Suggestions
Incremental Redesign:
Classroom Connect

By
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Selected Features for the Incremental Redesign

We selected six features to redesign.

- Create a simple introductory page that identifies Classroom Connect and its goals
- Make the Quick Tour more prominent
- Make site organization clearer
- Create a separate electronic notebook for taking notes
- Enhance Lesson Notes. Make it more prominent and relevant
- Let teachers rate and evaluate Web Units and other prepared lesson plans

Create a simple introductory page that identifies Classroom Connect and its goals

Our team noted in the minutes of our first meeting – after our first virtual visit to Classroom Connect – that the “homepage is very busy” and we were not sure where to start. That was simply our intuition.

But our design review backed up that initial diagnosis. The site did not immediately identify its purpose and did not establish goals for teachers and students. Mei Chen states that informing the learner of the new abilities he or she will acquire is a “basic pedagogical method,” yet one not followed by Classroom Connect. In addition, Alessi and Trollip argue that “if there is a particular sequence in which text information should be read, follow the general convention of sequencing from the top to the bottom and left to right because users are used to reading in that way.” The main Classroom Connect page has no order to it, no sequence, no focal point, and sometimes overlapping information. Alessi and Trollip also suggest selecting and designing graphics consistent with the rest of the instructional message. But if Classroom Connect’s message is that their service can make complicated processes simple, their homepage doesn’t give that impression.

Our Learner Studies backed up this finding. Alice suggested narrowing the number of options off the homepage, adding “It’s a little bit busy, a little bit hard to find what you want, there’s so much there.” Beth summarized: “It’s complex. What I found from a lot of websites [and this one in particular] from education is they’re a little more difficult than my age group can handle.” Another piece of anecdotal evidence is that all three subjects started at different points on the homepage, simply by choice.

We created a simple homepage that allows entrance for students and teachers separately. It also gives a concise summary of what teachers and students can do on the site and it identifies the Classroom Connect mission very briefly. There are only two choices on this main page and it should be very clear where users should enter. The page immediately after that gives the six main steps (in order) for how the site can be used. This feature also gives confidence to novice Internet users – they know where to go for what and have helpful icons to guide them. This confidence should translate into a new learning identity and a willingness to try features on the site that might seem intimidating in other settings.
Make the Quick Tour more prominent

The current Classroom Connect Quick Tour is only available when users log on as a Visitor, or on certain pages of My Classroom Today. Because the site is complicated and has many layers, we felt that the Tour should be a central feature of the website, one even that users must opt out of in order to proceed.

Sherrie Gott explains that a clear hallmark of training methods includes “external support or scaffolding from the tutor ... in the form of ideal modeling of the performance, hints, reminders, explanations, or even missing pieces of knowledge to assist the apprentice’s task execution.” While Classroom Connect had created an effective (if text-heavy) tutor to help teachers learn new skills using the site, it was nearly impossible to find and use. Having a tutor of this sort makes procedures “visible and explicit,” with no guessing required. Mei Chen wrote that assistance in learning – in other words, “cognitive supports made available to the learners in order to help them overcome the obstacles they confront in the course of learning and problem solving” – is vital.

Only one of our learner study subjects actually found the Quick Tour during our interviews. And she was already well into the process for building her class website, too late perhaps to have the proper impact.

Therefore, a more prominent Quick Tour gives novices a learning scaffolding that can fade in use as they become more comfortable with the site. But teachers don’t have to already understand the site in order to find this introductory help. Our second page places the Guided Tour prominently at the top of the page, with a large icon of a help hand for emphasis. Teachers can simply click on the words or the icon to enter the tour, and would easily be able to enter, skip through and exit the tour for brief use. We also feel that this tour could help teachers build a mental model of the site, thereby saving time in navigating it and building confidence in using the Internet in general.

Make site organization clearer

All of our learner study subjects mentioned that they were not clear on the site’s navigational structure, not sure where they could get to from various sections, and not sure how to get back to where they started. “I’m just trying to figure out where to go,” Alice said when she first logged onto the Website. Clara was in the same situation: “I still don’t have an idea from looking at this page, where to go. I’ll just start randomly clicking around.”

We decided to add two key navigational features to our redesigned site, a series of “breadcrumbs” that let users know where they have come from, and where they would return to with the Back button. We also created the beginning of a navigational web for the site, showing which pages link to which, and what students and teachers can each access. At any point, teachers can click on the Help icon to see the navigational web and figure out where they are and where they hope to get to. These features give teachers a mental model of the site, one they can refer to both physically and mentally. It saves them time, where they might have clicked down the wrong path, now hopefully they can find what they’re looking for on a first try. The navigational web is also a more
authentic situation for teachers: like a book, they can flip to the index or scan the chapters to see where they want to head next.

Because one of the missions of Classroom Connect is to teach teachers about using the web, a clear navigational map or web will help them create a cognitive model of web surfing and understand the hyperlinked nature of websites. It will also, on a simpler level, hurry along the learning process for using sites smoothly. Greeno et al discuss the advantages of “teaching concepts initially with exemplifications, in order for students to grasp the concepts clearly.” We feel that a clear navigational structure serves this purpose. The navigational web and breadcrumbs also provide scaffolding for novice technology users to quickly locate themselves and continue moving through the site efficiently. Greeno also focuses on creating authentic learning environments for true situative learning, which the web and breadcrumbs enable. Finally, Greeno metacognition to further cognitive learning. In a way, the navigational map takes users outside of the experience of using the website momentarily, in order to situate themselves in the experience. Where have they come from? Where could they go? This is a very useful tool, as we’ve said, not only for getting through the Classroom Connect site quickly and effectively, but for understanding website navigation in general.

Learning Resources
One of Classroom Connect’s most valuable and expedient resources is the prepared Learning Resources, where lesson plans have been created with links to (generally) reliable websites related to the lesson at hand. However, we have discovered through our design review and learner studies that some modifications should be made to make it more accessible and easier to navigate for busy teachers.

Create a separate electronic notebook for taking notes.

Classroom Connect currently provides a notebook feature for teachers to use while looking through a chosen topic. However, teachers need to go a level deeper to find this, and the limited text viewing window and location (bottommost) of the notebook makes it difficult for teachers find, let, alone use. Also, pages can only be viewed separately from each other.

One of the participants in our learner studies suggests a separate window for note-taking, which “facilitates encoding and recall” (Alessi, et. al. 2000). Having an electronic notebook allows teachers to cut-and-paste from the hypermedia content, and if well implemented, allows them to type in useful notes easily and reliably.

We envision a new window to open when teachers click on Notebook. This electronic notebook has simple features for typing text, copying text, drawing simple figures, printing the notebook contents and a help feature. Previous and next buttons allow users to move between notebook pages. The electronic notebook is available everywhere in Classroom Connect, as opposed to separate pages linked exclusively to one topic and inaccessible from others. When the teacher is done with the session, she can then print her notebook, or if she chooses to, cut-and-paste her notes to a regular word processor to be saved.
On a separate note, we also suggest implementing the same electronic notebook feature for students to use as they surf the links provided by Classroom Connect and assigned to them by their teachers.

Enhance Lesson Notes. Make it more prominent and relevant.

Lesson Notes are part of most Learning Resources topics, and are designed to provide tips, information and resources for teachers on how to implement the Classroom Connect-prepared lesson plan, including Introduction, Learning Goals, Procedure, Extensions, Assessments and Standards. These, when accurate, can be very useful for the busy teacher. According to the behaviorist learning perspective, for learning activities to optimize acquisition of information and routine skill, learning occurs most effectively if the teaching or learning program is well organized, with routines for classroom activity that students know and follow efficiently. For routine learning, it is advantageous to have explicit instructional goals, to present instructions that specify the procedures and information to be learned and the way that learning materials are organized, to ensure that students have learned prerequisites for each new component, to provide opportunities for students to respond correctly, to give detailed feedback to inform students which items they have learned and which they still need to work on, and to provide reinforcement for learning that satisfies students’ motivations (Greeno et. al., 1996). In addition, when “thinking” isn’t just “in the head” but is taking place in the context of getting something done, “know what”—or accumulating facts—becomes meaningful because people are also learning “know how”, “know why”, and “know when” (Scribner 1984; Scribner & Sachs 1990, 1991). Lesson Notes easily provide this information for teachers to apply in their classroom.

However, teachers’ failing to notice Lesson Notes defeats the purpose of creating these Lesson Notes in the lesson plans. The font size and location makes it less noticeable as users zoom in on the highlighted topic discussion upon opening the new page. Only one of the participants in our learner studies discovered the Lesson Notes, but felt they were not applicable for her third grade students.

To answer this problem, we suggest designing the Lesson Notes link to be more prominent and changing it to “Teacher Lesson Notes and Tips” with a links below to subtopics, e.g. Learning Goals, Procedure, etc. (See related storyboard for illustration.)

To enhance its reliability and usefulness, please refer to our next suggestion.

Let teachers rate and evaluate Web Units and other prepared lesson plans.

Classroom Connect provides teachers with lesson plans, but there is no formal feedback from the users on how well they are designed and executed. Yet, designing learning environments from a limited perspective can be counterproductive. Communities of practice are likely to develop their own perspective on that work, their own theories of what it is for, why it matters, and their own day-to-day way of accomplishing the work (Greeno et. al. 1999). Including a rating system and feedback section on topics is advantageous both ways. For Classroom Connect designers, they will have a clearer idea of what works in the real classroom and what doesn’t, and thus, will be able to design better. For the new teachers who plan to use the lesson plan, this provides them with insights of areas in the lesson plans to focus or improve on. Greeno et. al. (1999) states that “Participating in the community involves an ongoing participation in the
construction of new knowledge. Newcomers to a community of practice must have access to participation in order to learn.” Likewise, the teachers who used the lesson plan will be able to contribute and participate in activities of their work, increasing their sense of community online which may motivate them further to use Web resources in the classroom. This also encourages metacognition and self-assessment, in addition to a more conscious level of assessing their class’s progress. This is also an opportunity to improve the design of work by gaining understanding of the perspectives of the people who do the work. Through participatory design, teachers who use the prepared lesson plans are included in the process of designing resources for the activity. However, successful participation depends interactively on the abilities of people and the resources that are available in the situation. In evaluating the performance of individuals in a system, it is as important to assess the access that they have to what matters as it is to assess their individual skills. (Greeno et. al., 1999). Thus, the rating system and feedback system must also be assessed.

We suggest a simple five-star rating of the topic in general, and a more comprehensive feedback form where they can describe what worked, what didn’t and the changes they made or would like Classroom Connect to make. At the bottom of the page in each topic, the five-star rating will be shown, including the number of teachers who have rated the lesson. A button will allow them to read the comments of other teachers on that lesson, while another button will lead them to the feedback form to write their own comments. To maintain the integrity of the feature, we suggest teachers write their name and school district on the form.

The question may arise on how to initially motivate hesitant users to use this feature. One suggestion we have takes on a behaviorist approach, something that Classroom Connect uses at present. Currently, Classroom Connect provides gift certificates to amazon.com when users fill up a Classroom Connect survey. They may also use this approach just to “start the ball rolling”.

Other suggestions:

Accessing the Learning Resources
Currently, teachers have a choice of inputting their grade level and subject matter, then clicking through the topics chosen for them by Classroom Connect. Or they have a choice of clicking one of six Learning Resources categories and choose from an index of topics in that section, arranged by subject matter regardless of their grade level. These methods of searching work well for teachers who are browsing along, looking for possible topics to discuss in class, usually with little or no specific idea of what they are looking for. However, many teachers have definite topics they wish to discuss in class, as seen in our learner studies. Alice, for example, specifically indicated “I’m looking for watersheds.” By including a topic search function, teachers can immediately narrow down their search. This is a mirror of how teachers traditionally search for resources. They would go to the library and use the card catalog in search for a specific topic. Alessi and Trollip states that the larger the information database in a hypermedia program, the more important are options for searching. Search options are quick and powerful, though they are primarily suited for text, which in this case, is applicable for Classroom Connect. However, a disadvantage of word searching is the potential for disorientation. Therefore, it is important to include support for using this feature.