Essential Elements of Effective Visual Arts Educational Web Sites

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Abstract

Innovation is complicated. With Innovation, people's lives change... people's livelihood's change. Even though Innovation might provide new opportunities to some, others are left behind. People lose life long careers, as well as status and security. While innovations may benefit society, other innovations have created global warming or caused cancer. The internet is our culture's latest major innovation. Not everyone is excited.

In American schools, technological innovation presents challenges. Educators must increasingly use this technology, while protecting students from online predators and inappropriate content. K-12 educators are also being asked to teach subjects where they may not have much expertise, such as digital technology. The internet could provide resources for educators and students to discover new content quickly.

This study was designed to explore how K-12 Educators, especially visual art teachers, were meeting their needs with contemporary web technology. Twenty five participants were surveyed and interviewed. The study focused on three areas: first, general respondent comments about websites; two, professional development preferences; and three, general trends from web site research.

Introduction

The purpose of this study was to examine how to improve educational websites for K-12 teachers, especially those in the visual arts. For the last five school years, I have visited hundreds of high school classrooms, and I have witnessed a wide variety of skill levels and technology implementation. With new information, I hope to explain how to improve problems that I have seen.

Research Question: What elements constitute an effective website for visual art teachers?

Review of Literature:

My review of Literature discusses Marshall McLuhan and his relevance to the future of the internet. McLuhan was popular in the 1960's for his phrase "the medium is the message." McLuhan challenged citizens to explore how the new electronic media, then television, fundamentally

changed communication. For more information, visit this link (http://individual.utoronto.ca/markfederman/article_mediumisthemessage.htm)

He also provided a framework for predicting media's influence. Simplified here, McLuhan might argue that media had "unanticipated consequences," instead of "unintended consequences." For example, when the web was created, or more specifically, when search was created, most people did not anticipate that commercialism would influence search results. When searching for "Best education websites," top results are either for advertisements or for websites that advertise services; the sites are not the "best education websites. For an in depth exploration, read the Review of Literature. Link

Setting

The study included 15 K-12 teachers in Northern California, and 8 other professionals that work in technology and visual arts; two educators were Assistant Principals.

Description of Study

The action research project began by contacting people from a variety of sources and asking who would be interested in a Digital Media Survey. Professor John Cowan at CSU Sacramento contacted initial members who responded, including several who were not educators.

The first part of the study was a thirteen question survey (Appendix A); it was divided into two parts. K-12 educators answered all thirteen questions; others skipped as many as five questions. The first question asked respondents what they wanted from web sites. This question was open ended; other questions were more directed.

The second part of the study was an optional five question telephone interview (Appendix B). Participants from the first interview were provided an opportunity to be involved in this section. Seven were chosen, two non-educators and five educators. These questions were open ended; we discussed what respondents wanted from websites, and what they wanted from online professional development.

The third part of the study involved online research. Using the internet, I searched for "best educational websites." Eventually, I refined the search, and located best examples of online resources. Links are available in the Appendix and in the "Findings" section.

Limitations of Study

The United States has more than 35,000 high schools, as of 2001, and only ten high school teachers were interviewed for this study. Generalizations are problematic.

Comparisons to non-educators, though illustrative, are also based on limited participants. These surveys indicate proclivities. Online research supports other claims, but many websites cannot be verified.

Timeline

The study occurred during May –July of 2008. All education participants had either completed teaching for the 2007-2008 school year, or had nearly completed the year. Most people volunteered for additional phone interviews. These interviews, which usually lasted for thirty minutes, began in June and continued until July.

Presentation of Data

Types of Data

The multiple methods of data collection applied during this study established trustworthiness through triangulation of initial surveys, optional phone surveys, and online research for reliable web-sites. By combining multiple methods of data collection this study did not rely on any single type of data to evaluate the results.

The entire text of the online survey and the optional phone survey are included in Appendix A and Appendix B. The survey results are also available in the Appendix, and have been divided into three comparisons: overall numbers, K-12 results, and non-educators results.

Online Survey (Appendix A)

There were 13 questions; 23 people responded. The following questions became the focus of the study.

1. What do you consider to be the most important aspects of a high quality web site?
4. Does your work place often filter pages that you think are appropriate?
10. Can you easily override your school's filter so that students can see content you deem necessary?
9. Are you often worried about losing internet service at your school?

5. When using websites for professional development, how important is it to interact with others?
6. When interacting online, how important is it to you to have access to people with expertise in a particular field?
8. In a classroom, what is more useful? A great looking web page or a fast loading web page?
9. Are you often worried about losing internet service at your school?

With the Optional Phone Interview, educators and non-educators were asked to explain more about what they wanted to see on web-sites. Often the second question was answered before it was asked, and the interview lasted longer than the examples in the appendix would indicate. Respondents provided examples of professional development; many had problems giving examples, though many knew what they wanted in a professional development site.

The five questions follow:
1. What problems do you face with web-sites?
2. What changes would you like to see?
3. What sites do you use (in the classroom) for professional development?
4. For professional development, what do want from a site?
5. What else would you like to share?

Optional Survey Respondents
Several people were chosen for the Optional Phone Interview to provide a variety of responses: an assistant principal, a internet business professional, a digital photography teacher, a trained graphic artist who has taught technology and elementary school for twenty years, a software project manager, a veteran photo and video teacher, and a younger elementary teacher who uses technology in the classroom.

Internet Research
By conducting internet searches for "Best Educational Web Sites," and other derivations, many sites provided information about professional development and guidelines for teachers, visual arts and websites. Respondents from the Optional Survey also provided information that led to other sites.

Findings:

What do people want…the basics.

The responses of the educators and non-educators were similar, especially in the first question of each survey. Non-educators may have used terms such as "end users" while educators were more specific about students and teachers, but otherwise the answers were identical.

Nearly every respondent chose "ease of navigation" or something similar such as "clear directions" or "logical order." Respondents chose these options, because often, websites are not easy to navigate, nor are they graphically pleasing.

During the follow up interview, respondents expressed frustration that designers did not seem to understand the end user either. This further complicates navigation and design.

Sample answers to question 1 from the online survey:

  K-12 Teachers

- loads fast, easy to navigate, no pop ups, text available to print out as pdf or doc, accurate info

- Clear identification of content and ease of navigation

- Visually welcoming Clear directions Informative with useful links to other resources

- easy navigation

- Quality content; Ease of navigation.

- For me, strong design and beauty are most important. However, clarity and ease of navigation are a very close second.

- The website should have a lot of easily accessible information that is up to date. This information should be arranged logically. And the design should be pleasing.

- Clear purpose, Clear navigation, easy movement back and forth between pages, topics etc. Logical layout Clean, uncluttered. Clean graphics and images

Non-educators

- easy to use and navigate high quality content having clear purpose

- simple, clean design (2) attractive and appealing layout (3) easy navigation (less than 3 links or "clicks" to information I need)

- easy access to the information i want. search capabilities without redirection. give me what i want without redirection for the purposes of revenue generation.

- Usability - easy to navigate, find what you want, quick to load.

- Well-organized Error-free up-to-date

- Smooth navigation

- current, credible information -simple, readable, accessible info - ability to print printable versions of info -references to other sites

What do people want from a professional development site? Communicate with experts.

43.5% of respondents claimed that it was Very Important to "**have access to people with expertise in a particular field"** when conducting online professional development. More than 90% of respondents claimed that it was at least "Somewhat Important." Respondents were slightly less interested in interacting with others like them. When it came to sharing their own expertise with others, the numbers were markedly lower, especially in the educator group.

In fact, the educator group reported lower numbers than the non-educator group for all three online professional development categories. Only 73% of the educators marked that it was at least somewhat important to interact with others, compared to 100%. For the next question, having access to people with expertise, educators

marked 75% of non educators marked that it was Very Important, while educators did not reach that number with the top two categories. Educators reported 60% percent for at least Important.   In the third professional development category, sharing expertise, both groups were similar, with "somewhat important" being the most selected answer.

During phone interviews, respondents provided professional developments sites that they were using. Many respondents used a variety of sources or had nothing specific. There were two examples worth mentioning from the interviews.

The Marshall Memo, http://www.marshallmemo.com/, is a collection of education research that is circulated weekly. There is a one dollar subscription fee; an assistant principal orders it, and sends the relevant information to her staff.

Photoshop Professional Users site. www.planetphotoshop.com   This site is an example of people with expertise sharing their knowledge. High school teachers can also direct students to the site at any time, either during class or after school.

Web research yielded other sites, many of which are included in the Appendix. One site, Edutopia, surveys educators about their interests for the previous academic year. The topics for 2008 illustrate as much about current technology as the answers. For example, there were top blog sites and top podcasts sites. Blogs, according to Edutopia, are not popular with educators. The winning selection was "I don't blog."

The Edutopia teacher comments about blogs were in line with K-12 Educators comments about professional development. K-12 educators were not as interested in sharing their expertise as they were in having access to experts. Blogs rarely provide expertise, and while many people write them, teachers are busy. Still, some bloggers provide expertise and motivation. The Educational Blog Links demonstrate how teachers can learn about their profession (2cents worth) and about blogging (50 useful tips, link from 2cents worth).

The Classroom Web Page: A Must-Have in 2008
http://www.edutopia.org/classroom-web-page

Best Educational Blog
http://www.edutopia.org/best-blog-educators-2008
2cents worth
http://davidwarlick.com/2cents/

50 Useful Blogging Tips
http://www.teachingtips.com/blog/2008/07/21/50-useful-blogging-tools-for-teachers/

Best Educational Podcast
http://www.edutopia.org/best-educational-podcast-2008

What concerns teachers? Being blocked from appropriate sites.

Perhaps this explains why all but one of my educators said "yes" when asked "Does your work place often filter pages that you think are appropriate? 100% could not easily override the filter, even when there was a mistake. During phone interviews and personal experience, this seems to happen often. Teachers commented that nudity is not always filtered; educational material is often filtered. Teachers are most frustrated if they have prepared lessons, and then do not have access to the pages.

This was a problem for teachers more than non-educators. Non educators expect that non-work related sites will be blocked. However, non-educators expect to have access to work related material; it is their reason for being employed. When there is a IT problem, they also have access to someone who responds quickly, compared to a school, who can wait days (or weeks) to solve simple IT problems.

Whereas educators and business people had different experiences with filtering, most respondents commented that websites were too complicated and not designed for the end user. In schools, this creates problems for people with short attention spans and absent IT people. The Help function may be emblematic of the internet. It is written for tech people, not the normal end user, and is inherently unhelpful, too complicated, and too wordy. Yet, the technology exists to simplify the problem.

Recommendations / Reflections

The internet is not yet a visual medium, though it has tremendous potential. Currently, text predominates. Imagery exists as an afterthought creating a "flickrization" of visual content. Some would argue that people spend much of their time "looking" at the internet;

therefore, the internet must be a visual medium. People look at books. This does not make books visual.

Web pages often have too much text, poorly edited, with small font. Educational web sites are too much like text books, difficult to follow and boring.

Publishing a web page is simple. Publishing an effective website is more difficult than publishing a newspaper or magazine. A person must understand design, video, sound, photography, as well as any content, advertising and additional computer software. These fields each require years of study to master. Yet, people publish websites daily.

The link below maintains youtube videos by NPR's Ira Glass. He discusses the artistic process involved in producing radio and television programs. His advice is instructive for anyone interested in creating interesting engaging websites. The video that is most enlightening is "On Common Pitfalls."

http://www.podcastingnews.com/2008/06/14/ira-glass-on-storytelling-in-media/

The recommendations follow:

1. Simple Design; well planned. Easy to Follow.
   Simple Design, both graphically and for navigation will also allow the webmaster to keep links updated.

2. Photo and video must be high quality. Any visual elements should enhance project, including advertisements. All photo and video should (including advertisements) should meet a style guide.

3. Know the users. Sites can be developed for constant feedback, and then have content updated. Though the site must be planned, some changes are to be expected, and the site should be prepared to be adapted to meet the needs of the user.

As one teacher commented, the overall guidance: less is more.

Appendix

Appendix A Online Interview

1. What do you consider to be the most important aspects of a high quality web site?
Open ended response

2. Which selection best describes you?
K-8
9-12
Other

3. Do you spend most of your day instructing with computers?
Yes
No

4. Does your work place often filter pages that you think are appropriate?
Yes
No

5. When using websites for professional development, how important is it to interact with others?

Not important
Somewhat important
Important
Very important

6. When interacting online, how important is it to you to have access to people with expertise in a particular field?

Not important
Somewhat important
Important
Very important

7. When using websites for professional development, how important is it for you to share your expertise and experiences?

Not important
Somewhat important
Important
Very important

The Next Five Questions are only for K-12 educators

8. In a classroom, what is more useful?

A great looking web page
or a fast loading web pages?

9. Are you often worried about losing internet service at your school?
Yes
No

10. Can you easily override your school's filter so that students can see content you deem necessary?
Yes
No

11. When using websites for instruction, how important is video?
Not important
Somewhat important
Important
Very important

12. When using websites for instruction, how important is sound?
Not important
Somewhat important
Important
Very important

13. For those that would be willing to answer five additional open ended questions, I will follow up with a phone interview. Please provide your name, phone number and best time to call. Thank you for your time. Bryan

Optional Phone Interview #2

1. (In terms of classroom education) what problems do you face with web-sites?

2. What changes would you like to see?

3. What sites do you use (in the classroom and) for professional development?

4. For professional development, what do want from a site?

5. What else would you like to share?

**Appendix 2B
Optional Phone Interview #2
Notes for Non educator #1**

1. (In terms of classroom education) what problems do you face with web-sites?

Intuitive navigation systems require a greater degree of planning.
Developers don't understand real world application. Don't understand the end users.
Application systems more complex but the system hasn't developed

Another problem is that help function is written for technicians than users.

2. What changes would you like to see?

As the level of integration rises, there must be a quality assurance built in. More testing …and an eye for the end user experience.

3. What sites do you use (in the classroom and) for professional development?

Stanford university, graduate school of management.

UC Davis graduate school of management, Listserv at MIT

Google (for specific analytics and research), AOL, for financial analysis, Research facility at Schwab

4. For professional development, what do want from a site?

Legal and financial documents; one shortcoming in the marketplace: no one place to help early businesses go to build.

For earlier stage businesses; financial modeling.

Must do access in a specific geography, could be done a lot more efficiently.

5. What else would you like to share?

We are going to see an evolution of the web enabled world.

In 3 years, We will have 3 billion people connected. Society will be effected. A new paradigm, with access to data, or non access to data. It will play itself out. "Social Networks" will be much more integrated.

Challenges around data collection, but new rich and fulfilling process.

Appendix 2C
Optional Phone Interview #2
Notes for Educator #1 (Assistant Principal)

1. (In terms of classroom education) what problems do you face with web-sites?

"Too much information that is not engaging"

2. What changes would you like to see?

More video; video is good in the classroom (not people talking)
"Like the you-tube: experiments, performances.

3. What sites do you use (in the classroom and) for professional development?

"The marshall memo." Weekly subscription, digest of articles. With website referrals; Administrator then sends out the relevant articles to her staff.

4. For professional development, what do want from a site?

Real world answers to educational problems.

5. What else would you like to share?

From the marshal memo

The June issue of Kappan has a thoughtful article by Meghan Hopkins, a former Teach for America corps member, suggesting that TFA make three changes: (a) Extend corps members' commitment to three years; (b) Devote the first year to interning with an expert teacher and doing coursework toward certification; and (c) Offer incentives for corps members to continue teaching beyond three years.

Here are this week's Memo headlines:

Amitai Etzioni on moral education in schools
- Teaching the big ideas of science and lighting a fire in students' minds
- Three C's for improing urban science education
- The power of a science lab in a Kansas elementary school
- Twelve qualities of powerful professional learning
- What will it take to get the best teachers into the neediest schools?
- What do students need to be ready for college success?
- Test prep doesn't work
- Preparing for a teacher interview
- Websites on safe Internet surfing, an online ecology game, and a physical education video

Cheers,

Kim

Appendix 3
[Link to Survey Results for Entire Survey](#)

Appendix 4
[Link to Survey Results for K-12 Educators](#)

Appendix 5
[Link to Survey Results for non-Educators](#)

Appendix 6

Resources and References (Some sites are excellent; some are examples of poor sites.)

Photoshop User Site
http://www.planetphotoshop.com/
Adding Color Graphics to Web Pages
http://edweb.sdsu.edu/triton/july/graphics/home.html
Designing Effective ESL/EFL Web Pages
"Some Guidelines to Consider When Putting Together Pages"
http://aitech.ac.jp/~ckelly/esl/webpageguidelines.html
Internet4Classrooms
http://www.internet4classrooms.com/
Wisc Podcasting Page
http://engage.doit.wisc.edu/software/podcasting/
Institute for Politics, Democracy & the Internet
http://www.ipdi.org/about/staff.htm
Pew Internet
http://www.pewinternet.org/
Ypulse (Youth Social Network and Marketing Site)
http://mashup.ypulse.com/about.php
Social Networking Blog
http://daveman692.livejournal.com/
Photo podcast
http://www.topfloorproductions.de/v6/workshop/info/info/about.html
K-12 Success
http://encarta.msn.com/encnet/departments/HubPages/default.aspx?page=
K12Success&vv=600
Laws of Media
http://www3.sympatico.ca/federman/MerrillConsulting/transform/ncb2.htm
Mark Federmen's blog
http://whatisthemessage.blogspot.com/
Meaning of Medium is the Message
http://individual.utoronto.ca/markfederman/article_mediumisthemessage.htm
Dangerously Irrelevant
http://www.dangerouslyirrelevant.org/
Scott McLeod
http://www.techlearning.com/shared/printableArticle.php?articleID=196604937

Edutopia: The Classroom Web Page: A Must-Have in 2008
http://www.edutopia.org/classroom-web-page
Best Educational Podcast
http://www.edutopia.org/best-educational-podcast-2008
Best Educational Blog
http://www.edutopia.org/best-blog-educators-2008