

On the Fence with the *New Liberal Arts Student*: Reflections on Teaching Media for Expression and Communication

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Abstract

The author spent seven years teaching and tutoring basic media use to liberal arts students. During this time, the author noted that liberal arts students differ in their use of technology, both in basic technical comprehension and computer skills levels, as compared to technical and computer science students. Different pedagogical approaches for the liberal arts students for the period of 2003-2009 were used, and the result being an eventual increase in the basic capabilities of these students as each subsequent year's teaching methods were reviewed and refined. This paper reviews and discusses the processes utilized, by first considering Bruce & Levin's index as to how technologies can be used in teaching, including an evaluation of its evolution based on non-technical, pedagogical ideas of the early 20th century. Also considered are some differences between the traditional science student and the liberal arts student, especially within technology and its usage when teaching media for communication and expression. Secondly, this paper reviews setbacks and discusses solutions tried when more advanced technology was introduced into a liberal arts program, and those finally adapted solutions to the teaching and pedagogical problems that had arisen. Finally, this paper reflects on the pedagogy, instruction and tutoring involved during the author's sessions and workshops, both in groups and individually, and reflects on Prensky's theory of Digital Natives and Digital Immigrants.

Keywords:

digital natives, digital immigrants, liberal arts, media for expression, media for communication, multimedia, pedagogy

Introduction

Integrating multimedia technologies into teaching curriculum is an increasingly urgent issue as it is part of students' daily lives. Valid reasons for incorporating these technologies into our courses are numerous: simplified communication via the computer/phone system, social networking communities as study groups, and even what is expected of the student by future employers. One area that overshadows this paper is the question of how we mediate the area of technology; to be able to learn through technology, not only using it in a supporting role as a text editor or a meta-data finder.

Category / Classification and Indexing

In 1997 Bruce & Levin introduced a classification index for how technologies are used within education: This classification was based on those that John Dewey had originated in the early 20th century (List 1).

- Inquiry
- Communication

- **Construction**
- **Expression**

Dewey's four categories were used, and adapted to connect to how each one can be linked and used in different forms of teaching and learning, whether it is a singular role as a main area, or having a combined role whereby they are used in both key and supportive functions with specific and / or general teaching aims. Dewey's original, four, primary areas (List 1) have been employed and developed by Bruce & Levin.

The older list now has the added media component that shows how media can be characterized and incorporated into learning, as well as how it can be used with inquiry, communication, expression, and construction in learning. By adding the media as a self-styled component, it then becomes a gateway that all four areas can interact with and build upon (Figure 1). Bruce & Levin then take this further and go beyond just a framework that teachers can look to, they provide suggestions of particular programs, and types of programs, and media to use that can coincide to specific learning goals.

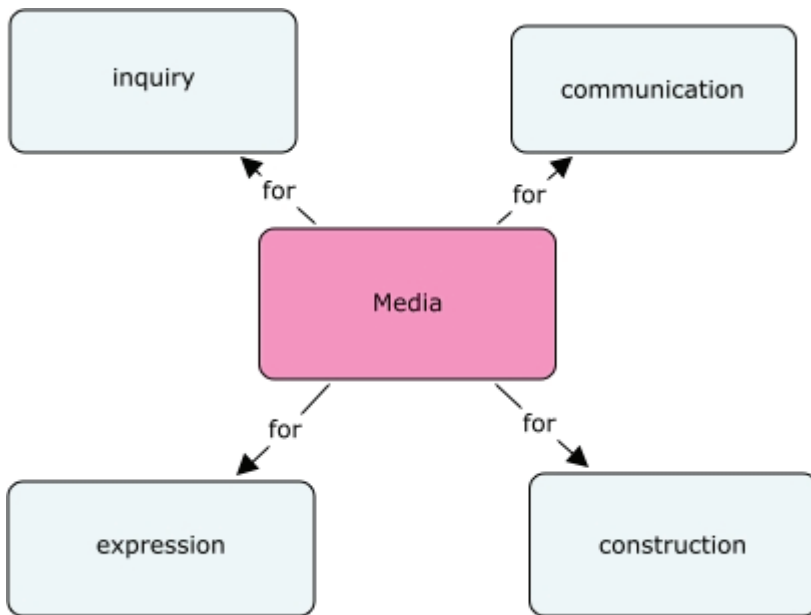


Figure 1: Bruce & Levin's

- **Inquiry** (virtual reality environments, databases, knowledge integration, etc.)
- **Communication** (text editors, desktop publishing, email, etc.)
- **Construction** (CAD, equipment control, graphs and charts construction, etc.)

□ **Expression** (drawing, interactive video and hypermedia, music making, etc.)

“Natural impulses to inquire or find out things” (Bruce & Levin, 1997) is an original concept that Dewey related to, and is meant to be incorporated into daily student curriculum in all forms of teaching. Instigating an interest in the area leads to more engaged students. By using media, one can supplement the way in which students learn. Means also gave ideas on possible usage of the technologies in 1994; “used as a tutor”, “used to explore”, “used as a tool”, and “used to communicate” (pp 6-9), yet without specifying particular media (programs). Between these two, Bruce & Levin and Means, both have valid means of looking at technology classification and both give thoughts as to helping how teachers improve and decide upon which is appropriate to employ and in what context the media can be used in.

Yet, choosing is not a one-off choice, nor an easy decision that a teacher should make without research. The choice needs to be based on the goals that have been set for the teaching task at hand. Between email and word processing, media that is used for communication is a resource that teachers and students use daily, whether it is one-on-one or in groups; but are these the only choices?

Media for expression has become more widely spread, and we see that it is not only used for student projects, but students create portfolios of work that can include personal websites, videos, digital artwork, as well as other media compositions being published on the internet, commonly referred to as digital artefacts. How is the decision made then on what to choose? The main drawback though, of any media usage, is still the user’s ability at the time of use.

Student Abilities

When I began teaching student’s computer skills, it was traditional that the students learning conventional computer technology abilities were those within the engineering departments. These students’ computer skills were typically found to have their teachings based on five areas: tutorials, drills, simulations, games, and tests (Alessi & Trollip, 1991). The background of the student within the computer engineering section was one that was required to have higher math and science skills (physics and calculus); this in turn leads to an easier understanding of programming, overall it is vastly different from the traditional liberal arts student and their background. Their basis was on “action = reaction” in a linear form.

The liberal arts area is seen, by some, as an area that results in students having no directly visible marketable skills, like computer programming or chemistry analysis. In actuality, the liberal arts student is trained to think critically, use reasoning, be able to communicate, and analyze everything from past, present and future; knowledge taken from literature, history, language and culture. As a result, the new liberal arts student needs to be able to apply these areas to the new world we live in, and more importantly, the virtual world, cyber space and its cultural mass. In contrast to the computer students, liberal arts students leaned to a more heuristic approach believing, at times, the computer should know what was being asked of it.

The evolution of the past ten years within the liberal arts arena has been more than the daily use of the text editor for writing, or employing a web browser for reading. The new liberal arts student must be a media user. Posting blogs and creating web pages has become a part of their daily requirements. Being able to use multi-media programs for expression and communication

to create digital artefacts is a necessity, and instances of these creations can be anything from a very easy, to a very difficult. A digital artefact is any kind of created and / or altered electronic item that is stored as a digital/electronic version. For most liberal arts students in the early part of this century, the use of WYSISYG (What You See Is What You Get) web page creation media was the solution. Microsoft's FrontPage and even Macromedia's Dreamweaver and were two of the more available web building programs that employed WYSIWYG possibilities and that schools had available on campus computers.

The convenience of "drag & drop", and "double click", or the option of "insert image", "insert link to" was more than convenient and did not require higher level math skills to use. It was needed, as these students did not have the programming background that engineering and computer science students had. Most of the liberal arts students neither had the higher math skills, logic planning, nor even schema understanding that could be used as a basis of learning a programming language. As a result, it was realized that if the student was to be able to make the best use of these types of media, this knowledge of programming was needed, and ultimately added as a component of the core program.

One attempt in adding this was to make use of traditional computer and technical adjuncts to teach what can be difficult and complicated media programs to liberal arts students. The aforementioned requirements became an issue early on. Items such as boolean, wrapper, and operator caused confusion and some misunderstandings for the liberal arts students as these terms were new and time was needed to give grounding in these newer areas. Even differences of teaching pedagogy were shown to be problematical as some math teachers expected a certain level of understanding that was not present, because it was not a requirement. Another problem was that some teachers were from other campuses and did not realize that this could claim more of their time than expected, both in commuting as well in extra lecture and tutorial times. Even with misunderstandings, this did not mean that the students were unable to grasp and understand the knowledge that was given; it did require more communication between student and teacher, and again more time.

One of the more interesting areas was the different styles of teaching. The pedagogy used by the math teacher's were in direct conflict to those student's were familiar with and had expected, the results in this case were that both students and teachers felt misunderstood and unable to complete some of the course sessions. Methods of task-based, project-based, group-based, and inquiry-based learning were not different between the two areas, yet the fundamental way of using these and applying them to different areas was found to be complex and difficult to modify. The technical adjuncts were found to have very linear teaching styles, whereas the liberal arts student worked in a spider's web with ideas and discussions flowing over others. Liberal arts students want to understand, and readily question why a result cannot be something else. Where as in many math areas, foundational knowledge lets one understand concepts and ways in which math formulas work and the result is the result, there is no other answer possible.

Then

During the years spent teaching liberal arts students, the need for computer skills has risen greatly. Many students in 2003 did not own their own computer; they had never used email, or an LMS (learning management system). They were novices on how to use the internet. The original student groups from 2003-2005 were users known as digital natives. The term in this

context is given to those computer users that grew up with digital technology, those who started elementary school after 1980, and were integrated into the technological world as a native. The digital native is readily aware of the technology, yet seems not to understand the fundamentals or even some rules, and at times. The older students, those who grew up in the 1960's and 1970's, who started in 2003-2005 were interested in understanding the cause and affect of their interaction with the computers, giving them the term digital im-migrants. As many immigrants are taught, these older students expected a foundation, and inquired consistently throughout the learning process.

One item that was noticed with digital native students was that they possessed much surface knowledge. Surface knowledge is akin to using a limited heuristic style to learn, it lets you accomplish tasks, yet without really understanding what you are doing, and takes you no further than accomplishing your goal. For example, you finished a task once by clicking on an icon, so this should work again. On one side, you know double clicking will produce a desired reaction, you know where your favorite webpages are, and you know enough about the text editor to create - produce – and save a document.

On the other side you do not know what XHTML is or how it affects a web page, nor do you know how to search for a specific webpage or topic by using inhibitive or additive symbols such as “+” or “-” in your search parameters. Neither do you know how to add multiple tabs to a basic document, nor the difference between .doc, .pdf, and .rtf files. Users who generally keep to this type of surface usage, do not feel that they need to go further, they can get by on this surface knowledge. Yet, by methodically reviewing usage, mistakes and achievements, the students then were taught how to become more adept at using media for goals, i.e. course work. It also taught them how to be more efficient media users and understood the knowledge that they needed was at a deeper level, and after time, they were able to apply this knowledge to other media and programs; a type of meta-cognitive problem solving. The result was that the digital natives were able to understand the need to have a deeper knowledge of the media, and eventually grew into digital immigrants.

After 2005, a change in the knowledge of the liberal arts student occurred. The students were more experienced with media before starting the bachelor's program, and could connect with media for both expression and communication. The one drawback was that these students, who were comfortable with computers, had grown up with a high level of everyday usage, yet retained the digital native standard. They were a different type of surface user. They had created websites, they had email, they knew HTML, XHTML, JavaScript, AJAX, and other programming languages. They worked in cyberspace and created digital artefacts on a daily basis, but they were limited in the vastness that is media, and were skilled in one area, whereas they were surface users in all others.

Now

By 2009 most of the incoming liberal arts students, including the international ones, had their own computers, often a laptop. The foundation knowledge of using the computer was already in place, but what was continuing was the surface usage employed by most of the students. When teaching computer use and media, and giving tasks to the students, there was always a need to make clear what the goals were. What knowledge was being gained, and more importantly how did this media knowledge connect to the required courses of the program they were taking. The

critical analyst of the student, which is one of the key components of a liberal arts student, was still there and it needed to be addressed. The list below gives core methods of teaching media to liberal arts students that were the result of these years:

1. What is the goal in using technology: as stated above, this is an important issue. If students know why it is important and how it connects to the course, they will be more interested in learning, they have a goal.

Whether it is any of the four goals above, inquiry, communication, construction, or expression, goals need to be stated clearly, and need to be discussed as different backgrounds might give way to different interpretations.

2. Time – 1 on 1 Sessions: there will be students that need more time. One should have the understanding that not all liberal arts students will grasp media knowledge at once. Repetition and sometimes 1-on-1 sessions are needed, especially if you have a large group with a diversified knowledge base.

Learning any new knowledge takes time. Students as individuals need this time to understand. Teaching media to liberal arts students can require more time with media for expression, as compared to media for communication. These types of programs can require a more systematic procedure in instruction, or the final compilation will not succeed.

3. Who is your user: know your student as a person too. There might be an unknown reason why goals are not being met. Be able to discuss in abstract, non-linear techniques.

As all students use processes to learn, yet some might not have had background in their previous schooling that makes them at ease with media, and can result lower grades than expected. Engage the student from his or her knowledge level and build upon his or her own experience. This might mean that communication at first is not based on the task, or the use of the media rather than receiving an insight to the student's background and their own learning process. Once this is established one can tutor the student with their learning process, and explain new learning methods to the student for future work, weaning off the need for continued teacher support.

4. The student should be comfortable with base technology and programs before moving onto ones that are more difficult: one should always have a diagnostic test preceding any type of media instruction. It will tell you how many novices or pros are there. Set up your session wisely to account for both groups.

Diagnostic tests are often time consuming, and one must take time to explain to the student that they must be completely honest with themselves when taking one. Media for communication is regularly thought to be easy as it is a daily part of our lives. However, which level of usage needs to be addressed, especially when using a visual format for statistical data to support conclusions. With media for expression, most liberal arts students have had work with image editors; again introducing an advanced media program (Adobe Photoshop, Adobe Premiere) should require not only a diagnostic test, yet informal discussions with small groups. These discussions are to emphasize the importance, and as a teacher receive an oral analysis with candid and specific

questions about the media used and the student's previous experiences.

5. Go back to the beginning - analog before technology (sometimes): it might be needed to visualize the final product before starting on the project. A simple wire-frame of a website using colors and boxes with comments on paper can give a different understanding and build confidence. A layout of what is built first, the decision of what code needs to be created before others, etc. Have a written plan before starting any large project that uses media, and handouts, examples and systematic instructions always help.

With media for expression, some areas might require a different approach. Not all teaching in this area is set by directly using the media. It was found that it was helpful for students to create a rough 'analog' version of some of their assignment before starting to work with the media. As an architect will sketch ideas of buildings, and movies will create storyboards before filming, so it was found that sketching (analog) with colored pens and paper would give the students a foundational plan that is easily discussed, amended and agreed upon before any time consuming media usage is employed; a type of non-digital, process creation.

Reflection

The new liberal arts students are careening into the computer world at an ever-increasing speed. They are jacked in and able to engage with distinct and critical knowledge, and they are more readily willing to analyze our digital age; even trans-form it into new digital artifacts for consumption by the masses.

The pedagogy involved in teaching these students evolved each year as requirements were discussed and new goals were added. The students became more interactive and knowledgeable about media as they progressed. The need to be able to create and manipulate diverse media became driving points for the 2nd and 3rd year students, this had a distinct and positive effect on the incoming 1st year students. As previously stated, there were many group workshops, and hours of one-on-one instruction teaching how to mediate media, and oddly enough, the surface users kept showing up each year, only to be taught and inspired – with time and patience – to push themselves further by teachers, mentors, and classmates alike. The liberal arts student might not seem to have visible, marketable skills. They still have their traditional skill sets, those of thought, interpretation, dialog, and critical knowledge. These students have also climbed over the fence into the technological, digital domain and their skill sets have increased to include media. They know how we, as humans, use the technology that the engineers build because liberal arts students are building too.

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