

Fostering Collaboration via Google Apps

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Abstract: Educators in the state of Hawai'i currently use the Lotus Notes email host program as a method of communication and collaboration. One public elementary school in Hawai'i, on the island of Maui, is currently in the process of replacing Lotus Notes with Google Apps for Education. More than just an email system, web-based Google Apps for Education offers an easy way to share documents, work together virtually in real-time, and much more. Educators requested assistance on learning the basic necessary skills for Google Apps for Education, in particular on Gmail and Google Docs. To meet that need, an online training module was designed and delivered through a Weebly website that utilized an interactive tour, instructional videos, and step-by-step instructions with screenshots that are printable documents. Participants were asked to complete a challenge at the end of Module 1 & 2 as a way to reinforce and assess what was learned. Survey results indicated that all participants have considered using Gmail and Google Docs as a way to collaborate with their fellow colleague.

Introduction

For the purpose of school-wide planning and coordination, schools are currently looking into the use of the Google Apps in education. Educators are largely unaware that Lotus Notes currently used by the (HIDOE) may eventually be replaced and shift over to Google systems. Within the educational system, educators are presumed to be able to learn how to use new technology resources, such as Google Apps.

As educators are expected to become familiar with the tools Google provides, the need for an innovative and self-paced form of instructional training module was highly desired by a particular elementary school in Hawai'i. One was developed to help educate Hawai'i K-5 educators on the basic Google features in particular Gmail and Google Docs. The purpose of this instructional design module was to design and evaluate the content of a Weebly-based online instructional training module for K-5 educators to learn the basics of the Google Apps features to foster collaboration for school-wide planning in an online environment.

According to the 2010 Horizon Report, teachers increasingly recognize the importance of collaboration skills and are finding that online tools to support collaboration provide them and their students with

opportunities to work creatively, develop teamwork skills and tap into the perspectives of people around the world with a wide range of experience and expertise that differs from their own. By moving to a platform like Google Apps, students, teachers, and staff will be able to share ideas quickly and efficiently, and get more done as they will have access to the same powerful communication and sharing tools. Promoting collaboration in an online asynchronous discussion will necessarily involve an appreciation for the context in which individuals interact in virtual environments (Murphy, 2004). With everyone using the same platform, technology will be a facilitator rather than a barrier to collaboration and learning.

Methodology

Instructional strategies

The ADDIE (Analysis, Design, Development, Implementation and Evaluation) model for instructional design was used (Peterson, 2003). The web-based format for the module was chosen to allow the participants to easily access the informational materials at the time and place most convenient to them.

The module was separated into two sections: Gmail and Google Docs. The module was structured to be self-paced and support the various learning styles of the participants. The learning options that were given included: (1) interactive tour of Gmail and Google Docs; (2) YouTube and Vimeo videos; and (3) Printable instructional step-by-step handouts with screenshots.

The participants were asked to apply the basic knowledge learned from each module to complete the challenges that followed. Open-ended questions within the challenges asked the participants to consider ways Google tools might be used in their own locus of control.

Technologies

The instructional training module was developed and hosted by Weebly, a free website builder. Weebly was selected because of its simple drag and drop features, and that no HTML or significant technical skills were required. The module and its components were accessible from a personal laptop, desktop computer, as well as on a Smartphone or tablet device.

The Weebly site consisted of the following sections: (a) Home; (b) Background; (c) Consent Form; (d) Instructional Module-sub-tabs (*Procedure, Module 1-Gmail, and Module 2-Google Doc*); (e) Post-Instructional Survey; and (f) About Drive. The module was accessible through the following url: <http://googleapp.weebly.com/>

Participants proceeded through a series of steps embedded in the Weebly site that included instructional

step-by-step documents via Google Docs, YouTube and Vimeo videos, and pre- and post-surveys via Google Form. The videos embedded were developed with Microsoft PowerPoint 2003 and the slides were recorded with Screencast-O-Matic. The audio narrations were separately recorded with a iPhone memo application and then inserted into the slides. The YouTube videos were converted with Vimeo to allow access within the DOE server.

Participants

Over 30 participants were interested in participating in the instructional training module, as they were introduced to the idea during a grade level staff meeting. The educators were informed that their particular school would be exploring the use of the Google Apps features, in particular Gmail and Google Docs. As a guest presenter, the educators saw a brief glimpse into what they could do with Google. A copy of the consent form was given to each educator explaining the purpose of the instructional training module.

According to the purpose statement, this study was aimed towards Hawai'i, K-5, public school educators. However, the study was altered to include a bigger participant pool which allowed educators within K-12 to participate. The reason for this change was that a majority of the participants wanting to participate in the study had backed-out from the initial recruitment. The time allotment given to complete the instructional training module was conflicting with other deadlines that the participants had to meet.

The participants of this particular study were K-12 public school educators in Hawai'i who use Lotus Notes, but not were not familiar with the basics of Gmail and Google Docs. In all, thirteen public school educators had agreed to participate, only one participant was a male. Participant ages ranged from 22-61+ years old and one participant had taught for over 28 years. With regards to learning about Google, 4 out of 13 participants had some form of training before taking the instructional training module and only 1 participants had no experience at all.

Two subject matter experts (SME) were asked to review the site before it was shared to the participants. The participants were directed to a link in which they would evaluate the module.

Limitations

Some limitations to this study included that only data from one school site was gathered, there were a limited number of participants, and results might not be representative of a larger population. A bigger sample size could have been employed if the study had included other public school educators interested in Google Apps.

Data Collection

Quantitative and qualitative data were collected using Google Forms to design the pre- and post surveys, in which the responses were saved and compiled to a Google Spreadsheet. To ensure that the surveys remained anonymous, participants were asked to create a code and enter the same code for both the pre- and post surveys.

The preliminary survey consisted of four demographic questions, one question on comfort level on using computers, three questions based on the participants' experience with Lotus Notes and Google Apps, and two open-ended text questions. The demographic questions that were asked in the survey included the participant's age, sex, grade level, and years of experience in the teaching field.

The post survey asked for the participants' opinion on the effectiveness of the instructional training module. The questions were based on the 5-point Likert scale with one being strongly disagree and five strongly agree. Participants also responded to two open-ended questions that asked them to describe the positive aspects of the module and whether the module enhanced or affected their understanding of Google Apps.

One problem became evident in the data collection phase. There were 13 responses to the pre- survey and 16 responses to the post survey. Based on the respondents' codes, 13 participants took both the pre- and post surveys. An email was sent from three of the participants stating that they had forgotten their code, in which they entered for the pre- survey, and they completed the post survey twice. This was the reason for having more responses for the post survey in comparison to the pre- survey.

Results

In all, 13 participants responded to both the pre- and post surveys, as well as completed the Gmail and Google Doc challenge. The pre- and post surveys were based on a five-point Likert scale.

Table 1. Pre- Survey Data

Variable	N	Mean	Std Dev	Variance
IM-1. I am familiar with the basic features of Lotus Notes, such as sending emails.	13	4.69	0.48	0.23
IM-2. The amount of time needed to learn how to use new technology resources, such as Google Apps deters me from utilizing it.	13	2.08	0.86	0.74
IM-3. I had some form of training on using Google Apps before this module.	13	3.54	1.33	1.77

Note. Values represent responses on the five-point Likert scale. 1= Strongly Disagree, 5= Strongly Agree

Table 2. Post Survey Data

Variable	N	Mean	Std Dev	Variance
IM-1. The module was clear and easy to understand.	16	4.75	0.58	0.33
IM-2. The length of the module was manageable.	16	4.69	0.60	0.36
IM-3. The aesthetics are appealing and provide graphical interest to engage the learner.	16	4.81	0.40	0.16
IM-4. The content is scaffolded adequately for understanding.	16	4.81	0.54	0.30
IM-5. I understand the basic features of Gmail and Google Docs.	16	4.88	0.34	0.12
IM-6. The examples in the module allowed me to identify the benefits of Google Apps versus the use of Lotus Notes.	16	4.88	0.34	0.12
IM-7. The materials provided in the modules prepared me for the challenges at the end.	16	4.81	0.40	0.16

Note. Values represent responses on the five-point Likert scale. 1= Strongly Disagree, 5= Strongly Agree

As for suggestions for improvement, participants had little or no suggestions. However, one participant's response stated, "Video was a bit hard to see. Some parts were blurry, and hard to make out the words."

This study was conducted to open the doors to Google life, as well as determining whether educators will consider using a new tool to foster communication with their fellow peers. Qualitative open-ended questions within the pre- and post survey revealed that the participants consider using Google Apps tools, in particular Google Docs, as a way to foster collaboration for school-wide planning in an online environment.

Participant responses to the question included in the pre-survey: What is your opinion about using Google Apps to foster communication?

- *I am interested in learning more about Google Apps to foster communication with my*

colleagues.

- *It is a very good system for collaborating about things other than our students.*
- *Problems that you can run into are that if not everyone takes the time to be trained or is interested the information cannot be disseminated among individuals.*
- *I think this is a wonderful idea! Teachers can share ideas, lessons, and calendars of meetings with each other.*
- *I think it could be beneficial for my team (grade level) and school.*
- *It has the potential to be very helpful*

The participants who participated in this study were eager to learn more about the Google Apps tools. However, there was a sense of uncertainty that prevented some participants in integrating the use of Google Apps. A participant stated that the number one factor preventing them from integrating the use of Google Apps was not having enough training, knowledge, and practice. One of the 13 participants indicated that they had no prior training on using Google Apps before the participating in the instructional module (see Figure 1).

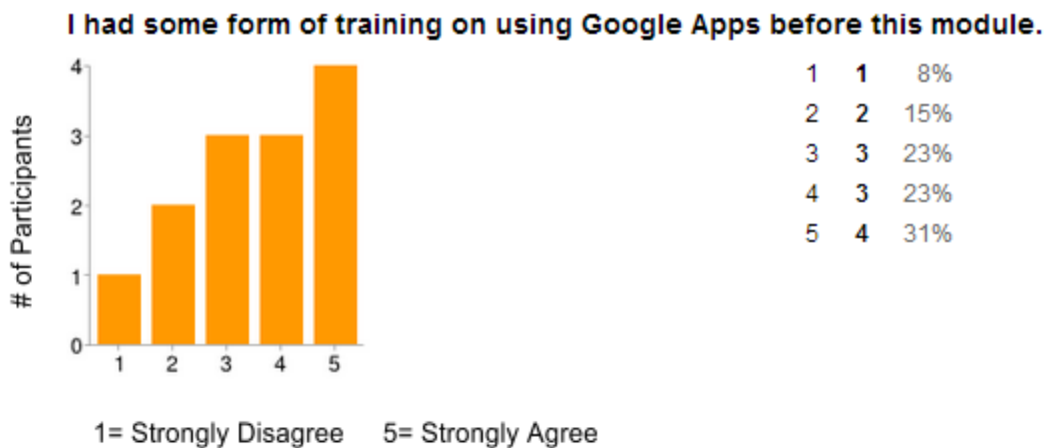


Figure 1. Form of training on using Google Apps

In the post survey, participants were asked to describe the efficiency of the instructional module as well as their learning experience. According to Table 2, the participants’ responses indicated that the instructional module was beneficial, clear, easy to understand, and engaging. One participant stated, “Easy to follow, clear step-by-step instruction, and good module for training.” Another participant stated, “The module was absolutely fantastic. The DOE should consider the use of these modules if it

moves from Lotus to Google.”

Participant responses to the question included in the post survey: In what ways, if any, has this instructional module enhanced or affected your understanding of Google Apps.

- *It showed me some new things that I didn't know about Google Apps.*
- *I have always heard how cool Google Apps was, but never had the chance to learn it- too busy! But this presentation with the music, the movement, and how I was walked through it, I learned how.*
- *I want to switch over right now, as well as clean up and clear out my personal email!*
- *Prior to the instructional modules, I had no idea what “Google Apps” were.*
- *This instructional module created a clear step-by-step understanding in how to properly create/use the Google Apps functions.*
- *I would like to try it with another teacher on my grade level.*

Implications/Discussion

Based on the data gathered, it appears that the participants were highly interested in learning about the basics of Gmail and Google Docs. The learning methods provided in the training module showed to have helped the participants apply the basic knowledge they learned to complete the Gmail and Google Doc challenge.

The results indicated that all 13 participants found the instructional module to be beneficial. The demographic data, such as gender, age, grade level, years of teaching, and comfort level in using computers, included in the pre-survey do not appear to affect the participants' interactions with the instructional module (Table 2).

Participants were expected to view the instructional modules in an online learning environment. None of the participants seemed to have an issue with online learning and were able to navigate the site with ease.

Future plans for changes include shortening the step-by-step YouTube and Vimeo videos and continuing to add content to the instructional training module. One participant's response stated, “The option of audio tutorials to go along with the modules would be even more awesome.” In addition,

participants had requested for additional content, in particular Google calendar, presentation, spreadsheet, and form.

Conclusion

This study has opened the doors to the Google life. Based on the results, all the participants in this study showed that they are ready to move to the Google platform. As one participant stated, “It’s time to get rid of Lotus Notes and take advantage of all the possibility Google has to offer.” Like educators, Google is constantly evolving and seeking ways to be better. With the support of the instructional training module, participants have the basic fundamentals to start the learning journey with Google. Let’s go Googleing!

The collaborative nature of Google Apps for Education can provide educators to reach a common, shared goal. Educators should consider making the switch from Lotus Notes to Gmail and Google Apps. This process is quick and easy, not to mention free access to Google tools that support online collaboration. While the principles for facilitation of good teamwork are much the same for online contexts as they are for face-to-face, understanding how online communication works and the benefits that Google Apps can offer can create unique opportunities for collaboration, assessment, and engagement.

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