



**Digital Environments and Libraries:
Using Second Life as a Catalyst for Campus Wide
Visual Literacy Initiatives**

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Abstract:

The University of California, Irvine Libraries are dedicated to delivering services in print and online environments that are conducive to learning and discovery. With the rising use of new and multi-media in education and research, libraries are in a unique position to expand traditional services and collections to establish new opportunities for outreach and collaboration.

Towards this end, the UCI Libraries created Anteater Island to highlight library services and to provide a platform for research and teaching to UC Irvine faculty. Since 2007 a

team has been responsible for the successful management of Anteater Island and plans to utilize the virtual space to build a modular, immersive and interactive Visual Literacy tutorial. As we build our collections and services to include digital reality environments, such as Second Life, it seems only natural to extend efforts in promoting visual literacy education within this new milieu.

Our paper will chronicle the project's process for establishing new tools in an interactive online virtual environment, including the methodology we have assumed, and the challenges we have encountered. We hope to compel other libraries to consider New Media as an exciting addition to collections strategies. Together we can harness outreach opportunities and expand the libraries mission on campus and beyond.

VIRTUAL WEB SPACES:

Virtual worlds are a type of online community where users can interact with one another and sometimes use and create objects. In the real world or in real life as some refer to it, we have all of our senses and the information they bring to us, sound, sight, smell and touch. When the web was established it was primarily for the dissemination of text, and as time progressed the internet started to display 2D flat images and graphical representations. Some consider Virtual Worlds the beginnings of the 3D web and that these virtual spaces bring us back to something more like real life but without the constraints of location and time. Utilizing a virtual world allows the library to explore the idea of mixed reality, which refers to the merging of real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact in real time.

The concept of mixed reality, “the inclusion of real world elements into a virtual environment” (Pan, et al, 2006), is becoming increasingly available to a larger population every year as more events start to merge the virtual with the real. Conferences are gradually adding virtual segments to their schedules. We have seen virtual world conferences, such as the ALA Virtual World Interest Group’s “*The Future is Now;*” where the conference showcased an auxiliary online presence where librarians and educators met in only a virtual setting. With the increase of multi-media and virtual world representation, it is time to add visual literacy to the requirements of twenty-first century education.

Virtual Worlds have many different variations, one of the most well known virtual worlds is World of Warcraft, this is a typical virtual space that is most like a game with levels and challenges. Second Life represents another type of virtual space where the participant makes their own choices and experiences, in this case the only limitations are what you can imagine and what can be created and built. Libraries have many choices when choosing a virtual space; Active Worlds, Kaneva, Second Life, Onverse, and Twinity are just a few. Second Life was chosen by the UC Irvine Libraries originally because of its ability to allow users to build and to allow UC Irvine faculty and staff access to the spaces we create. Second Life offers its users the most advanced building and scripting functionality, allowing users to create and own their own materials. There is also a large population of users in Second Life. This fact in addition to the sophisticated multi-media possibilities available makes this Virtual World particularly appealing. It is also a virtual environment that from the onset attracted organizations as well as individuals.

Additional partners can play a more active role in building and selecting resources and establishing relationships in Second Life. For instance the concept of a “universal library” can be created, free of boundaries and open to all. The emphasis is not only on the meaning, but the aesthetic. By encouraging participants or readers to be active rather than passive, enhancing the experience to include more interaction, and by creating a more entertaining role the digital potential with communication increases. The role of characters and images often in 3-dimensional capacities offers a way to create conversation instead of only dialogue, and tell a story. As Norrington (2010) writes, “To harness ‘e’ is to offer options-levels of immersion and engagement, multi-platform choices, perhaps even linear or non-linear narratives with the intention of organically reaching a wider readership far beyond the restrictions of print based novels.”

Some argue that Second Life is obsolete! However we agree with Lisa Janicke Hinchcliffe, the current president of the ACRL Division of the American Library Association. She asks , “if virtual worlds are the next thing that our students use day-to-day, is it not better to have some experience using it yourself now that there may be 2,000 students who use it, rather than to start after 20,000 students are using it?”

WHAT IS VISUAL LITEARACY?

As library collections proliferate with content extending across several formats to include sound, virtual and online environments, images and born digital products, new literacies are needed in order to promote and use these multimodal resources. The focus of this paper suggests that patrons in academic libraries may choose to find and use information sources in non-traditional ways in order to read, study, manipulate, apply and publish as their needs dictate.

A core foundation of Academic Libraries is to promote and engage in the study of information literacy in order to facilitate learning and knowledge. However, visual mechanisms are as prominent as text in today's information age. The image is a new paradigm of textuality that can be created, modified, changed, and exhumed. Visual cues are dominating our communication systems and transforming our culture of knowledge and learning. The subjective and perceptive act of reading images is necessitated by the rise of image-centered technology, thus requiring a new set of skills and syntax to extract meaning, this set of skills fall under the umbrella of visual literacy.

Visual literacy is the ability to interpret, negotiate, and make meaning from information presented in the form of an image. It is based on the idea that pictures can be “read.” According to Seppanan (2006), a basic objective of visual literacy education is to understand and interpret the function and meanings of different visual representations and orders. Visual literacy is an essential proficiency that will determine how effectively one navigates emerging post modern communication systems.

An example of an emerging postmodern multi-modal environment is Second Life. Within this virtual world, the user interacts with the online environment visually, audibly, and manually; manipulating an avatar to navigate the image dense world. In an effort to extend upon the libraries’ mission to teach and promote information literacy, we have proposed to utilize the virtual space to host a modular, immersive and interactive visual literacy tutorial.

Methodology: Visual Literacy and Libraries

In 2008, Barbra Rockenbach and Carole Ann Fabian published a core article on visual literacy and Libraries titled, “Visual Literacy in the Age of Participation.” In this article, the authors interpreted the ACRL Information Literacy Competency Standards with a visual literacy lens, in order to “parse each of them for their particular relevance to establishing a basic construct for visual literacy” (Rockenbach, 2008). These standards “give librarians a framework for teaching goals, and together with constructivist/active learning strategies, present a workable pedagogical approach for delivering library instruction to visual” learners (Rockenbach, 2008). Using their vision of Visual Literacy Standards as a guideline, our team is progressing through the following methodology as we seek to build a learning environment in Second Life.

I. Find Partners within the Library, and on campus with a similar mission

Using the resources and knowledge of our team, we have identified several entities in the Libraries and on campus whose missions and goals are conducive to visual literacy education. UC Irvine has several courses that build first year writing, argument and image-based research into the undergraduate curriculum. As these initiatives are aimed at our undergraduate population, we decided early on that our primary outreach efforts would be aimed at this group.

II. Root Visual Literacy in Campus Curriculum

One challenge in initiating institution level visual literacy initiatives is that campus leaders often work in silos.

“The key is to move beyond training a few visually adroit instructors and students and to instead establish strategic and overarching institutional goals. There is no easy, natural enculturation process. The individuals and organizations with expertise in visual forms are not typically the most revered in the institution” (Metros, 2006).

Building on this statement, the UC Irvine Libraries have an opportunity to align themselves with the goals of the institution and undergraduate curriculum, thus asserting our value and participation in the education of a new breed of learners in academia.

III. Determine what current tools are available to teach Visual Literacy, and build on these efforts

Librarians can build on the knowledge of our expert colleagues and collaborators in the Visual Resources Association (VRA) when determining the core visual literacy skills we should learn and promote. The recently published VRA white paper, “*Advocating for Visual Resources Management in Educational and Cultural Institutions*” states:

“Students need assistance using visual information and developing digital literacies for their academic exercises. This includes identifying reliable image

sources, judging the quality of images and associated descriptive data, accurate identification of historical content, and understanding intellectual property and how to cite images in their writing assignments” (Visual Resources Association, 2009).

This is a tall order and a daunting task when seeking to develop tools to assist students in using visual information for their academic exercises. Some online tools already exist. We do not want to re-create the wheel, but we want to develop tools that reflect the research interests and curricula specific to UC Irvine.

Challenges

In chronicling our efforts on this project, we do not intend to dismiss the real and the perceived challenges that lie ahead, nor do we intend to deny that at times our goals appear downright arduous. The following list reflects the core challenges we are facing:

- Developing evaluative components for the training tools
- Determining the best process for collaborating with faculty
- Managing the project on top of current duties
- Harnessing the technological skills to create the tools we envision

In order to help us face these challenges a separate Visual Literacy Tutorial group was formed in the Winter of 2010, the new team included the Second Life Team, the Education Librarian, a Librarian Assistant III, and an Education and Outreach Librarian. Our expanded team has implemented a few strategies for combating these challenges; however we invite critical thought and discussion regarding the nature of undertaking such a project.

ABOUT THE VISUAL LITERACY TUTORIAL

Susan E. Metros and Kristina Woolsey issued a call to action in the January 2006 *Educause Review* urging educational institutions to implement a systematic approach in establishing visual literacy initiatives to meet the multimodal learning needs of today’s educational environment. They outline three steps that may accelerate the adoption of new visual literacies:

1. Multimodal fluency: teach a basic visual design vocabulary.
2. Design context: Provide the places, people, and resources needed for those in the academic community to become visual producers.
3. Visual judgment: Develop constructive critics of visual information.

Librarians can play an active role in answering this call. By developing online learning objects within the digital environment of Second Life, the team hopes to push the UC Irvine Libraries’ mission into the world of digital environments. Such non-linear gaming environments provide new opportunities for the Academic community and for the Library.

Working in virtual environments also extends our outreach efforts to tech-savvy millennials.

The Visual Literacy Team is in the planning stages for the Visual Literacy tutorial. Our first steps were to decide on the following determinants:

- why does the library need to create this tutorial,
- what is the scope of the project, do we have overall learning outcomes and objectives for the tutorial,
- how will we evaluate the success of the tutorial.

Fleshing out these parameters before writing the tutorial has proved to be a vital step in providing a compass and reference point for our efforts. After establishing an overall vision for the project, we proceeded to identify key elements for our first module.

Modularity

The tutorial's first module will be about analyzing images. The tutorial's progression continues with additional modules covering charts, diagrams, maps, graphs, web pages, advertisements, image citation and color theory. Within each module we can imagine visitors assessing, evaluating, and responding to four distinct images.

Modular learning objects offer a viable solution when pondering how the UC Irvine Libraries could promote visual literacy skills on our campus. Learning objects offer online learning content in small instructional components or modules. According to Wiley (2002), these components can be reused, independently, created and maintained, and pulled apart and stuck together. By incorporating learning objects into Second Life, we hope to appeal to a new generation of students that acquire skills and knowledge through multi-modal communication mechanisms. It is through the development of learning objects that we seek to achieve our overall learning objectives which are:

- Teach and provide information on finding images in library collections and on the web.
- Increase levels of visual literacy and basic research skills on the University of California, Irvine campus.

As the Visual Literacy Tutorial progresses, the team will need to determine how the tutorial will be displayed in the virtual world. One idea is that participants will pass through a hallway like structure that will contain images, and this complex will be displayed on the UC Irvine Libraries' Second Life space called Anteatler Island. Each new image will in turn open the doors of perception, another sequence of questions, and another opportunity for personal comment. Another component that the team hopes to utilize is the power of cloud tagging, utilizing a hybrid program to display tutorial participant commentary asynchronously. The team has already determined that the tutorial will exist not only in the virtual world of Second Life but also on the web, we acknowledge that not everyone will have access to this virtual space. By creating access to the tutorial through the web we allow for users to access it in the format available to them. In the future we will need to determine the best way to bridge the virtual and the web formats through images, video and branding.

COLLECTIONS PERSPECTIVE

Libraries are characterized often as warehouses where librarians have gathered, organized and preserved elements of recorded history. In the environment of virtual worlds, additional partners play a more active role in building and selecting resources and establishing relationships. In Second Life for instance they create the concept of a “universal library,” free of boundaries.

Text may be the primary medium for communication, but gestures and expressions contribute to the success of understanding a message. Social interaction is the unique attribute of virtual worlds that distinguishes it from other collection types. Virtual worlds also transcend global boundaries and as Poppink (2000) asserts, “the interaction has the potential to be international in nature...developing cultural models for designing new interactions.” The merging of online virtual collections with library services appears to be gaining strength in Second Life. There is a strong potential for libraries to incorporate more digital content and mixed media. Academic libraries need to try and promote at their institutions the placement of content in local repositories and in and campus environments, real and virtual.

The growing emphasis of encouraging collaboration in library spaces has found support in the virtual worlds where the players or participants known as “avatars” can engage in self-expression, and hands-on interactions. The analogy of building physical collections in a traditional library can be illustrated in virtual worlds as participants “navigate their avatars through these digital spaces, communicate with other users, build structures, teach, learn, and engage in a variety of collaborative activities” (Damer, 1997). It confirms the conclusion by Lori Bell and colleagues, that “through the power of collaboration, librarians may choose to work in a global community with the goal of sharing resources of every kind – the physical, virtual, paper or electronic” (Bell, et al, 2008).

CONCLUSION

In conclusion, mixed reality environments offer the ability to include real world elements into virtual spaces, interact with others as well as with objects, and to create experiences for fellow users. Second Life is a mixed reality environment that libraries may choose to utilize; this world offers the most robust building and scripting functionality of any other virtual world available at this time. Students and scholars are pushing the boundaries of online publishing and self-expression utilizing image-centered technologies, thus requiring a new set of skills that extend beyond information literacy into the realms of visual literacy. Second Life provides the opportunity to develop hands-on interactive learning objects that engages non-traditional users. In this time of decreased resources, libraries may experiment with new methods for outreach and education; modular tutorials offer the opportunity to attempt new methods without significant funding or loss of resources if the project is not as successful as envisioned. By incorporating learning objects into mixed reality environments, we strive to engage this new generation of students through multi-modal communication mechanisms.

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