

eStudying for Electronic Education an Instructional Design Project

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Abstract: Traditional studying systems based on print media historically involved bookmarking, highlighting, and underlining passages for future reference. As technology changes the way we read information from print to electronic media, traditional studying practices will need to change as well. This study asked college students to use an electronic studying system with a variety of applications including GoodNotes, Web to PDF+, To PDF, Zotero, PaperShip, and Google Drive on a personal computer and an iPad. Six College of Education graduate students learned how to use the electronic studying system through an online instructional module. They then applied what they learned to their graduate coursework over a span of at least a week. Results from the pre and post-survey's showed that participants were not initially familiar with note-taking apps and after participating in the study, were considering changing their current note-taking strategies to better accommodate electronic materials. Survey results revealed a positive correlation between participant's previous note-taking strategies and most useful features in the note-taking app GoodNotes. Even though the electronic studying system was used over a limited time, participants found it very useful and some even purchased GoodNotes to use in the future.

Introduction and Background

At the University of Hawai'i at Mānoa, graduate students in certain fields are exposed to electronic documents and electronic reading materials and have varying note-taking practices. Some of these practices include; pen and paper, highlighting and underlining passages, or typing notes out using a word-processor. These studying practices are simply the way they have done it for years and what seems to work, but many are open to seeking new strategies that may be more useful when working with electronic materials. Therefore, the purpose of this instructional design project was to develop and evaluate a web-based module that instructs iPad users enrolled in graduate study on how to set up and utilize a studying system using a combination of apps. Ultimately the goal of this new studying system should help students with their studying practices and hopefully improve their note-taking and information organization. Table 1 shows a break down off all of the applications in the eStudying system:

Table 1. Applications of the eStudying System

App Name	App Type	Description	Cost
GoodNotes	Note-taking/PDF Annotation	Core app which stores and organizes all notes and documents	Free with some limitations that prevent eStudying productivity. Full version \$5.00
To PDF & Web To PDF+	File Converters	Can convert images and web-pages on the iPad to PDF format w/o using a desktop/laptop	Both free with some limitations that don't prevent eStudying productivity
PaperShip	Links Zotero & Mendely to iPad	Resources found and saved in either Zotero or Mendely can be easily accessed on the iPad	Free with created account
Zotero	Desktop application for online resources	Online resource organization for electronic research materials and easy resource citations	Free with created account
Google Drive/Dropbox	File sharing via cloud storage	Easy file sharing between desktop/laptop and iPad	Free with created account

GoodNotes is at the center of the eStudying system. The other applications in the system help optimize some of the main features in GoodNotes. GoodNotes is a digital bookshelf, that allows users to save and organize several digital notebooks in a respective digital folder. These notebooks can have text or images added by electronic means. Using a finger or stylus, users can draw and highlight on these digital pages.

The other five applications were selected to provide more functionality within GoodNotes. WEB to PDF+ and To PDF are used to convert images and web pages into PDF format. GoodNotes works best with PDF documents and the PDF format is an open standard format that provides interoperability when sharing files with others who may not be using the same applications or operating systems. PaperShip allows for convenient syncing of online research materials saved in Zotero via the user's personal computer. Resources opened in PaperShip can be easily imported into GoodNotes. Google Drive allows this same convenient syncing of other electronic documents that user's choose to import into GoodNotes.

The project aimed to find out if participants could make use of the eStudying system in their coursework. Participants were asked in a pre-survey about their current studying practices to get a clear comparison with their opinions on using the eStudying system. The post-survey asked participants if their studying practices had changed and how often they used the eStudying system during the project study.

Although the eStudying system is a bit different from traditional studying practices that use print media, the core purpose and functions are still very much the same. It focuses on document organization, document sharing and manipulation of documents (i.e. highlighting, underlining, margin notes, etc.). Surveys asked participants about these functions and what they found most useful before and after using the instructional module. Survey responses revealed how many

electronic documents participants encountered during and outside of the project study and provided information on how many courses used electronic documents.

Literature Review

There have been similar studies that evaluated the preference and effectiveness of using an electronic means for note-taking. One study that stands out involved the evaluation of eVerNotes, an application that facilitates verbatim note-taking and enables users to create multiple note' associations through an intermediate hierarchical structure (Palaigeorgiou, Desptakis, Demetradis & Tsoukalas 2006). The researchers developed eVerNotes because they realized that the quantity and quality of electronic publishing was growing and students were becoming more computer literate. Their study revealed that students already embedded electronic notes into their writing, read materials from computer screens, and sought out tools to help them manage their articles (Palaigeorgiou, et.Al. 2006). As early as 2006, students were looking for new tools to help manage electronic data. The eStudying system may be a useful set of tools that will facilitate this purpose.

Rockinson- Szapkiw, Courduff, Carter & Bennett (2013) did a comparative study on the influence of electronic versus traditional print textbooks on university students' learning. Although there was no difference in cognitive learning and grades between the two groups, the average scores indicated that students who chose e-textbooks for their courses had significantly higher perceived affective learning and psychomotor learning than students who chose to use traditional print textbooks. In another study (Kearney, 1994), students using the e-textbook compared to the printed textbook had increased internalization of positive attitudes toward the content or subject matter. The eStudying system has this same potential to increase positive attitudes toward content or subject matter as it converts traditional studying and note-taking strategies into an electronic format.

Bui, Myerson & Hale (2013), in their article on note-taking with computers, reported results consistent with Slamecka and Graf's generation effect and Conway and Gathercole's translation hypothesis, both of which predict that engaging in generative activity (taking notes on a computer) during note-taking improves memory and therefore is an improvement in the studying strategy. The eStudying system in this project was set up for use with an iPad. The many functions of the eStudying system incorporated with the iPad provide students generative activities that may foster improvement in their current studying strategies.

Design

The online instructional module was created using the free online webpage creator, Wix, chosen because of its affordability and design freedom. The drag and drop interface made it very easy to create the instructional module while still allowing much design freedom in regards to color choices, graphics placement, and navigation.

Certain features like the image galleries were very easy to add to and make changes. These galleries were used as the application instructional slides in the module and were the focal point of the application tutorial pages. Other key features that were easy to use and add to the instructional module were the video tutorial links, consent form and survey links. The tutorial slides were the main focus of the module and included step-by-step instructions on how to complete specific tasks using each of the six eStudying system applications (GoodNotes, Web to PDF+, To PDF, Zotero, PaperShip, and Google Drive). They were designed to have participants accomplish these tasks while navigating through the tutorial slides. Because participants may not use the same operating systems as the module developer, it is possible participants saw different views of the tutorial slides, although no one indicated this was an issue. In future development, this should be better taken into account.

The surveys were created in the free version of SurveyMonkey. The pre-survey consisted of nine questions and the post-survey consisted of 13 questions. Due to the limitation of only ten questions per survey in the free SurveyMonkey account, the post-survey was split into two parts. Part 1 focused on nine questions concerning the content of the instructional module. Part 2 focused on four questions concerning the use of the instructional module as a teaching tool.

The instructional module was designed with Gagne's (2004) domains of learning in mind. The use of intellectual skills were needed. More specifically, participants needed to discriminate between what they saw in the tutorial screenshots and what they saw on their own personal devices. Psychomotor skills were relied up on when using the tutorial slides. Each slide described a set of information encouraging participants to explore specific tasks for each of the applications. Learning while doing is a base concept for the eStudying system and a major reason why the system has the potential to be an effective, new studying strategy. Using cognitive strategies was taken into account by, having the GoodNotes tutorials be the starting point as the other five applications provide support to GoodNotes. Without the context of understanding what GoodNotes can do and where it stands in the eStudying system, the other five application tutorials may have been difficult to understand.

Methodology

Emails were sent to select graduate students enrolled in the College of Education (COE) at UH Mānoa. Of about 30 students who were emailed, seven responded and agreed to participate in the study. Of the seven participants, six completed the study and submitted responses for the post-survey. The initial goal was to get 15-20 students to participate. Finding willing participants was more difficult than expected, perhaps because many did not own or have access to an iPad. IRB approval, the participant consent form, and copies of the pre and post surveys can be found in Appendices A through D.

The project aimed to examine the need among graduate level students for an electronic based note-taking/studying system for use with, electronic documentation in their coursework. Therefore, participants were not selected based on gender, age, or ethnic background. While

participants were asked about their level of proficiency using an iPad in the pre-survey, they were only required to have access to one for duration of the study in order to participate.

After the initial email was sent out requesting participation in the study, a follow up email was sent to those who responded confirming their participation. The follow up email contained instructions for an alternative download source to the GoodNotes app. The developers of GoodNotes had replaced the free version with an updated paid version for the iPad iOS7 operating system. The change occurred after the initiation of this study and development of the module. The alternative download method was much more complicated than a typical download from the Apple Store, yet it was the only way to proceed with the study without major revisions to the instructional module and project plan.

The instructional module was designed in a way that participants could explore each of the six apps at their leisure. The home page provided participants with a brief introduction about the eStudying system. They were then directed to view the consent form and fill out the pre-survey, then proceed to the GoodNotes tutorials, the core app of the system. The other five app tutorials could be reviewed in any order after GoodNotes, as long as participants viewed them all. The final link in the navigation menu wraps up the instructional module and asks participants to apply what they have learned from the module to one of their graduate courses. After doing so for at least one week, they were instructed to come back and fill out the post-survey.

Findings/Results

A comparison of the responses from the survey's revealed a positive relationship between participant's current note-taking practices and GoodNotes features they found most useful (see Figures 1 and 2). This project revealed a positive relationship between non-iPad studying practices and the eStudying system.

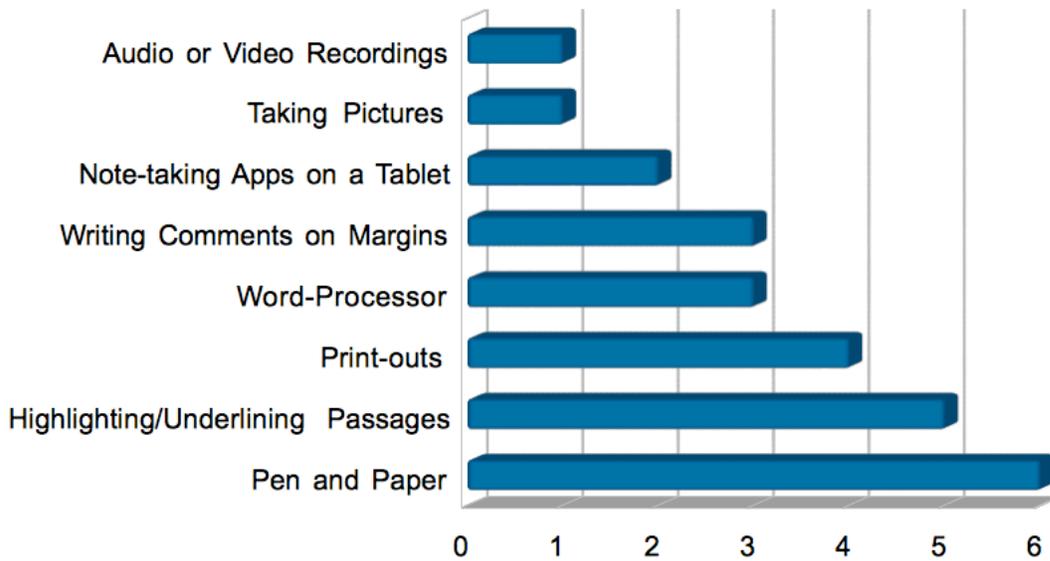


Figure 1. Participant reports of note-taking practices prior to using the eStudying instructional module.

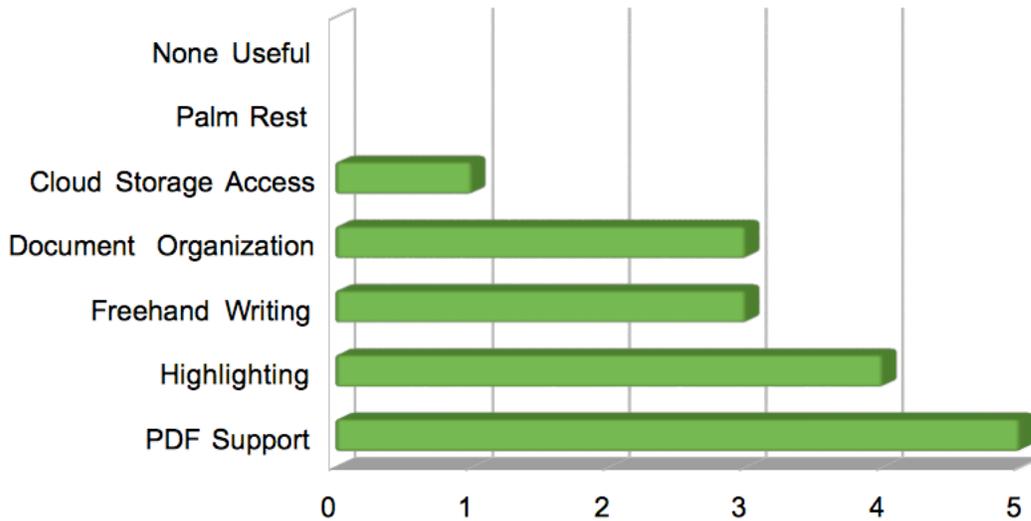


Figure 2. Participant responses for features of the GoodNotes app they found to be most useful while using the eStudying system.

According to the participant responses in Figure 1., before using the eStudying system their note-taking practices focused on writing out notes, highlighting, and underlining passages on document print outs. Figure 2. shows that participants found PDF support, highlighting, freehand writing, and document organization to be the most useful features in the GoodNotes app.

As shown in Figure 3., graduate students encounter many electronic documents throughout their coursework. One participant stated that they used 11-15 electronic documents per course, while the other six used 16 or more. While participating in the study, two participants said they used 1-5 e-documents, two others said they used 6-10, and the last two said 16 or more.

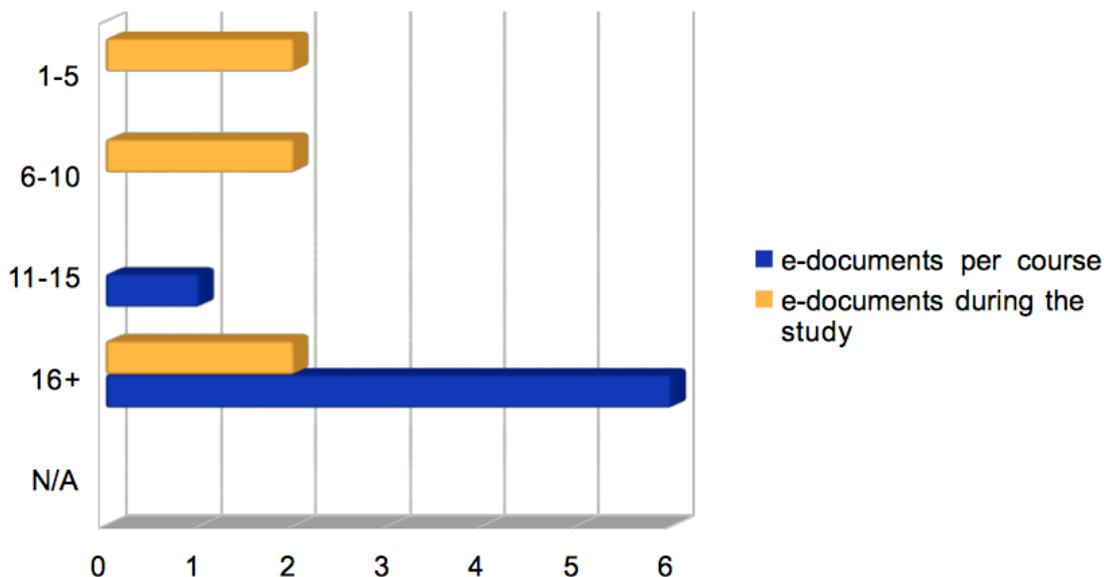


Figure 3. Participant reports on number of e-documents encountered in coursework in general (blue) and during the course of the study specifically (orange).

The pre-survey asked participants to describe their satisfaction with current note-taking/studying strategies. Two said their strategy was adequate for their needs, one said they needed a new strategy, and four said they have a strategy but are always seeking new ones. After completing the study, all six stated that their note-taking/studying strategies changed and they were using what they learned from the instructional module. The post-survey showed six participants would consider purchasing the full version of GoodNotes after using the free version in the study. In fact, some stated that they had already done so upon completing the study.

The second part of the post-survey asked participants about their perceptions of the instructional module itself. Of the six responses, five said that it “works well,” while only one said that it “needs a few changes.” No one responded with, “it needs significant changes” or “it needs to be completely revamped.” When asked what they really liked about the eStudying module, two said navigation. Two others said they liked the content. Readability and multimedia examples received one response each, while task completion, links, and the amount of information did not receive any responses.

While participants found the instructional module useful in its current format, they had some suggestions to help improve the module for future use. Some suggestions were:

- to add an “estimated time to complete” for each of the application tutorials.
- to have the application tutorials in a specific order instead of having users explore each of them as they wished
- adding more interactivity (i.e. activities for each application with answers and “how to's”)
- to include a pretest for each application to provide more direction in the module

Implications/Discussion

The eStudying system was well received based on the survey results. Participants liked working with the eStudying system because it was basically their same studying/note-taking strategies in electronic format. As the printed documents once used in coursework have changed over to electronic format, the traditional studying practices must also change. With more electronic documents being used in graduate courses, the need for an eStudying system seems to make sense.

Participant responses shown in Figures 1 and 2 solidify the notion that the eStudying system is an electronic conversion of traditional studying practices. Before using the eStudying system participants would write on print out documents and/or highlight and underline passages. While using the eStudying system, they ended up using these same techniques in GoodNotes. Instead of paper, they were using PDF documents. Instead of a pen and highlighter, they used their fingers or a stylus to emulate freehand writing with a pen and a digital highlighter. It is uncertain whether or not participants recognized this correlation while using the GoodNotes app. Comparing their survey responses makes this relationship clear.

The instructional module was created in a way to allow students to explore each application on their own after familiarizing themselves with GoodNotes. The hope was that once participants used GoodNotes, each of the main functions explained in the GoodNotes tutorials would be further explained by using each of the other five applications. Since each of the other five applications surround GoodNotes, no particular order for participants to learn them was set. Thinking now from an instructional standpoint, how the information is used and how the information is learned are two very different things. Just because participants may not use what they learn from the module in a particular order, having the different applications in a particular order would help foster their learning of all six applications.

What is unclear based on the survey results is whether or not all studying/note-taking needs are being met by the eStudying system. The commonly used strategy of highlighting and underlining passages seems to continue to work well, but are there other needs not being satisfied that could be satisfied by the eStudying system?

Participants did state that, “the combination of the apps worked well together” and, “this was a very informative and relevant module.” Further study is necessary to find out to what degree the eStudying system is effective and what potential improvements could be made. The basic concept of note-taking is very simple, but could an electronic studying system provide more options beyond a conversion of traditional note-taking practices?

Conclusion

The original need for the eStudying system came from a personal need to improve the current strategies in dealing with graduate level coursework. This need was based on coursework through the College of Education's Educational Technology program at the University of Hawai'i at Mānoa. Now that other graduate students have learned about the eStudying system and have used it, their responses confirm that there is a need for a new, electronic studying format. The participants in this project were of only one small section of the UH Mānoa campus. There are other graduate students who probably face the same increasing number of electronic documents being implemented in their coursework. While this implementation increases, the need for electronic based note-taking/studying systems may increase. The eStudying system is hopefully a step towards a useful solution. Not only do students have to realize this conversion from traditional practices to new electronic based practices, instructors need to as well. Why add so many more electronic documents and electronic media, without providing students proper suggestions on how to manage all of this electronic information? Some instructors in applicable programs do, but there are many more that don't. As instruction is changing and evolving towards an electronic age, studying practices must do so as well in order to maintain a balance between teaching and learning.

References

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Appendix A: IRB Application

Application Exempt Status for Human Subjects Research Project Description

1. *Briefly describe the purpose and objectives of your research in non-technical language.*

The purpose of this instructional design project is to develop and evaluate a web-based module that instructs iPad users enrolled in graduate study on how to set up and utilize a studying system using a combination of apps. Ultimately this new studying system will help students with their studying practices and hopefully improve their note-taking and information organization.

2. *Briefly describe your research design and methods.*

An online pre-survey will be accessed by participants who volunteer to be part of the study. The pre-survey will gather information from participants, focusing on questions related to their current studying practices, their reasoning for using these strategies, and what their studying needs are. Participants will then be asked to review an online learning module. It will be designed using a free online web site designing tool, Wix. The module will feature a handful of pages, each page describing how to use iPad apps and corresponding desktop applications as a part of an eStudying system. The applications to be included in the module are: GoodNotes, To PDF, WEB to PDF+, Google Drive/Dropbox, PaperShip, and Zotero. Review of the module should take about an hour and a half. Following the module review, participants will be asked to use the apps as part of an eStudying system for a minimum of one hour a week over a span of 3-4 weeks, after which participants will take an online post-survey that will revisit similar questions as stated in the pre-survey but with relation to their experiences using the eStudying module. The post-survey will also ask questions which will help in refining the learning module.

3. *For research being conducted as “educational curriculum,” describe how the activity being studied is part of “normal” educational practice.*

N/A

4. *If you are using existing data, describe the source(s), the extent to which individuals are identified, and how you have access to the data.*

N/A

5. *If your research will be observational, describe how the observations will be recorded (e.g., audio, video, field notes). If you are planning to audio the participants, please see Section IV.*

N/A

- a. *If your project involves videotaping, please fill out an application for non-exempt review.*

The project does NOT involve videotaping participants

6. *Describe your participant population (e.g., age, as special needs, etc...). How will you identify, contact and recruit participants? How many participants do you intend to involve in your research? How will you explain your research to participants?*

I am hoping to recruit between 10 – 20 graduate student participants from the College of Education program at UH-Mānoa via email contacts and word of mouth. These participants will not be gender or age specific, but all will be over age 18. Peers in my Educational Technology program will be a primary recruitment pool. I will send an initial recruitment email to them (see attached) that will provide a link to the consent form that they can access if they are interested in more information and in possibly participating. They also can forward that email to others they know and believe might be interested.

Participants who have expressed interest and imply their voluntary consent to participate by clicking the link to the pre-survey from the consent form, will be asked to verify that they are at least 18 and currently enrolled in a graduate program at UH-Mānoa. They will also be asked if they have regular access to an iPad, as this is essential for their full participation. These participants will have varying experiences with note-taking (e.g. using a computer, tablet, or pen and paper.)

The research is explained in the consent form, but if participants need more information, they can call or email me and I will answer any questions they have and explain further.

Appendix B: Participant Consent Form

Consent to Participate in Research

The University of Hawai'i at Mānoa

Title of Project: eStudying for Electronic Education: an Instructional Design Project

Principal Investigator: Kelson Ho'omano Pakele, Graduate Student
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Introduction

My name is Ho'omano Pakele, I am graduate student at the University of Hawai'i (UH). As part of my degree program, I am conducting a research project.

The purpose of this instructional design project is to develop and evaluate a web-based module that instructs iPad users enrolled in graduate study on how to set up and utilize a studying system using a combination of apps. Ultimately this new studying system will help students with their studying practices and hopefully improve their note-taking and information organization.

I am asking you to voluntarily participate in this project because you are at least 18 years old, you are enrolled as a graduate student at UH Mānoa and you are an iPad user.

Participation in this project requires you to have access to an iPad throughout the study, which will last approximately one month. If you do not have access to an iPad, I thank you for your interest, but you will not be able to participate. If you have access to an iPad, please read on for more details about this study.

Project Description – Activities and Time Commitment

As a participant, you will be asked to take a pre-survey asking you questions about your current studying strategies, your reasoning for these strategies, and what your studying needs are. The survey questions are mainly multiple choice. However, there will be a few questions where you may add an open ended response. The survey is accessed on a website which I will provide you with a link to. After completing the pre-survey, you will be asked go through an online learning module that teaches you how to use a series of iPad apps and corresponding desktop applications. The applications you will use include GoodNotes, To PDF, WEB to PDF+, Google Drive/Dropbox, PaperShip, and Zotero. The applications related to this study are all free. You will not be asked to purchase anything for participating in this study. I will provide you with a link to the online learning module, which should take about 1 1/2 hours to review. After a review of the apps, the online module asks you to use applications in your current course work over the span of 3-4 weeks. During this time you may use the learning module as a guide, teaching you about the applications, how to use them, and suggestions for how to apply them to your coursework. Over these 3-4 weeks, you will use the learning module and mobile apps at your convenience for a minimum of one hour a week. You are free to use the system for more time than that should you wish to do so. At the end of the study you will be asked to complete a post-survey that again asks questions about your studying strategies as well as for feedback on the module and the usefulness of the study strategies.

Completing the online pre-survey and post-survey will take about 15 minutes each. The initial review of the learning module will take approximately 1 1/2 hours. Participants are then asked to use the apps as part of their course studying strategies for at least one hour each week over the course of 3-4 weeks. Pre-survey, post-survey, and module review will take place online. Use of the apps will take place at the participants' convenience using the applications on their individual iPads and personal computers.

Benefits and Risks:

A direct benefit of participating in this study is that you will get information about free apps that are available for your iPad and learn how they can be used in helping you to study. Participating in this project may provide you with an alternative studying strategy involving the use of an iPad and some mobile apps. There is minimal risk to you in participating in this project.

Confidentiality and Privacy:

The only information I will ask of you is your name and email address. This is for the purpose of keeping in contact with you throughout the study and to send you the URL links to the online learning module to ensure you can access it at any time during the study. This information will not be used for any other purpose and will not be linked to any of your survey responses. Please do not include any personal information in your survey responses. You will be asked to provide a pseudonym (fake name) on the pre and post survey that can be used for matching purposes only. You are asked to create your pseudonym using the first name of a fictional character you identify with and the last two numbers of your home town zip code. For example, I may identify Egon Spengler as a famous person and my home zip code is 96720. Therefore, my pseudonym would be Egon20. You would use this name on the pre and post surveys.

Right to Ask Questions:

Please contact Ho'omano Pakele (me) at (808) 896-2769 or at kpakele@hawaii.edu with questions or concerns about this study. For any other questions or concerns you may contact my Advisor, Dr. Christine Irvine at (808) 956-3910 or at sorens@hawaii.edu. If you have questions about your rights as a research participant, you may contact the UH IRB Human Studies Program at (808) 956-5007 or uhirb@hawaii.edu.

Voluntary Participation:

You can freely choose to take part or to not take part in this research study. There will be no penalty or loss of benefits for either decision. If you do agree to participate, you can stop at any time with no penalty or loss of benefits. If you feel uncomfortable answering any of the questions on the surveys, you may skip those items.

If you choose to participate, simply use or copy the link to your browser address bar below to access the pre-survey. Accessing the pre-survey link and completing and submitting the survey implies that you have read the information in this form and consent to take part in the research. Please keep this consent form for your records or future reference.

Pre-survey link:

<https://www.surveymonkey.com/s/TXVXNNK>

Emails to graduate student peers will be used to solicit voluntary participants for this study. Emails would be sent to contacts known by the researcher but may be forwarded to others.

Appendix C: Pre-Survey

eStudying for Electronic Education: an Instructional Design Project
Pre-survey Questions

I verify that

I am at least 18 years of age

I am a graduate student enrolled in a program in the College of Education

I have access to an iPad to use as I participate in this study

I voluntarily agree to participate in this study and understand that I may withdraw at anytime with no penalty

Before you begin, please create a pseudonym (fake name). You will use this name on the pre-survey and post-survey so that your responses can be matched. To create your pseudonym, you will use the first name of a fictional character you identify with and the last two numbers of your home town zip code. For example, I may choose Egon Spengler and my zip code is 96720. My pseudonym would be Egon20. You will use the same name on both pre-survey and post-survey.

Pseudonym by which my pre-survey and post-survey responses can be matched is:

Please fill out each question to the best of your ability and understanding. Completion of this survey is completely voluntary and your responses will be kept confidential. Results are not linked to any personal information or any information that could identify you. If you do have questions or concerns about this survey, please contact me at: kpakele@hawaii.edu. Enter "eStudying – Pre-survey" as the subject and I will respond right away. Mahalo.

1. How would you describe your current, personal studying/note-taking practices?

- a. Adequate for my needs
- b. I need a new studying strategy
- c. I have my own strategy, but am always looking for new ones

2. Which of these best describes your current, personal studying/note-taking practices? (select more than one if necessary)

- a. pen and paper
 - b. computer notes (using a word-processor)
 - c. print outs
 - d. highlighting/underlining passages
 - e. writing comments on margins
 - f. taking pictures
 - g. audio or video recordings
 - h. note-taking apps on a tablet
3. If you selected "h," note-taking apps, please list which app(s) and for what platform (e.g. iPad, Android)?
4. Why is this your current, personal studying/note-taking practice? (you can choose more than one if necessary)
- a. this is how I've done it for years
 - b. this is the best and only way that works for me
 - c. I didn't know there were other ways
5. How many of your courses use electronic media (e.g. PDFs, Google Docs, websites) for homework or otherwise?
- a. 1
 - b. 2
 - c. 3
 - d. 3+
 - e. N/A - None
6. If your courses do use electronic media, roughly how many electronic documents do you come across per course?
- a. 1-5
 - b. 6-10
 - c. 11-15
 - d. 16+
 - e. N/A
7. Do you use an iPad for your course work beyond just web-browsing?
- a. yes
 - b. no
8. How proficient are you with your iPad? (e.g. downloading apps, exploring new apps, most features and functions of your device)
- a. Very proficient
 - b. Somewhat proficient
 - c. average
 - d. Not very proficient
 - e. I need someone to show me how to do things on my iPad

Appendix D: Post-Survey

eStudying for Electronic Education: an Instructional Design Project
Post-survey Questions

Before you begin, please use the same pseudonym (fake name) that you created in the pre-survey. As a reminder, you will use this name on the pre-survey and post-survey so that your responses can be matched. To create your pseudonym, you will use the first name of a fictional character you identify with and the last two numbers of your home town zip code. For example, I may choose Egon Spengler and my zip code is 96720. My pseudonym would be Egon20. You will use the same name on both pre-survey and post-survey.

Pseudonym by which my pre-survey and post-survey responses can be matched is:

Please fill out each question to the best of your ability and understanding. Completion of this survey is completely voluntary and your responses will be kept confidential. Results are not linked to any personal information or any information that could identify you. If you do have questions or concerns about this survey, please contact me at: kpakele@hawaii.edu. Enter "eStudying – Post-survey" as the subject and I will respond right away. Mahalo.

Section 1: The eStudying System

1. After using the eStudying module, how would you best describe your current, personal studying/note-taking practices?

- a. They have not changed since using the eStudying module
- b. They have changed and I now use what I have learned from the eStudying module
- c. I am still searching for a new studying/note-taking strategy

2. If you chose "c," what are you looking for in a studying/note-taking strategy?

3. Within GoodNotes, what feature do you find the most useful? (select no more than 3)

- a. Highlighting
- b. Freehand writing
- c. Palm protection
- d. PDF support
- e. Cloud Storage access
- f. Document organization
- g. Not listed _____
- h. I found none useful

4. During the time of the study, roughly how many electronic documents did you come across in the courses you used the eStudying system with?

- a. 1-5
- b. 6-10
- c. 11-15
- d. 16+
- e. N/A - None

5. Throughout the study, how often did you use the eStudying system?

- a. less than an hour a week
- b. between 1 and 3 hours a week
- c. 4-6 hours a week
- d. more than 6 hours a week
- e. I did not use it at all after going through the modules

6. After using the eStudying system, please indicate which apps you would consider purchasing.

- a. To PDF
- b. Web to PDF
- c. GoodNotes
- d. Another Note-taking app: _____
- e. I would not consider purchasing any of them

7. After using the eStudying system, how likely are you to use it even after this study is completed?
- a. very likely
 - b. somewhat likely
 - c. not very likely
 - d. not at all likely

8. Throughout the eStudying system, indicate how easy to use you found each of the apps using the following scale:

very easy to use somewhat easy somewhat difficult very difficult

- a. To PDF
- b. Web to PDF
- c. GoodNotes
- d. Google Drive/DropBox
- e. I encountered no difficulty using these apps

9. For any apps you found somewhat difficult or very difficult to use, please explain why.

10. Are there any other comments you would like to make about the apps?

Section 2: The Learning Module

1. Please indicate which of these areas of the eStudying web module need improvement using the following scale.

Works well Needs a few changes Needs significant changes Needs to be completely revamped

- a. navigation
- b. content
- c. task completion period
- d. readability
- e. multimedia examples
- f. links
- g. amount of information

2. Name ONE thing you really liked about the eStudying module and why. (the learning web module, not the eStudying system)

3. What recommendations would you make to change the web module?