Teaching Paperless with Freely Available Resources

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Abstract

The world is increasingly going digital. Many universities have one-to-one computing and campus Wi-Fi networks that allow teachers and students to interact digitally more than ever before, although the situation does vary from country to country. Teachers at one Japanese university are rapidly moving toward teaching paperless using various information and communication technology (ICT) tools. The article addresses how paperless teaching was applied in classes with first-year university students having low levels of computer skills, using specific tools such as Google Docs, Facebook, and Dropbox. It then provides general ideas of how to implement paperless teaching in classrooms, specific recommendations on tools and activities to use, and specific ways that students can be prepared before they enter university.

Across Asia, there is a huge variety of information technology (IT) situations in universities, ranging from low-tech classrooms with only a whiteboard to classrooms with a full array of audio / visual materials available. Some universities have high speed Wi-Fi throughout their campuses. Some students have access to well-equipped computer labs outside of class. Additionally, schools in various areas around the world are moving to a one-to-one computing model (Trucano, 2010). With this transition toward more technologically-focused classrooms, teachers are finding ways to integrate new methods into their practices. This paper targets instructors with access to IT and highlights teaching practices attempting to make the technologies more useful for the teacher and students. It is designed as a basic outline for *teaching paperless*.

Inspiration for this article came from the blog TeachPaperless (Blake-Plock, 2012), which aims not only to remove the paperwork from teaching, but to meet students' technology needs. The article relates the challenges of employing various online media websites in class for academic purposes and aims to share how a paperless classroom was accomplished, what online tools and references were utilized, which skills the students needed to perform the tasks, and finally, what advantages and disadvantages were discovered during the process. The questions fostering this exploration were:

- 1) What are the benefits or drawbacks of a paperless system for teachers and students?
- 2) What are the limitations and difficulties of teaching a paperless course?
- 3) What computer programs can be used in a face-to-face class so that it can be taught entirely paperless?

While many e-Learning platforms exist, the authors' university did not subscribe to any, requiring teachers to find other means of integrating technology into the classroom. One goal of this exploration was to discover technologies to use in the absence of these platforms.

Further, this article reflects what the authors found worked best in their teaching situation; it is not meant to be a comprehensive review of all digital tools. It is about trial and error for two teachers attempting to find methods to make their workloads lighter while addressing the needs of students entering a technology-driven world. No formal research was conducted; rather, a problem was addressed with a practical approach. The teachers conferred with each other about which platforms to use, how they were using them, and what other programs could be implemented to make a course paperless.

Literature Review

Teaching paperless relies on technology that did not exist a few years ago, so most of the literature related to this topic is relatively recent. Computers in language-learning classrooms are primarily used to enhance students' skills in terms of language input and output (Winke & Goertler, 2008); however, students often feel anxious about using computers for academic purposes (Ushida, 2005). Students may use computers and social networking sites (SNS) such as Facebook, Twitter, or Mixi (specific to Japan) for personal reasons; however, the skills needed to use these websites do not always overlap with academic language learning goals. In fact, students have said using these specific SNS can be problematic. For example, Japanese students have reported that Facebook is not "Japanese friendly" in regard to Japanese cultural constraints; also, they deem the user-interface too complicated and the real name policy uncomfortable (Acar, 2011). However, recently, Facebook use in Japan has increased faster than in any other nation except Brazil, going from 200,000 users in 2008 to over 6 million currently (Morales, 2012).

In the United States, 100% of universities polled in one study stated they were using SNS sites (with Facebook being reported as one of the most used), meaning that students, whether using these sites for personal reasons or not, could be required to use such sites for academic purposes (James, 2011). In another survey, 80% of American university educators report using social media for a course they are teaching and two-thirds have used social media during class (Daily Statistic, 2011). Barnes and Lescault reported an increase from 2007 in all areas of university social media use, including blogs, podcasts, Facebook, video blogs, and YouTube (2011).

American universities have a high success rate with technology because many students are already using the technology (Walsh, 2010). This is not always the case in other countries, yet educators are eager to integrate technology into language teaching for several reasons. One of the most important is student motivation. A well-implemented computer-assisted language learning (CALL) program may strengthen students' motivation when learning a second language (Ushida, 2005).

Another concept in CALL is a technology-enhanced language learning (TELL) environment. (Adair-Hauck, Willingham-McLain, & Youngs, 1999). This notion extends from not only online learning programs, but also hybrid learning and face-to-face learning situations. TELL

environments can be used to strengthen a course by giving students technology-related components to language learning that encourage students to learn more outside of the classroom.

Setting

This investigation took place at a university in Japan. Two teachers had six classes with 20 to 30 students in each course. The majority were first-year students, all of whom were required to have a laptop in class every day. Students and teachers met twice a week for ninety minutes.

In this English program, teachers and students were encouraged to use computers for as many tasks as possible: group projects, presentations, essay writing, speaking journals, video blogs, and social media sharing via Facebook. The teachers' main goal was to teach freshmen basic-skills courses without using paper; all teacher-student and student-student interactions would be digital. All in-class activities were done using computer or online technology, as was all homework.

How Computers Can Be Integrated into the Classroom

The sections that follow describe paperless techniques that can be used with students. They were all used with the students in the study.

Creating a Home Base

One method of teaching paperless is to create a home base for each course, a central location online where all information and files about the course are stored. It is a space where students can find all pertinent information needed for the course. There are many platforms that can serve as a home base: Moodle, a private Facebook group, a Google text document, a calendar, a blog, or a Dropbox folder (Appendix A). It is important that the teacher selects and uses only one location for the home base throughout the semester. By making it a course requirement to visit the home base, students will use it consistently and be aware of the information or activities available to them. Information could include in-class activities, homework, the class syllabus, class vocabulary lists, and examples of good work. Details of how the applications can be used as home bases will be described within the section covering each application.

Google. A Google document is an online word document created by the teacher using a Google account; it can be shared with students in an email with a link to the document. Once created and sent to a specific group, all group members can then access the document. Documents can be set up as "read only" (i.e., no editing is allowed) or alternatively, all group members can be allowed to edit this document. Used as a home base, a Google text document can include the course syllabus, class-by-class updates, detailed information about homework, model examples of homework or projects, vocabulary lists, or links. As the document is updated, the information for previous classes is still available, creating a complete, detailed reference for the students throughout the semester.

Another reference home base through Google is Google Calendar. Prior to the semester, the teacher inputs the information about the class, time, room, etc. into the Google Calendar set up page. On the calendar, the classes appear by the date, week and time. The teacher sends the link to the students, and they can locate the class by the day of the week and time to see the information written for that day. It could include what was done in class, homework, links or class activities. The calendar is useful for absent students to look up assignments.

Facebook. Facebook, the most popular SNS in the world, is increasingly adding new languages, making sign-up, navigation, and troubleshooting easier. Facebook is an excellent online teaching tool, despite fears about privacy. Specifically, with its privacy settings, Facebook is good for a home base. The teacher controls the privacy settings so only group members have access. By using a group, the teacher and students do not have to “friend” one another to interact. Teachers can send students a link to the group via regular e-mail, and students can directly join the group. The students, who may already use Facebook for personal reasons, will be notified when they log into Facebook if changes have been made to the group page. Using Facebook as a home base is easy because of the notifications and ease of posting items into the group. The group wall serves as an easy means of alerting students of class events, assignments, projects or changes. The wall also allows the teacher to create a post for an assignment. To submit their projects, students simply comment or reply on that same post. Another benefit is that students can post questions and get feedback from either classmates or the teacher.

Dropbox. Dropbox is a free service that saves information online as well as synchronizes shared folders and files within a set of computers. Once connected to the Internet, the system automatically updates changes made in the folders. After a folder is updated via the Internet, it can be accessed offline. Files can be accessed any time and from any computer with Internet access. The main advantage of Dropbox is the ability to share large audio and video files. There are many options when creating class folders; there can be one single class folder, or students can have their own individual folders. These folders can be shared with the entire class or between just the teacher and student. For example, for an academic speaking class, each student created a folder and shared it with the teacher so that both had access to the student’s speaking audio files. In an academic listening class, the teacher created one folder and added all of the listening files for the class to access.

In-Class Activities

Google. Used for in-class activities, Google Docs allows students to collaborate simultaneously on one document, whether it is a text, presentation, questionnaire, spreadsheet, vocabulary list, project, or a writing assignment. The major benefit of this tool is that the teacher, as a member with access to the document, can directly add real-time feedback (e.g., guiding student direction, writing clarification questions, highlighting errors) to students’ documents as the students are working on the them in class. This allows the teacher to not only supervise more students than would ordinarily be possible, but also to give a more detailed level of feedback – all paperless.

An important facet of Google is that having a Google account is not necessary, although it is helpful. Links to Google documents and calendars can be sent to any email address, and students can edit documents as anonymous users. The benefit of having students sign up for the free e-mail account is accountability; teachers can assess student contributions. Other benefits are easier access to documents, calendars within students’ accounts, and removal of the need for students to bookmark or search through emails for document links.

Facebook. The Facebook platform is constantly integrating social media that many students are already using, making it a space for various in-class paperless projects. Students can post links to websites or YouTube videos, write survey questions, create polls, write comments on content posted by other students, and upload photos or videos. A typical in-class assignment may involve students choosing and watching a video, for example, a TEDTalk (<http://www.ted.com/>), reposting the video in the Facebook group, and creating a poll about the video for other students to complete. The ease of adding videos allows speaking and listening

to be incorporated into the online component of classes. Students can use their computer web cameras or cell phone video cameras to make a video about a topic and upload it. Other students can comment on the content. A Facebook group also allows for group collaboration. Students can interview one another, make a video, and create a quiz for other groups to complete. Student groups can make videos outside of class to share with the group for in-class discussion or as a group presentation.

Dropbox. When teaching paperless, Dropbox is an easy system for in-class tests and quizzes. Before class, the teacher adds the quiz file into individual student folders. When the students arrive, they log in, their individual Dropbox folders update so that the quiz automatically appears, and students then complete the quiz. When each student saves the completed quiz file in the individual Dropbox folder, the folder synchronizes and the file is immediately shared, allowing the teacher to access the quiz for assessment.

Discussion

Computer Skills Needed for Students

In this Japanese university, many first-year students in the English Department arrived without the skills to use applications such as Google, Facebook, or Dropbox, or even to use a computer. Although these Japanese high school graduates were adept at using cell phones, they lacked basic computer skills needed to be successful in an academic sphere: touch typing (30 words per minute), and Microsoft Word, PowerPoint, and Excel skills. Many students could not create files or folders, download, open, or install files or software, manage computer settings or preferences, control privacy on computers or Internet websites, or troubleshoot hardware problems. When students lack these basic computer skills, the ability of a teacher to implement class use of Facebook, Dropbox, or Google Docs is limited.

Solutions to Improve Student Skills

Several solutions were found for these difficulties. One simple solution for the students' inability to type faster than 10 words per minute is various touch-typing games available for free online. Students are required to increase their typing speed by 10 words per minute every week, and they are tested once a week in class. Practice is done outside of class. The typing games are often fun and encourage students to correct their hunt-and-peck typing habits.

Students provided a solution when their classmates had difficulties during the initial setup phases for Google Docs, Facebook, or Dropbox. After the teacher introduced the software, one or two students would understand quickly and successfully download, install, and use the program. These students began helping other students who had difficulties.

Another solution was teacher-created handouts that had screenshots of the setup process in English to aid students as they attempted the task (Appendix B). These handouts provided step-by-step instructions to follow. Occasionally, students encountered problems that could only be dealt with by the university's IT staff; the support network at the university helped foster the use of these tools.

A further solution was for the teachers to be available during the day after classes for students to get personal help. Several students came during these periods to have the teacher help them complete assignments.

Observed Advantages and Disadvantages of Teaching Paperless

This project was devised from two sources: one a blog about teaching paperless and the other, the desire of two teachers to end the onslaught of emails and the stacks of papers after every project, essay, or test. There are several advantages of teaching paperless. First, homework cannot be inadvertently left at home, as it is submitted online. The time and date stamps in all of the programs allow teachers to check when the work was submitted, making evaluation more immediate and easy. Another advantage is that by working online, students and groups can collaborate, but do not need to be in the same location to do group work. Finally, teaching paperless reduces time spent making copies and saves trees.

The disadvantages of teaching paperless include students and teachers not being technologically proficient, causing frustration and lost time. Teachers and students need to have constant access to a computer, an Internet connection, and electricity. Although students can have a basic understanding of technology, sometimes they cannot productively transfer their knowledge of this field to language learning, and using technology in this manner can create anxiety (Ushida, 2005). Technology also constantly changes and requires upgrades.

Conclusion

The year of teaching paperless was a trial for the students as well as the teachers. The first semester was the most difficult as the students struggled with all of their classes being taught only in English while their computer competency was on trial every day. Many students risked failing classes because of their inability to understand how to use the necessary technologies, and several class periods had to be dedicated to teaching students how to do basic computer tasks. The twice weekly classes allowed for this necessary input. In addition, several teachers at the university agreed to use the same media; this overlapping structure benefitted the students. By the end of the first semester, the majority of the freshman students were competent at using the basics of the technologies mentioned.

Once students and teachers are proficient at using the required technologies, the paper load for both is markedly decreased. The tasks using technology seem to be motivating for students: the students in this investigation liked watching videos and commenting on other student work. These are advantages for both students and teachers. The main disadvantage and limitation lies in the learning curve and time needed for students to acclimate to using computers and technology. However, teaching paperless teaches students 21st century skills that are transferable to most major fields of work, making it a viable reason to encourage students to learn, understand, and make the most out of what they learn in class.

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Appendix A

Examples of Home Base Platforms

Google Calendar

Google Document

Dropbox

Dropbox

kele.butler@gmail.com Account Upgrade Log out

[Get Started](#) [Files](#) [Events](#) [Sharing](#) [Help](#)

Dropbox » Kelly's Writing 1 T45 Spring 2011

[Upload](#) [New folder](#) [Shared folder options](#) [Show deleted files](#) [More](#)

☐ File Name	Size	Modified
Parent folder		
☐ 9 June Homework		
☐ 13 June Homework		
☐ 16 June Homework		
☐ Completed		
☐ brown1a.pdf	13.33KB	5/8/2
☐ Writing.pdf	6.35MB	4/17/

[Download folder](#)
[Move...](#)
[Rename...](#)
[Copy to...](#)
[Delete...](#)

Appendix B

Lesson Plan: How to Join Dropbox

Main Aim: Students (Ss) will demonstrate their ability to use various computer tools by successfully navigating the Internet, downloading and installing the Dropbox (DB) software, and emailing the shared folder to the teacher (T).

Subsidiary Aims: Ss practice installing software onto their laptops. Ss successfully complete an assignment upload into Dropbox.

Materials / Resources:

Students' individual laptop computers with webcams and microphones

Teacher computer connected to the overhead projector

Wireless Internet connection

Handout (HO) with instructions for students

Procedure

Stage Aims	Procedure	Time (Min.)	Tools
1. Intro: Tell Ss why using class to install software.	- T explains paperless classroom. - All files will be turned in with an electronic folder shared by the T and the Ss.	2	
2. Demo: Show Ss what to do.	- T demonstrates process of downloading, installing, and setting up DB.	10	- PowerPoint - Computer & Internet - Overhead Projector
3. Ss install software.	- Ss install and set up DB, use detailed handout (HO) for help. - T moves from S to S to check progress.	30	- HO (attached)
4. Assignment 1	- Ss record a short video of themselves in class: Topic - How technology is useful in the classroom. - Ss save video in their DB. - Assignment complete once assignment arrives / updates in T's shared DB folder.	10	- Webcams - Microphones
5. Homework	- Ss must record a dialogue and save to DB.	3	

Anticipated Problems:

- 1) Ss have difficulty understanding instructions.
- 2) Internet is slow / not working.
- 3) The website is not working.
- 4) Some Ss computers are not working.

Possible Solutions:

- 1) T helps one or two Ss with good computer skills; these Ss then help other Ss along with the T.
- 2) T uses HO screenshots to show Ss how to complete the assignment. Ss complete for homework.
- 3) Same as Solution 2.
- 4) Same as Solution 2.

How to Join Dropbox Handout

- 1) First, go to: <https://dropbox.com>
- 2) Second, download Dropbox for Mac or PC.

- 3) Third, install the software according to the instructions.

- 4) Once Dropbox has been installed, go to Sign In.
Click: Create New Account

- 5) Write your name, email address, and a password.
Click: I agree to Dropbox Terms. Click: Create Account.

Create an account (or sign in)

First name

Last name

Email

Password

☐ I agree to Dropbox Terms

Create account

6) In the Dropbox folder, click: New File.

7) After clicking on New File, please type:
Ms B's Academic Speaking Class: Daisuke K.

8) Click: Share this file.

9) Invite me to share your folder.
Please write: ms.b@gmail.com
Then write me an email with your name.

10) Congratulations! You have now shared your Dropbox folder with me.

For this class, always save all of your homework,
class activities and notes in the Dropbox folder.
The folder will update automatically.
Every time you have Internet connection and update your folder,
I will receive the same file!