP. The system is developed using the digital storytelling taxonomy as a guide, to create an interactive storyline. Through research, development, and evaluation, it is found that the level of awareness on Malaysian cultural performing arts is still relatively low, and that the MCGS has been able to raise awareness and interest level amongst the users.

ACKNOWLEDGEMENTS

The two semesters spent on completing this project has been of great experience and exposure. Many others were also involved, and they have provided guidance, advice and assistance in which I consider priceless. I would like to thank them all for such commitment and support in realizing the goals and the successful completion of this project.

First and foremost, my gratitude to Allah S.W.T. for giving me the strength to follow through with this project from start to finish.

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Special thanks go to the lecturers and examiners involved in evaluations, for their time in listening and giving their insights on the said project. Special thanks also to Mr. Ahmad B PG Abdullah from Student Support Services and Mr. Mohd Khalid Bin Ka'ab from IT and Media Services Department for their cooperation in the collection of relevant data for this project.

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ABBREVIATIONS

UTP	Universiti Teknologi PETRONAS
MCGS	Malaysian Cultural Gateway System

CHAPTER 1
INTRODUCTION

1.1 BACKGROUND

1.1.1 Digital Storytelling

Digital storytelling is a dynamic new space for storytelling. The idea of digital storytelling is to combine narrative with digital content, such as images, audio and video (Paul & Fiebich 2005). This will give the storyteller a more intense way of delivering to his or her audience. A digital story can convey absolutely anything, from personal life stories to stories that reflect history and culture, from stories that are instructional to persuasive stories. Digital stories can be as simple as a slideshow of images with a narration, or it can be more complex, with user interactivity determining the flow of the story. Utilizing interactivity will affect the content of the story (Miller 2004). A digital story is not necessary a linear story, or even a game, although most interactive works are constructed on a gaming model (Gillespie 1997). Therefore a digital story can come in many forms, with the use of preferably a variety of media and mainly interactivity setting it apart from conventional stories.

1.1.2 Performing Arts

The performing arts, or performance arts, are those forms of art in which an artist gives a performance, rather than producing a physical work of art (Hornby 2005). Performing arts dates back to the days when stories were recreated in a performance to be told, or to be expressed creatively to entertain specific or mass audiences. Today, performances are practiced as a means of communication and consequently to promote understanding between one country and another, as well as an important key in understanding a country's heritage (Kotler & Scheff 1997). The popularity of performing arts amongst mass audiences has gone up and down within the past few decades. However, within the last two decades, it has been made a contemporary tool for expression and not just a cultural heritage (White 1995). Nowadays, performing arts are also considered an art form that is studied and practiced in a variety of ways.

1.2 PROBLEM STATEMENT

In Malaysia, performing arts are practiced widely, both those related to Malaysian culture and those that are more contemporary. Several organizations have been set up to truly promote performing arts, such as Kakiseni.com, The Actors Studio, and Istana Budaya. Although performing arts do not receive as much hype as movies and television, many still anticipate and appreciate these type of performances (Kotler & Scheff 1997). However, very few understand of have adequate knowledge on cultural performing arts, especially amongst the younger generations (Wo 2007). Therefore there is a need to promote and cultivate interest in them so that this beautiful art form will still be around in coming decades.

A digital story, as a concept that has yet to be a household word, is still relatively new to many. Therefore the potential of a digital story has yet to be realized (Paul & Fiebich 2005). A vague idea of a what digital story is can be made based on the combination of both words – "digital", in which is something that uses discrete values, often electrical voltages, for input, processing, transmission, storage, or display; and "story", in which is a narrative of any sort. A digital story aims at more than just conveying a message across to the audience, it aims at encapsulating a story, message, or even facts into a digital form accessible by the audience, in order for the audience to obtain information through a path determined by themselves. This project intends at developing a digital story that will incorporate the need to promote Malaysian cultural performing arts.

1.3 OBJECTIVES AND SCOPE OF STUDY

1.3.1 Objectives

1. To study the awareness level on the performing arts in Malaysia that relate to Malaysian culture.
2. To develop a digital story that presents Malaysian cultural performing arts through the Malaysian Cultural Gateway System (MCGS).
3. To test the suitability of a new medium of communication, digital storytelling, to promote to and educate users.

1.3.2 Scope

This project intends at developing a digital story on Malaysian cultural performing arts. Development of the project began with the development of a prototype. This prototype was used to test the tools and language intended to be used. Data was then collected to create the system, and users were tested on the awareness raised after going through the developed system.

The target users is the public in general, and specifically those with a special interest in this form of art. This will provide a gateway for those with interest to learn more and Malaysian culture.

Limitations of this project are that the system covers music and dance only, and the data obtained to be used in the system are only from performances in Universiti Teknologi PETRONAS (UTP). The data obtained also does not fully cover all the available forms of Malaysian cultural performing arts.

CHAPTER 2
LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 DIGITAL STORYTELLING

Storytelling has come a long way. From something as simple as being told from one person to another, storytelling has evolved greatly through the use of media. Media has also been evolving ever since it has been introduced. First from print media, then to radio, and then to something in which has both visual and audio, television. "All new media go through a transition phase. In the beginning, television news was simply radio reports read on camera. It took years of development before the unique abilities of the medium were used: multiple camera angles, live and taped video, photos and graphics." Janet Murray, when asked "Can there be significant new forms of storytelling in the new digital medium?" replied "Yes, because it has its own expressive properties: encyclopedic, spatial, procedural, and participatory." (Paul & Fiebich 2002)

One element of digital storytelling that sets it apart from the conventional way is the interactivity involved. Interactivity means that the user or audience can get involved with the story, and that the user's choices can make a difference in the story that is being told. "Play is older than culture. Digital storytelling and computer game designs are excellent modern prototypes of play. Computer games are very similar to digital stories but computer games diverge away from pure storytelling because computer games are interactive, non-linear. Good computer games have multiple possible endings. Computer games are designed to be read, to be watched, to be listened to, but also to be manipulated in ways the designer/author had anticipated and also had never anticipated. This is true human-media interaction. People don't want to interact with hardware or software anymore than they want to interact with paper; they want to interact with the

representation on the page and the screen, with the message in the medium." (Gillespie 1997)

Digital stories are not just limited to what they seem to be: a story that is in digital form. Instead, it can be represented in many ways with the most important element, interactivity, playing a vital role. "Interactivity profoundly changes the way we experience a work of entertainment. We go from being a member of the audience to becoming a participant. Instead of passively watching, listening, or reading, we take on an active role. Interactive works are immersive. They involve us in an extremely absorbing and intense way, requiring not only our intellectual attention, but also drawing on most of our senses as well". Ten major tools of interactivity have been defined by Miller. One of these tools is interface and navigation. Navigation is what ensures that the user does not just sit back and watch passively; but instead, provide a way for users to understand how the program works, and give them a way to make their wishes known and control what they see and do. (Miller 2004)

Human beings are unique in a way that each has their own strengths and weaknesses. For example, when it comes to trying to understand something, each has their own preference, such as those who prefer reading alone, as opposed to those who prefer discussing in a group. This is because each person has their own preference over a certain kind of element in which they find most effective to relate to. A digital story is a mixture of various elements. The integration of these elements is what gives the digital story its effectiveness in conveying a message across, regardless of a persons' preference of element. Narration, the foremost form of storytelling, is central to human experience, and goes back as far as time could tell (Plowman & Luckin 1999). Another element is pictures, in which one simple picture could tell a powerful story. Photographs, which are captured moments in time, often represent a much larger experience (Landry & Guzdial 2006). "The five elements that are essential in creating digital stories are media, action, relationship, context and communication." (Paul & Fiebich 2005) These elements are

divided into sub elements. The sub elements intended to be used in this project are as follow; the type of media to be used are single media and multimedia, using video, audio and motion graphic, and will be asynchronous, edited and real-time. As for action, content action will be both static and combination, and user content will be mixed. The types of relationships intended to be used are linear, set, non-calculable, and finite; as well as customizable, calculable, manipulable and appendable. The context for the whole system would be standalone. Last but not least, the types of communication to be used are recorded and one-way.

2.2 TOOLS

The proposed tool to be used in development of this project in Macromedia Flash 8, with the use of ActionScript. Many popular games and interactive movies posted on the web are written in Macromedia Flash. Macromedia Flash is a genuine tool for authoring Flash movies. Authors are required to write programs in the ActionScript language in order to make movies interactive (Nakagawa et al 2006). Macromedia Flash is a popular tool for creating interactive, lightweight multimedia web content. With ActionScript, programmers can create interactive animations (Neo et al 2004). Macromedia Flash has been used to create many interactive multimedia content, therefore step-by-step references can be found from various books. Among the applications already created using the said tools are those that apply interactive visualization of scientific contents, among others, and various short games.

2.4 PROMOTING ARTS THROUGH DIGITAL STORYTELLING

Systems utilizing multimedia sharing similar frameworks with digital storytelling are being developed and used for many purposes. A lot of these systems are used for education purposes. The topics covered in these systems range from those that teach concepts, to those that guide towards accomplishing certain tasks. The difference in the use of a multimedia system as opposed to conventional ways lies in the fact that "abstract ideas are generally managed that are not appreciated easily by our senses." (Cordova & Valverde 2006). Therefore multimedia systems create a guide in which is step-by-step, which facilitates user's learning.

However, learning science researchers have paid little attention to the field of arts education. Among the reasons for this is the lack of new technologies in the arts education curriculum. Recently, the Arts Education Partnership (AEP) issued a call for research to further investigate 'New Technologies and Arts learning' noting that "New technologies are changing the nature of arts". A study conducted at the University of California, Los Angeles, showed that youths participated eagerly in the use of digital tools to express themselves artistically. This results in the broadening of participation of youths with new technologies. Digital tools are also an increasing importance for youth and society at large (Peppler & Kafai 2006). Therefore digital stories have the potential to attract people both in developing and experiencing it, with regard to the nature of the technology used. Besides that, a study conducted at the Arizona State University in 2007 has shown that many students' learning styles are not well served by traditional classroom educational approaches. Therefore efforts are put into supporting learners through discovery-based activities, and the realization of new expressive forms that arise from the intersection of arts education and technology (Cuthbertson et al 2007). Due to the study in a student's learning style, it can be compared to the mass public in that new ways of promoting and educating will be able to further enhance one's knowledge.

On another note, performing arts has faced challenges in being promoted. This problem occurs not so much to the implementation of the promotion, but more to an artist's or performer's response to the promotion. This is usually the case with those who value the arts as a creative expression more than a marketing or profitable tool. However, there is an unquestionable conviction that promotion can work miracles for the arts (Kotler & Scheff 1997).

2.5 ART IN THE DIGITAL WORLD

Art comes in many forms, but are most commonly observed in its physical state, such as paintings and sculptures in museums and galleries, and performances being performed. Putting art into a digital form would include preserving its eccentrics, to convey to the audience what is intended. On the other hand, art can also be interpreted in many different ways by various audiences. One way art in digital form differs from its physical state is the fact that a person can view or experience this art without having to be physically there. Besides that, reproducing a work of art together with an observer can produce a new artifact. The work is separate from the man; when it is untied with him to grasp his interaction, it becomes an exhibit, a show, a performance (Padula & Reggiori 1999). Art is not just limited to the output of the product itself. Art is also the perception gained from the different perspectives of differing audiences. In the words of Paolo Rosa, "And the work of art must be like a process. The artist begins the trip and the spectator continues on it." (Padula & Reggiori 1999)

Art has been integrated with various multimedia systems for various reasons. In 2007, ACM held an exhibition entitled "Speculative Data and the Creative Imaginary: shared innovative visions between art and technology", in which the goal was to open a dialogue between communities of practice in fields of creative production and computer science to identify common research goals to bridge across these communities (Jennings

2007). Among the exhibitions that share similar goals with this project are; "7000 Oaks and Counting" by Tiffany Holmes (School of the Art Institute of Chicago), in which is a dynamic screen based interface designed to bring awareness, and "Life Species II" by Christa Sommerer and Laurent Mignonneau (University of Art and Design, Linz, Austria), in which is world renown work in artificial life and interactive fictional ecologies (Jennings 2007).

Multimedia systems have also been developed to promote movement, such as those in performing arts. In the case of art, technology can serve to communicate, change the message, and in many other ways enhance the performance and performance space (Meador et al 2004). One system that integrates movement with technology is the Movement-based Interactive Dance Performance, in which the choreographers and dancers, through the adaptation of their movement, can manipulate the music and the visual display (James et al 2006). This system, however, is intended more to the dancers themselves. A system that shares the objective of this project to educate users on traditional dances is that entitled "Learning System for Human Motion Characters of Traditional Arts" (James et al 2006). In this system, three-dimensional human motion is produced by the sequence of views from a single direction in the video contents, and the motions from any direction presented simultaneously.

CHAPTER 3
METHODOLOGY

3.1 RESEARCH METHODOLOGY

1. Survey

   A survey was conducted April – May 2007. Survey results with 60 respondents, ranging from UTP students to working adults in Kuala Lumpur and Penang, provided a guide as to the need to promote Malaysian cultural performing arts.

2. Literature review

   Research was done on the elements of digital storytelling, in order to create a digital story that can fulfill the goals of the project. Research was also done on the types of performance arts to be portrayed and initial target audience's reaction towards these performance arts.

3. Picture taking and video or audio recording

   Pictures and videos were taken to portray what one sees when participating in performances. The video or audio will give an idea of the sights that can be seen and the sounds that can be heard.

3.2 SURVEY

A survey on Malaysian cultural performing arts was conducted to the UTP students, both local and international, as well as working adults in Kuala Lumpur and Penang. The survey was conducted online using www.freeonlinesurvey.com, and was also handed out by hand to respondents. For the online survey, a URL was created where respondent did their survey through the address sent through their e-mails.

The survey covered the respondent's general knowledge on Malaysian cultural performing arts. The survey also covered the respondent's awareness, attitude and initiative towards such performances. Last but not least, the survey attempted at finding out the respondent's point of view on the current level of awareness on Malaysian cultural performing arts.

From this survey, it is assumed that although the general public does have a basic knowledge on the existence of Malaysian cultural performing arts and the various types portrayed in their everyday lives, the knowledge stops there. Very few people have a deeper knowledge, in which they can relate these performances to stories of Malaysian heritage. The results of the survey are covered in Chapter 4.

3.3 SYSTEM DEVELOPMENT

3.3.1 Development Process

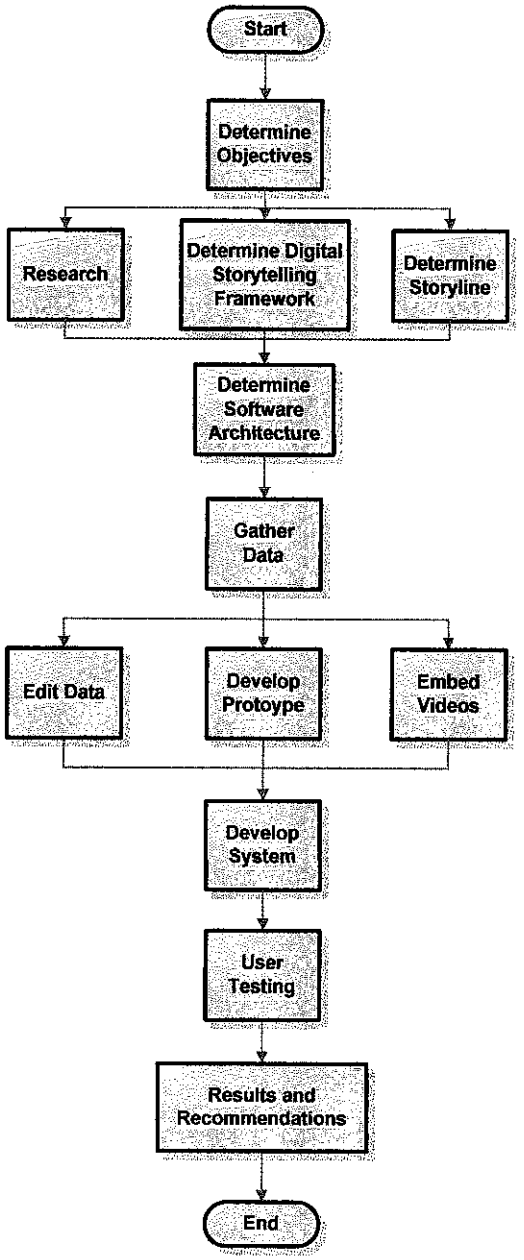


Figure 3.1: Development Process of the MCGS

Figure 3.1 shows the processes taken in developing the MCGS, in order to fulfill the objectives of this project. Once the objectives have been determined, research was conducted on two main topics. Firstly, research was done on the level of awareness on the Malaysian cultural performing arts, to determine the importance of creating further awareness on the said topic. Secondly, extensive research was done on what a digital story is, on what kind of system can be developed in order to follow the digital storytelling framework, in order to be called a digital story. Research was also done on the similar works related to both digital storytelling and Malaysian cultural performing arts.

After that, the software architecture was determined, based on the digital storytelling framework. This was followed by the gathering of data to be put into the system. The data itself had to be processed before it could be used, and this was done by editing and embedding the data into the format required by the software used to develop the system. This was done simultaneously with the development of the system prototype, in which was first done using various different software. The system was then developed using the software that further met the requirements of the system.

Once the system was finished, the final part of the project was to test the system. User testing was done in order to get results on the outcome of the system, and also to get recommendations for future upgrades.

3.3.2 Framework

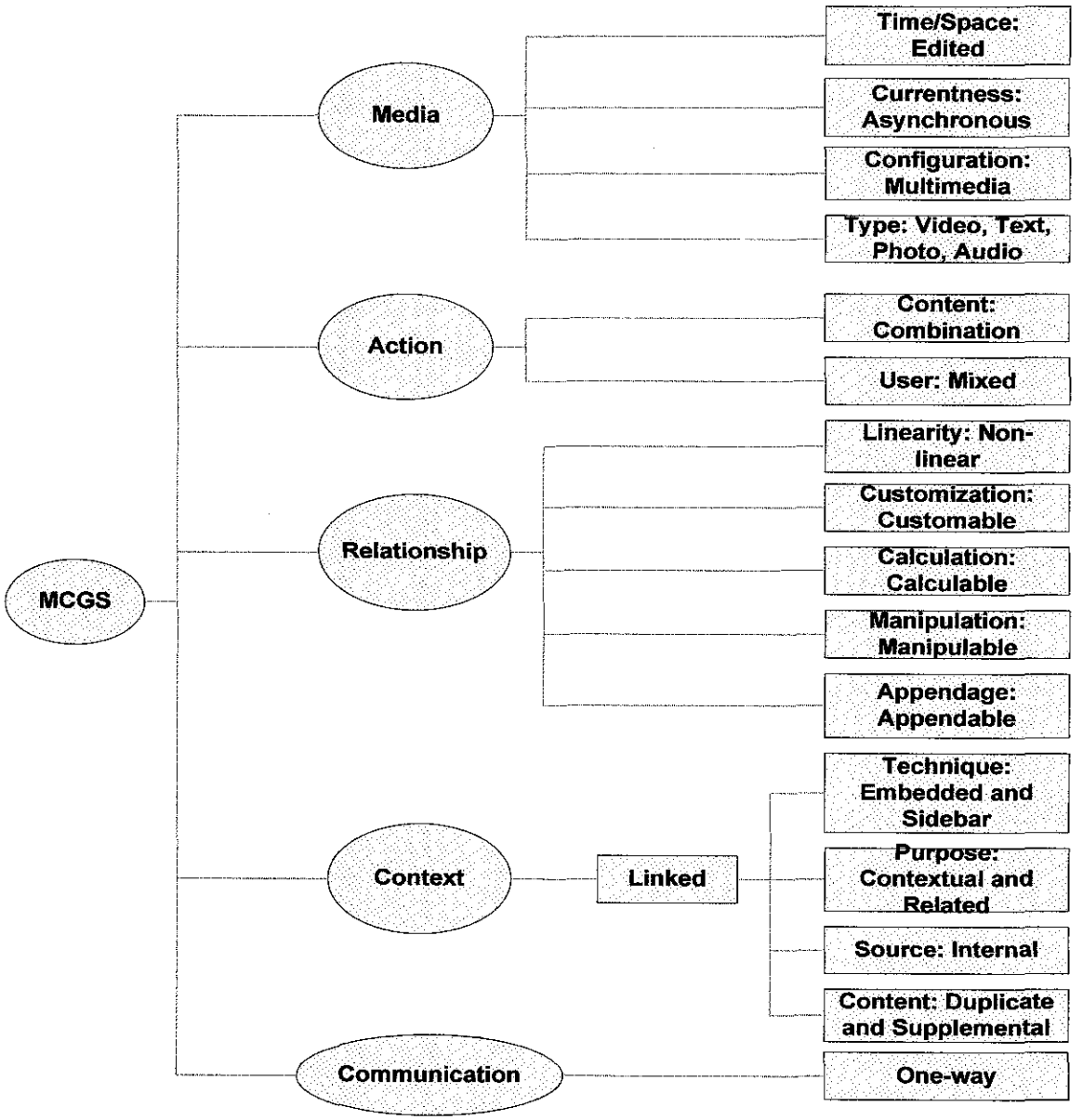


Figure 3.2: Framework of the MCGS adopting Digital Storytelling Taxonomy by Paul and Fiebich

This framework is based on the Digital Storytelling taxonomy by Paul and Fiebich, in which has inspired and been used as a guide by many developers and creators of digital stories. The five main elements; media, action, relationship, context, and communication is present with respect to the examination of thousands of digital stories.

3.3.2.1 Media

Time/Space, which addresses editing of the content, is edited, in which content has been processed in some manner by the content developer. The currentness is asynchronous, in which the content is recorded and delayed from the time it was captured. The configuration is multimedia, in which two or more media types are woven together into a seamless presentation, and the said types are video, text, photo and audio.

3.3.2.2 Action

Digital stories have action in both the content and through the user. The content will be combination, in which have both static and dynamic portions. The user action will be mixed, in which it will require both passive and active actions.

3.3.2.3 Relationship

The relationship between the digital story and the user can be either open or closed, in which it will be open in Multimedia Tutorial System. Due to it being open, the linearity will be non-linear, in which there is more than one path to get through the story, it will be customable by user in which the users can pick their own paths, and it will also be calculable, in which the user can put in input to get a certain result. Besides that, the system will be manipulable, in which a portion

of the material can be arranged by the user, as well as appendable, in which allows the addition of content by the user.

3.3.2.4 Context

Context refers to the linking to related, relevant information. The Multimedia Tutorial system will be linked, as it will utilize context links. The techniques used to identify link location are embedded, in which can be found within the story text, as well as sidebar, in which the links are located outside of the story. The purpose for these links are contextual and related, in which the former refers to links to material specific to the story being read, and the latter refers to links on material on the same topic, but not necessarily specific to the story being read. The source of the links will be internal, in which the material are on the publisher's system. The content, in which is the nature of the link, will be both duplicate and supplemental. The former refers to links in the same content but in a different media format, and the latter refers to links that are not a replication of the original content.

3.3.2.5 Communication

Communication would be one-way, in which it does not allow user to communicate digitally with other users.

3.3.3 Storyline

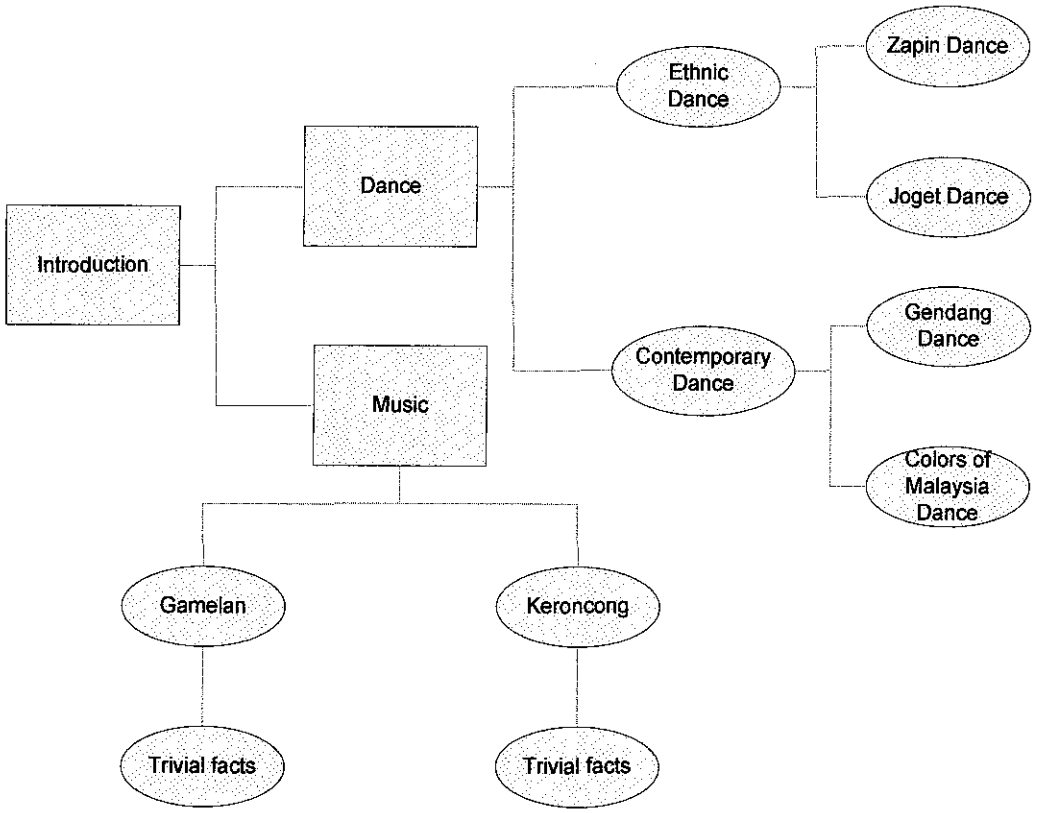


Figure 3.3: Storyline of the MCGS

The storyline was created based on two out of three categories of Malaysian cultural performing arts, namely Music and Dance. Both categories are broken down into two subcategories, in order to better explain the said categories.

3.3.4 Software Architecture

3.3.4.1 System Flowchart

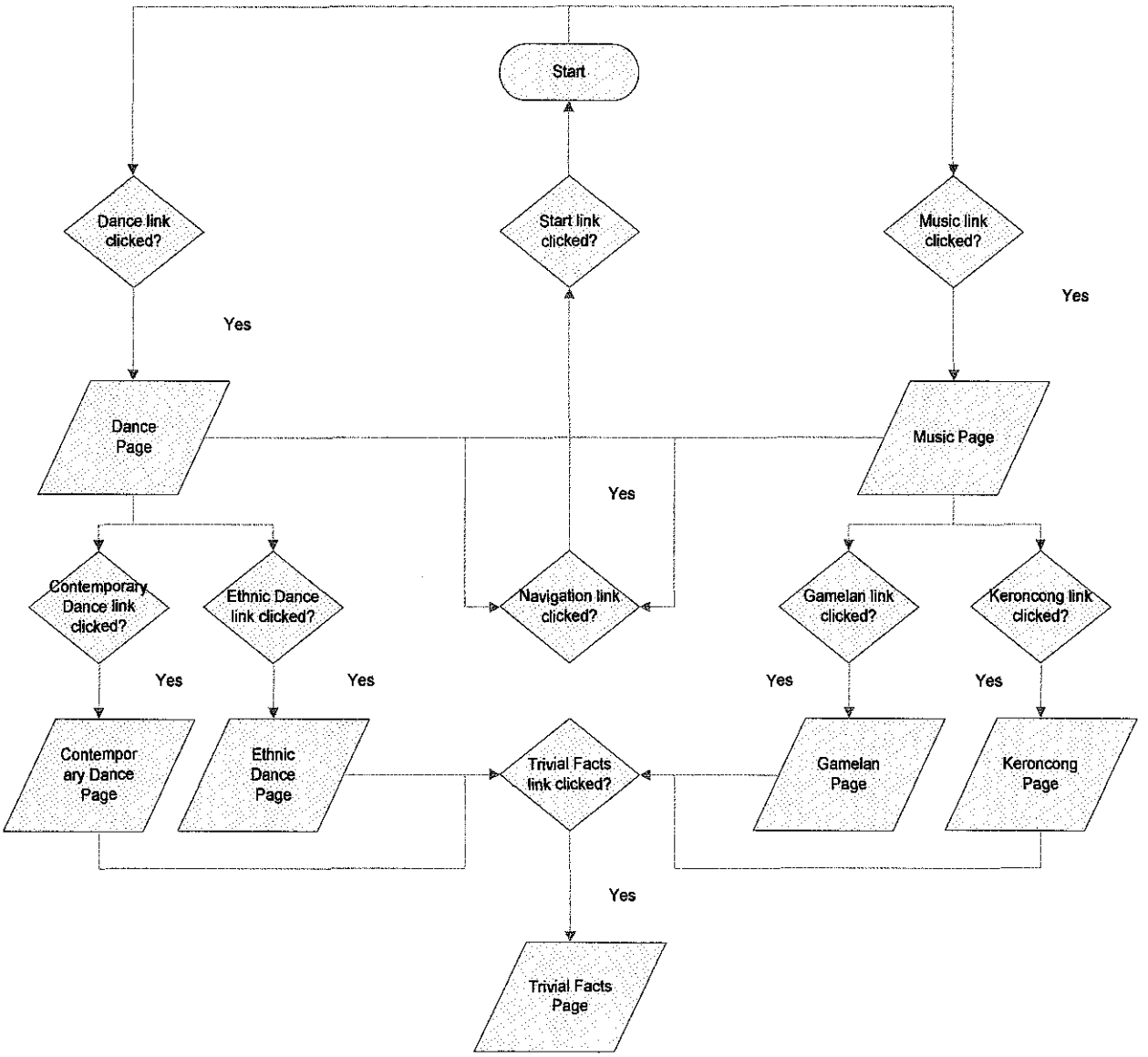


Figure 3.4: Flowchart of the MCGS

The flowchart was done based on the storyline of the system. The flowchart shows the flow of the linking of different pages in the system, in order for the user to get his or her own version of the story. The user will have to start at the Start page, in which the user can link to either one of the main categories, namely Music and Dance. From each page thereafter, the user can always link back to either the Start page or one of the main categories through the sidebar. Each page will also feature links to subcategories in which the user can link to through either a widget link or through hotspots.

3.3.4.2 Interface and Navigation Design

The MCGS typically has links for navigation on every page, in which the user can go through the system and come up with a personal version of the story, depending on the order of the links. These links are available on a sidebar, in the running videos, as well as in text form. Besides that, widgets are placed in which will give the user choices in playing or stopping a video or audio, and in hearing narration.

3.3.5 Tools

3.3.5.1 Hardware

The following hardware was used in data creation and collection:

Hardware	Model	Purpose
Digital Still Camera	Canon A530	To capture still pictures
Video Camera	Sony DVDCam	To capture videos
Tripod	-	To support the camera or video camera for better quality of data
USB Microphone	-	To record narrations

Table 3.1: Hardware used in data creation and collection

3.3.5.2 Software

The following software was used in creating the prototype and the system itself:

Software	Purpose
SID Video Cutter and Splitter	To cut and edit video
3GP Video Converter	To convert videos to supported formats
Adobe Photoshop	Edit still data
Camtasia Studio 2	Develop prototype
Macromedia Flash Professional 8	Embed videos, Create system, utilize ActionScript 2.0

Table 3.2: Software used in creating the MCGS

3.3.6 Evaluation

The resulting system, the Malaysian Cultural Gateway System, was evaluated using a survey done from October until November 2007, with 50 respondents. This survey was completed by respondents ranging from working adults in Kuala Lumpur and Penang, to UTP students, both local and international.

The survey contains two main parts, the first covering the level of awareness or interest before the use of the system, and the second on the level of awareness or interest after the use of the system, as well as the usability of the system. The results of the evaluation are covered in Chapter 4.

3.4 CONCLUSION

In conforming to the objectives of this project, a structured design was approached, in which a waterfall method was used. This started out with planning, followed by analysis, development and implementation. Evaluation was also done at the end to get feedback and recommendations. This is shown in Figure 5.

However, in the development of the system itself, a prototyping-based methodology was used, in which prototypes were developed, and upgraded, until the final prototype conformed to the desired system. This is shown in Figure 6.

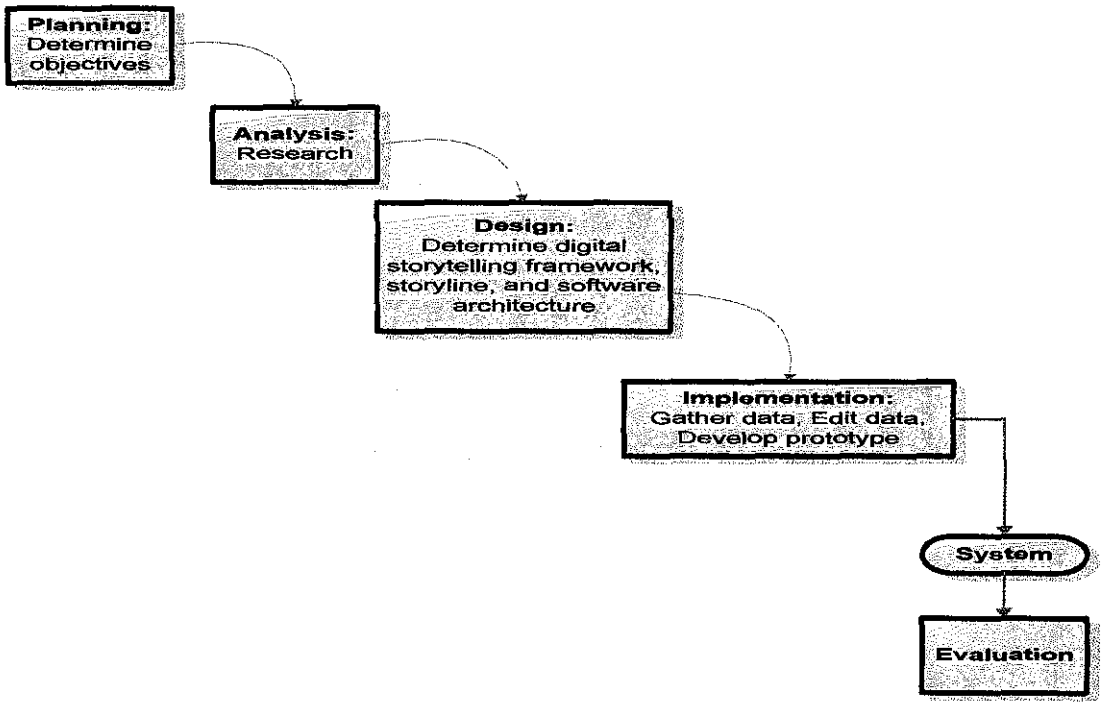


Figure 3.5: Waterfall method used throughout the project

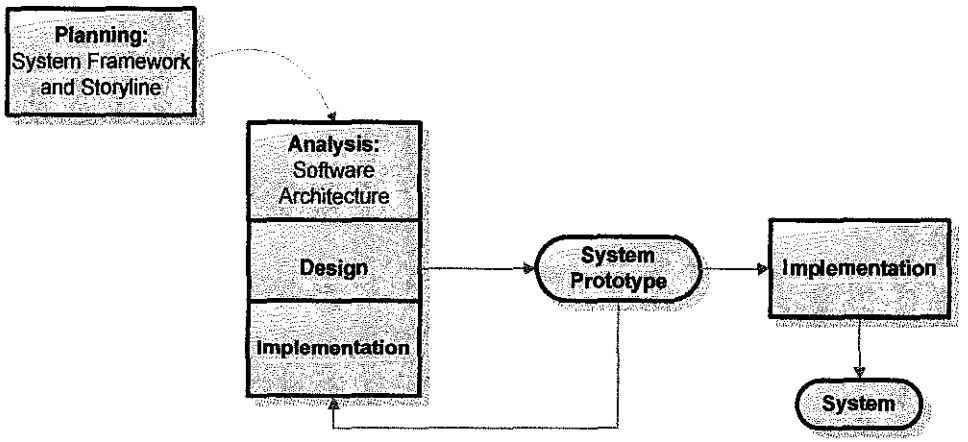
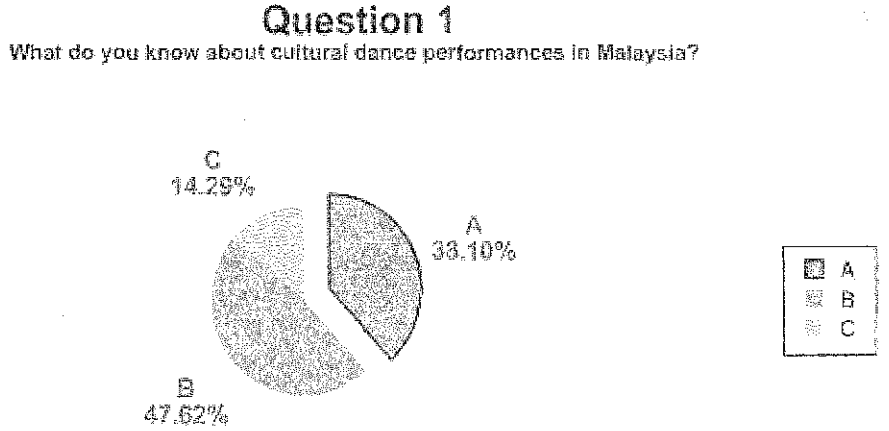


Figure 3.6: Prototyping methodology used for developing the MCGS

CHAPTER 4
RESULTS AND DISCUSSION

4.1 SURVEY RESULTS

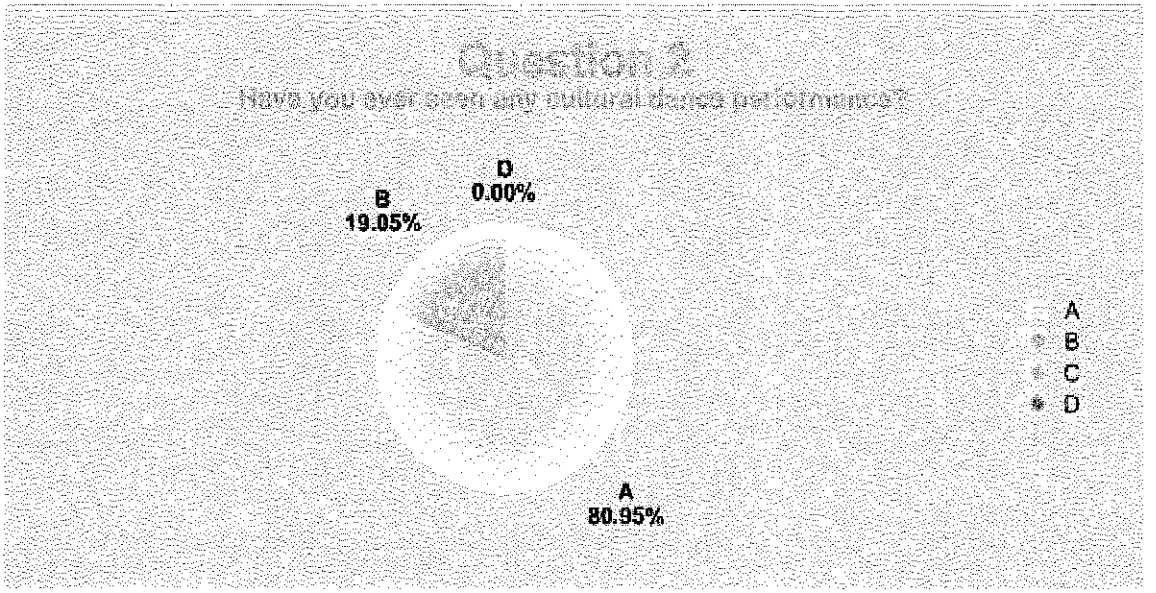
The results shown below covers the Survey on Malaysian Cultural Performing Arts conducted. The purpose of this survey is to get the public's opinion on Malaysian cultural performances, specifically dance performances.



A) A lot - dance performances interest me
B) Not much, just the basic things everyone else knows
C) Im not even interested in cultural dance performances

Figure 4.1: Question 1 of the Survey on Malaysian Cultural Performing Arts

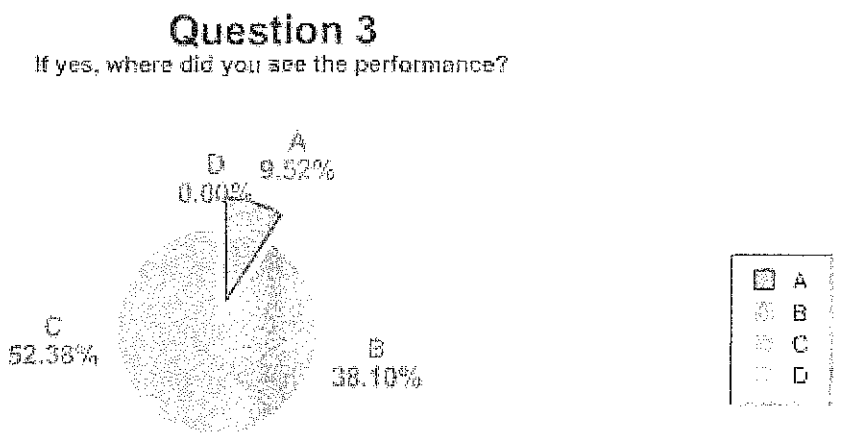
Based on the diagram above, 38.10% of respondents say that they know a lot about cultural dance performances in Malaysia, and 47.62% say that they don't know much, whilst 14.29% say that they are not interested. This shows that there is an interest amongst more than half of the respondents towards Malaysian cultural dance performances.



A) Yes - quite a few
B) Once or twice in my lifetime
C) None - this type of performance does not interest me
D) Other

Figure 4.2: Question 2 of the Survey on Malaysian Cultural Performing Arts

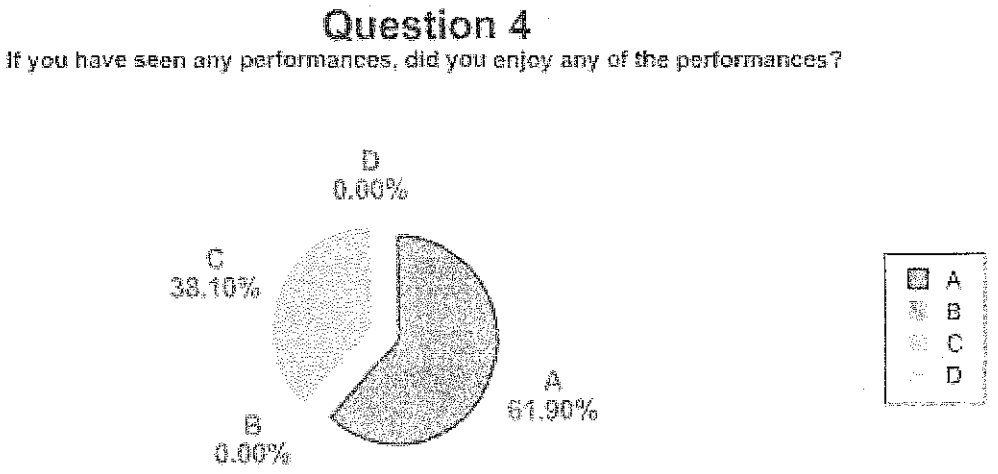
Based on Figure 4.2, 80.95% of respondents have seen quite a number of cultural dance performances, whilst 19.05% have only seen one or two, and none of the respondents have yet to see any cultural dance performance.



A) Had to buy a ticket to see the performance, such as at Istana Budaya
B) Public concert or event, such as during Citrawarna
C) Dinner or private event
D) Other

Figure 4.3: Question 3 of the Survey on Malaysian Cultural Performing Arts

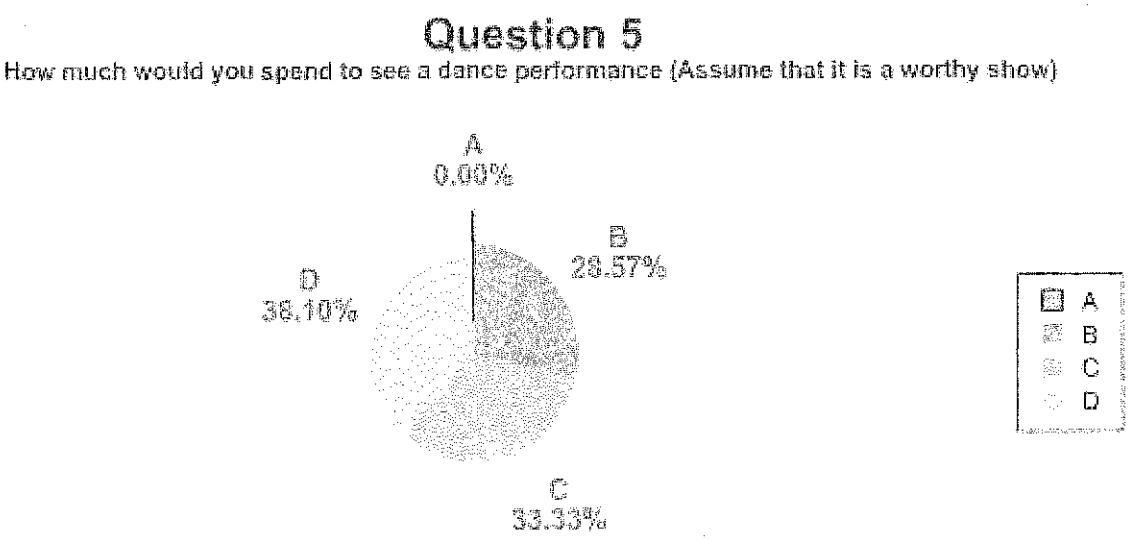
Based on Figure 4.3, most of the respondents saw cultural performances through a private or public event. Only 9.52% of the respondents were interested enough to buy a ticket to see a cultural dance performance.



A) Yes
B) No
C) It was so-so
D) Other

Figure 4.4: Question 4 of the Survey on Malaysian Cultural Performing Arts

Based on Figure 4.4, 61.90% of the respondents did enjoy the performance they saw, whilst the other 38.10% only slightly enjoyed the performance. None of the respondents thought that the show they saw was bad.



A) More than RM100
B) RM50-RM100
C) Less than RM50
D) I would only see it if it were free

Figure 4.5: Question 5 of the Survey on Malaysian Cultural Performing Arts

Based on Figure 4.5, 38.10% of respondents would only catch a show if it were free, while around 50% of respondents are willing to fork out money to see a cultural performance show. However, none of the respondents are willing to fork out more than RM100 for a show.

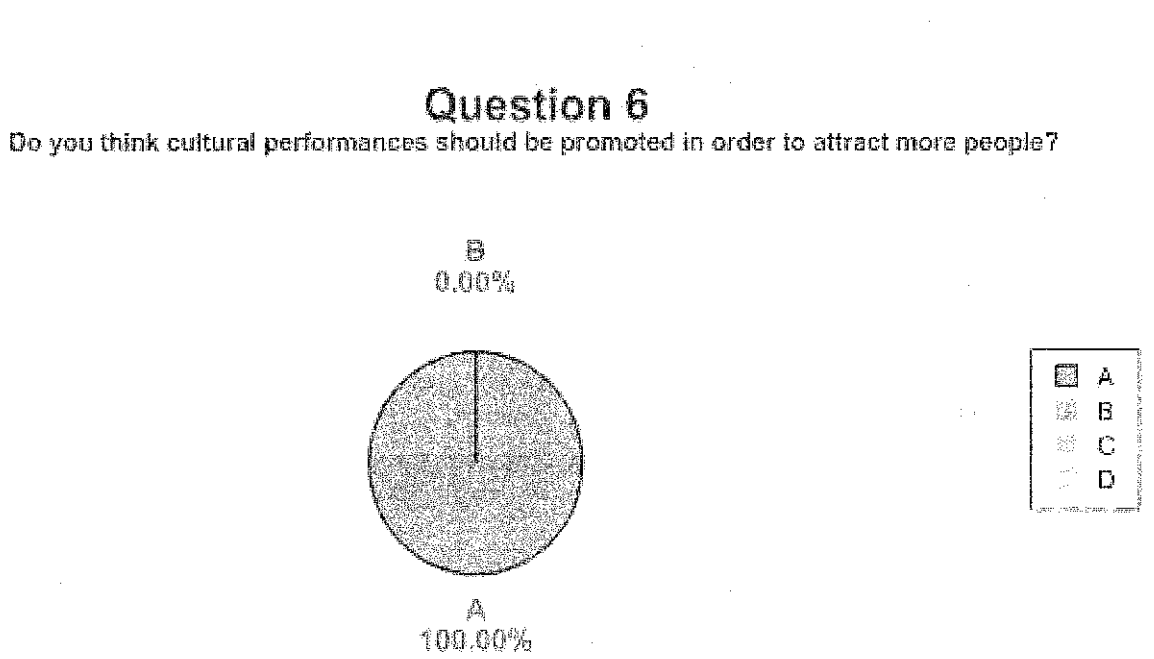
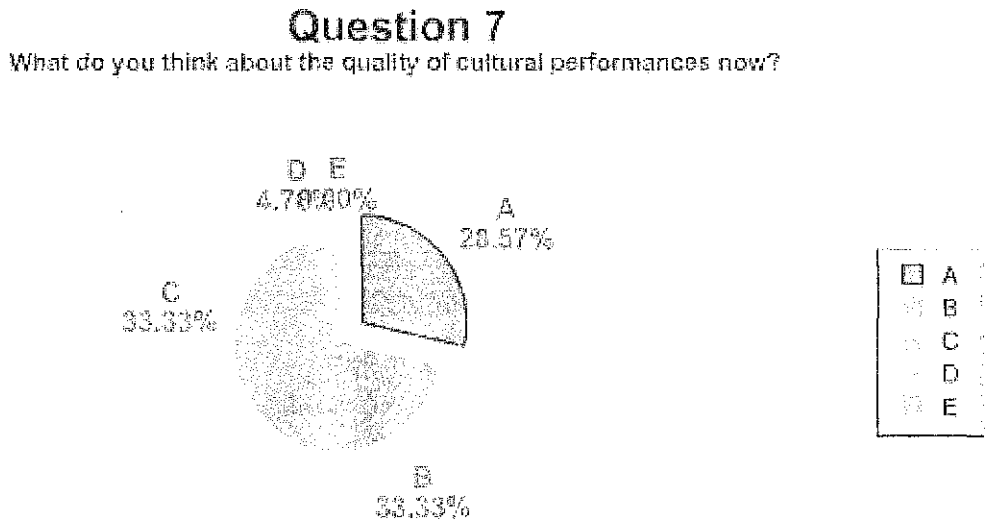


Figure 4.6: Question 6 of the Survey on Malaysian Cultural Performing Arts

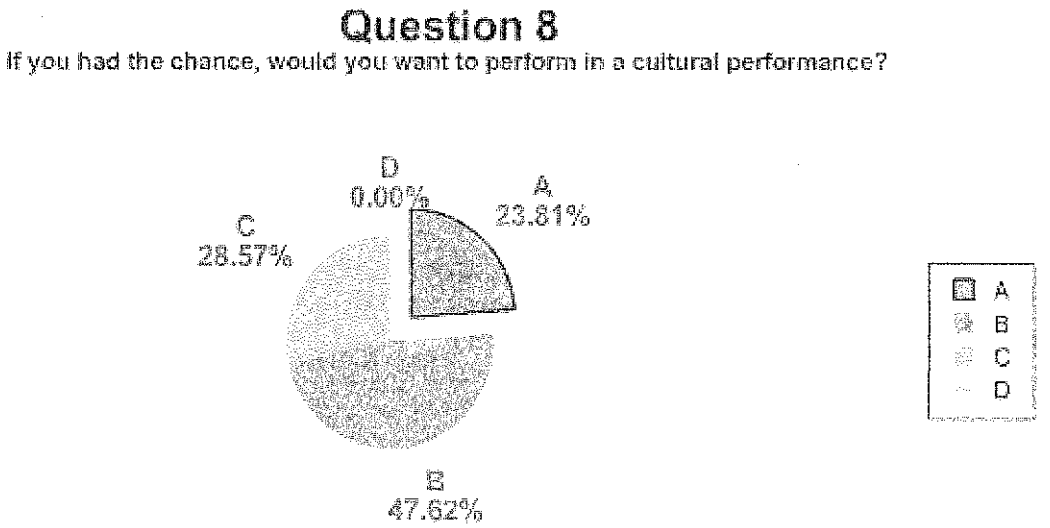
Based on Figure 4.6, 100% of the respondents think that cultural performances should be promoted in order to attract more people. This shows that there is a need for more promotion of Malaysian cultural performances.



A) Very good
B) Good
C) Not bad
D) Can use some improvement
E) Other

Figure 4.7: Question 7 of the Survey on Malaysian Cultural Performing Arts

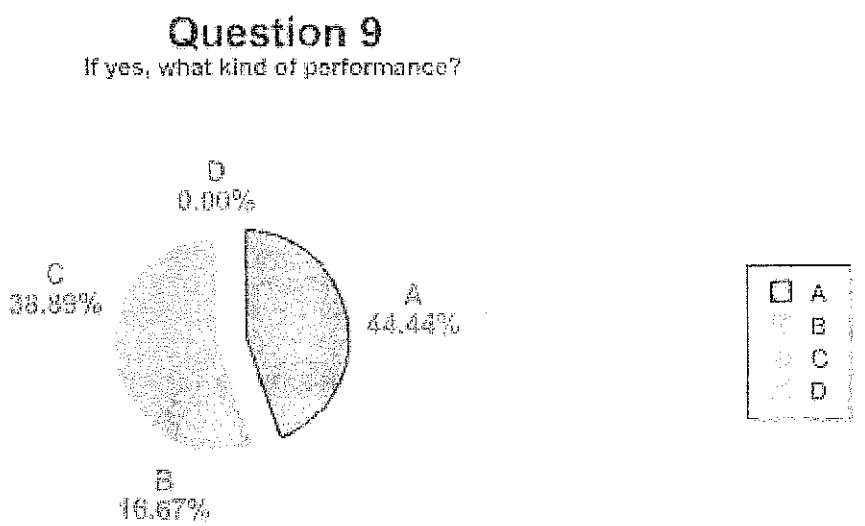
Based on Figure 4.7, almost all of the respondents think that the cultural performance that they saw rates between being very good to not bad. Only 4.70% thinks that the show they saw could use with some improvement. This shows that cultural performances do spark up at least a slight interest amongst the audience.



A) Yes
B) Maybe
C) No
D) Other

Figure 4.8: Question 8 of the Survey on Malaysian Cultural Performing Arts

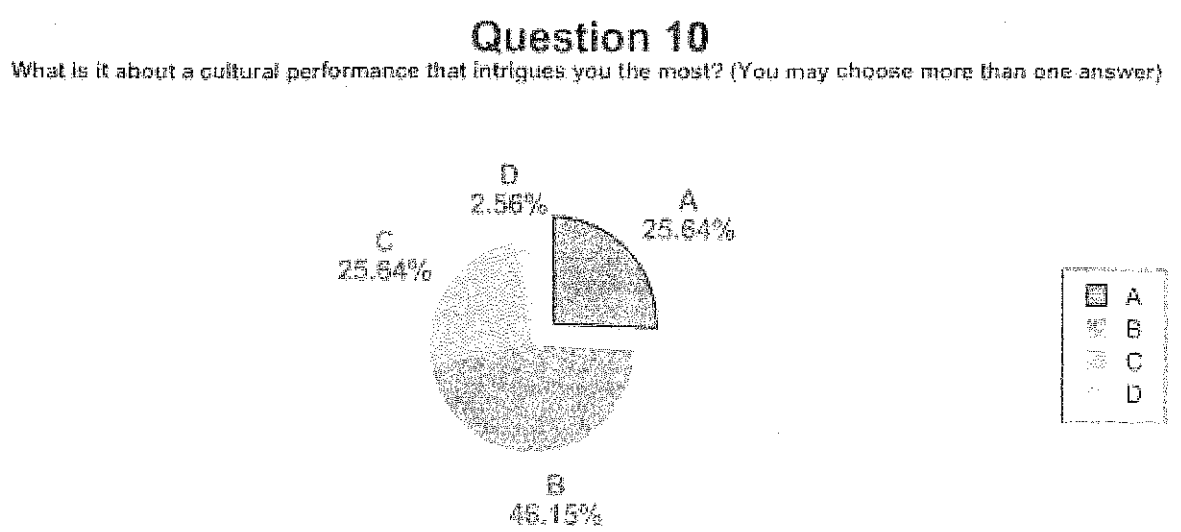
Based on Figure 4.8, 23.81% of respondents are interested to perform in a cultural performance, whilst almost half; 47.62% say maybe. 28.57% of the respondents are not interested.



A) Theater
B) Dance
C) Playing any musical instrument
D) Other

Figure 4.9: Question 9 of the Survey on Malaysian Cultural Performing Arts

Based on Figure 4.9, almost half of the respondents, 44.44% are interested to perform in theater, whilst only 16.67% are interested to perform in dance, and 38.89% are interested to play a musical instrument.



A) Its relation to Malaysian culture
B) The way it is performed
C) The music
D) Other

Figure 4.10: Question 10 of the Survey on Malaysian Cultural Performing Arts

Based on Figure 4.10, almost half of the respondents, 46.15%, say that they find the way a cultural performance is performed as most intriguing. 25.64% are interested in the way its relation to Malaysian culture, whilst 25.64% are interested in the music. 2.56% are intrigued by various other reasons, such as the nature of the culture itself.

4.2 SYSTEM

The Malaysian Cultural Gateway System was created as the digital story in which will promote Malaysian cultural performing arts. This system was created using Macromedia Flash Professional 8. Still data, such as pictures, that were to be used were imported to the library. Audio was also imported to the library. However, video files had to be embedded, in order to be properly placed in the timeline.

Besides that, ActionScript 2.0 was utilized in order to create the links, and to activate the widgets and buttons. ActionScript was also used to create hotspots, in which enabled running vides to be linked elsewhere. The active buttons, widgets and hotspots were categorized into layers for better organization of the pages, and to avoid error in the activation of the said links.

Gathered data had to be edited before they were used. Firstly, the still data was resized to avoid it being heavy on the system. The videos were firstly converted to AVI format in order to be recognized by Macromedia Flash. The videos were then cut in shorter clips, again as to not be heavy on the system. After that, the videos were embedded into Macromedia Flash in accordance to the timeline given. This system runs on Macromedia Flash Player.

Overall, the system features unordered links that enables the user to navigate through the system at their own will. This, in turn, creates the interactivity of the story, in which is one of the elements of the framework for digital storytelling.

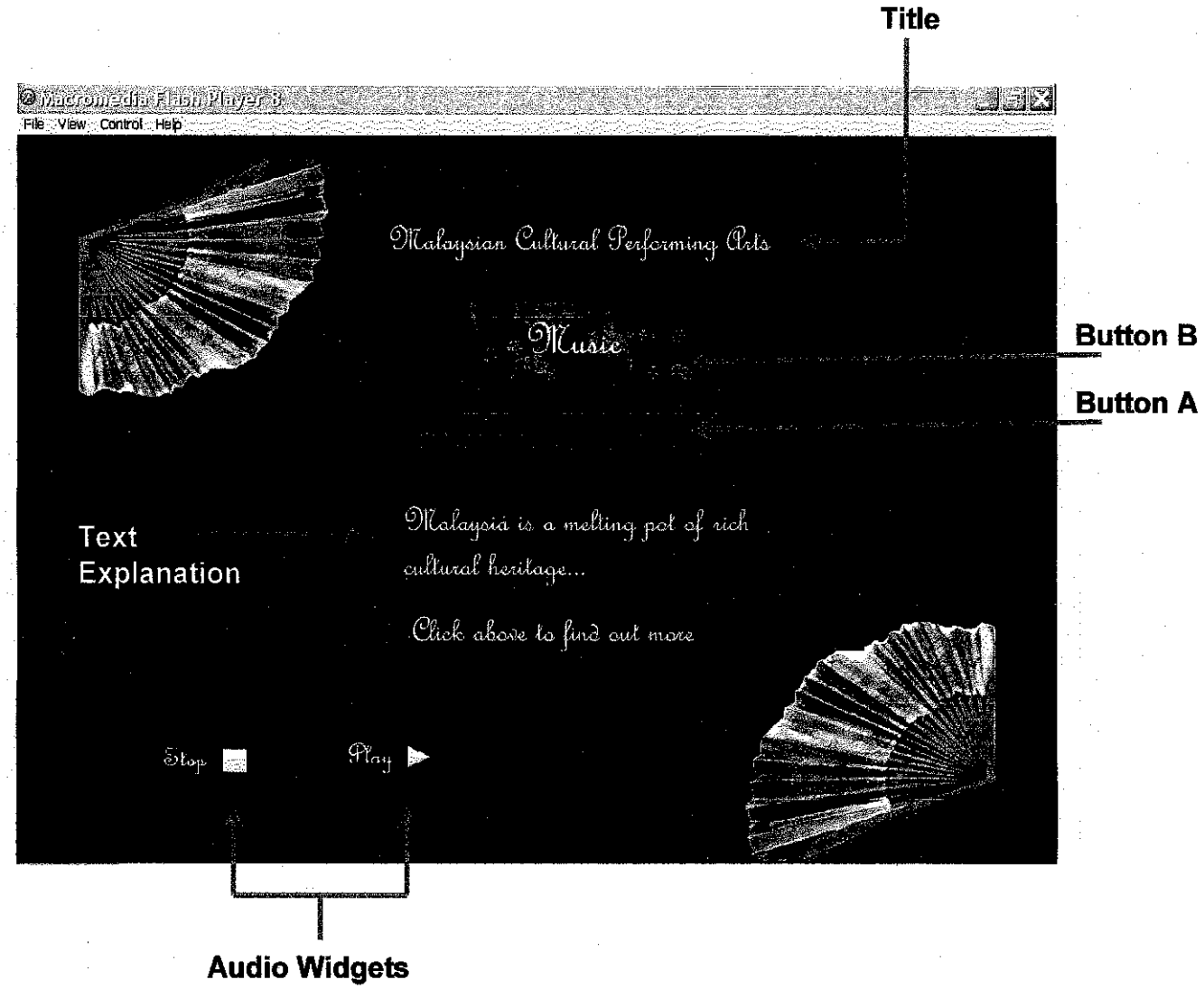


Figure 4.11: Start page of the MCGS

Figure 4.11 shows the start page of the MCGS. The page includes the title of the system, and a text explanation as an introduction. Besides that, there are two active buttons, Button A and Button B, in which links the user to either the Dance category or Music category. Button A is the initial state of the button, whilst Button B is the state of the button once the user mousse over Button A. Also included on this page are two audio widgets, a Stop button and a Play button. The Play button enables cultural music to be played, and the Stop button makes the music stop.

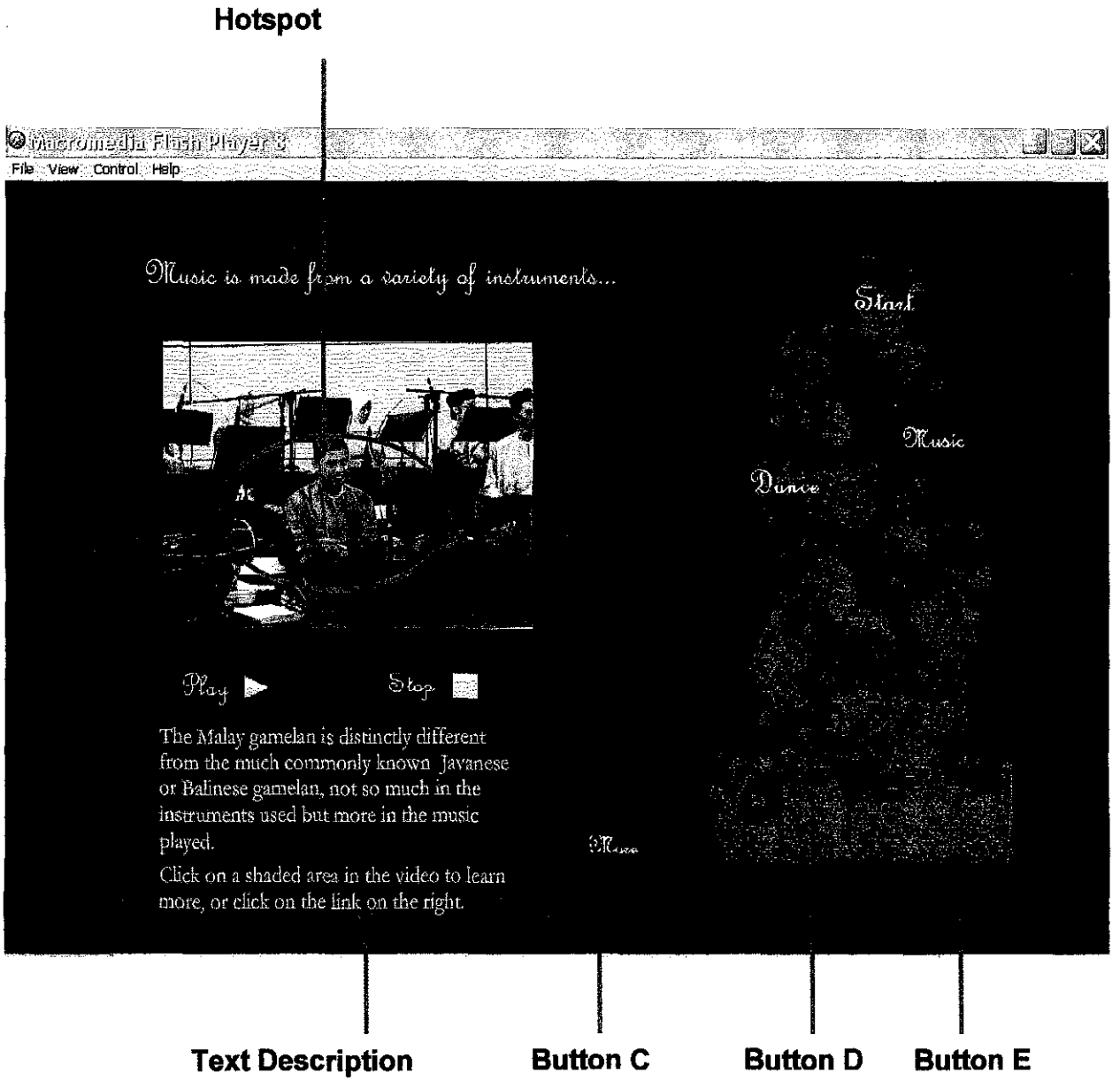


Figure 4.12: Music page of the MCGS

Figure 4.12 shows the music category page of the MCGS. This page features a running video, in which can be started and stopped with Play and Stop buttons. A text description is provided about the music category, and on the right of the page is the sidebar navigation. Three pages that can be linked through this sidebar are the Start page, the Music page, and the Dance page. Button D is the initial state of the links made available, whilst Button E is the state of the link after the user mouse over the link. Button C is an active button that will enable the user to hear a narration of the respective category. The hotspot is embedded in the video, and is slightly shaded to enable the user to detect it.

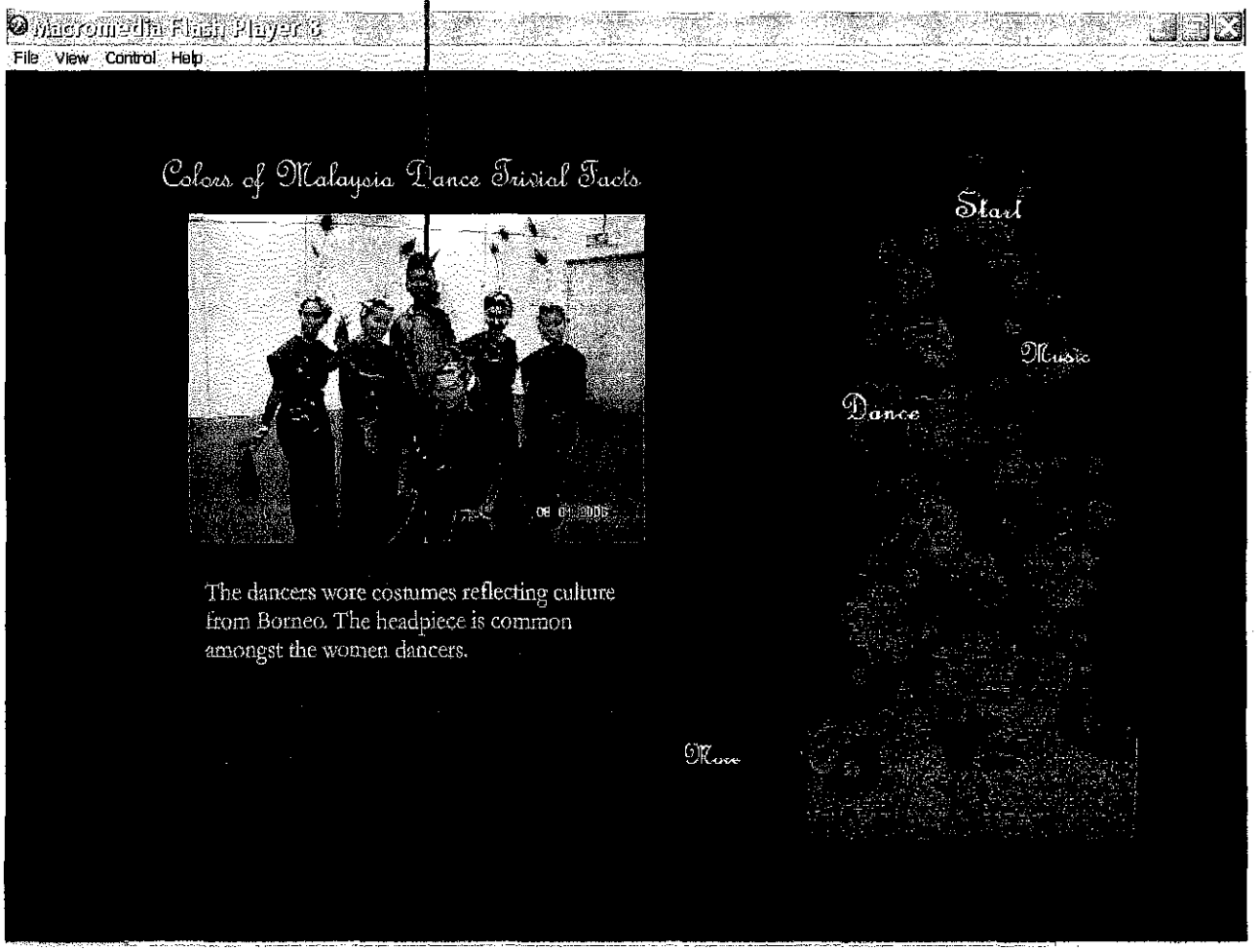


Figure 4.13: A Trivial Fact page of the MCGS

Figure 4.13 shows a typical page to show trivial facts. Besides the basic features such as a navigation bar, text description, and a button for narration, this page also features a still picture about the respective topic.

4.3 SYSTEM RESULTS

To evaluate the system, a survey was conducted, containing two main parts. Users were asked to fill in the first part of the survey before going through the system, and the second part of the survey after going through the system. The results of the survey are as follows:

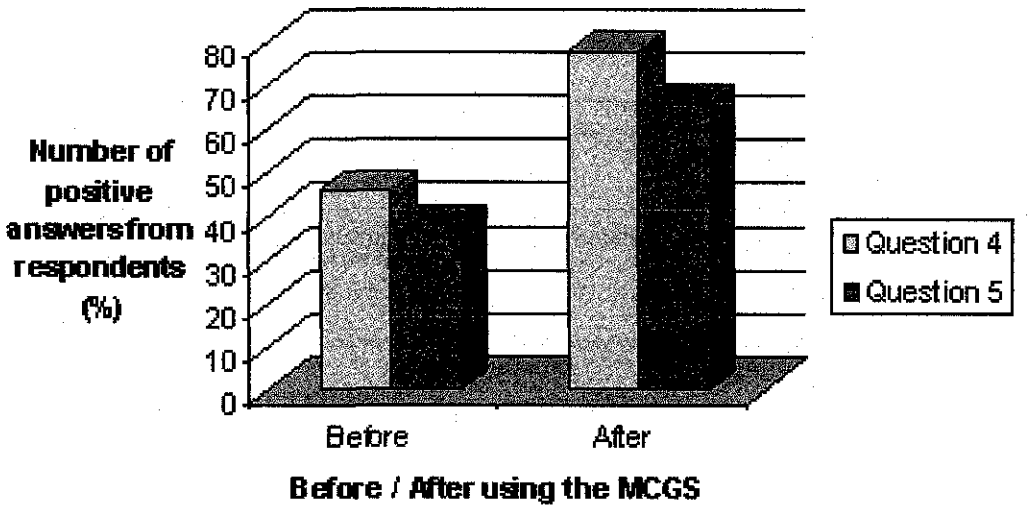


Figure 4.14: Positive answers from respondents before and after using the MCGS

Figure 4.14 refers to positive answers from respondents before and after using the MCGS, based on two questions:

Question 4: Would you want to see a cultural performance?

Question 5: Would you want to be involved in a cultural performance?

The answers considered as positive in this case would be a definite "yes". Before using the system, only 46% of respondents answered "yes" to question 4, and only 38% of respondents answered "yes" for question 5. This increased for both questions after respondents viewed the MCGS, in which is 78% for question 4 and 66% for question 5.

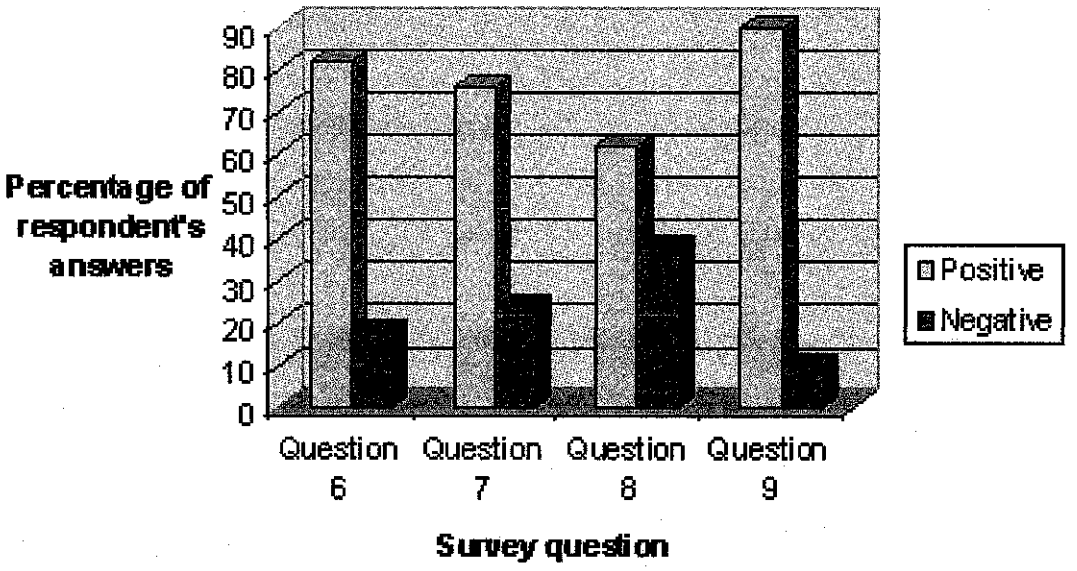


Figure 4.15: Percentage of positive and negative answers from respondents after using the MCGS

Figure 4.15 refers to positive and negative answers from respondents after using the MCGS, based on four questions:

Question 6: When you first used the system, were you interested to find out more?

Question 7: What do you think of the layout of the system?

Question 8: Were the links easy to use?

Question 9: Did you find the features of the system easy to use?

The answers considered as positive in this case would be either a "very good" or "good", and those considered negative is a definite "no". For question 6, 82% of the respondents were interested to find out more, as opposed to 18% who weren't. As for question 7, 76% of the respondents thought the layout was either interesting or easy to understand or that it could be slightly better. 24% of the respondents found the layout confusing. For question 7, 62% of the respondents found the links easy to use, whilst 38% got a bit confused. Last but not least, for question 9, 90% of the respondents found the features of the system easy to use, while 10% thought otherwise.

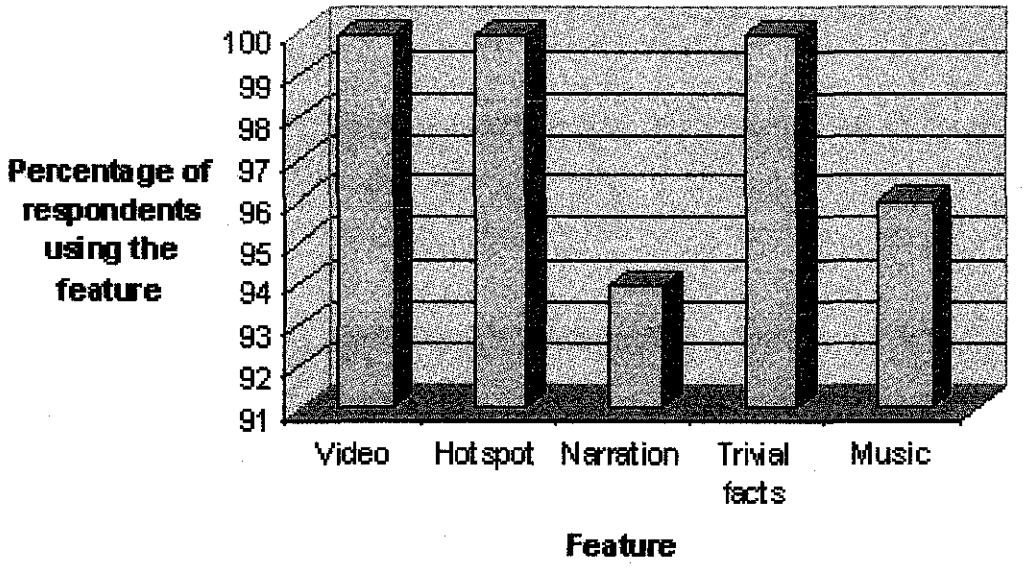


Figure 4.16: Percentage of respondents using the available features in the MCGS

Figure 4.16 shows the percentage of respondents using the five main features of the MCGS, in which were to create interactivity of the system. These five features are viewing the running videos, using the hotspot in the running videos, clicking on a button to listen to narration, viewing trivial facts, and clicking on a button to listen to music, where applicable. From the survey, 100% of the respondents used three of the features, in which are viewing the running videos, using the hotspot in the running videos, and viewing trivial facts. 94% of the respondents listened to the available narration, and 96% of the respondents listened to the available music.

CHAPTER 5
CONCLUSION AND RECOMMENDATION

After conducting research, surveys, and evaluating the developed system, several assumptions are concluded based on the objectives of this project. They are as follow:

5.1 SURVEY

From the initial survey conducted on the level of awareness on Malaysian cultural performing arts, it is concluded that most people in Malaysia already have basic awareness on Malaysian cultural performance arts. These shows are usually held during events, in which people get a slight taste of Malaysian culture. A lot of people are actually interested to know more, and would even participate if given the chance.

5.2 SYSTEM

To develop the system as a digital story, it took a lot of research in order to figure out the characteristics of a system that can make it be comprehensible as a digital story. This was guided by adopting the digital storytelling taxonomy by Paul and Fiebich . From there, various software were tested to find a software that was most suitable to put in all the intended elements of the digital story, in which in this case is the MCGS.

5.3 EVALUATION

From the evaluation survey conducted, it is concluded that the system managed to fulfill the objective to test the suitability of a new medium of communication, digital storytelling, to promote to and educate users. This is shown by the overall percentage of positive answers given by users after using the MCGS.

5.4 RECOMMENDATIONS

Several limitations were raised during development of the system, in which restricted the development. The limitations mostly concerned the data used, specifically video data, in which the scope and quality of data could not be as good as intended, due to time and procedural constraints.

Therefore, recommendations for future upgrades of the MCGS are as follow:

1. Scope of the system to include another main category of performing arts, in which is theatre.
2. Scope of the system to cover every possible existing performing arts in their respective categories, in order to be able to create more links and create more possibilities of different outcomes of the story from the system.
3. Better quality of data.
4. Develop more features for interactivity.
5. Develop the system to be put online, to reach a wider audience.

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APPENDICES

APPENDIX A: Sample of survey on Malaysian Cultural Performing Arts

APPENDIX B: Sample of survey on the Malaysian Cultural Gateway System

APPENDIX A

Survey on Malaysian Cultural Performance Arts

You can enter some introduction text here!

Free Online Surveys .com

*1) What do you know about cultural dance performances in Malaysia?

- A lot - dance performances interest me
- Not much, just the basic things everyone else knows
- I'm not even interested in cultural dance performances

*2) Have you ever seen any cultural dance performance?

- Yes - quite a few
- Once or twice in my lifetime
- None - this type of performance does not interest me
- Other (Please Specify):

3) If yes, where did you see the performance?

- Had to buy a ticket to see the performance, such as at Istana Budaya
- Public concert or event, such as during Citrawarna
- Dinner or private event
- Other (Please Specify):

4) If you have seen any performances, did you enjoy any of the performances?

- ○ Yes
- ○ No
- ○ It was so-so
- ○ Other (Please Specify):

***5)** How much would you spend to see a dance performance (Assume that it is a worthy show)

- ○ More than RM100
- ○ RM50-RM100
- ○ Less than RM50
- ○ I would only see it if it were free

***6)** Do you think cultural performances should be promoted in order to attract more people?

- ○ Yes
- ○ Not sure
- ○ No, cultural performances already attract many people
- ○ Other (Please Specify):

***7)** What do you think about the quality of cultural performances now?

- ○ Very good
- ○ Good
- ○ Not bad
- ○ Can use some improvement
- ○ Other (Please Specify):

***8)** If you had the chance, would you want to perform in a cultural performance?

- ○ Yes
- ○ Maybe
- ○ No
- ○ Other (Please Specify):

9) If yes, what kind of performance?

- ○ Theater
- ○ Dance
- ○ Playing any musical instrument
- ○ Other (Please Specify):

***10)** What is it about a cultural performance that intrigues you the most? (You may choose more than one answer)

- ☐ It's relation to Malaysian culture
- ☐ The way it is performed
- ☐ The music

Other (Please Specify):

Submit

APPENDIX B

Survey on the Malaysian Cultural Gateway System

This survey contains two (2) parts, ***Part A and Part B***. Please complete ***Part A*** before using the system and ***Part B*** after using the system. Have fun! ☺

PART A

Please circle your answers

1. How many different types of cultural performing arts are there?
    a. More than 5
    b. Less than 5
    c. I have no idea

2. Can you categories cultural performances, for example, dance, into smaller categories? Or are they all just the same – a cultural dance?
    a. Yes
    b. No, they are all the same – a performance

3. Do you think cultural performances have any history behind them?
    a. Yes
    b. Maybe
    c. No

4. Would you want to see a cultural performance?
    a. Yes
    b. Maybe
    c. No

5. Would you want to be involved in a cultural performance?
    a. Yes
    b. Maybe
    c. No

PART B

Please circle your answers

1. How many different types of cultural performing arts are there?
    a. More than 5
    b. Less than 5
    c. I have no idea

2. Can you categories cultural performances, for example, dance, into smaller categories? Or are they all just the same – a cultural dance?
    a. Yes
    b. No, they are all the same – a performance

3. Do you think cultural performances have any history behind them?
    a. Yes
    b. Maybe
    c. No

4. Would you want to see a cultural performance?
    a. Yes
    b. Maybe
    c. No

5. Would you want to be involved in a cultural performance?
    a. Yes
    b. Maybe
    c. No

6. When you first used the system, were you interested to find out more?
    a. Yes
    b. Maybe
    c. No

7. What do you think of the layout of the system?
    a. Interesting, I found it easy to read
    b. It was OK, but it could be better
    c. It was confusing / dull

8. Were the links easy to use?
    a. Yes, I could navigate through the system easily
    b. Not that easy, but I managed to find my way
    c. No, I got confused / lost

9. Did you find the features of the system easy to use?
    a. Yes, they were clearly stated
    b. Sort of, I managed to find them
    c. No, I couldn't understand what they were there for

10. Please tick on all the features of the system that you used:
    a. Watching the videos (where applicable)
    b. Video hotspots (linking by clicking on the shaded area in the video)
    c. Narration
    d. Trivial Facts
    e. Playing the music (where applicable)

11. Do you know what a digital story is?
    a. Yes
    b. No
    c. Maybe

12. Do you consider what you just viewed in the system as a story?
    a. Yes
    b. Maybe
    c. No

13. Would you consider telling your stories in the same way the system does?
    a. Yes
    b. Maybe
    c. No

Thank you for your time!