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Development of online platform for designing animation-based presentation aid (EZ presentation)

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ABSTRACT

Presentation skills are very important to deliver information effectively and to convince the listeners. Presentation aids such as presentation slides that are using multimedia animation have assisted the presenters a lot. However, the existing tools such as Microsoft Power Point were found to be dull, boring, confusing and complex. Thus, this paper presents the development of online platform for designing animation-based presentation aid namely EZ Presentation. This study was conducted in four phases; analysis, design, development and evaluation. During analysis phase, preliminary study was conducted to investigate on the necessity of developing the new system. Then, EZ Presentation has been developed using Macromedia Dreamweaver CS6 and Xampp for the database. Finally, system functionality test has been conducted among five multimedia practitioners. It was found that the functions that have been provided in EZ Presentation worked as the expected outcome.

1. Introduction

Presentation is an activity where the presenter describes something to a group of audience. This activity sometimes becomes a medium where the presenter convinces the listeners. Presentation skills nowadays are very important in most of the fields including education, business, communication and many more. The most important matter of presentation is to ensure the messages that have been delivered effectively understood by the audience.

Recent developments in multimedia techniques have significantly improved the quality of presentations. In tertiary education, multimedia presentation has been widely practiced among the students. Microsoft Power Point for example is a common tool that has been used to produce presentation aid. A study that has been conducted by Abusharib et al. (2015) on the limitations of Microsoft Power Point. The study which was conducted at Najran University College of Medicine in Saudi Arabia found that most of the respondents agreed that Microsoft Power Point made the presentation dull and boring. This finding is also supported by the study that has been conducted by (Jordan, 2014). Based on that limitation there has been much software that has been produced such as Prezi, PowToon, Emaze and few more. However, this software still got limitations in terms of limited template, unable to customize, not suitable for live presentation and others.

Therefore, this study presents the development of online platform for designing animation-based presentation aid namely EZ Presentation. This online platform aims to provide a medium for tertiary education students to create their own interactive multimedia presentation aid.

2. Literature review

A presentation is a process of presenting a topic to the audience. It is also known as a demonstration, lecture, or speech in order to notify or deliver information to people (Brooks and Wilson, 2014). To keep the viewer alert and entertained, we need to create an interesting and interactive presentation. There have been many tools provided in the Internet; most of them do not require any installation where the user can unleash their creativity using the medium provided in the website. Besides that, in order to create fresh looking content for user to impress their viewers, most of them use more than just slideshows to create presentation with the combination of sound, images, videos and animations.

In order to prepare for a presentation, it is better to apply multimedia approach as this approach combines the text, still images, animation, video and sound together. Lecturer should also foster student's awareness on their strengths in learning and their

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sense of ownership of their learning by allowing them to choose the products that they will create and the formats or modes of presentation they will use (Hénard and Roseveare, 2012). As a result, students can improve their presentation skills and quality, as well as the effectiveness of message delivery to the listeners.

Animation is known as order of pictures used to deliver the movement of the illustration (Jolly, 2003). One example of animation is cartoons that have been shown on television. Animation on computers is one of the components of multimedia presentation. It has been used in user interfaces for variety of purposes. Based on the study that has been conducted by Robertson et al. (2008), animation has helped in various angles including enhancing motivation and easing the understandable of difficult topic. Psychologically, the brain has strong focus to the moving objects in hierarchical pattern which is offered by animation (Ware, 2004). Presentation using multimedia animation will give many benefits to not only presenters but also to the audience. By having this better approach of presentation, audience's attention could be attracted. Higher quality and more effective delivery can be delivered by presenters while bigger amount of knowledge will be gained by the listeners (Xingeng and Jianxiang, 2012).

Currently in education, the usage of animation in classroom becomes popular. Most of the presenters in various fields have experiences in using animation, such as using PowerPoint. A lot of the contents have been developed for various disciplines or professional trainings. Basically, animation approach is not replacing the tradition presentation method. However, it provides a complementary method for representing simple or complex information simulations. By applying animation with traditional presentation approach, the deliverable of education contents could be clearer for the students (listeners) to understand (Xiao, 2013). As reported, GoAnimate.com has distributed their animation tools to 2,500 schools while YouTube has implemented animation in tutorials for delivering complex topics in classroom. Based on these initiatives, significant improvement has been produced as compared to the use of static displays for educational presentations.

Another study which was conducted by Greenberg and Zanetis (2012), various animation videos have given positive impacts to a large number of studies on grades and test performance of universities and colleges. Based on those studies, it can be concluded that students who were applying animation or video streaming obtained better results as compared to the students who were applying traditional face-to-face classroom. Other than that, animation could also encourage students to improve students' problem solving skills through peer collaboration where it encourages more teamwork, collaborative learning, as well as the awareness on the importance of multicultural.

3. Methodology

This study has been conducted in four phases; analysis, design, development and evaluation. During analysis phase, preliminary study has been conducted on the necessity of producing new platform for designing animation-based presentation aid. Then, the existing platforms for the same purposes were also studied; based on this preliminary study, the weaknesses of the existing platforms especially in terms of usability aspect. At the end of analysis phase, use case diagram which depicts the functions of the proposed system has been designed (refer to Fig. 1 as a multimedia presentation).

There are two main actors involve in this system, which are users and admin. Both are defined according to their specific roles inside the system. For users who are using the system, they need to register first and right after that, they can login to the website in order to access to the presentation editors. Meanwhile, admin will get the details of the new user. Admin will be able to modify the database, such as edit, copy or delete the details of the user which consists of user ID, username, password and email. As mentioned earlier, there are two types of presentation editors, which are text editor and video editor. User can choose either one to create their presentation. Once they have done the editing part, they can preview on what they have created, modify it and save the file. Users can download the file and save it to their computer. At the same time, admin will updates the database based on the new file created by the user.

Then, EZ Presentation has been developed based on the design that has been produced in design phase. This system was developed using Macromedia Dreamweaver CS6 and Xampp for the database. Finally in evaluation phase, system functionality test has been conducted to ensure the system works as expected. A checklist has been provided to five multimedia practitioners in testing the system.

4. Results and discussion

4.1. Preliminary study

As discussed in previous section, existing similar systems have been reviewed and most significant weakness found is on usability. The existing systems were found to be complex. An experimental study has been conducted on the usage of Microsoft Power Point among 30 Foundation students of Business Information System programme, Universiti Teknologi PETRONAS. During the experiment, students were given a task to produce presentation slide for free topics related to computer technology. They were given freedom to show their creativity in designing the slides. An assessor has been appointed to evaluate their slides. Based on that assessment, it was found that 23 of them (76.67%) obtained below that 50% marks. Follow up interview then was conducted to investigate on their bad performance. The result showed that they found Microsoft Power

Point to be complex for designing animation. They were also getting confuse with too many settings provided by the tool and this has resulted in lack of motivation in using the tool. Based on this issues that have been highlighted, new system has been developed to design animation-based presentation aid namely EZ Presentation. This system was developed on web-based platform.

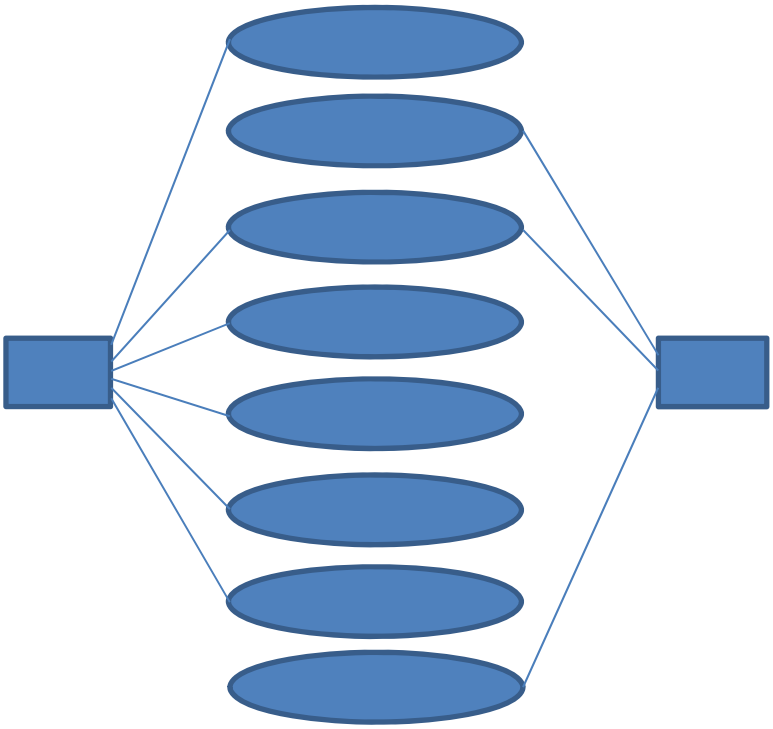

Fig. 1: User case diagram

4.2. EZ presentation

EZ Presentation consists of two components; management and presentation editor. Fig. 2 and Fig. 3 illustrate the user management component.

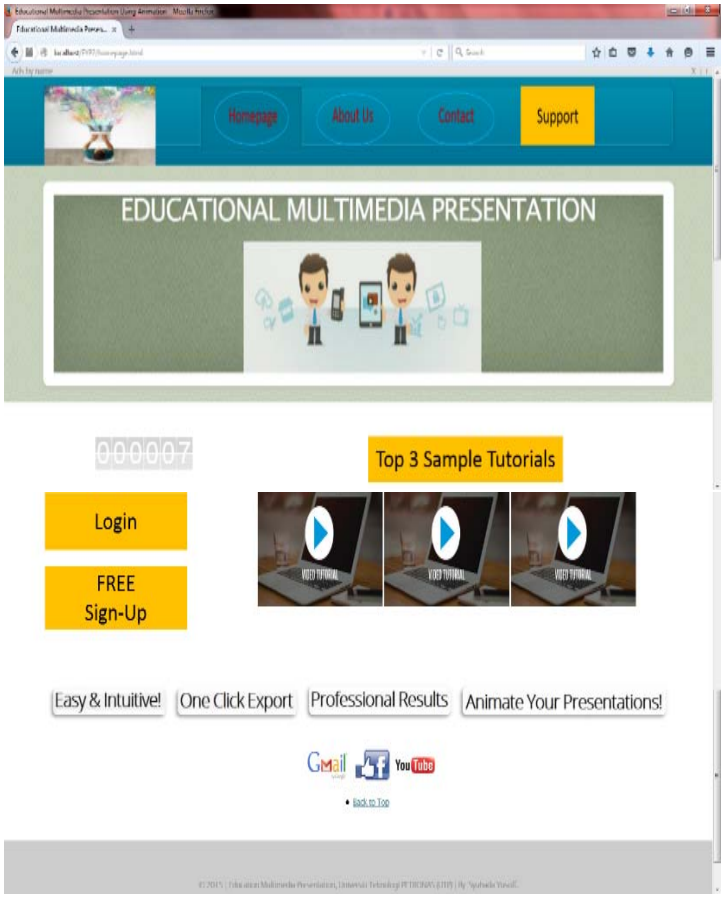

Fig. 2: System homepage

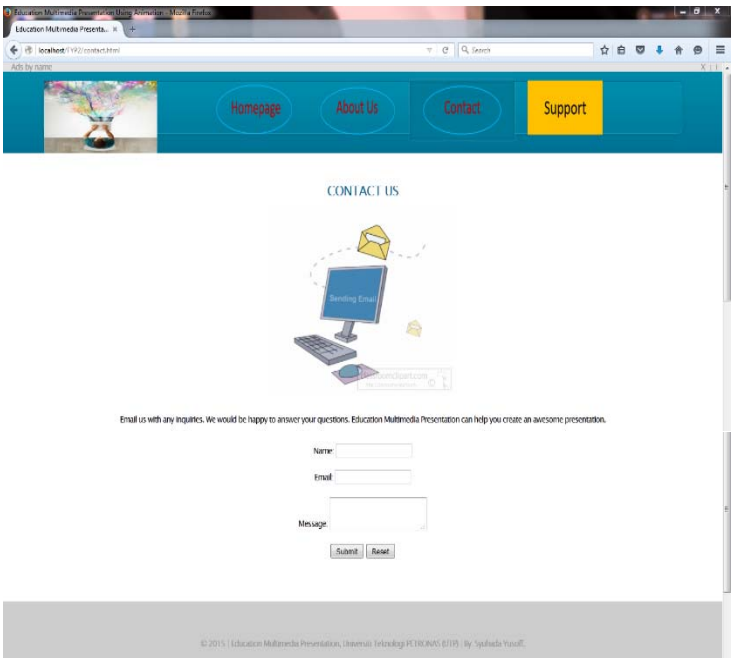

Fig. 3: Contact

EZ Presentation also provides support in helping the users to produce the presentation animation. The users can send any support requests to the administrator via email. Fig. 4 portrays the Support page. Finally, Fig. 5 shows the presentation editor page.

Fig. 4: Support

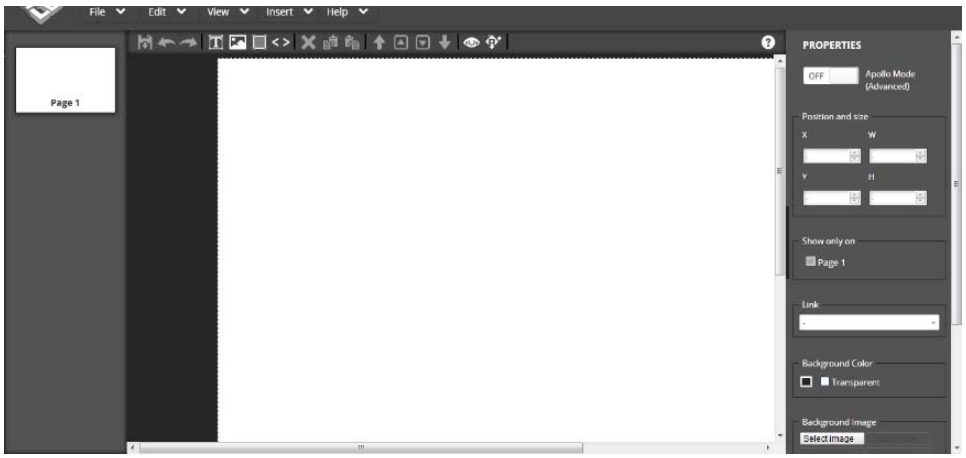

Fig. 5: Presentation editor

4.3. System functionality test

As mentioned in Methodology section, system functionality test was conducted among five multimedia practitioners. The finding of this test is shown in Table 1. Based on Table 1, most of the functions worked well as the expected outcome.

Table 1: Functionality test result

Functions	Expected outcome	Testing frequency	Testing results		Remarks
			Success	Failure	
Start-up					
"Login Button"	Link to other login page. It requires users to fill in their username and password	5	5	0	
"Sign-up" button	Link to other register page. Requires users to fill in their username, password and email	5	5	0	
Home page	Displays all the contents	5	5	0	
About us	Displays all the contents	5	5	0	
Contact	Displays all the contents	5	5	0	
Support	Displays all the contents	5	5	0	
Chat box	Displays all the contents	5	5	0	
Counter for website	Displays all the contents	5	5	0	
Presentation Editor-Text Editor					
All buttons except: Picture, Cut, Undo & Redo, Copy, Save buttons	Doesn't allow user to click on the button	5	3	2	Fail due to JavaScript, Php, Html error
Presentation Editor-Video Editor					
All buttons except: Browse button	Doesn't allow user to click on the button	5	3	2	Fail due to JavaScript, Php, Html error

5. Conclusion and future work

Preliminary study that has been conducted showed that students found Microsoft Power Point to be complex in preparing presentation slide for their presentation. They were also getting confuse with too many settings provided to design the animation. Thus, this study has proposed a web-based platform for designing animation-based presentation namely EZ Presentation. System functionality test has also been conducted where most of the testers found the provided functions worked well as the expected outcome.

For future work, the system can be improved by allowing collaboration works between users. Evaluation of the system can also be expanded by conducting usability test and user acceptance test. Finally, experimental design can also be performed to investigate on the effectiveness of EZ Presentation as compared to the existing similar systems.

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