Google Applications For Teachers

Submitted to James Jaurez

By

Godofredo Ginex-Orinion

In partial fulfillment of the requirements for the

Master of Science in Educational and Instructional Technology

National University

San Diego, California

April, 201X

The Capstone Project entitled "Google Applications for Teachers" is approved by:

Signature_____ Date_____
James Jaurez, Capstone Faculty Advisor, School of Media and Communication

We certify that this Capstone Project by Godofredo Ginex-Orinion entitled Google Applications for Teachers, in our opinion, is satisfactory in the scope and quality as Masters of Science project for the degree of Master of Science in Educational and Instructional Technology in the School of Media and Communication, at National University.

Signature_____ Date_____
              Cynthia Sistek-Chandler, Ed. D., EDT Lead Faculty, Department Chair

Signature_____ Date_____
              Karla Berry, M.F.A., Dean, School of Media and Communication

Google Applications for Teachers

Table of Contents

ABSTRACT

Google Applications for Teachers was a professional development course designed to train teachers how to use Google Applications in daily tasks and interactions. This was as a four week, web-based course that required participants to develop meaningful and relevant student activities that involved current collaborative technologies. After a school-wide presentation at the start of the academic year, a survey was sent out to the faculty at Fountain Valley High School to determine the need for this type of training. More than fifty percent of the responses indicated that teachers wanted to incorporate Google Applications in their instruction. Google Applications for Teachers addressed the current need for implementing Web 2.0 technologies into instruction and curriculum. Due to the free online delivery of the course, participants paced themselves according to their technology competence level and did not have to attend fee-based, professional development off campus. The course was divided into seven units, one for each Google Application. Participants were led through the initial setup of a Gmail account all the way through the creation of a classroom website using Google Sites. The teachers were engaged in project-based assignments, discussion forums, synchronous online chats, and reflective writing assignments that encouraged them to consider why collaborative technologies were essential in tapping into higher ordered thinking skills of analysis, creation, and evaluation. Participant and expert surveys were included at the end of the course for continued improvement and updates. Google Applications for Teachers was located at http://tinyurl.com/gaforteachers.

CHAPTER 1: Introduction

Introduction

The purpose of this professional development course on Google Applications was to instruct teachers how to use the technologies and have them seamlessly incorporate this use in their curriculum and instruction. The course was created and developed in response to the stated need from an initial survey administered to the faculty at Fountain Valley High School (Appendix A) regarding their interest in implementing Google Applications as a communication and curriculum tool.

In response to the No Child Left Behind legislation (NCLB, 2001), there has been a rise in the number of professional development courses for educators to reach highly qualified status. The integration of technology in education has become a priority at the national level. According to Wilson and Berne (1999), the increase in professional development technology courses has not necessarily brought increased technology use among teachers. This can be attributed to many factors. At the local level, the course designers determined that the reason for this technology deficiency at Fountain Valley High School were: (a) not enough professional development time; (b) different levels of technology competence; (c) inconvenience of current professional development technology courses offered on- and off-site; and (d) insufficient examples of relevant and effective technology practices.

Google Applications for Teachers provided the faculty the opportunity to create relevant exercises and activities that could be readily implemented into the curriculum. The web-based deployment allowed participants to complete the course at any desktop computer with an Internet connection. Teachers with a higher level of technology competency were able to complete the course at a faster pace but were still challenged to brainstorm and produce assignments that

leveraged the technology. The discussions and chats provided an exchange of ideas and

permitted everyone to share best practices. Google Applications for Teachers was successful in

addressing the technology issues identified by using sound educational theory and supporting the

current movement towards incorporating technology in education.

Background of the Study

According to the United States Department of Education (2010), technology-based

learning and assessment has proved pivotal in transforming education. Technology has become

pervasive in today's society, and educators must leverage it to provide innovative, powerful, and

engaging learning experiences for students. Current consumer technology use in education made

learning relevant to students and personalized their learning to their specific goals and interests.

Technology has motivated students to actively participate in their own learning and academic

growth.

Collaboration tools in education have been developed and implemented, but a majority

have remained below the standards that businesses currently use. Education has made an effort

to branch out and look at web-based document sharing tools to lower the cost of hosting servers,

maintaining databases, and the like. The Orange County Department of Education mentioned

that the implementation of Google Documents in curriculum and instruction is a future "desired

state" that it would like to reach (OCDE, 2010). Although training webinars and courses have

been offered in the use of Google Applications and Google Documents, there haven't been any

justifications or definitive explanations on why such tools should be implemented into

instruction.

Statement of the Instructional/Training Problem

The problem with the cloud-computing model that Fountain Valley High School (FVHS) used was that all the data resided in three separate third-party applications that were independent of each other. Two of the applications were consistently unreliable due to infrequent browser updates, and one database subscription was purchased without being fully operational. The course designers introduced the FVHS faculty to Google Applications at the start of the current academic year during a teacher development presentation. After the presentation, teachers showed significant interest in adopting Google Applications, but there was no organized training course available to them. Professional development courses on Google Applications were offered by private organizations and by the Orange County Department of Education (OCDE, 2011) but at a significant cost to the teachers and at inconvenient dates and times.

Purpose

The purpose of Google Applications for Teachers was to instruct the FVHS faculty on Google Applications using a web-based training module utilizing Moodle as the Learning Management System (LMS). Google Applications for Teachers was designed as a free alternative to professional development training. The lessons and projects within the course were designed to have the participants create relevant learning objects that the teachers could implement into their instruction immediately. Google Applications for Teachers also helped pass down these important cloud-computing skills to the students at FVHS for their success inside and outside academia.

Delimitations

Google Applications for Teachers was designed for educators to develop relevant lessons and activities using Google Applications. Personal computers with audio capabilities and Internet connections were necessary for the completion of the course. Basic web-navigation skills were recommended but were not essential. The course was also designed for teachers at FVHS who were considered novices at Google Applications. Teachers were able to determine their level of competency at Google Applications by completing an initial survey (Appendix A) regarding their experience with Google Docs and Google Calendar.

Google Applications for Teachers was designed as a four-week online training program. In addition, the developers made the course so it could also be used as a reference tool for teachers who need to know how to perform a specific task in a Google Application. Teachers who used it as a reference guide did not benefit from the constructivist asynchronous discussions, reflective writing exercises, and peer responses. Lastly, since the course was implemented during the academic year, a minimal amount of students participated in the course. The course designer and instructor determined that summer delivery of the training would have been more successful with regards to participation and completion.

Definitions

For the purposes of this online course, the following terms were defined:

ADDIE process – This instructional design model denoted a systematic five-stage design

　　　　process: Analysis, Design, Development, Implementation, and Evaluation. This

　　　　method was a way to construct any training program from inception to

　　　　improvements after evaluation (Piskurich, 2006).

Cloud-computing – This described convenient, on-demand, network access to a shared

pool of configurable computing resources that can be rapidly provisioned, edited,

and released with minimal management (Mell and Grance, 2010). The phrase

generally referred to an online repository of documents that is easily accessible

through any Internet connection.

CRAP model of design – Williams and Tollett (2006) stated that the four basic principles

of design were: (a) Contrast; (b) Repitition; (c) Alignment; and (d) Proximity.

Following these principles will make web or printed pages look cleaner, neater,

and more professional.

FVHS – Fountain Valley High School was located in Fountain Valley, California. It was

one of the nine high schools that make up the Huntington Beach Union High

School District. Google Applications for Teachers was designed and implemented

at this school site for the faculty at this school.

HBUHSD – The Huntington Beach Union High School District was located in Orange

County, California.

ISD – Instructional Systems Design described the practice of maximizing effectiveness and

efficiency of instruction and learning. It involved learning theory, strategies for

applying these theories, and methodologies to carry out the strategies (Horton,

2006).

LMS – Learning Management Systems have taken on different forms, from instructor-led

training to e-learning courseware. It has helped learners keep track of the skills

they have acquired and provided instructors with the management tools to track

learning activities and their relationship with the users (Oakes, 2002).

SME – A subject matter expert described an individual with particular skills in a certain

field. Course evaluators were designated as SME's after completing an initial

survey ([Appendix A](#)), and were asked to evaluate the course using an evaluation

tool.

Summary

Google Applications for Teachers was designed as a free, online, instructional course for

teachers at FVHS to incorporate Google Applications into their curriculum. It encouraged the

teachers to develop lessons and activities that use this type of technology to collaborate openly

with other faculty and students.

Professional development courses on this technology were offered at certain offsite

locations at a cost. Most of these courses were available in the late afternoon and evening, which

made it inconvenient for teachers to attend. Further, the shrinking district budget did not provide

room for much professional development, especially in educational technology. Free online

resources on Google Applications were available, but none of the courses helped teachers

incorporate the use of all Google Applications had to offer. Most resources were piecemeal and

did not encourage participants to develop creative and effective learning activities based on

sound educational theory.

The primary goal of Google Applications for Teachers was to provide new teaching tools

for teachers at FVHS for them to become more effective instructors. The course was deployed

using Moodle, which is an open-source, online LMS designed to help instructors monitor the

user's relationship with learning objects in an online course (Oakes, 2002).

CHAPTER 2: Review of the Literature

Introduction

Google Applications for Teachers addressed the technology needs of today's learners and followed the recommendations put forth by the United States Department of Education and the Orange County Department of Education regarding technology integration in instruction. The course was delivered online using an open source LMS called Moodle. Web-based delivery was chosen to eliminate location barriers and different-paced learning for individuals who were at varied levels of technology competence. The course contained synchronous and asynchronous activities that allowed participants the opportunity to collaborate and share ideas with each other. The student-centered, project-based nature of Google Applications for Teachers mirrored constructivist learning theory principles. Although the result of this training may not facilitate the planning of technology-rich lessons and activities (Vannatta & Beyerbach, 2000), the participation of the teachers in such activities provided examples of the types of lessons that the teachers may decide to implement in their curriculum in the future.

Technology in Education and at FVHS

The United States Department of Education (2010) stated the following:

> The challenge for our education system is to leverage the learning sciences and modern technology to create engaging, relevant, and personalized learning experiences for all learners that mirror students' daily lives and the reality of their futures. In contrast to traditional classroom instruction, this requires that we put students at the center and empower them to take control of their own learning by providing flexibility on several dimensions.

Students are immersed in communication technology for quite some time before they enter secondary education. This technology has allowed them to access resources and information at all times of the day. They have participated in online social networks and have created multimedia content to share with others at an early age. The United States Department of Education has deemed it necessary to address the divide between consumer and educational technology by identifying best teaching practices and encouraging their incorporation into education. Unfortunately, the United States Department of Education failed to identify these best practices and failed to provide guidance on how to implement them.

The Orange County Department of Education (2010) concluded that the use of Google Documents was a "desired state" for technology use for the schools in the county. Some of the other "desired states" mentioned were: (a) real time communication and collaboration; (b) universal accessibility; (c) technology that is easy to use; and (d) technology that always works. Although these were *expectations* and not *goals* for technology use, the Orange County Department of Education was able to enumerate what was expected of the current technology used within the districts it oversees. No goals were mentioned and no structure was developed to facilitate the incorporation of such Web 2.0 tools.

FVHS adopted a third-party application to facilitate posting assignments, calendar notifications, and run the school website. This third-party software addressed none of the previously mentioned "desired states" by the Orange County Department of Education. The application had a history of losing data and documents and was challenging to learn to use. It did not provide the real-time communication and collaboration that most free Web 2.0 technologies offered. The application also failed to work effectively on most browsers and was only updated

for use with Microsoft Internet Explorer. Updates were infrequent and cost the district time and money. In summary, the application was a drain in teacher time and money.

Google Applications was introduced to the FVHS faculty at the start of the current academic year and generated a lot of interest. From the initial survey results in [Appendix B](#), it was understood that a new communication and collaboration tool was needed to replace the current system at the school site.

Learning in the 21st Century

Prensky (2001) argued that today's students are no longer the learners the current educational system is designed for. A debate has started that challenges the existence of a fundamentally different type of learner that Prensky describes and simply suggests the general evolution of society and the pervasiveness of technology. Bennett, Maton and Kervin (2008) suggested that the role of technology is different for students today, but pedagogy need not be altered due to the lack of evidence that "digital natives" truly learn differently. Regardless, Hixon and Hyo-Jeong (2009) stated that integrating technology tools in instruction (a) exposes students to various types of learning, (b) promotes reflectivity and cogent arguments, (c) develops relevant job/academic technical skills, and (d) encourages collaboration and constructivism.

According to Ito et al. (2008), "to stay relevant in the 21st century, education institutions need to keep pace with the rapid changes introduced by digital media" (p. 2). One of the ultimate goals of Google Applications for Teachers was for educators to stay current with new emerging and evolving technologies. The course was designed not just to improve teacher performance and efficiency but also to get students working with these new technologies to improve their academic experience.

Instructional Design

Weiss (2000) stated that technology in training and education should be thought of as a tool to help disseminate information and provide access to as many of Garner's multiple intelligences to maximize the learning experience. Google Applications for Teachers tried to utilize the many collaborative technologies that Google has to offer and apply them to education. The intention of using such technologies was not driven by the inclusion of new and innovative software. Lee and Owens (2004) indicated that the development of clear, measureable course goals was essential in determining content, assessment, delivery method, and the effectiveness of a training solution. The course objectives for Google Applications for Teachers dictated the structure of the course and the included activities and assignments.

The course was logically divided into the seven Google Applications. Although each component was inherently tied to the others, the designers decided to focus on each application as a separate entity. This allowed the participants to brainstorm and develop lessons that incorporated each individual application. Different subjects would utilize the applications in varied ways. Language teachers used Blogger for journal writing exercises and comment boards, while math teachers used Google Spreadsheets to graph data and perform statistical analysis. Asynchronous discussions and synchronous chats in Google Applications for Teachers allowed for cross-curricular collaboration between participants. Qiyun and Huay Lit (2007) stated that the inclusion of asynchronous discussions in online courses worked well with complex discussion topics that required lengthy answers. They also stated that both online and face-to-face synchronous discussions required a lot of preparation but benefitted groups as a whole because these discussions required the said preparation beforehand. Collaborative activities in training and education have resulted in significant and substantially greater gains in learner achievement

than traditional teaching methods (Terenzini, Cabrera, Colbeck, Parente, and Bjorklund, 2001).

The inherent teacher collaboration in the course reinforces Perkins' (1991) notion of "distributive

intelligence," which stated that the contributions of individuals in a group setting was a more

effective method for the achievement of desired course goals. Driscoll (2000) indicated that a

collaboration activity provides students the opportunity to consider viewpoints outside of their

own. The student-centered discussions and weekly live chats in Google Applications for

Teachers provided evidence for the course designer's focus on collaboration in learning.

Web Based Instruction

Hiltz and Turoff (2005) stated that web-based instruction was not limited by physical

geography, time, or space limitations. Google Applications for Teachers was developed to be

completely web-based, from presentations to assignment submissions and assessments. Since

Google Applications is fundamentally cloud-computing, it would make sense to have the entire

course completely web-based. Teachers easily viewed the desktop video capture on one browser

window and completed the assignment tasks in another open window. Using Moodle as the LMS

provided the opportunity for discussion activities that promote learner-centered instruction (Cole

and Foster, 2008).

Google Applications for Teachers employed desktop video captures hosted on the Moodle

server as the main type of learning object in the course. Tempelman-Kluit and Ehrenberg (2003)

indicated that desktop video captures addressed many different learning styles and was deemed

to be the best method for technology distance learning.

The writing assignments for the course provided the participants the opportunity to

research and identify the best practical uses for Google Applications in their own curriculum.

They allowed increased "think-time" for learners to ponder complicated concepts and produce coherent and cogent arguments. The use of "think-time" has proven to increase academic achievement and improve the quality of responses to complex discussions (Rowe, 1987).

Summary

In conclusion, leadership entities understood and have stated that technology integration in education is essential for the advancement and development of all learners in today's educational environment. Vannatta (2000) concluded that technology integration must happen in conjunction with curriculum development and planning in order to be successful. Departments of education at the federal, state, and local levels identified the implementation of collaborative technologies as one area of improvement to make future graduates competitive in an increasingly technology savvy and global economy. The Google Applications for Teachers course addressed each of the participant's needs identified from an initial analysis survey (Appendix A). Regardless of preferred learning styles, Google Applications for Teachers incorporated the construction of knowledge using collaboration and reflective writing exercises.

CHAPTER 3: Project Design

Learning Theory

The activities, assignments, and resources in Google Applications for Teachers were created based on the application of behaviorist, cognitive, and constructivist learning theories.

A majority of the instructional material in the course involved the use of desktop capture videos. The use of video instruction was determined to be the best way to disseminate information to the course participants. This example of computer-based instruction reflected behaviorist principles. The course allowed the trainees to watch the instructor's actions in one window, while completing the task in another browser window. Trainees obtained immediate self-satisfaction from completing the technology tasks and were positively reinforced by the procurement of a grade.

Cognitivist learning theory was also applied in Google Applications for Teachers, as the trainees were asked to reflect on discussion and paper topics throughout the training. They were encouraged to identify their best teaching practices and to develop meaningful activities and assignments leveraging the technology found in the training.

Finally, constructivist learning principles were reflected in the connect-type activities in Google Applications for Teachers. These activities allowed the participants to analyze their teaching styles and apply what they've learned into their methodology immediately (Horton, 2006). The asynchronous discussions and synchronous chats that were included in the course provided avenues for interpersonal communication. These intrapersonal and interpersonal activities addressed components of multiple intelligences. The cooperative learning and social activities in the course were just as essential as the granular learning involved (Goodsell et al.,

1992). Participants were asked to collaborate and comment on each other's documents. This type

of peer review and connection achieved the notion of "distributive intelligence" (Perkins, 1991).

Preliminary Extant Data Analysis

Private training organizations and intra-district classes (OCDE, 2011) offered many

professional development courses focused on the use of Google Documents. Preliminary

research showed that the courses trained teachers how to use Google Documents, but did not

offer any training on other Google Applications. Google (n.d.) also offered formal online training

certification at the Google Apps Education Training Center. With the training came an expensive

yearly fee to remain Google Apps Certified. The courses offered by private organizations and

local districts were only available during the school year and midweek evenings (OCDE, 2011).

Additional online research determined that there were online videos on free video sharing sites

that provided quick tutorials with Google Applications. Subscribing to a video channel allowed

people to view the short instructional video clips.

A list of concerns put together by the OCDE regarding collaboration tools indicated that

time and money were significant factors in providing training for web-based collaboration tools

(OCDE, 2010). Some of the other concerns were that: (a) training must be built into the

instructional day; (b) training must provide examples and opportunities to share best practices;

and (c) training must be universally accessible. Google Applications for Teachers was developed

to address all these issues for the faculty at FVHS.

The course was developed as a free alternative to paid professional development courses

offered externally. It was designed to incorporate all the Google Applications as instructional

tools for teachers to implement. Google Applications for Teachers was hosted on a Moodle

server and was easily accessed by the participants at any computer with an Internet connection. One future consideration determined was that the course could be delivered through the school's intranet with a direct link on the staff page of the school's website.

Google Applications for Teachers provided the some examples of best practices, but also allowed for the development new, innovative uses for the Applications through the collaboration time embedded within the course. The course presented the participants with the technology, and the participants were given the opportunity to develop new lessons and uses for all the applications. Medsker and Holdsworth (2001) stated that learning these new technologies engaged teachers and students and motivated learners to participate and pursue other uses for such technologies.

Since Google Applications for Teachers is fully web-based, the teachers were able to access the course at any time during the instructional day. The inconvenience of travel and poorly scheduled courses was eliminated. Google Applications for Teachers was designed specifically for online delivery to mirror the cloud-based collaboration tools of Google Applications. Barrett's (2007) concept map provided some concrete examples of how to incorporate Google Applications into the curriculum. According to Vannatta (2000), this technology integration must be implemented in conjunction with curriculum development and planning in order to be successful and pervasive in instruction. Google Applications for Teachers showed educators how to use Google Applications to its fullest extent. It required teachers to create projects, develop curriculum, organize their workflow, and implement relevant technology into their instruction according to sound educational theory.

Audience

The audience consisted of teachers at FVHS who were interested and willing to adopt Google Applications as an instruction and collaboration tool. These teachers already used the Internet to communicate with parents, students, and other faculty. These were individuals who already knew how to search for information and navigate on the Internet using a browser like Internet Explorer, Firefox, Safari, or Google Chrome.

The course was not designed for individuals who already used Google Applications to post and share documents, develop class agendas, and create dedicated websites for each of the courses they teach. The course was also not designed for teachers who were unfamiliar with word processing applications and with the general use of a computer.

The design process took teacher's attitudes towards technology into account, as this could have been a roadblock in audience learning if they tended to exhibit negative responses to learning new technologies. Tabata and Johnsrud (2008) stated that several factors have deterred faculty from participating in distance education training and delivery. Their study identified several contributing factors: (a) the amount of time it takes to learn the technology; (b) the effect of training on current workload; (c) lack of release time for training and learning outside of the workday; and (d) the lack of instructional and technical support. In response to this, the course designers created the course so that it would be accessible to any of the participants at any time of the day. Participants with higher technical skills were able to complete the tasks at a faster pace, instead of waiting for slower learners to catch up in a traditional computer training session. The instructional video clips embedded in the course had an average length of two minutes. These videos were brief, concise, and unobtrusive to other daily teacher tasks and obligations. Since the training was completed at the learner's pace, the participants had more time to

brainstorm and develop student activities and lessons that leveraged the technology. The

designers created a course with relevant activities and assignments in mind to make the projects

useful to the end user. The inclusion of desktop video captures was determined to be the easiest

and most direct instructional method for this type of audience. It put participants aversions at

ease, especially those who may be adverse to this type of training, which unfortunately described

a surprisingly large percentage of educators.

Goals

At the completion of the training, the participants were to have:

- Created and shared online documents and collaborated with others using Google

  Documents;

- Constructed and managed a blog using Blogger;

- Developed an online academic calendar with links using Google Calendar;

- Designed, constructed, and managed a website using Google Sites;

- Followed and assessed student work using Google Reader;

- Communicated and collaborated with students and other faculty using Gmail;

- Incorporated online video into their instruction by embedding Google Video

  (YouTube) into their blog or website; and

- Developed relevant and meaningful learning activities for students using Google

  Applications.

Project Design

The ADDIE process of instructional design was chosen in the development of the course. Piskurich (2006) stated that the ADDIE process was simplistic, straightforward, and efficient, especially when course development time is at a minimum. The course designers' familiarity with the ADDIE model was another consideration when choosing an instructional design processes. The course was developed as an online tutorial so teachers at any location with an Internet connection could easily access it.

The media delivery analysis activity by Lee and Owens (2004) determined that web-based instruction was the best delivery method for this type of training. Computer-based and Web-based instruction provided several advantages:

- Consistent delivery;

- Learner-controlled pace;

- Unlimited opportunity for review;

- High degree of interactivity and involvement by the learner;

- Incorporation of audio, video, and graphics; and

- Opportunity for participants and instructor to have synchronous and asynchronous dialogues about the course content.

Teachers completed the course in the convenience of their classroom or at their home computer instead of attending an off-site training course. Hiltz and Turoff (2005) stated that the learning process couldn't be bound by physical geography, time, or space limitations. One major benefit of using web-based learning objects in this type of training was that the teacher could have one browser window open with the tutorial, and another window open as they complete the

training tasks. Teachers saw the annotated learning objects simultaneously, then immediately

completed the task without having to open a textbook or load other programs. The training was

completed at any computer with an Internet connection, regardless of the model or operating

system.

Educational / Instructional Need

Web-based document sharing and collaboration tools have existed for some time in the

business environment. Secondary education has implemented this technology, with reservation,

to modernize teaching practices, establish a more efficient workflow, and ease the burden on

school budgets. Most new teachers were familiar with document sharing applications from recent

experiences in teaching credential programs. Even with the influx of new teachers at FVHS,

there remained a significant amount of teachers at FVHS who had never used this type of

technology. These educators were aware of the benefits of using technology tools in instruction.

Although those teachers understood these benefits and were capable and willing, they did not

have the time to learn such technologies, nor the development time to integrate them into their

curriculum. New models of problem-based and collaborative learning have been replacing

traditional teaching methods. This trend towards Constructivist Learning Theory supported the

use of online document sharing and collaboration tools for students. Dede (2000) stated:

> The important issue for the evolution of school curriculum is not the availability and
>
> affordability of sophisticated computers and telecommunications, but the ways these
>
> devices enable powerful learning situations that aid students in extracting meaning out of
>
> complexity. (p. 296)

A survey was sent out to teachers at FVHS regarding the use of Google Documents

(Appendix A). The results (Appendix B) indicated that the teachers knew that the technology is

useful and showed interest in incorporating this technology in their instruction. From the survey

and informal inquiries, it was determined that the teachers at FVHS needed a tutorial that

assisted them in incorporating collaborative technologies like Google Applications. Google

Applications for Teachers was developed and implemented to encourage the use of Google

Applications and aid teachers in evolving their instruction into student-centered learning.

Procedure

The *analysis* component of the principle stages of instructional design (Gagne, Wager,

Golas, & Keller, 2005) was determined to be a necessary step before developing any type of

training program. An initial survey was developed (Appendix A) to assess the current level of

use of Google Applications. This survey was sent out via email at the start of the academic

school year to the entire FVHS faculty to obtain some preliminary data. The data was used as

part of the front-end analysis to determine what solutions will be required to bridge gaps and

serve the needs of the teachers (Lee & Owens, 2004). A summary of the results (Appendix B)

show that 85% of those who have not used Google Documents before were interested in

participating in a tutorial on Google Documents. It also showed that 53% of those who had used

Google Applications were at a beginner-to-below-average level of expertise in its use. This

reinforced the need for the development of the course to service the faculty's desires for training

in Google Applications.

Online research was conducted to find best practices for Google Applications. Barrett's

(2007) mash-up for using Google Applications for student portfolios was the starting point for

developing a list of best practices included in the course (Appendix C). Additional information

was gathered via informal interviews with the faculty regarding attitudes towards technology

training. Tabata and Johnsrud (2008) summarized that quality training, accessible technical

support, and increased funding were key components to changing negative and adverse attitudes

towards distance education and technology training. Through sound research, the course

designers developed Google Applications for Teachers with those considerations in mind.

Course goals were developed according to the number of Google Applications present at

the time of course delivery. The seven units were spread out over a four-week course. The course

goals helped to dictate the syllabus, course schedule, tasks, and assignments (Appendix D). Lee

and Owens (2004) stated that the development of clear, measurable course objectives was

essential in determining content, deployment method, assignments, formative and summative

assessment, and course effectiveness.

A usability evaluation plan was developed and implemented during the design stage to

identify any errors or shortcomings of the course. It consisted of several components. The course

designers developed a course evaluation survey (Appendix E), which was completed by the

SME's identified at the design stage. Lee and Owens (2004) produced a usability report in their

text, which was the foundation for the course evaluation survey. The analytics of the course

evaluation survey were eventually compiled for later study (Appendix F).

A Prezi visual storyboard was created to showcase and display a rough layout of the

components of the course. The layout was put together according to the CRAP model of web

design (Williams & Tollett, 2006). The Prezi presentation was eventually used as a primer for

course participants and was placed at the top of the course page.

The course was created and deployed in Moodle, which was chosen for its embedded learning activities, design features, and flexibility. The course designers considered the ability to zip up the entire Moodle course and transfer it to another server to be an important feature (Cole & Foster, 2008). Course content was composed of short instructional videos, which required a significant amount of time to develop, from script to post production. Because the discussions, chats, assignments, and grading applications were embedded within the Moodle course, no additional software applications needed to be included or installed.

An expert walkthrough was conducted by the SME's to identify any missing components. The SME's completed the Course Checklist (Appendix G) and their results were compiled for analysis at the evaluation stage. The course designers developed a usability test script (Appendix H) to obtain more granular data regarding the participants' user experience. Finally, participants were asked to complete a Class Reaction Survey (Appendix I) at the end of the course. The data gathered from the Class Reaction Survey was used to determine the participants' feelings at the end of the course. It also served as a self-assessment of student learning regarding Google Applications.

Ethical Considerations

Course designers visited the SME's and teacher volunteers in person when requesting them to participate in the course evaluation process at the design stage. Due to the timing of the course being deployed during the school year, the course designers found it challenging to find willing participants in the evaluation process. Sensitivity to busy schedules was considered when choosing SME's and volunteers. The evaluators who did participate were profusely thanked for their time and effort in the evaluation of heuristics, design, and usability of the course.

Summary

Piskurich's (2006) ADDIE process was a successful choice in the design process, considering the time constraints in the creation of Google Applications for Teachers. Developing concrete and measurable course goals at the beginning of the design stage served as an integral guide in course construction. Teacher attitudes towards technology training were an important consideration for the faculty at FVHS. A significant amount of research and analysis was completed to produce a course that provided relevancy, excellent usability, and ultimately helped the teachers at FVHS to implement Google Applications into their teaching practices.

CHAPTER 4: Project Evaluation and Discussion

Introduction

The term *usability* had a number of different definitions due to its multi-dimensional use and application in several industries (Seffa, Donyaee, Kline, and Padda, 2006). The International Organization for Standardization (1998) described the usability of a product in terms of the effectiveness, efficiency, user satisfaction, and successful completion of goals initially set forth by the product. According to Conte, Massolar, Mendes, and Travassos (2009), the Web-based nature a course like Google Applications for Teachers required usability evaluations based on the following design perspectives:

- *Conceptual*: usability was satisfactory if different users easily understood the material, preventing mistakes caused by ambiguous, inconsistent, or unknown terms;

- *Presentation*: usability was satisfactory if the arrangement of elements of the interface enabled the user to accomplish tasks effectively, efficiently, and pleasantly;

- *Navigation*: usability was satisfactory if the navigation options allowed the user to accomplish tasks effectively, efficiently, and pleasantly; and

- *Structure*: usability was satisfactory if the arrangement of the components or lessons allowed the user to accomplish tasks effectively, efficiently, and pleasantly.

Usability testing was described as the quantitative and/or qualitative analysis of each of the criteria listed above. Conte, Massolar, and Travassos (2009) stated that the usability of web-based applications must be evaluated using scientific methods to determine if the applications supported the building of knowledge and skills. The usability evaluation data gathered for Google Applications for Teachers identified insufficiencies and topics for redesign.

Usability Evaluation and Discussion

Nielsen (2005) stated that the goal of heuristic evaluation was "to find the usability

problems in the design so that they can be attended to as part of an iterative design process."

Several evaluations were created for Google Applications for Teachers that assessed the

concepts, presentation, navigation, and structure of the course. The evaluations produced were:

- *Heuristic Evaluation* by the SME's using the Courseware Evaluation Form

    (Appendix E);

- *Expert Walkthrough* by the SME's using the Course Checklist (Appendix G) as a

    guide to the information covered in the course;

- *Usability Test* by the SME's and teacher volunteers using the Usability Testing

    Script (Appendix H); and

- *User Review* by participants using the Class Reaction Survey (Appendix I).

Heuristic Evaluation

SME's used the Courseware Evaluation Form (Appendix E) to assess the interface design,

course design, quality of the learning objects, and the accessibility of Google Applications for

Teachers. The results (Appendix F) suggested that the interface design was effective and was

produced well. There was a negative mark regarding the inability to access help and/or the main

menu. The course designers determined that a quick video tutorial about navigation through the

course should be included at the start of the course to identify important areas of the course page.

The results for the course design/content section indicated that Google Applications for

Teachers contained sufficient material regarding the topic and that the design was effective for

the participants to complete their tasks. One negative mark suggested that the course failed to

include sufficient "teacher-related" examples. The course designers decided to include current and working examples of how teachers use Google Applications at the end of each unit as a starting point for the participants to develop their own uses for the technology.

Analysis of the media quality section concluded that the videos, graphics, and other learning objects were easy to follow and reinforced the content covered in the course. Course designers dedicated a significant amount of time researching, developing, and recording the video learning objects used in Google Applications for Teachers.

Responses to the connectivity and accessibility section suggested that there were problems viewing some of the videos in the course. The course designers identified the issue to be a local bandwidth issue at the time of the analysis for one of the SME's on the FVHS campus. The campus was undergoing a bandwidth upgrade at the time of the review. The course designers checked the connectivity on campus and did not find any delays in video streaming for any of the embedded videos in the course.

Expert Walkthrough

SME's were asked to complete the Course Checklist (Appendix G) in an exploratory fashion to determine if all the topics listed were addressed and taught in Google Applications for Teachers. The SME's also determined if the activities and assignments in the course were appropriately represented and covered. The SME's reported that the items listed in the checklist were all addressed in the course and that each Google Application was covered in depth.

Usability Test

The course designers developed a usability test script (Appendix H) to obtain granular data about the user experience as participants navigate through the course. Piskurich (2006) stated that the interview in usability testing was effective in eliciting the user's feelings and opinions regarding the content and experience. The course designers were not able to complete the usability test at the time of this report. In future course deployments, the information gathered from this analysis would provide useful information regarding user experience. This information would be used for redesigning the course in increase its effectiveness.

User Review

Participants used the Class Reaction Survey (Appendix I) at the end of the course as a self-assessment of their learning. The survey also provided information about feelings and reactions to the training. Although only one response to the survey was received at the time of this report, the results (Appendix J) showed that there was an overall positive experience for the participant and that the course was useful and relevant to their job. The course designers decided not to eliminate the Class Reaction Survey because it provided essential information that could be used in redesigning the course in future deployments.

Kirkpatrick's Evaluation Levels and Discussion

Both SME's and teacher volunteers were scheduled to conduct the initial usability tests. SME's were identified as *proficient* or *experts* in using Google Applications by completing the Google Applications Survey (Appendix A). Teacher volunteers were identified from their Google Applications Survey results as well. These were competent and willing teachers who

wanted to participate in the usability evaluation process. Alshamari and Mayhew (2009) stated

that usability tests have generated information that effectively helped designers and developers

make decisions during the Design stage.

Kirkpatrick Level 1: Reaction

Kirkpatrick's first level of evaluation related to the favorable reaction of the participants

regarding the training they have just completed (Kirkpatrick Partners, 2011). Chapman (2009)

suggested that the positive impression a course left to its trainees was important when relating

their experience to others who might consider taking the same course in the future. This feedback

was not expensive to implement and was administered to the trainees immediately upon

completion of the course (Appendix I). The reaction instrument was adapted from Lee and

Owens (2004), which was provided to all the participants in the final unit of Google Applications

for Teachers. This served as the feedback survey for all future participants of the course. Future

questions may be added once the course has been implemented and reviewed to gather additional

data regarding the success or failure of the training. The survey was implemented as a Google

Form to utilize the technology addressed in this course.

Although there was one response, the results of the Class Reaction Survey (Appendix J)

showed that the participant ultimately found the course useful and worth the time spent on it. The

summary indicated that the course gave practical information and was relevant to technologies

the participant used on the job. The course designers looked at the "agree" responses and

determined that the main area of improvement for the course would be to make the assignments

more useful to the end user. Other "agree" responses were assumed to be due to the truncated

time the participant had to complete the course and the absence of the course instructor during

most of the course deployment.

Kirkpatrick Level 2: Learning

Chapman (2009) stated that Kirkpatrick's learning evaluation was the measurement of the

proliferation of knowledge or intellectual ability from before to after the learning experience.

These usually involved assessments before and after the training to identify growth in

understanding of the material covered in the course. A survey was developed (Appendix A) to

assess the current level of use of Google Applications. The survey was sent out via email to the

current faculty at FVHS on December 7, 2010, to obtain some preliminary data. The data was

used as part of the front-end analysis to determine what solutions would be required to bridge the

gap and serve the needs of the teachers (Lee & Owens, 2004). The results of the survey

(Appendix B) showed that 85% of those who have not used Google Documents before were

interested in participating in a tutorial on Google Documents. It also showed that 53% of those

who had used Google Applications were at a beginner-to-below-average level of expertise in its

use. The results reinforced the need for a structured tutorial on Google Applications for the

teachers at FVHS.

A course checklist (Appendix G) was developed and provided for the trainees. This

checklist served as a formative assessment for the course. Due to the project-based nature of the

course, the checklist allowed the trainees to monitor their own progress. The trainees submitted

the checklist at the end date of each unit for the instructor to monitor their progress as well. Since

there was only participant during the course's initial deployment, there wasn't enough data to

make any conclusions regarding whether the course activities, assignments, and discussions were effective in the advancement of technology skills.

Kirkpatrick Level 3: Behavior

Chapman (2009) stated that Kirkpatrick's behavior level of evaluation was the direct application of the knowledge gained from instruction. Although some of the tasks required the participants to create relevant student assignments and activities during the course, no formal evaluation was performed to determine if the end products were implemented into each teacher's curriculum. The designers determined that an evaluation tool needed to be created to assess the current use of Google Applications for the participants. The course designers suggested that a Google Form be sent out to previous participants of the course with a Likert scale rating to assess the use of each Google Application in their instructional methods.

Kirkpatrick Level 4: Impact

One of the ultimate goals of Google Applications for Teachers was to improve the technology and higher-ordered thinking skills for high school students. Training teachers how to use Google Applications and encouraging those educators to apply the technology into their daily teaching tasks accomplished this outcome. At the time of this report, student scores from prior years were not compared to current achievement scores after the implementation of lessons and activities that use Google Applications. The course designers determined that comparing student achievement scores pre- and post-training would provide evidence for the incorporation of the technology. Positive results in this area would provide funding and increased administrative buy-in to technology training in the future.

Limitations

Technological

One of the SME's indicated that there were connectivity problems with some of the videos in the course. The course designers identified the problem to be a local bandwidth issue, as the FVHs campus was undergoing some upgrades at the time the SME was evaluating the course. The course designers later tested the streaming video links and did not find any issues.

Human

Some evaluators decided to not participate in the process, so other non-teaching volunteers were asked to complete the evaluation survey. Those individuals were not necessarily SME's, but they had enough experience in Google Applications to be able to make a decent assessment of the course content and design. Some identified SME evaluators had not responded at the time of course delivery, which resulted in a small sample of reviews for the course.

Financial

There was no budget for the evaluation; therefore, the evaluations were performed on a volunteer basis. This was not a significant issue because the front-end analysis of the course identified interested and willing parties.

Time

The evaluation process required time for the SME's and other evaluators to complete the course themselves. This was the reason for the low response to volunteers reviewing the course, since the training was implemented in the middle of the academic year. Since most of the

evaluators have experience in Google Applications, it did not take a significant amount of time to

evaluate the course. If the course was redeployed and the scheduled SME's had significant time

to review the course, more data could be gathered to properly assess the heuristics and

effectiveness of Google Applications for Teachers.

CHAPTER 5: Summary and Conclusion

Introduction

Gosmire and Grady (2007) stated that student achievement and technology is an urgent and compelling issue that educators face today. Many studies have concluded that technology has not yielded the anticipated jumps in student achievements. Many articles have also suggested that the relationship between technology and student achievement cannot be analyzed properly due to the immeasurable causality of technology leading to higher scores. However, evidence does exist that educators are integrating more technology tools into their instruction than in previous years. Medsker and Holdsworth (2001) affirmed that the use new technologies engages students and teachers in the classroom and motivates learners and educators to participate in the process of learning. Google Applications for Teachers was an effort to bridge the divide between education and technology. Its main purpose was to show teachers how to use the collaborative technology. Ultimately, the goal was to motivate teachers at FVHS to integrate the technology into their teaching by creating lessons, activities, and assignments that leverage Google Applications.

Conclusions

Deliverables

The teachers at FVHS indicated a need for this specific type of training from survey results. Google Applications for Teachers was a course designed to leverage collaborative technologies in instruction. This course was successful in integrating proper course design with rich content. The activities and writing assignments provided relevant opportunities for the participants to brainstorm and create best practices using Google Applications. The forum discussions and online chats were excellent opportunities for the participants to share ideas and

collaborate with other teachers at FVHS. Evidence shows that collaboration among teachers

produces excellent technology activities and ideas (Vannatta & Beyerbach, 2000). Google

Applications for Teachers was engaging, interactive, and successful in achieving its course

objectives.

Design and Development

The course designers followed Williams' and Tollett's (2006) four major principles of

designing web pages in the layout and presentation (Appendix K). These elements served as the

foundation for the selection, placement, and alignment of all the visual elements that went on the

course page. Although the LMS was a little restrictive with the location of certain essential

components, Moodle was identified as the best option for hosting the content because of its

embedded applications and course management. The structure of the course was based off the

number of Google Applications. Goals were developed and eventually became the structure for

all the components of the course. These measurable objectives are essential in judging

performance, quantifying knowledge gained, and in determining the effectiveness of the training

(Lee & Owens, 2004).

It was important to address the different levels of technology competency among the

faculty at FVHS. Google Applications was deployed as a web-based training course, which

individualized the learning and allowed the participants to pace themselves according to their

level of technology skills (Coley, Cradler, & Engel, 1997).

The production of instructional videos and their inclusion in the course were effective in

providing directed instruction for the small computer tasks the participants needed to complete.

These screencasts were excellent tools for computer instruction because the teachers could

review any information that they may have missed by clicking and dragging the cursor to rewind

to any point on the video (Ferriter, 2010). Google Applications for Teachers was successful in

personalizing the training because of its web-based, self-paced delivery.

Implications for Teaching

Teacher roles in the classroom have started to change with the proliferation of information

and its ease of accessibility. Students no longer have to wait to obtain valuable information from

their teachers by traditional methods of instruction because the information is available to them

at all times through the Internet. With open access to information, teachers are needed more than

ever to create structure and provide meaning with the information for their students. The teacher

role has changed from a "sage," who is the source of all information in the classroom, to an

"oracle," who guides the students to create something meaningful with the information (Hall,

2008).

As technology advances exponentially, teachers themselves must become active digital

learners. Technology offers individualized instruction for all learners. Teachers must recognize

that technology not only eliminates physical barriers to learning, but also eliminates limits to

learning. A student's desire to learn more is now only limited to Internet bandwidth speeds,

which are increasing exponentially as well. Google Applications for Teachers has become the

starting point for teachers at FVHS to use Web 2.0 technology in their instruction.

Implications for Further Research

As Google expands the available applications it provides for its users, teachers will now be

able to incorporate those new applications easily because of their training in Google Applications

for Teachers. The course can be deployed at other high schools interested in adopting the

technology. Google Applications for Teachers could even be delivered in teacher credentialing

programs to educate upcoming teachers on how to use these types of technologies. As new

applications are offered, the designers must continue to update the course with new sections and

training videos to make the course relevant.

REFERENCES

Alshamari, M., & Mayhew, P. (2009). Technical Review: Current Issues of Usability Testing. *IETE Technical Review*, *26*(6), 402-406. doi:10.4103/0256-4602.57825

Barrett, H. C. (2007). ePortfolio mash up with Google Apps. Retrieved on March 27, 2011, from http://electronicportfolios.com/google/index.html

Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review of the evidence. *British Journal of Educational Technology, 39*, 775–786. doi: 10.1111/j.1467-8535.2007.00793.x

Chapman, A. (2009). Kirkpatrick's learning and training evaluation theory. Retrieved on January 15, 2011, from http://www.businessballs.com/kirkpatricklearningevaluationmodel.htm

Cole, J., & Foster, H. (2008). *Using moodle.* Sebastopol, CA: O'Reilly.

Coley, R., Cradler, J., & Engel, P. (1997). *Computers and classrooms: The status of technology in U.S. schools.* Princeton, NJ: Educational Testing Service, Policy Information Center.

Conte, T. T., Massolar, J. J., Mendes, E. E., & Travassos, G. H. (2009). Web usability inspection technique based on design perspectives. *IET Software*, *3*(2), 106-123. doi:10.1049/iet-sen.2008.0021

Dede, C. (2000). Emerging influences of information technology on school curriculum. *Journal of Curriculum Studies, 32,* 281-303. Retrieved on March 27, 2011, from http://www.virtual.gmu.edu/ss_pdf/DedeJCS.pdf

Driscoll, M. P. (2000). *Psychology of learning for instruction* (2nd ed). Neeham Heights, MA: Allyn and Bacon.

Ferriter, W. M. (2010). Preparing to teach digitally. *Educational leadership*, *67*(8), 88-89. Retrieved from EBSCO*host*.

Gagne, R. M., Wager, W. W., Golas, K. C., & Keller, J. M. (2005). *Principles of instructional design* (5th ed.). Belmont, CA: Thomson/Wadsworth.

Goodsell, A., Maher, M., Tinto, V., Smith, B. L., & MacGregor, J. (1992). *Collaborative learning: A sourcebook for higher education*. Pennsylvania State University, PA: National Center on Postsecondary Teaching, Learning, and Assessment.

Google. (n.d.) Google apps education training center. Retrieved on March 27, 2011, from http://edutraining.googleapps.com/

Gosmire, D., & Grady, M. L. (2007). 10 questions to answer for technology to succeed in your school. *Education digest*, *72*(8), 12-18. Retrieved from EBSCO*host*.

Hall, D. (2008). *The technology director's guide to leadership: The power of great questions.* Washington, D.C.: International Society for Technology in Education (ISTE).

Hiltz, S. R., & Turoff, M. (2005). Education goes digital: The evolution of online learning and the revolution in higher education. *Communications of the ACM*, *48*(10), 59-64.

Hixon, E., & Hyo-Jeong, S. (2009). Technology's role in field experiences for preservice teacher training. *Journal of educational technology & society*, *12*(4), 294-304. Retrieved from EBSCO*host*.

Horton, W. (2006). *E-learning by design*. San Francisco, CA: Pfeiffer.

International Organization for Standardization. (1998). ISO 9241-11, Ergonomic requirements for office work with visual display terminals, part 11: Guidance on usability. Retrieved on January 22, 2011, from http://www.usabilitynet.org/tools/r_international.htm

Ito, M., Horst, H., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P.G., Pascoe, C.J., … Tripp, L. (2008). Living and learning with new media: Summary of findings from the

digital youth project. Retrieved from

   http://digitalyouth.ischool.berkeley.edu/files/report/digitalyouth-TwoPageSummary.pdf

Kirkpatrick Partners. (2011). Kirkpatrick's four levels of evaluation. Retrieved on January 15,

   2011, from http://www.kirkpatrickpartners.com/OurPhilosophy/tabid/66/Default.aspx

Lee, W. W., & Owens, D. L. (2004). *Multimedia-based instructional design* (2nd ed.). San

   Francisco, CA: John Wiley & Sons, Inc.

Medsker, K. L., & Holdsworth, K. M. (2001). *Models & strategies for training design*. Silver

   Spring, MD: International Society for Performance Improvement.

Mell, P., & Grance, T. (2010). The NIST definition of cloud computing. *Communications of the

   ACM*, *53*(6), 50. Retrieved from EBSCO*host*.

Nielsen, J. (2005). Heuristic evaluation. Retrieved on January 15, 2011, from

   http://www.useit.com/papers/heuristic/

NCLB. (2001). Enhancing education through technology: Part D, section 2402. *No child left

   behind act of 2001*. Retrieved on April 20, 2011, from

   http://www2.ed.gov/policy/elsec/leg/esea02/pg34.html

Oakes, K. (2002). E-learning. *T+D, 56*(3), 73. Retrieved from EBSCO*host*.

OCDE. (2010). Orange county department of education: Collaboration tools. Retrieved on

   January 9, 2011, from

   http://oconline.ocde.us/AngelUploads/Content/DTL_Online/_assoc/2A08FF35CC774607

   972E45E088290484/DTLcollaborationtools_032210.docx

OCDE. (2011). Orange county department of education: Education technology department.

   Retrieved on March 27, 2011, from http://register.ocde.us/

Perkins, D. (1991). Technology meet constructivism: Do they make a marriage? *Educational Technology, 31*(5), 18-23.

Peterson, C. (2003). Bringing ADDIE to life: Instructional design at its best. *Journal of educational multimedia and hypermedia*, *12*(3), 227-241.

Piskurich, G. (2006). *Rapid Instructional Design* (2nd ed.). San Francisco: Pfeiffer.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1-6.

Qiyun, W., & Huay Lit, W. (2007). Comparing asynchronous online discussions and face-to-face discussions in a classroom setting. *British Journal of Educational Technology, 38*(2), 272-286. doi:10.1111/j.1467-8535.2006.00621.x

Rowe, M. B. (1987). Wait time: Slowing down may be a way of speeding up. *American educator*, *11*(Spring), 38-43.

Seffa, A., Donyaee, M., Kline, R. B., & Padda, H. K. (2006). Usability measurement and metrics: A consolidated model. *Software Quality, 14*, 159-178. doi:10.1007/s11219-006-7600-8

Styron, Jr., R., & Disher, F. (2003). Improving school performance and career preparation with a wireless computer lab. *T H E Journal, 31*(3), 40-42. Retrieved from EBSCO*host*.

Tabata, L., & Johnsrud, L. (2008). The impact of faculty attitudes toward technology, distance education, and innovation. *Research in higher education, 49*(7), 625-646. doi:10.1007/s11162-008-9094-7

Tempelman-Kluit, N., & Ehrenberg, E. (2003). Library instruction and online tutorials: Developing best practices for streaming desktop video capture. *Feliciter, 49*(2), 89. Retrieved from EBSCO*host*.

United States Department of Education. (2010). *National education technology plan 2010:*

Executive summary. Department of education, Washington, D.C. Retrieved on January 9,

2011, from http://www.ed.gov/technology/netp-2010/executive-summary

Vannatta, R.A. (2000). Evaluation to planning: Technology integration in a school of education.

Journal of technology and teacher education, 8(3), 231-246.

Vannatta, R. A., & Beyerbach, B. (2000). Facilitating a constructivist vision of technology

integration among education faculty and preservice teachers. *Journal of research on*

computing in education, 33(2), 132. Retrieved from EBSCO*host*.

Weiss, R. (2000). Howard Gardner talks about technology. *Training & development, 54*(9), 52.

Retrieved from EBSCO*host*.

Williams, R., & Tollet, J. (2006). *The non-designer's web book* (3rd ed.). Berkeley, CA: Peachpit

Press.

Wilson, S. M., & Berne, J. (1999). Teacher learning and the acquisition of professional

knowledge: An examination of research on contemporary professional development.

Review of research in education, 173-209. Washington D.C.: American Educational

Research Association.

Appendices

APPENDIX A: Google Applications Survey

Google Applications Survey

This is an informal survey for FVHS teachers to determine their:
- knowledge of Google Documents as a file sharing and collaboration tool
- background (if any) in the use of Google Applications

* Required

Have you used Google Documents before? *

○ Yes

○ No

(Continue »)

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

Google Applications Survey

* Required

Using Google Documents

What type of Google Documents have you worked with before? *
Check all that apply

☐ Google Document
☐ Google Spreadsheet
☐ Google Presentation
☐ Google Forms
☐ Google Drawing

What functions of Google Documents have you used? *
Check all that apply.

☐ Uploaded documents to Google Documents
☐ Shared documents with others to VIEW
☐ Shared documents with others to EDIT
☐ Created a survey (Google Form)
☐ Other: [   ]

What is your level of expertise with Google Docs? *

        1   2   3   4   5

beginner ○ ○ ○ ○ ○ expert

(« Back) (Continue »)

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

Google Applications Survey

* Required

Google Calendar

Have you used Google Calendar before *

○ Yes

○ No

(« Back) (Submit)

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

APPENDIX B: Google Applications Survey Results

Summary See complete responses

Have you used Google Documents before?
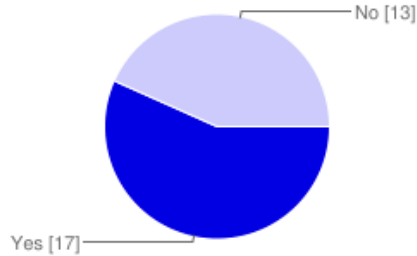
Yes	**17**	55%
No	**13**	42%

No [13]

Yes [17]

Using Google Documents

What type of Google Documents have you worked with before?
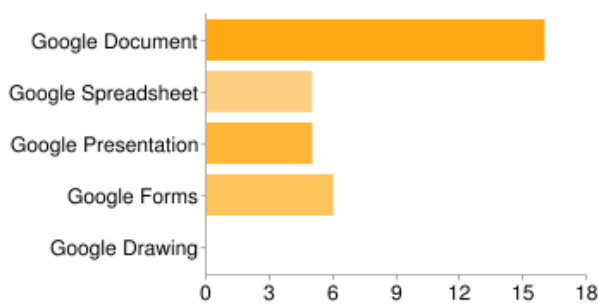
Google Document	**16**	94%
Google Spreadsheet	**5**	29%
Google Presentation	**5**	29%
Google Forms	**6**	35%
Google Drawing	**0**	0%

People may select more than one checkbox, so percentages may add up to more than 100%.

What functions of Google Documents have you used?

Uploaded documents to Google Documents	16
Shared documents with others to VIEW	13
Shared documents with others to EDIT	8
Created a survey (Google Form)	6
Other	2

People may select more than one checkbox, so percentages may add up to more than 100%.

What is your level of expertise with Google Docs?

1 - beginner	3	10%
2	6	19%
3	6	19%
4	2	6%
5 - expert	0	0%
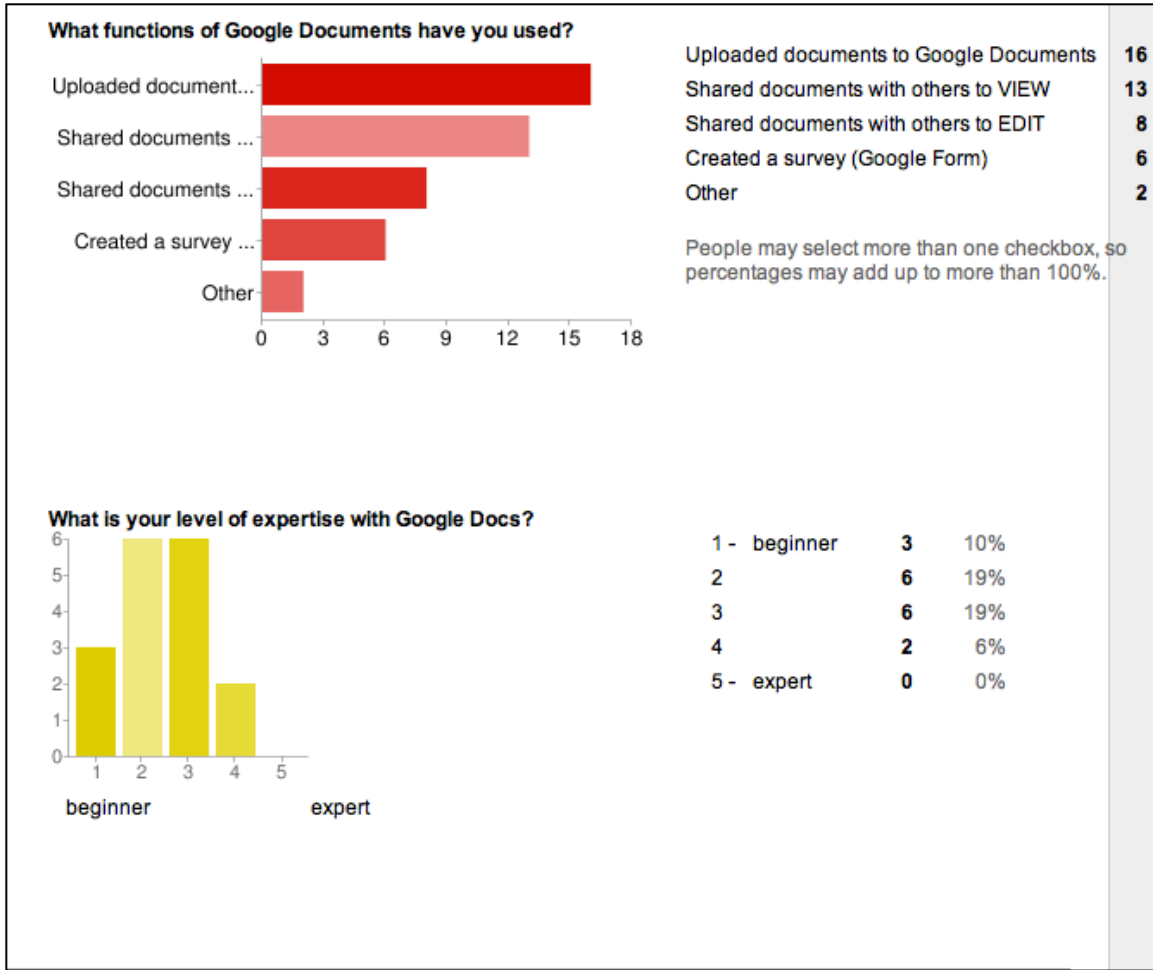
Not used Google Documents

A tutorial is being developed to show teachers how to use Google Docs and other applications. Would you be interested in attending?

Yes	11	35%
No	2	6%

No [2]
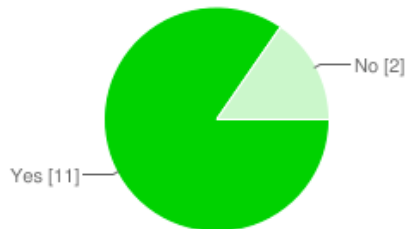
Yes [11]

Google Docs Training

If you answered "YES" to the above question, what topics would you be interested in learning about in Google
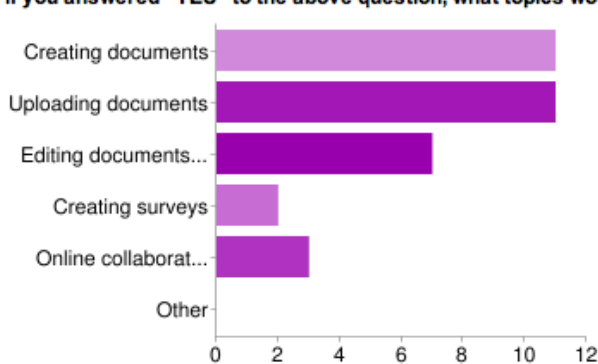
Creating documents	11
Uploading documents	11
Editing documents with others	7
Creating surveys	2
Online collaboration with Google Docs	3
Other	0

People may select more than one checkbox, s
percentages may add up to more than 100%.

- Creating documents
- Uploading documents
- Editing documents...
- Creating surveys
- Online collaborat...
- Other

0 2 4 6 8 10 12

Google Calendar

Have you used Google Calendar before

No [18]

Yes [12]

Yes	**12**	39%
No	**18**	58%

Number of daily responses

12/6/2010 .... 12/31/2010

Number of responses without dates: 1
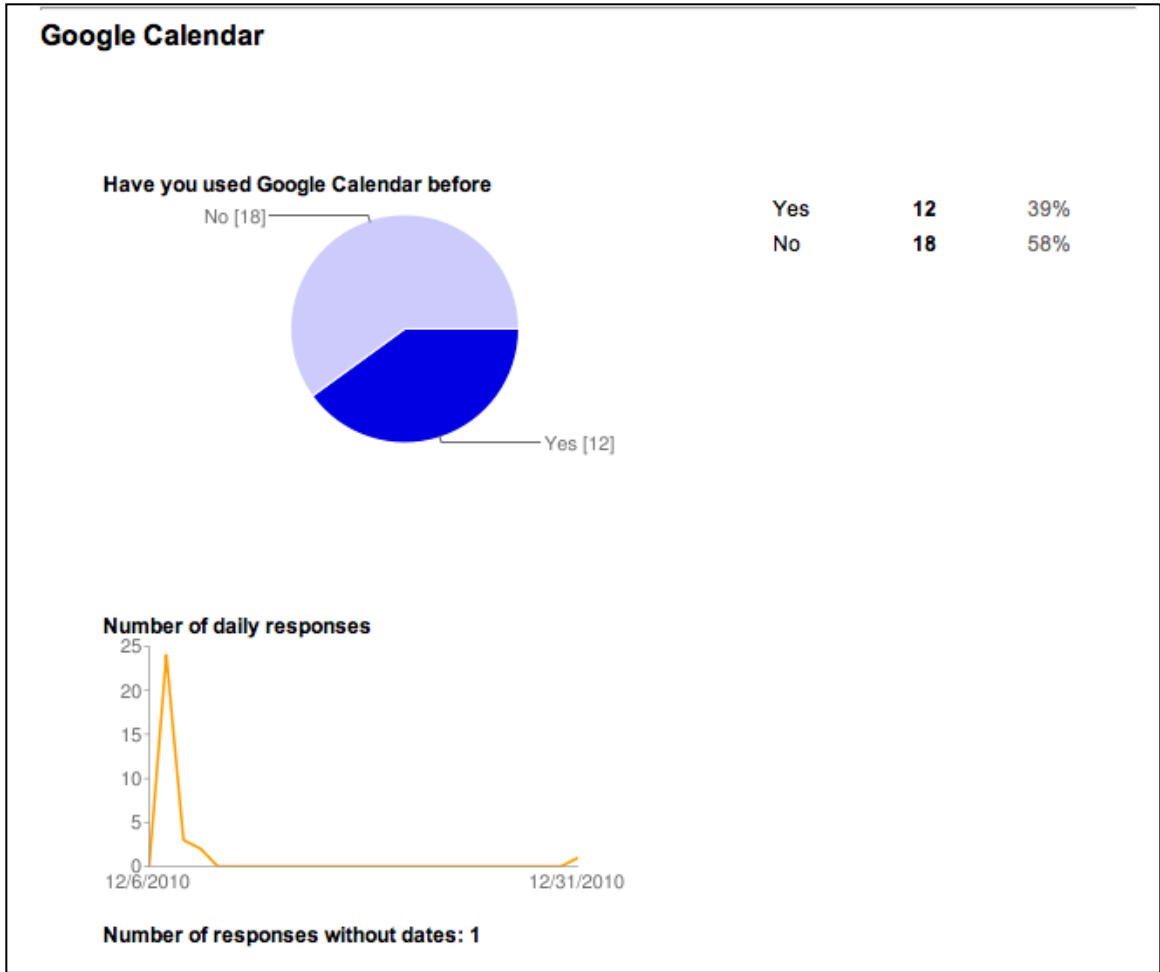
APPENDIX C: Google Applications Mash-up
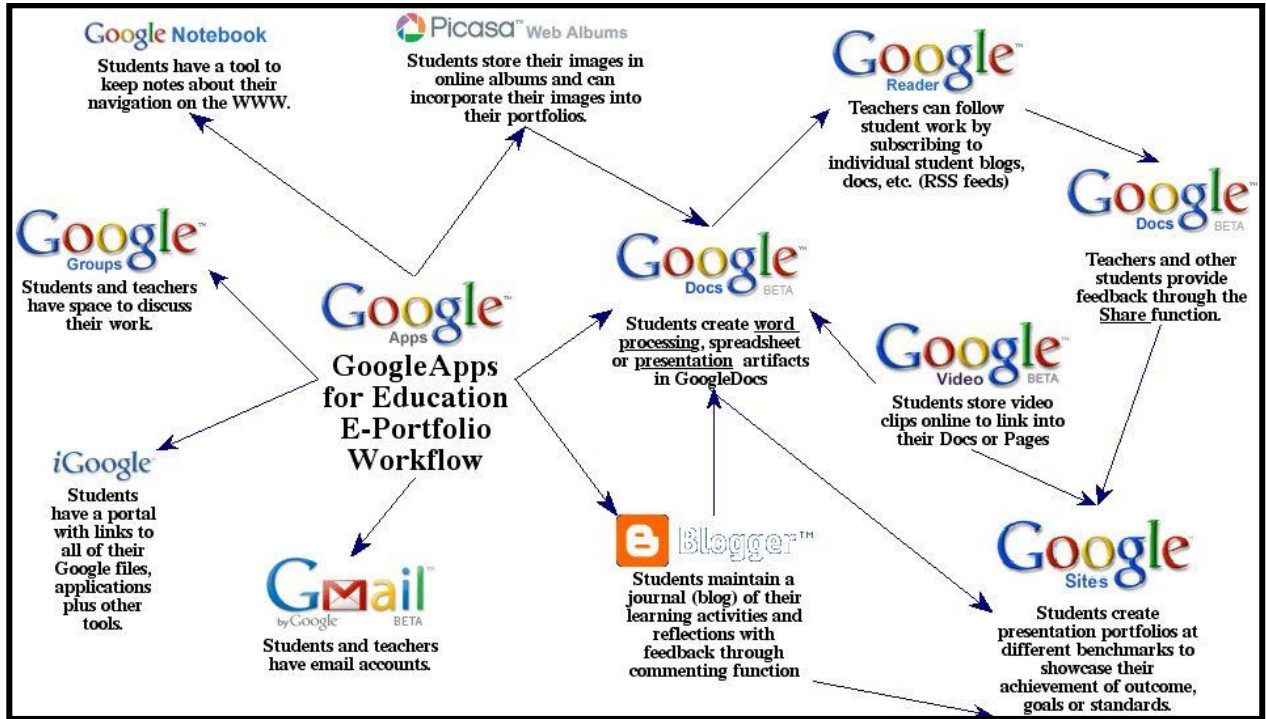
APPENDIX D: Syllabus

*Course Title***:** Google Applications for Teachers

*Course Web-Address***:** School of Media and Communication Online Education
http://www.somconline.com/LMS/course/view.php?id=699&edit=0&sesskey=ZkqaytfIRk

*Course Prerequisites***:** None

*Required Text***:** None

*Course Objectives***:**
Upon completion of this online course, participants will:

1. Develop relevant and meaningful learning activities for students using Google

   Applications

2. Communicate with students and other teachers using Gmail

3. Create and share online documents and collaborate with others using Google

   Documents

4. Create an online academic calendar to post documents and communicate agendas

   with students and teachers using Google Calendar

5. Create and upload videos to YouTube

6. Integrate relevant educational videos into lessons and activities using YouTube

7. Construct and manage a blog using Blogger

8. Follow and assess student work using Google Reader

9. Design, construct, and manage a website using Google Sites

Week 1

Unit1	Description	Points
Weekly Synchronous Chat	Mandatory attendance on Monday at 6PM PST of Week 1	25
Google Documents Survey	This is an initial survey to check the student's abilities in Google Applications	20
Task Assignments for Unit 1	- Create a gmail account - Set up email group - Send email	20
Paper: Web 2.0	APA format, submit by the end of Week 1	100

Week 2

Unit 2	Description	Points
Weekly Synchronous Chat	Mandatory attendance on Monday at 6PM PST of Week 2	25
Discussion	Respond to discussion question and to two other posts	50
Task Assignments for Unit 2	- Google Doc - Google Spreadsheet - Google Presentation - Google Drawing - Google Form	100

Week 2 (continued)

Unit 3	Description	Points
Task Assignments for Unit 3	- Events and Attachments - Calendar settings - Sharing Links - Notifications	100

Week 3

Unit 4	Description	Points
Weekly Synchronous Chat	Mandatory attendance on Monday at 6PM PST of Week 3	25
Discussion	Respond to discussion question and to two other posts	50
Task Assignments for Unit 4	- Create Blogger - Post Google Docs - Embed Video	100

Unit 5	Description	Points
Task Assignments for Unit 5	- Google Reader setup - RSS Feeds	100

Week 3 (continued)

Unit 6	Description	Points
Paper: Multimedia in Education	APA format, submit by the end of Week 3	100
Task Assignments for Unit 6	- Create a channel - Post videos - Customize channel	100

Week 4

Unit 7	Description	Points
Weekly Synchronous Chat	Mandatory attendance on Monday at 6PM PST of Week 3	25
Paper: Reflection	APA format, submit by the end of Week 3	100
Class Reaction Survey	End of course survey	-
Task Assignments for Unit 7	- Google Site creation - Embed Calendar - Announcements	100

Course Totals

Components	Points per	Totals
Chats x 4	25	100
Google Survey x 1	20	20
Tasks Unit 1	20	20
Tasks Units 2-7	100	600
Papers x 3	100	300
Discussions x 2	50	100
Course total		1140

Grade breakdown

Grade percentage	Grade assigned
At least 90% of total	A
At least 80% of total	B
At least 70% of total	C
At least 60% of total	D
At least 50% of total	F

Teaching Style:
The instructor will serve as a facilitator for the course, and guide the trainees (teachers) in the discovery of their own learning. The instructor will grade written work in a timely fashion to provide feedback on the direction of the participants in the course. The instructor will be available to respond via email to questions regarding the course. Please allow for a response time of 24-48 hours.

Discussion Questions:
Discussion questions are opportunities for the trainees to confer and brainstorm with each other regarding the assignments and projects of the course. The questions are to be answered thoughtfully and respectfully. The participants are also asked to comment to at least one other post provided, not to their own posts. Comments must add to the discussion, and not be terminal conversations. Proper etiquette and proper discussion participation gives the student all the points available for the discussion.

Assignment Deadlines:
The deadlines for the assignments are solid and non-negotiable. The tasks given to the trainees do not require much time to complete, so most of the time spent on assignments should be on writing papers, producing activities, and producing the video. Please notify your instructor immediately if you are planning to turn in an assignment at a later time. Failure to do so may result in a point deduction for the assignment.

Safeguarding your work:
It is the student's responsibility to back up his/her work as to not lose it due to technological problems. Since there is a penalty for tardiness, the student understands that technological issues are not satisfactory excuses. Please be aware that incidents do happen, and that you are prepared for those instances incase they do.

Plagiarism:
Plagiarism is the copying of another's words and/or ideas without citing. Plagiarism is a serious offense. If a student is suspected of plagiarism, he or she will be asked to provide the instructor with a copy of any research materials used throughout completion of this course. Failure to supply the materials and/or discovery of plagiarized information will result in a failing grade for the course.

APPENDIX E: Courseware Evaluation Form

Courseware Evaluation Form: Google Applications

To be completed by the designated SME's (SUbject Matter Experts) for the purpose of instructional evaluation.

* Required

Interface Design *

	Strongly Agree	Agree	Disagree	Strongly Disagree
Directions are clear and easy to follow	○	○	○	○
No modifications to PC system settings was required	○	○	○	○
Function buttons are easily identified	○	○	○	○
There is a one-click access to help and the main menu	○	○	○	○
Location of where you are in the course is easily identified	○	○	○	○

Comments about Interface Design
Use the text box below to make any comments regarding interface design

Continue »

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

Courseware Evaluation Form: Google Applications

* Required

Course Design / Content *

	Strongly Agree	Agree	Disagree	Strongly Disagree
Objectives are clearly stated for the course	○	○	○	○
Content of the course reinforced objectives	○	○	○	○
Content followed a logical sequence	○	○	○	○
Examples were adequate and related to the material presented	○	○	○	○
Adequate number of activities to support objectives	○	○	○	○
Course elements were of appropriate scope and length	○	○	○	○
Interactivity was used to engage the learner	○	○	○	○
Course contained real simulations to practice concepts and skills	○	○	○	○
You could use the course as a reference to obtain specific information on a topic	○	○	○	○
Main topics were easily identifiable	○	○	○	○
Adequate amount of instruction to produce/perform each task/project	○	○	○	○

Comments on Course Design/Content
Use the text box below to make any comments regarding course design and content

(« Back) (Continue »)

Powered by Google Docs

Courseware Evaluation Form: Google Applications

* Required

Quality and Use of Media *

	Strongly Agree	Agree	Disagree	Strongly Disagree
Graphics reinforced content	○	○	○	○
Graphics were easy to read	○	○	○	○
Video reinforced content	○	○	○	○
Video and Audio was easy to follow and understand	○	○	○	○
Presentations reinforced content	○	○	○	○
Animation was appropriately used to reinforce topics	○	○	○	○

Comments on Media Use
Use the text box below to make any comments regarding course design and content

« Back   Continue »

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

Courseware Evaluation Form: Google Applications

* Required

Connectivity and Accessibility *

	Strongly Agree	Agree	Disagree	Strongly Disagree
Graphics and pictures were accessible	○	○	○	○
Graphics and pictures loaded quickly	○	○	○	○
Video items were accessible	○	○	○	○
Video items loaded quickly	○	○	○	○
Presentations were accessible	○	○	○	○
Presentations loaded quickly	○	○	○	○

Comments on Connectivity and Accessibility

Use the text box below to make any comments regarding connectivity and accessibility

[text box]

(« Back) (Submit)

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

APPENDIX F: Courseware Evaluation Results

Interface Design - Directions are clear and easy to follow

Strongly Agree	**1** 33%
Agree	**2** 67%
Disagree	**0** 0%
Strongly Disagree	**0** 0%

Interface Design - No modifications to PC system settings was required

Strongly Agree	**3** 100%
Agree	**0** 0%
Disagree	**0** 0%
Strongly Disagree	**0** 0%

Interface Design - There is a one-click access to help and the main menu

Strongly Agree	**1** 33%
Agree	**1** 33%
Disagree	**1** 33%
Strongly Disagree	**0** 0%

Interface Design - Location of where you are in the course is easily identified

Strongly Agree	**0** 0%
Agree	**3** 100%
Disagree	**0** 0%
Strongly Disagree	**0** 0%

Course Design / Content - Content of the course reinforced objectives

Strongly Agree	2	67%
Agree	1	33%
Disagree	0	0%
Strongly Disagree	0	0%

Course Design / Content - Content followed a logical sequence

Strongly Agree	2	67%
Agree	1	33%
Disagree	0	0%
Strongly Disagree	0	0%

Course Design / Content - Adequate number of activities to support objectives

Strongly Agree	2	67%
Agree	1	33%
Disagree	0	0%
Strongly Disagree	0	0%

Course Design / Content - Course elements were of appropriate scope and length

Strongly Agree	1	33%
Agree	2	67%
Disagree	0	0%
Strongly Disagree	0	0%

Course Design / Content - Course contained real simulations to practice concepts and skills

Strongly Agree	2	67%
Agree	0	0%
Disagree	1	33%
Strongly Disagree	0	0%

Course Design / Content - You could use the course as a reference to obtain specific information on a topic

Strongly Agree	0	0%
Agree	3	100%
Disagree	0	0%
Strongly Disagree	0	0%

Course Design / Content - Adequate amount of instruction to produce/perform each task/project

Strongly Agree	1	33%
Agree	2	67%
Disagree	0	0%
Strongly Disagree	0	0%

Comments on Course Design/Content

Since it is "Google Docs for Teachers" - it would be nice if all of the examples were directly teacher related.

Quality and Use of Media - Video reinforced content

Strongly Agree	2	67%
Agree	1	33%
Disagree	0	0%
Strongly Disagree	0	0%
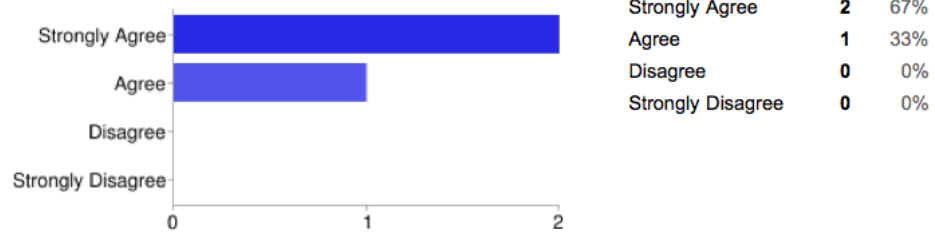
Quality and Use of Media - Video and Audio was easy to follow and understand

Strongly Agree	2	67%
Agree	1	33%
Disagree	0	0%
Strongly Disagree	0	0%

Quality and Use of Media - Animation was appropriately used to reinforce topics

Strongly Agree	3	100%
Agree	0	0%
Disagree	0	0%
Strongly Disagree	0	0%
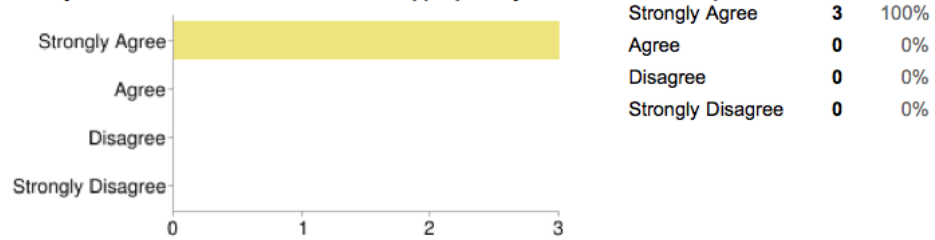
Comments on Media Use

The videos for each subject is a nice touch. Gives a good short and sweet explanation of the apps.

Connectivity and Accessibility - Video items were accessible
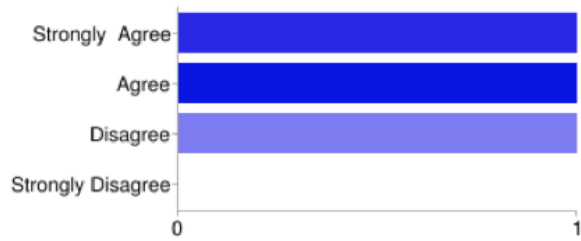
Strongly Agree	1	33%
Agree	1	33%
Disagree	1	33%
Strongly Disagree	0	0%

Connectivity and Accessibility - Video items loaded quickly

Strongly Agree	1	33%
Agree	0	0%
Disagree	2	67%
Strongly Disagree	0	0%

Connectivity and Accessibility - Presentations loaded quickly
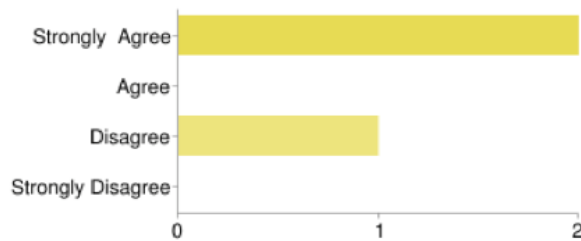
Strongly Agree	2	67%
Agree	0	0%
Disagree	1	33%
Strongly Disagree	0	0%

Comments on Connectivity and Accessibility

Again, just the problem with the Google Docs vid.

APPENDIX G: Course Checklist

Course Checklist for Google Applications

Use the checklist as a progress monitor for your advancement through the course. Visit the checklist at the END OF EACH UNIT and submit your progress to the instructor to notify them of completion of each project.

* Required

Enter your name (Last, First) and your ID number *

[   ]

Gmail *
Check the steps you have completed for this section
- ☐ Create a Gmail account
- ☐ Create a Contact Group
- ☐ Send an email to recipients in a Contact Group
- ☐ Attach a Google Document to an email and send to a contact
- ☐ Email a Google Form to a Contact Group to respond to

Google Documents *
Check the steps you have completed for this section
- ☐ Create a Google Document
- ☐ Share a Google Document with another collaborator
- ☐ Email a link to a Google Document to a collaborator
- ☐ Create a Google Spreadsheet
- ☐ Share a Google Spreadsheet with another collaborator
- ☐ Email a link to a Google Spreadsheet to a collaborator
- ☐ Create a Google Presentation
- ☐ Share a Google Presentation with another collaborator
- ☐ Email a link to a Google Presentation to a collaborator
- ☐ Create a Google Form
- ☐ Obtain results and responses for a Google Form you created
- ☐ Email a Google Form you created to respondents to gather data
- ☐ Create a Google Drawing
- ☐ Share a Google Drawing with another collborator
- ☐ Email a link to a Google Drawing to a collaborator

Blogger *
Check the steps you have completed for this section
- ☐ Create a simple blog using Blogger
- ☐ Post a Google Document into your blog
- ☐ Post a Google Spreadsheet to your blog
- ☐ Post a Google Presentation to your blog
- ☐ Post a Google Form to your blog
- ☐ Post a Google Drawing to your blog
- ☐ Post a YouTube video to your blog

Google Reader *
Check the steps you have completed for this section
- ☐ Set up a Google Reader account
- ☐ Subscribe to at least 5 RSS feeds
- ☐ Assign a Contact to create a blog and subscribe to the blog's RSS feed

YouTube *
Check the steps you have completed for this section
☐ Create a YouTube channel
☐ Edit your YouTube channel's personal information to be searchable
☐ Post 2 Videos on your YouTube channel
☐ Edit the settings to a video on your YouTube channel to include tags and comments

Google Calendar *
Check the steps you have completed for this section
☐ Create a Google Calendar
☐ Create an Event on your calendar and Attach a Google Document to it
☐ Set email notifications on your calendar for upcoming events
☐ Set cellphone notifications on your calendar for upcoming events
☐ Change your calendar settings to public access
☐ Obtain link for calendar and share with a Contact Group
☐ Invite contacts to an event

Google Sites *
Check the steps you have completed for this section
☐ Create a simple Google Site Classroom
☐ Add an Announcement section and post an Announcement to your site
☐ Add a Google Calendar section to your site
☐ Add a Profile section to your site, post a photo, and include professional information
☐ Post a YouTube video to your Announcements
☐ Post a Google Document to your Announcements
☐ Post an external link to your Announcements
☐ Post a Google Form to your Announcements

(Submit)

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

APPENDIX H: Usability Test Script

Part 1: Greeting and Introduction (5 minutes)

Hi (name of participant). My name is (name of interviewer), and I'm going to be walking you through this session.

Let me explain why we are conducting this interview today. We are testing a training web site that we are working on to see what it's like for actual people to use it.

I want to make it clear right away that we are testing THE SITE, and not you. You cannot do anything wrong during this interview. Do not worry about making a mistake, because there are no mistakes in this entire interview process.

We want to hear exactly what you think. Do not worry about hurting anyone's feelings, or your comments affecting anyone. We want to improve the web site, so we need to know how you feel about your experience. We want you to be comfortable and as honest as possible.

As we go along, I'm going to ask you about what you're thinking or to think out loud. Let me know what thoughts are going through your mind. This will help us.

If you have any questions, please don't wait to ask. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them to ask. I will try to answer any questions you may still have when we're done.

We have a lot to do, and I'm going to try to keep us moving, but we'll try to make this experience as relaxing and fun as well!

I will ask you to sign something for us. (see Appendix F) It simply says that we have permission to record this information. It also says that you won't speak to anyone about what we're showing you today, since it hasn't been made public yet.

Do you have any questions before we begin?

Part 2: Background Information Questions (5 minutes)

Before we look at the course, I'd like to ask you a few questions. Firstly, have you completed or attempted any computer-based training before?

Good. Now, roughly how many hours a week would you say you spend using the Internet, including email?

Can you think of an example when the Internet really helped you develop a great teaching lesson?

Do you have any favorite educational websites? What are they?

I understand that you are interested in using Google Applications. Have you used it before?

In what areas do you think you would need training on Google Applications?

Part 3: Overview of Test Session (3 minutes)

I just wanted to remind you again, that we are not testing you. We are testing the usability of this new website, what parts work well, and what parts do not work well. You are here today to help us with this task, learn something, and enjoy the training as well.

You will be given a set of tasks to complete. Work on the tasks as if you were participating in the course. You will also be asked to complete phrases and answer questions regarding the tasks, so work through the tasks as if you were enrolled in the course. We just want you to voice your thoughts as you go through the course so we can record them for later study.

Again, be as honest and frank about your experiences.

Part 4: Entry Page / Initial Impressions (10 minutes)

Take a look at the home page of the tutorial. Observe what is on the page without using the mouse to navigate through the site. Now look away from the screen.

- What was the first thing you saw when you looked at the home page?
- Without looking at the home page at the moment, what parts of the page do you remember very well?
- Go ahead and think out loud as we are recording your responses.

Use the mouse to navigate through the course. Go ahead and try to complete these sentences as you do the talk-through:

1. This website is called _____
2. What the purpose of the website?
3. I am going to click on _____ first.
4. I am on the _____ page of the website.
5. The parts of the website are _____
6. What am I going to learn from this website?
7. I am confused about _____

Part 5: Task (30 minutes)

You are now going to complete the first task of the course. Remember that the purpose of the interview is to test the *website* and NOT to test your performance on the site. Follow the directions and we encourage you to THINK OUT LOUD while you are working through the first lesson. Here are some thoughts to consider while you are completing the first task.

1. What is the first lesson about?
2. How did I navigate to it?
3. The instructions are clear/unclear.
4. This task was difficult/easy to complete.
5. What new concept did you learn from the tutorial?
6. Identify something you liked about the tutorial.
7. Identify something you disliked about the tutorial.
8. Identify something that was clear in the tutorial.
9. Identify something that was unclear in the tutorial.
10. Was the text difficult/easy to read?
11. Were the multimedia components helpful in this first lesson?
12. How did you know you were done with the first lesson?
13. How did you know you were successful with the first lesson?

Part 6: Debrief (15 minutes)

Now that you have completed the first lesson, I want to ask you about the following:

- What is your general reaction to the first lesson?
- Was the lesson successful in addressing its learning objective?
- Did you want to change any of your earlier statements?
- Any other suggestions or recommendations?

APPENDIX I: Class Reaction Survey

Class Reaction Survey: Google Applications for Teachers

* Required

For each statement below, select the response that best describes your opinion. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
This course was relevant to what I do on the job	○	○	○	○
I was able to master the course objectives	○	○	○	○
The course was interesting and entertaining	○	○	○	○
The course gave me practical information	○	○	○	○
The assignments were useful activities	○	○	○	○
The trainer helped make the learning easier	○	○	○	○
There was enough time to complete all the course material properly	○	○	○	○
The course was well organized	○	○	○	○
The course materials helped me in my learning	○	○	○	○
Overall, the course was worth the time I spent in it	○	○	○	○

(Submit)

Powered by Google Docs

Report Abuse - Terms of Service - Additional Terms

APPENDIX J: Class Reaction Survey Results

Summary See complete responses

For each statement below, select the response that best describes your opinion. - This course was relevant to what I do on the job

Strongly Disagree	0	0%
Disagree	0	0%
Agree	0	0%
Strongly Agree	1	100%
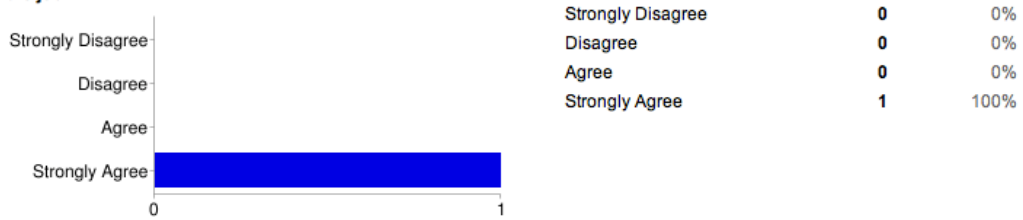
For each statement below, select the response that best describes your opinion. - I was able to master the course objectives
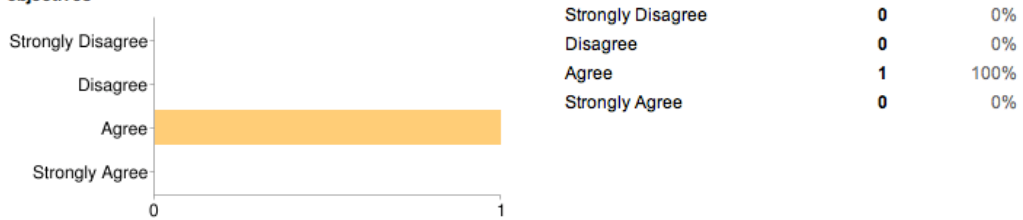
Strongly Disagree	0	0%
Disagree	0	0%
Agree	1	100%
Strongly Agree	0	0%

For each statement below, select the response that best describes your opinion. - The course was interesting and entertaining

Strongly Disagree	0	0%
Disagree	0	0%
Agree	1	100%
Strongly Agree	0	0%
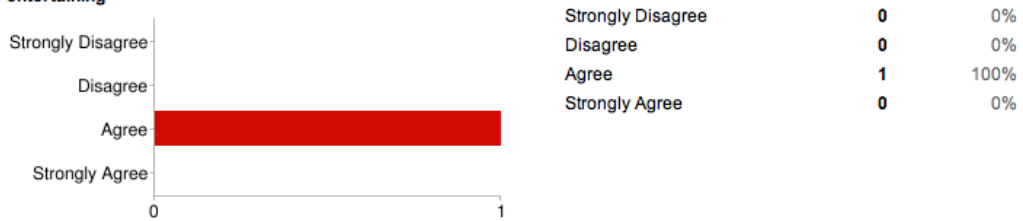
For each statement below, select the response that best describes your opinion. - The course gave me practical information

Strongly Disagree	0	0%
Disagree	0	0%
Agree	0	0%
Strongly Agree	1	100%
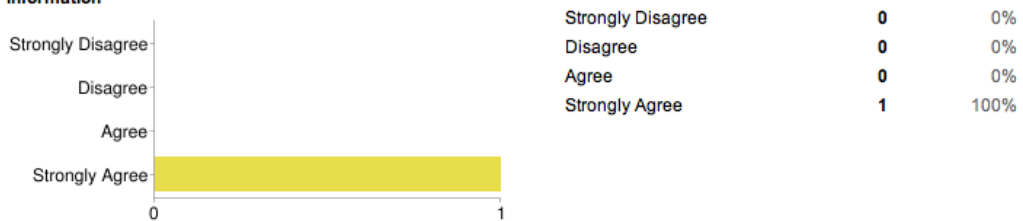
For each statement below, select the response that best describes your opinion. - The assignments were useful activities

Strongly Disagree	0	0%
Disagree	0	0%
Agree	1	100%
Strongly Agree	0	0%
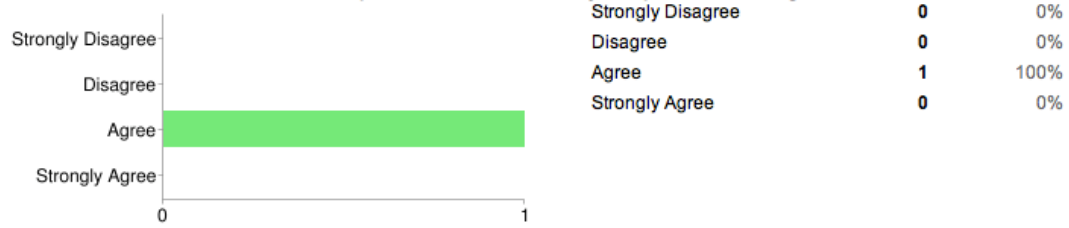
For each statement below, select the response that best describes your opinion. - The trainer helped make the learning easier

Strongly Disagree	0	0%
Disagree	0	0%
Agree	1	100%
Strongly Agree	0	0%
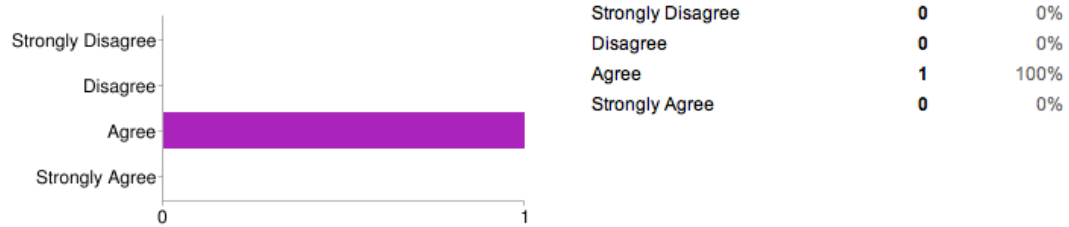
For each statement below, select the response that best describes your opinion. - There was enough time to complete all the course material properly
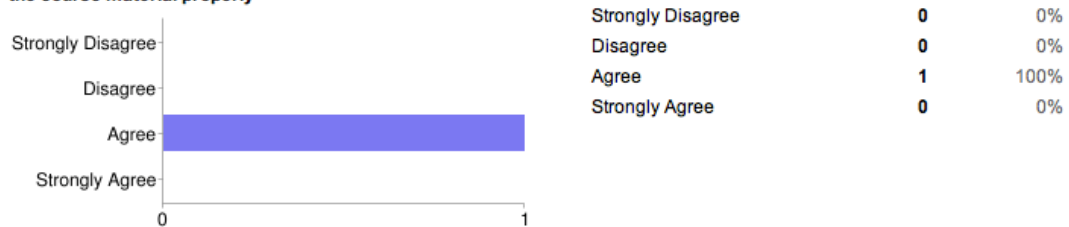
Strongly Disagree	0	0%
Disagree	0	0%
Agree	1	100%
Strongly Agree	0	0%

For each statement below, select the response that best describes your opinion. - The course was well organized

Strongly Disagree	0	0%
Disagree	0	0%
Agree	0	0%
Strongly Agree	1	100%

For each statement below, select the response that best describes your opinion. - The course materials helped me in my learning

Strongly Disagree	0	0%
Disagree	0	0%
Agree	0	0%
Strongly Agree	1	100%

For each statement below, select the response that best describes your opinion. - Overall, the course was worth the time I spent in it

Strongly Disagree	0	0%
Disagree	0	0%
Agree	0	0%
Strongly Agree	1	100%
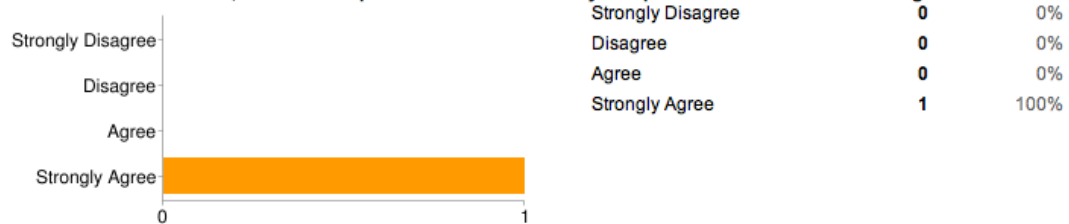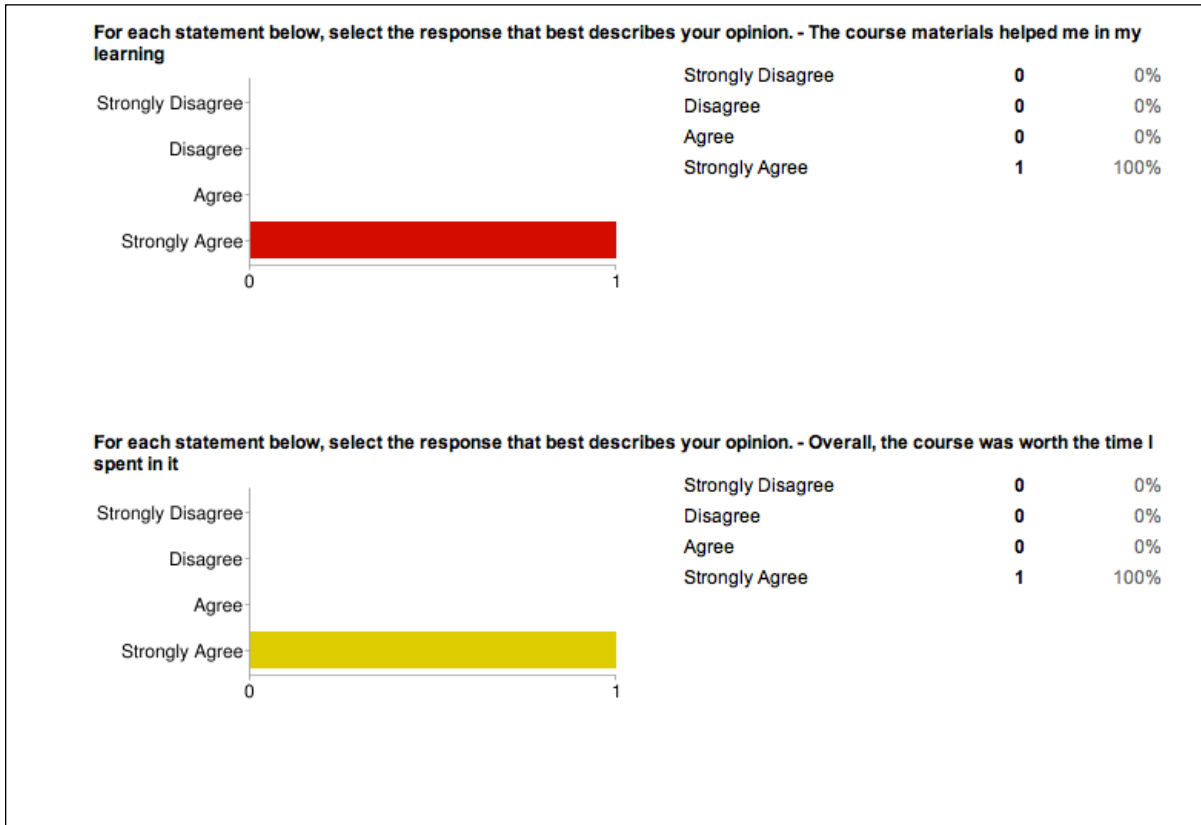
APPENDIX K: Screen Captures of Google Applications for Teachers

1

📧 **Gmail: The key to Google Applications (Week 1)**

Create a Gmail account to access all of the Applications that Google has to offer.

💬 Weekly Synchronous Chat
📋 Google Documents Survey
📋 Paper: What is Web 2.0?
📋 Task Assignments for Unit 1

Tasks for Unit 1 (Week 1)

🖥 Task 1.1: Create a Gmail Account
🖥 Task 1.2: Set up Email Group
🖥 Task 1.3: Send an email to a Contact Group

2

📝 **Google Docs: Edit, Share, Collaborate (Week 2)**

Google Docs in Plain English

▶ 🔊 0:00 / 2:50   ➕ Watch later   YouTube   ⛶

Here is a video introduction into Google Docs. Take a second to view it, and think about how you can use this application in your day-to-day teaching.

💬 Weekly Synchronous Chat
👥 Discussion topic: Digital Natives
📋 Task Assignments for Unit 2

Tasks for Unit 2 (Week 2)

🖥 Task 2.1: Google Forms
🖥 Task 2.2: Google Docs
🖥 Task 2.3: Google Spreadsheet
🖥 Task 2.4: Google Presentation
🖥 Task 2.5: Google Drawing

3

Google Calendar: Event tracker (Week 2)

Organize and share.

Task Assignments for Unit 3

Tasks for Unit 3 (Week 2)

Task 3.1: Event and Attachments
Task 3.2: Calendar Settings
Task 3.3: Share link to Calendar
Task 3.4: Calendar Notifications

4

Blogger: Posts, Discussions, Assess (Week 3)

Blogs in Plain English

"Quote"   Link

Read

0:00 / 2:58   YouTube
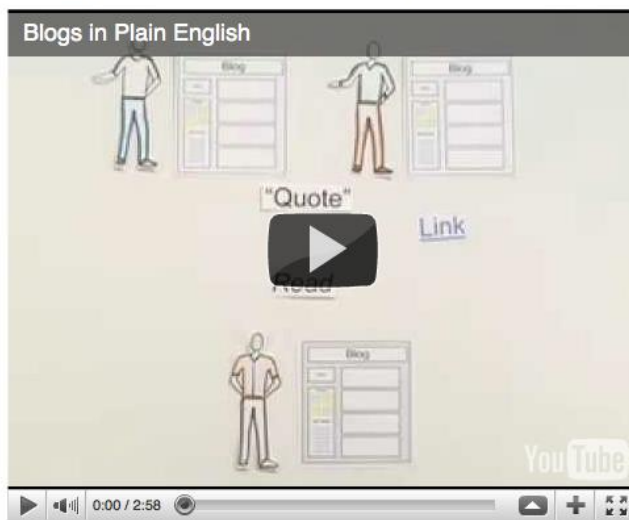
Create meaningful discussions using a blog forum
Weekly Synchronous Chat
Discussion topic for Week 3: Blogs in Education
Task Assignments for Unit 4

Tasks for Unit 4 (Week 3)

Task 4.1: Create a simple Blog
Task 4.2: Post Google Documents
Task 4.3: Embed a YouTube video

5

Google Reader: Stay in Touch (Week 3)

Google Reader in Plain English

0:00 / 1:06
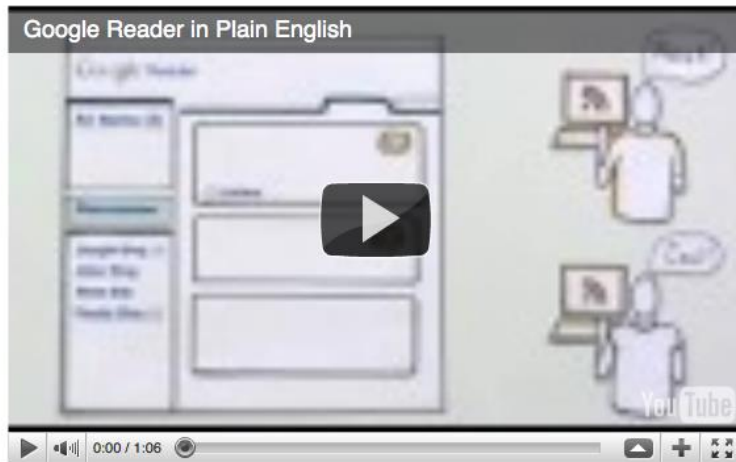
Task Assignments for Unit 5: Google Reader Assignment

Tasks for Unit 5 (Week 3)

Task 5.1: Set up Google Reader
Task 5.2: Subscribe to RSS feeds

6

YouTube: Resources and Podcasting (Week 3)

Teaching with video
Paper: Role of Multimedia in 21st Century Education
Task Assignments for Unit 6

Tasks for Unit 6 (Week 3)

Task 6.1: Create a Channel, Edit you Settings
Task 6.2: Post 2 Videos
Task 6.3: Customize your channel

7

Google Sites: Your online classroom (Week 4)

Introduction to Google Sites

▶ ◀▶ 0:00 / 1:00

One Stop Shop
Weekly Synchronous Chat
Paper: Reflection on Google Applications for Eduation
Task Assignments for Unit 7

Class Reaction Survey

Class Reaction Survey

Tasks for Unit 7 (Week 4)

Task 7.1: Create a Google Site
Task 7.2: Embed your Google Calendar
Task 7.3: Announcements