

Let's Do Moviemaking: An iMovie Instructional Module for Deaf Individuals

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Abstract: Movie making on the computer is fun, but many deaf Macintosh users considered this difficult. Given that there are few modules that is specifically designed for the deaf Macintosh users, the module was created as a guide to help them enhance their homemade videos by using iMovie '09, the free moviemaking application. This paper describes a study on the effectiveness of an instructional module developed to familiarize deaf individuals to three specific video editing features available in iMovie '09 on the Macintosh computer. The research indicated that few deaf individuals were aware about iMovie and its possibilities for creating a homemade video in few simple steps. The module only focused on three new features that would help enhance their efficiency in producing homemade videos with this application. Since the module lacked the short, signed instructional videos in the module, the results also indicated the value of using sign language and visual cues. Sign language and visual cues are essential for deaf individuals because the sight is their primary sense instead of hearing. Considerations about the future developments of any kind of modules and implementations of these modules were also discussed.

Introduction

Electronic technologies have been revolutionizing exponentially in today's world. Technologies for deaf individuals have also improved drastically. The 20th century has seen the innovations of personal computers, pagers, and most recently, iPhones with video call capabilities, and video relay services that have helped break through some of the barriers which have hindered deaf individuals in communication. Also, there was a noticeable increase in the number of deaf individuals owning the Macintosh computers, known as the Macs (BigMac1985, 2009).

The possible reason is that the Mac has iLife bundle of free productivity applications including iPhoto, iMovie, iWeb, and iDVD. Another possible reason is that its alluring graphics appear attractive to the deaf individuals who rely heavily on the visuals.

Beskow, Engwall, Granström, Nordqvist, and Wik (2008) stated that they believed that the most natural modality to use is the visual, since speech is fundamentally audiovisual.

The focus of this study is the development of a guide for deaf individuals to maximize their efficiency with iMovie. iMovie is a moviemaking application available only on the Mac that provides the individuals the ease of making their home videos with a Hollywood style without the true Hollywood production procedures (Cohen, Wohl, Harrington, & Plummer, 2009). The purpose of this instructional design project was to develop and evaluate a web-based instructional module focusing on the three new features in iMovie '09 that specifically benefit the deaf Macintosh users. These three new features will benefit them by aiding them in adding the special effects and other enhancements, including the opportunity to create a clip by using the green chrome background feature, as well as fine-tuning their edits through Precision Edition feature. They also help the users increase their creativity and produce better home videos.

Background

Since the concept of editing and producing the home movies has become simpler and easier than before, people are now able to develop their own home videos on either Windows or Macintosh. However, Macintosh dominates the moviemaking market because of Apple's moviemaking software including: iMovie, a free application; Final Cut Express, a novice application; and Final Cut Studio, an high-end, professional application.

iMovie is available for free only on the current Macintosh computers. For those users who still have the older Macintosh computers like those with PowerPC processors, they can purchase iMovie, along with other iLife applications, at an affordable price from the Apple retail store, other authorized Apple resellers, the Apple Online Store, or the Mac App Store. It includes all the basic editing features such as trimming the clips, organizing the clips, and applying the effects, transitions and text on the clips. The current version of iMovie on the Macs today is "iMovie '11", part of the iLife '11 bundle (Apple, 2011).

The main reason why the module focuses on the three features in iMovie '09 is that these features will help enhance the production of homemade video clips that deaf Macintosh users can use without having to purchase a novice moviemaking application, Final Cut Express, or the high-end, professional one, Final Cut Studio.

It was noticeable that not a lot of deaf Macintosh users were aware about iMovie, the free moviemaking app, and its possibilities for creating a homemade video in few simple steps. Most deaf users are reluctant to use iMovie because either it is difficult to learn or that it is too complicated to use (C. K. Matusof, personal communication, January 19, 2011; A. Tsuji-Jones, personal communication, February 11, 2011). What they needed is some sort of an instructional module on iMovie, but at the same time, the module itself should not be too simple because they should be able to learn about the basic functions and features in iMovie by themselves. The module itself is focused on only three features

available in iMovie, given that its version is 2009 or later, which are (1) video effects, (2) green chrome background, and (3) Precision Edition. These three features in iMovie '09 provide more opportunities for the deaf individuals who are involved in digital moviemaking, either as a hobby or a side job, to bring themselves into the new level of creativity (Swan, Hofer, & Levstik, 2007).

The application of video effects provides various enhancements on the clips. For instance, you can add the video effect of antique to the clip to make it look like it was filmed in the old time, or the video effect of black and white to make it look like the old movies from early 1930's. The green chrome background features allows us to film the objects with a green background, then we can supplement the picture or another film into the background to make the clip look like it was filmed on location. The similar concept can be seen on local news, where a weather newscaster would point to the blank green background enhanced with a picture of the Hawaiian islands with their weather forecast showing information on tides, wind information, and so on. The Precision Edition is a powerful feature to use in iMovie because it allows the users to fine-tune their editing as they are able to pinpoint a certain point of the clip before the transition occurs and on another clip below to occur right after the transition. For example, you might want to have one camera shooting close to a child jumping off from the dock into the water and have it be transitioned to another clip of the similar child jumping off from the dock from the opposite view. To have the clips be transitioned effectively, you can enter the Precision Edition to fine-tune these two clips to merge together, making it look like the camera did successfully captured the child jumping off from the dock and switch to the other camera right before the child goes into the water.

The steps for these features are made to be relatively easy for most of the deaf individuals as it does not require numerous steps or textual instructions.

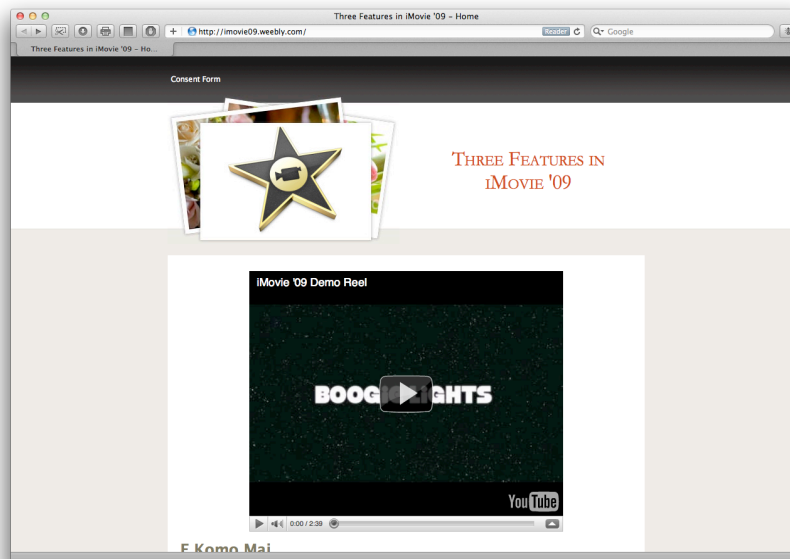


Figure 1. The screenshot of the instructional module on the Web.

Method

Given that this web-based instructional module (see Figure 1, previous page) seeks to increase the knowledge about iMovie for deaf Macintosh users, an approach is necessary to inquire the participants for their feedback on the module itself. The surveys include multiple choices, open-ended questions, and Likert-scale ratings. Pretest survey asked for demographical information while the posttest questionnaire provided a Likert-scale rating on the module and open-ended questions for their feedback.

Participants

The research study was open to the individuals who either own or have an access to a Macintosh computer. In addition, the participants must be deaf, either from birth or experience of hearing loss. The age requirement for participating in this research study was age 18 or older. There were no requirements for gender or educational background. Basic knowledge of iMovie was strongly recommended to participate, but not required as the study was open to all individuals, ranging from these who have no knowledge about iMovie to these who are intermediate users of iMovie.

Procedure

In the spring semester of 2011, participants in the research study were given the website address for the access to the web-based instructional module and asked to respond no later than late February. The participants would be taken to the consent form inside the module, thus requiring them to give their consent of participation in the study. Once they provided their consent, they were taken to the pretest survey to complete their demographical information. After they complete the survey, they were then guided to the pretest, then the three chapters with a quiz at end of each chapter, and posttest at the end of the module. An attitudinal survey would be provided to them once they completed the posttest. They were asked to evaluate the module itself and provide feedback on modifications or improvements necessary for the module.

Data were collected analyzed by screening through their attitudinal surveys and comparing the number of correct answers from their pretest and posttest. Responses from the participants' attitudinal surveys will be useful because they provide feedback necessary for modifications and improvements of the module.

The data would also provide several considerations useful for instructional designers who plan to create future modules for the targeted audience of deaf individuals.

Results

All responses were gathered from 10 participants through pretest, posttest, and attitudinal survey questionnaire. The data collected (see Table 1) from the participants revealed that

there were more participants who obtained at least the high school diploma (6 out of 10) than those who obtained either the bachelor’s (3 out of 10) or advanced degrees (1 out of 10). All participants increased their knowledge throughout the module as one participant who had the least knowledge about iMovie scored at a low score of two correct answers on the pretest, but after she went through the module, she gained her knowledge significantly as she scored correctly on all of the seven questions on the posttest. The module was proven to be successful as an instructional guide for deaf individuals, given that all participants who showed their willingness to participate were deaf.

Table 1. Educational background of participants.

H.S. Diploma	Bachelor	Master	Doctorate
6	3	0	1

Also, it was observed that educational level did affect the knowledge of the individuals, as several participants who obtained the high school diploma were able to score better at the pretest than those who obtained the bachelor’s degree.

The research study was open to any deaf individuals with no specific location or region, most of the participants were from Hawai`i while there were only two who reside on the mainland. One participant from the mainland has the highest increase of 71 percent from two correct answers out of seven on the pretest to the perfect score of seven correct answers on the posttest.

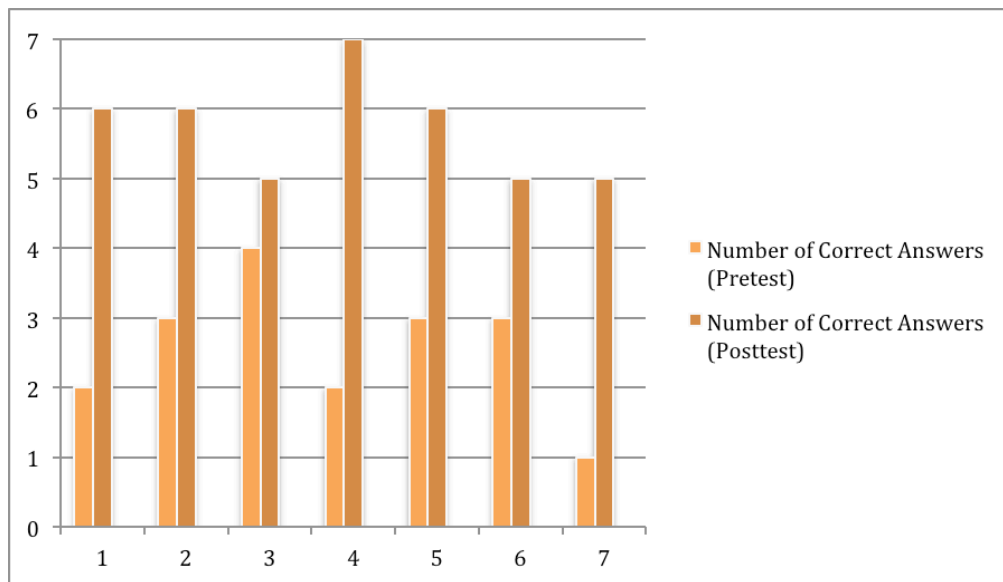


Figure 2. Number of correct answers on pretest and posttest.

Out of 10 participants, only six of them owned the Macintosh computers. Those who owned the Mac were able to comprehend the module better than those who do not. Those five participants who own the Mac were able to score better on the pretest than those who do not own a Mac. The reason why the owners of Macs were able to score

better was because they have the full access to the Mac and they have the familiarity with the iLife app bundle on the Mac. However, the result showed the overall increase of scores when compared between pretest and posttest scores (see Figure 2).

It was essential to mention that most of these participants who provided their feedback on the module suggested that the module should incorporate the video clips of a person signing out the instructions. One participant mentioned that “since English is a second language for most Deaf people, I would suggest that the entire module be signed in American Sign Language (ASL). As English is not a conceptual language like ASL is, most Deaf people have difficulty understanding English.” The instructional module did not include the signed instructional video clips because they require more time in order to be produced through the extensive process of editing and filming. The timeframe does not have sufficient time to allow the creation of instructional video clips in sign language.

Discussion

It is important to take the short, signed instructional clips into consideration for the development of any modules that target the audience of deaf individuals. As Beskow et al. (2008) stated that they believed that the most natural modality to use is the visual. The visual cues were critical for deaf individuals as they rely on the sense of sight with their eyes instead of the hearing. They use their eyes to see the visuals, read lips, and comprehend the sign language.

The results from the participants showed that the range from 30 years old to 49 years old were willing to participate in the research study more than any other age groups. This group also expressed their interest in learning about iMovie '09 and applying it to their own hobbies of producing several home videos.

It was taken into the serious consideration about the implementation of several instructional clips with sign language. But given the limitation of time in the timeframe of the research study, this instructional module did not have the short, signed instructional videos because it would have taken more time in order to develop, edit, and produce these kinds of videos. However, it had come into the realization that the deaf individuals in general would understand better if they saw the instructions being signed out instead of the textual information with visual screenshots from iMovie '09. The future modules to be developed specifically for the deaf individuals should take this into the consideration.

It was also essential to consider about the requirement of the Macintosh computer because several participants mentioned in the attitudinal survey questionnaire that they would understand the instructions better if they could work it with a Macintosh computer. Although this research study did not require the ownership of Macintosh computer, many felt that having one on the hand while participating would help participants understand the module better.

As for the development of similar modules in the future, the results of this study suggest that the considerations of implementing the instructions in sign language, improved readability, and clear visual cues were essential. The modules should include the instructions in sign language if they were developed specifically for the deaf individuals, along with a possibility of adding the subtitles into these instructional videos to make the module be open to the hearing individuals as well. Incorporating the sign language into the instructional videos would greatly improve the motivation and comprehension in the deaf Macintosh users because they will be able to understand the instructions in sign language much better than from the textual information.

Overall, most participants rated the module at least seven out of ten and mentioned that the navigation was easy to go through the module. One participant mentioned that it was really helpful to have the mini navigation map at the top of the module so the learner would know what would come up next after they complete reading or taking the exam on the page.

Conclusion

The purpose of this instructional design project was to develop and evaluate a web-based instructional module focusing on three new features in iMovie '09 that specifically benefit the deaf Macintosh users. The reason behind the development of this instructional module was to provide as a guide that targeted the deaf Macintosh users for the usage of iMovie '09. They were targeted because most of them were unaware about the features in iMovie '09 and how they could help them enhance with their home videos. Also, there were insufficient resources on iMovie '09 that benefitted the deaf Macintosh users, especially to those who were considering of making home videos.

The participants of the research study were strictly deaf and have the access to the Macintosh computer. The accessibility of Macintosh computer did not mean the requirement of ownership of a Macintosh computer as there were several other ways that the individuals could obtain the usage of the computer, probably at the school or at the library.

The results suggest a critical recommendation for implementation of the instructions in sign language. It was critical because many deaf individuals have lower reading comprehension level than their hearing peers. A participant from the research study made a good point by stating that English was considered as the secondary language for the deaf individuals, given that their primary language is the American Sign Language.

The future development of similar modules should take consider incorporating instructional videos filmed in sign language, clear visual cues, and improved readability on the module itself. Incorporating these elements into the modules would greatly enhance the learning in the deaf individuals, making them appreciate about their learning more.

Consequently, the instructional modules that were created for deaf individuals should be more deaf-friendly by taking the suggestions above into the considerations, including the signed short instructional videos and clear visual cues. However, it was possible to expand the usage of the module into the hearing Macintosh users, given the consideration of adding the subtitles into the signed instructional videos, having the textual information provided along with the signed instructional videos in the module, or incorporating the spoken language in parallel with the signed instructional videos as a background sound.

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