Practicum Project in Instructional Technology: Posit Science

Michael James “Jayme” Johnson
EDIT 242 • Summer 2008

Executive Summary

The Master’s in IT practicum project for Michael James “Jayme” Johnson provided a unique and interesting opportunity to practice instructional design. As an individual already working as an instructor and instructional designer, it was agreed that I could pursue an atypical practicum experience in order to gain a wider understanding of the professional world. The company I worked with is Posit Science, and the specific aspects of the practicum project included the review of a new technology (Apple iPhone) as a target platform for the company flagship product, The Brain Fitness Program, as well as the conception and design of a new 3D animation that would enhance the educational aspect of the program.

I worked with Dr. Joe Hardy, the Director of Research and Design, and more closely with Don Brenner, the lead software engineer for Posit Science. As an independent off-site intern, my experience was unique, and I enjoyed the freedom to explore and set my own pace within the confines of a larger timeframe determined by the site supervisor and myself. The aspects of planning and project management were both simplified and complicated by this working arrangement. In the end, the project was completed successfully, though it was an initial stage in an ongoing process of research and design.

Ultimately, I satisfied my stated learning objectives and more.

The corporate context provided an invaluable insight for my understanding of instructional technology and how it can be used outside academia. The process yielded multiple opportunities for personal growth and education on my part, and the relationship has been mutually beneficial to Posit Science as well.

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Analysis

Project Proposal

At the most basic level, I wanted to learn what it is like to be an independent contractor working on an instructional design project for a big company. Having sufficient advance notice to consider my options and strategize, I initiated the process early, as I understand how things can flow in the business world. After convincing Posit Science to let me work with them on a project, we selected a general area to focus on and I signed a non-disclosure agreement. I then proceeded to research the general topic and be prepared for a follow-up meeting to further define the project scope. The basic parameters for the project were that I would work independently to assess a new technology and determine how to best produce digital media for this technology so that an existing piece of software can be converted to the new technology. In the process I would achieve the following learning goals:

Learning Goals

- Asses and explain differences between original media/technological platform and the portable target media/technological platform.
- Identify key learner/audience characteristics of existing users as well as the users of new technology platform.
- Develop and refine abilities and skills in 3D Studio Max, Illustrator, Photoshop, and Premiere, through the process of converting and creating media for new platform.
- Gain insight and understanding into the organization and daily functions of a modern science-based rehabilitative and educational software company.

In addition to these learning goals, I would learn a great deal about the primary business of Posit Science, brain plasticity and the finer details of auditory processing in the human brain.

As a two-part practicum, I had two primary instructional problems to address:

1. Design and implement a plan to transfer existing instruction to a new technology base and audience.
2. Evaluate production capabilities and research on brain plasticity to conceive of a 3D instructional animation to help explain the underlying concepts of the instruction.

Project scope for media conversion included research of original and target technologies, audiences, and

specific media assets.

For the conversion of media assets, I had to find a method for converting flash movies (.swf) to quicktime (.mov) movies, while changing them from 720 x 480 resolution to 640 x 480. There are several freeware conversion tools that exist, and each will do a certain limited type of conversion. Among the modestly priced conversion tools, there are few that offer the capability of changing resolutions while converting media types without seriously distorting the image. In addition, I converted many Microsoft Word documents into platform-neutral formats like HTML and XML. I also experimented with different style sheets for the new target media dimensions.

The project scope of the 3D animation project included gaining a deep understanding of the basics of brain plasticity so I could perform the ideation and visualization of the key concepts that might translate well into an instructional animation. As part of the process, I began experimenting with different techniques and tools within the 3D animation program 3D Studio Max. This process would eventually lead me to upgrade the version of the software and purchase several reference texts, as the potential of 3D Studio Max and the conceptual visualizations were mutually inspiring. In the end I was able to conceive of a project that would be useful and that I should be able to actually accomplish.

Timeline

The target completion date for conversion of existing materials and final selection of a 3D animation topic was August 1, 2008. However, it was also agreed that this would be the initial target date subject to further revision. As an “extra” project for Posit Science, it was understood that I would be working on the project pretty exclusively, and I could expect limited interaction while the company was releasing their newest product. So the timeline was ultimately mine to determine as an independent contractor, just as I had originally hoped.

Because I am fortunate enough to have a full suite of modern media production tools, I was able to work independently from my home. As a full-time instructor for the High Tech Center Training Unit and a full-time student in the IT program at SJSU, I was forced to work on the project in small bursts, with the longest continuous time on task being a couple of weeks in June. As I started this process nearly a year ago, it has somehow become an ongoing part of my life.

While the original portions of the project have been completed, the project is still ongoing. I have found 3D Studio Max to be a thoroughly enjoyable tool, and the subject matter is directly beneficial to my primary

job and ongoing studies in instructional design, so I continue to volunteer as an animator and instructional designer. I am currently bringing my animation concept to fruition, and hope to have it completed by early January 2009.

Project Task	Requirements	Completion Date
Transfer existing instruction to a new technology base and audience	Audience Analysis Technology Analysis Media Analysis Conversion and formatting Ideation of new interface	August 1, 2008
Propose instructional 3D animation to further illustrate the concepts of the instruction.	Review and understanding of basic science behind the Brain Fitness Program.	August 1, 2008

Stakeholders

In the broadest sense, the stakeholders for this project include the salesman (Joe Aerisophol) who initially decided to introduce me to the Director of Research and Development, Dr. Joe Hardy. Don Brenner, the lead software engineer for Posit Science, comprises the other major stakeholder in this project. It is my understanding that Joe Hardy has given permission to Don Brenner to employ me as a volunteer intern, and that the project will be of secondary priority for Posit Science as it is still very much an initial stage of the research and development process. As the project is supplemental to the primary current focus of Posit Science, it is very limited in the reach and impact in terms of stakeholders. Basically a prototyping experiment, if this project proves to be worthwhile and have potential, it will be implemented in the real world.

Design and Development

The purpose of this practicum project is to assess the iPhone as a target destination for a port of Windows-based software. The Windows-based software is the primary core of the Brain Fitness Program application, a rehabilitative/training program developed by Posit Science.

In terms of picking a formal design models for this project, I always start with the Kemp model just to see what bubbles might be in play. In this case, there were only three bubbles of significance, the development of instruction, and to a lesser extent the audience analysis and designing of the message.

Next in line is the ever versatile ADDIE model of Assess, Design, Develop, Implement, and Evaluate, which always provides good guidance as you assess and analyze existing instruction. As an existing unit of instruction, the Recycle & Reuse design model was the next obvious evolution in specificity. As the primary work of the instruction had been completed in regards to the original instructional problem, I was free to focus on the nuts and bolts of transferring media to a new context. The primary instructional goal of The Brain Fitness Program is to improve auditory processing, and that remains constant regardless of the instructional context. In terms of audience analysis, the principles of universal design were used to minimize cognitive load and reduce extraneous effort that might distract from the primary task of audio processing. As a guiding principle, this ease of use and simplicity was fundamentally in tune with the theory of the iPhone, and a tremendous asset in determining how to convert the digital media assets.

As one of the few software applications with proven results in improving audio processing, Posit Science’s Brain Fitness Program provides rehabilitative activities based on the principles of brain plasticity. The Brain Fitness Program has demonstrated sophisticated and effective use of multimedia in a training context, with built-in assessment methods that actively monitor and adjust the difficulty of the exercises for each user. While the large scope of the Brain Fitness Program makes it inappropriate for a mobile device such as the iPhone, the primary module of the Brain Fitness Program is perfectly suited to stand on its own as an application on the iPhone. This primary module is titled “High or Low?” and is a simple exercise where the user must discriminate between two tones. As the user progresses through the module, graphical information coalesces into a meaningful shape in the background with every success, employing some subtle brain plasticity manipulation. Every now and then, a reward animation or graphic is displayed, further emphasizing the brain plasticity related to success. In addition to the visual elements, there is audio reinforcement to further emphasize the positive and negative brain plasticity.

The unique capabilities of the iPhone are examined in regards to enhancing or altering the interface for “High or Low?” with suggestions for additional design possibilities. Another aspect of the practicum is the conversion of media assets into an iPhone-friendly format, including existing .swf videos and Word documents.

Apple iPhone

The Apple iPhone is notable for its innovation and appeal, and for the astonishing success it has enjoyed. The exact makeup of the Apple iPhone user base is a precious commodity, with reports running in the $5,000 dollar range for basic data alone. The value of this information is significant in regards to targeting advertising and services, but also in a more general sense to determine who is buying smartphones across the nation or globe.

Perhaps the most notable feature of the iPhone is the ability to interact with the device through both touch and motion. This means that instead of having to tap the device, you can potentially shake it left or right, or up or down as a means of control. This also allows for smart display of information, as the device can tell which way the screen is oriented and adjust the content accordingly.

An additional feature that lends itself to the port of “High or Low?” is the web access which allows for data communications through both wifi and cellular radio signals. This opens many opportunities for providing rich data as well as collecting user information and driving traffic to a target website.

Add to these features the interesting potential of a camera and media player, and the iPhone becomes more than a “SmartPhone”, it is actually a usable portable computer interface, which effectively separates itself from other portable devices.

Part of why the iPhone is so powerful is the use of a layered Operating System which provides access to powerful animation and graphic capabilities without requiring extensive programming. In this way, simple code can be used to call forth powerful transitions and user control interfaces that don’t take away time or power from the primary application. By allowing the use of many popular electronic media files with integrated OS-level technologies, the iPhone makes it easy for developers to create impressive applications.

iPhone Audience

Finding out the specifics of just who uses the iPhone is not an easy task, unless you are willing to spend some serious money. Demographic reports start around $5,000 (DUBLIN, Ireland - (BUSINESS WIRE) - Research and Markets (http://www.researchandmarkets.com/research/f45447/apple_profile_repo) has

announced the addition of the “Apple Profile Report 2008” report to their offering.) and it is easy to see why they can command such a high price. With the Apple iPhone, advertisers can selectively determine exactly who they wish to advertise to, right down to the neighborhood they live in. In more general terms, the iPhone demographics might reveal an interesting picture of the professions and lifestyles of iPhone users in general. In relation to the Brain Fitness Program, naturally there is an interest in a demographic that would be interested in improving and maintaining brain functionality. It is in this regard that the port of “High or Low?” is being undertaken, to test the waters and find out what sort of interest is out there. According to recent reports, the iPhone has captured 5.7% of the US market with a sixth-place ranking (**Samsung Overtakes U.S. Market Share Lead From Motorola, Nov 7, 2008, CMP Techweb)**, while globally the iPhone has a 17% share of the market and a second-place ranking. (**APPLE IPHONE OVERTAKES BLACKBERRIES’ SALES, Nov 8, 2008, Asian News International)**.

Since I started paying attention in June of 2008, I have noticed a general breakdown of iPhone users, as I travel across California as well as a trip to Reno, Nevada, and a two-week trip through Ireland, Spain, and Britain. In my direct observation, the majority of iPhone users appear to be successful professionals. As might be expected, the greatest density of iPhone users I have witnessed is in Cupertino, no doubt because I live there, and work down the street from the main Apple campus. However, even in Cupertino, the primary audience seems to be successful professionals in their mid twenties to upper forties. The other camp of users seems to be the children of these successful professionals. There are inevitably going to be the Apple fanboys and techno-nerds who stand outside the general curve, but in my observations the basic breakdown is professionals and then the children of professionals.

High or Low?

The original module from the Windows OS provided traditional mouse-based interaction and suggested calibrated headphones. Simple images and animations are used as rewards for completing exercises, making full use of the computer capabilities.

The iPhone allows for the same game functionality, but provides opportunities for new layout options, new control options, new image options, and new reward options. In addition to these potentials, the iPhone provides a natural and effective way of driving traffic to the Posit Science website.

While the Windows OS version uses mouse clicks to activate an icon representing up or down, the iPhone could use the touch screen to accomplish the same effect. In addition, the iPhone accelerometers can be used

to determine orientation and movement of the iPhone, allowing for the potential of shaking the iPhone up and down, or left and right to select an option rather than touching the screen.

In addition to the control potential, the iPhone can tap into user image libraries and use these as rewards in the game. Taking advantage of built-in transitions, the images can gradually be revealed and simulate the same effect as the standard library of images from High or Low?.

New reward options also include the capability of 3D animations, and even mini-games.

Finally, as a user completes a level, they are invited to increase the difficulty or visit the Posit Science website for even more ways to increase their brain power.

Design Potential

Recognizing these characteristics of the iPhone, there are some obvious design changes that come to mind which do not require significant programming or other resources.

Utilizing the accelerometers, provide the user the ability to determine if they want the game to be played in the wide screen view or the tall screen view.

Provide a choice of different user skins.

Allow for multiple means of controlling the game, including the accelerometer-driven options for shaking.

Utilize core animation and graphic capabilities to provide interface structure and application functionality in selecting image themes.

Include completion screen that encourages users to visit the Posit Science website.

Media Conversion

I have converted the original .swf files into the h.264 Quicktime Movie format, currently at 640x480. There were a total of three files: Sci_1, Sci_2, and exer1_sci. In addition, the science benefits of “High or Low?” have been converted into a PDF document to test the iPhone’s capabilities to handle this document type.

3D Animation Conception and Design

Various models of the human brain were created with different materials in an attempt to find a palatable option that would be appealing to the basic iPhone user. In the end, a simple but not graphic depiction in flesh tones was selected at one end of the spectrum, with different colored wireframe renderings on the opposite end of the spectrum.

After considering many options, the basic topic of brain plasticity was selected for the 3D animation.

In 30 seconds, a brief narration will accompany the visual depiction of a human brain, which fades to reveal

the inner workings of neural activity. The fundamental mechanics of brain plasticity will be explained with corresponding animations of what is being described. Large sprays of neural activity will spark with corresponding loci in the brain, which will send back a corresponding chain of neural activity. This process repeats, and with each iteration, the flow coalesces into a more defined and obvious path between loci, representing the positive reinforcement of neural communication through active brain plasticity. In the final part of the animation, what was a series of showers of neural activity has been reduced to a well defined network of targeted and efficient neural activity.

Implementation

The implementation of my practicum project is difficult to describe concisely. In terms of the general goal of learning what it is like to be an independent contractor, I feel I have totally satisfied the objective. As for the implementation of the project, it was so nebulous that while the project has been successfully completed, I still feel unsatisfied. This could be why I am compelled to continue volunteering for the project, as I still seek some overall sense of completion. Ultimately, this will not be complete until High or Low is released as an Application in the iTunes Store. Then we can see how successful it is, and whether or not it will generate interest in the flagship project.

Unfortunately, the final implantation is totally removed from my hands. There is the unfortunate reality that it may never be actually released as an app. While this will be frustrating, it is also a very real and valuable part of the process to learn. Research and development doesn’t always lead to actual implementation.

Ultimately, it has been very interesting working for a company that is on the cutting edge of neuroscience, and dealing with the actual mechanics of knowledge and brain function. While it presents challenges in terms of defining a project according to specific dates, it is worth the challenge in regards to what I have learned about the neuroscience of learning.

As for the implementation of my concept and design for the 3D animation, it was implanted with minor revision, and now I am taking it to the next level. So again, successful implementation, but I am left with the feeling of unfinished work! So it goes, in the ongoing saga of an independent contractor.

Evaluation

The formative evaluation for this project was very informal, and consisted of the subject matter expert reviewing my proposal and offering some suggestions as to how certain elements of the brain might be represented for the 3D animation. Discussion of technological considerations were centered around the need to keep the interface simple, and not be distracting from the primary task at hand. Converted materials were inspected and found to be totally acceptable for the new medium. As the head of the software engineering department that had created the original software, Don Brenner was uniquely qualified to assess and communicate his opinion of the planned instruction and conversion. Likewise, he knew best what sort of quality was required for the implementation of these digital assets into the final project.

As for my own self-assessment, I found the project to be very rewarding on a number of levels. I was able to satisfy all of the learning objectives, with additional insights and knowledge along the way. I have managed to cultivate an ongoing and mutually beneficial relationship with the company and am looking forward to future projects. In the most general of senses it was very satisfying and successful.

I did find some personal challenges with project management in terms of communications, which while frustrating, were ultimately resolved. It is the nature of off-site workers to be “out of the loop” and with our mutual traveling and other obligations, I was never quite certain if Don would be in the office in a particular week if something would come up. To make matters more interesting, there was a critical email failure where I was added to the spam list on Don’s end, and I received no input for some time. As I had left the conversation with a reply being Don’s prerogative, I continued working, assuming all was well, because I hadn’t heard otherwise from Don. Fortunately, weeks later when I phoned Don and resolved the email problem, I discovered that work had been completed to his satisfaction after all.

As for the operations of the unit, Posit Science is one of the premiere companies involved in rehabilitative training and research. I am in awe of the talent and skill that comprise the organization. Visiting the headquarters in downtown San Francisco is an experience unto itself, and while I am not able to discuss what I saw inside, I can say that they are well on their way to accomplishing their objectives. The company goals are strategic and far-reaching, with many potential avenues of future exploration and research on the horizon. It will be interesting to see how Posit Science continues with this line of work, and the benefits to humanity are impossible to overstate. The preservation and enhancement of one’s mental facilities could be the greatest contribution to society of all time.

While I learned many things and was able to develop my skills with media creation and conversion tools, I think the greatest benefit was the challenge of communications and time management while leading an active life on two other fronts. While honesty requires I admit I did not always live up to my expectations, I also must admit that I am my harshest critic and that I have received nothing but praise and encouragement from Don and Joe.

Appendices

Company Information
Resume
Intern Information form
Internship Placement Report form
Non-disclosure agreement (if needed)
Include all your experience log sheets signed by the site supervisor
Site Supervisor Evaluation form
Intern Evaluation of Host Site form
Recommendation letter signed by Site Supervisor on letterhead

Company Information

Posit Science (http://www.positscience.com/) is a company that produces rehabilitative and instructional software based on cutting edge research into neuroscience and neuropsychology. Headquartered in San Francisco, CA, I first became aware of them through another project involving learning disabilities and software selection. I was impressed with the software from Posit Science called “The Brain Fitness Program” and I decided to pursue the prospect of doing a practicum project with Posit Science.

I worked primarily with Don Brenner, the lead software engineer. I also worked with Dr. Joe Hardy, the Director of Research and Development at Posit Science. Here is the relevant contact information:

Posit Science
225 Bush Street, 7th Floor
San Francisco, CA 94104
415-394-3100

Dr. Joe Hardy, Research and Development Director
415-394-3119

Site Supervisor: Don Brenner, Lead Software Engineer
415-595-3028

Full information about Posit Science and their products is available at their website: http://www.positscience.com/.

RESUME

Michael James "Jayme" Johnson
6379 Bollinger Rd, Cupertino, CA 95490
(408) 725-9113

email: jayme@inreach.com

CAREER FOCUS: To perform meaningful and rewarding work that will challenge my creativity in a variety of media and formats, while offering opportunities for expanding my talents and skill sets.

Experience Summary

- Strong technical command of the English language, familiar with most writing styles, with a serious commitment to excellence in the printed and published word.
- Proven ability to successfully plan and coordinate large-scale projects, involving diverse resources and staff under high-stress and tight-deadline situations.
- Extensive knowledge of a wide variety of assistive technologies and access-software applications for individuals with various types of disabilities.
- Strong understanding of pedagogy and androgogy, in terms of best practices for presenting information in a variety of means to engage various and different learning styles.
- Experienced in designing instruction for a variety of contexts including traditional face-to-face and distance education for academic and vocational programs, as well as training for corporate and industrial needs.
- Knowledgeable and comfortable working with a wide range of technologies and media formats.
- Extensive computer experience dating back to 1982, comfortable with a variety of computer platforms from the obscure to the mainstream.
- Experience with many common layout, graphics, and multimedia programs (Adobe Illustrator, Photoshop, ImageReady, Pagemaker, InDesign, Corel Graphics Suite, 3D Studio Max, Flash, Dreamweaver, Quark).
- Proven commitment to community service through participation and service as a member and leader in various organizations.

Education

Master of Arts, Education, Instructional Technology (in progress). San Jose State University, San Jose, CA
Studying the systematic approach to designing instruction for a wide variety of contexts utilizing an equally diverse range of technologies and media.

Bachelor of Arts, English, Cum Laude. Fort Lewis College, Durango, CO 1997
I studied English and Literature, with a minor emphasis in Computer Science studies. Elected member of Sigma Tau Delta, an International English Honor Society, won several scholarships and grants for superior academic performance, and served in the Associated Student Union in various capacities.

Work Experience

Assistive Computer Technology Instructor *High Tech Center Training Unit (HTCTU) of the California Community Colleges* • Cupertino, CA 8/2006 to Present
The HTCTU conducts trainings and provides technical assistance to higher-education faculty and staff on the use of assistive computer technology for students with disabilities, the creation of alternate media, and improving Web access. In supporting these efforts to improve access for students with disabilities, I conduct workshops and trainings in the area of assistive computer technologies and modern media, including text to speech (TTS), speech recognition, screen reading and magnification, applications for learning disabilities, and operating system-specific accessibility features for Windows, Macintosh, and Linux. In addition to designing and offering trainings and workshops, I also provide direct assistance to faculty, staff, and administrators throughout the 110-campus California Community College system via telephone, web-based conferencing, and direct site visits as necessary.

Alternate Media Specialist *Mendocino College* • Ukiah, CA 11/2001 to 8/2006
As Alternate Media Specialist I secured and translated instructional materials into accessible formats for students with disabilities, as well as providing assistive technology for students in the classroom and computer labs. I advised faculty, staff, and administration on disability related issues and legal requirements. I worked with faculty to create accessible curriculum,

assist with pedagogical issues related to accessibility, and provided direct assistance with the creation of electronic information through the use of different software applications. I provided workshops and trainings to faculty, staff, and administrators about disability related issues and served on various committees and shared governance bodies to advocate for student needs across the district.

Owner/Operator *Aces High Graphics & Publishing* • Mancos, CO (1997-2001) & Willits, CA (2001-2006)
Aces High Graphics & Publishing was a desktop publishing company specializing in custom writing, web-site design, and custom graphics, and a wide range of computer-based services.

Exhibit Coordinator *San Juan Basin Recycling Association* • Durango, CO 1/2001 to 6/2001
I took this position after multiple successive changes in leadership, and with the final deadline looming six months away. I created a traveling multi-media exhibit about recycling for grades K-8, and an accompanying educational website. I contacted the administration of various schools within the greater San Juan Basin (over 30 schools in 6 counties, comprising nearly 400 miles in area), and after arranging exhibition dates, I personally transported the exhibit to and from the participating schools (17 participated). I also created and compiled educational packets of activities and information for the teachers to use both before and after the exhibit had visited their schools. Finally, I created a follow-up survey to asses the impact of the exhibit, gathered almost $2,000 in donations from the schools, and compiled the final project report to be used as the basis of the final report to the EPA, who sponsored the grant.

Technical Writer/Graphic Artist/Webmaster *Draeger Safety, Inc.* • Durango, CO 3/98 to 1/2001
Created original technical documents including operating manuals, service manuals, and installation manuals. Original graphics and technical illustrations were created for manuals, advertising, website, presentations, as well as product identification and labeling. Performed advertisement placement and trademark enforcement duties, as well as creating original copy for ads, press releases, and the website. Created and maintained all marketing and collateral materials, in addition to maintaining the tradeshow booths and show graphics. Organized and supervised photo-shoots of products, and maintained the archives of product photos, negatives, and transparencies. Provided phone support and computer instruction to regional sales people, and created original animations and presentations, in addition to backing up receptionist and assisting administrative manager with office organization.

Adjunct Professor - *Pueblo Community College, Southwest Center* • Cortez, CO 1/98 to 6/98
Taught courses in English, Computer Graphics, HTML authoring, and Internet publishing.

Presentations

Captioning DVD Media with Adobe Encore – TechEd Annual Conference, Ontario, CA, March 26-28, 2007.

Equal Access to Education, an Overview of Assistive Technology in Distance Education - Online Teaching Conference, Fremont, CA, June 11-12, 2007.

Captioning DVD Media with Adobe Encore – Association of Higher Education And Disability (AHEAD) Annual Conference, Charlotte NC, July 16-20, 2007.

Accessible Podcasting – California Association of Post-Secondary Educators and Disability (CAPED) Annual Conference, Ventura, CA, October 21-24, 2007.

Affordable Reading Systems – California Association of Post-Secondary Educators and Disability (CAPED) Annual Conference, Ventura, CA, October 21-24, 2007.

Accessible Podcasting - Accessing Higher Ground Annual Conference, Boulder, CO, November 7-10, 2007

Accessible Podcasting - Assistive Technology Industry Association Annual Conference, Orlando, FL, January 3 to February 2, 2008.

Accessible Podcasting - California State University Northridge Annual Conference on Disability, Los Angeles, CA, March 12 – 15, 2008.

Selecting Software for Students with Learning Disabilities – Association of Higher Education And Disability (AHEAD) Annual Conference, Reno, NV, July 14-19, 2008.

Accessible Podcasting - Association of Higher Education And Disability (AHEAD) Annual Conference, Reno, NV, July 14-

19, 2008.

Affordable Reading Systems - Association of Higher Education And Disability (AHEAD) Annual Conference, Reno, NV, July 14-19, 2008.

Selecting Software for Students with Learning Disabilities - California Association of Post-Secondary Educators and Disability (CAPED) Annual Conference, San Francisco, CA, October 8-10, 2008.

Enhancing Access to Education with the Save As DAISY XML (SADX) Plugin - California Association of Post-Secondary Educators and Disability (CAPED) Annual Conference, San Francisco, CA, October 8-10, 2008.

Affordable Reading Systems - California Association of Post-Secondary Educators and Disability (CAPED) Annual Conference, San Francisco, CA, October 8-10, 2008.

Professional Associations

California Association of Post-Secondary Educators and Disability (CAPED) – member since 2003

Access Technologists in Higher Education Network (ATHEN) – member since 2006.

Intern Information Form

Complete this form using a word processor and submit with a copy of your resume to your Practicum Instructor.
The form fields and document will expand to accommodate your typing.

Your Name:**Michael James Johnson** Email:**jayme@inreach.com**

Preferred contact phone number (home work mobile): **408-505-0567**

EDIT #	Course Name (Description)
226	Instructional Design Seminar
273	Creating Instructional Graphics
274	Creating Instructional Video
180	Independent Study
228	Instructional Web Media
285	Distance Education

Describe your primary instructional technology interest, goal, and objectives.

Instructional Design

List or describe any special skills you have, such as, graphic design, web design, photography, management, curriculum design, e-learning development, LMS, training, editing, multimedia, Flash, or video

Expereinced with graphic arts and layout software, wed design and publishing, multimedia design and creation, studio and live event audio engineering, recording, and video production (including VHS and DVD, with linear and non-linear editing technology). Experience with pedagogy and accessibility issues in media selection for curriculum design and distance education delivery, photography and cinematography skills, as well as creative and technical writing. Experienced project manager, supervisor, and assistive computer technology trainer.

Describe in as much detail as possible the ideal practicum experience for you. Include setting, your preference for individual vs. group projects, the nature of the work, specific skills you would like to use, skills you would like to learn, and any other information that would help your instructor identify a suitable practicum placement for you. If you have self-selected a practicum, please complete this section with a similar description.

I would like a project that would replicate the typical experience of an independent contractor, communicating primarily through email and phone, possibly through web-enhanced chat, in addition to a couple of face to face meetings. I would like to work with new or emerging technologies that have potential for helping people.

Describe or list any issues, factors, or conditions that may impact your practicum experience (e.g., vacation, work schedule, commuting, environmental preferences, etc.)

I will be at a family reunion during the last week of June- though I will be able to check email occasionally during that time.

NON-DISCLOSURE AGREEMENT

PositScience

THIS NON-DISCLOSURE AGREEMENT (the "***Agreement***") is entered into by and between Posit Science Corporation (the "***Company***") and _____ (the "***Recipient***") as of _____, 200__ (the "***Effective Date***"), to protect the confidentiality of certain confidential information of Company to be disclosed to Recipient solely for use by Recipient in pursuing a business relationship with the Company (the "***Permitted Use***").

1. As used herein, "***Confidential Information***" shall mean any and all technical and non-technical information provided by Company to Recipient, including but not limited to information regarding patents, patent applications, trade secrets, inventions, ideas, techniques, know-how, processes, apparatuses, equipment, algorithms, drawings, pictures, software programs, software source documents, and/or formulae related to the current, future or proposed products and services of the Company, and including, without limitation, the Company's information concerning research, development, design specifications, engineering, financial information, procurement requirements, purchasing, manufacturing, customers suppliers, investors, employees, contractual relationships, business forecasts, strategic plans, marketing plans and/or information the Company provides regarding third parties.

2. Confidential Information includes all materials marked as "confidential" or "proprietary" and all information disclosed orally or visually which the Company has not disclosed publicly and holds as proprietary.

3. Subject to Section 4, the Recipient agrees that at all times and notwithstanding any termination or expiration of this Agreement it will hold in strict confidence and not disclose Confidential Information to any third party, except as approved in writing by the Company, and will use the Confidential Information for no purpose other than the Permitted Use. The Recipient shall only permit access to Confidential Information to those of its employees or authorized representatives having a need to know and who have signed confidentiality agreements or are otherwise bound by confidentiality obligations at least as restrictive as those contained herein.

4. Recipient shall not have any obligations under this Agreement with respect to a specific portion of the Confidential Information if Recipient can demonstrate with competent evidence that such Confidential Information:

(a) was in the public domain at the time it was disclosed to the Recipient;

(b) entered the public domain subsequent to the time it was disclosed to the Recipient, through no fault of the Recipient;

(c) was in the Recipient's possession free of any obligation of confidence at the time it was disclosed to Recipient; or

(d) was rightfully communicated to the Recipient free of any obligation of confidence subsequent to the time it was disclosed to the Recipient.

5. In addition, Recipient may disclose certain Confidential Information, without violating the obligations of this Agreement, to the extent the disclosure is required by a valid order of a court or other governmental body having jurisdiction, *provided that* Recipient gives reasonable prior written notice to the Company of such required disclosure and makes a reasonable effort to obtain, or to assist the Company in obtaining, a protective order preventing or limiting the disclosure and/or requiring that the Confidential Information so disclosed be used only for the purposes for which the law or regulation required, or for which the order was issued.

6. The Recipient shall immediately notify the Company in the event of any loss or unauthorized disclosure of any Confidential Information.

7. Upon termination or expiration of the Agreement, or upon written request of the Company, the Recipient shall promptly return to the Company all documents, notes and other tangible materials representing the Confidential Information and all copies thereof.

8. The Recipient recognizes and agrees that nothing contained in this Agreement shall be construed as granting any property rights, by license or otherwise, to any Confidential Information disclosed pursuant to this Agreement, or to any invention or any patent, copyright, trademark, or other intellectual property right that has issued or that may issue, based on such Confidential Information. The Recipient shall not make, have made, use or sell for any purpose any product or other item using, incorporating or derived from any Confidential Information.

9. Confidential Information shall not be reproduced in any form except as required to accomplish the intent of this Agreement. Any reproduction of any Confidential Information shall remain the property of the Company and shall contain any and all confidential or proprietary notices or legends which appear on the original, unless otherwise authorized in writing by the Company.

10. This Agreement shall terminate one (1) year after the Effective Date, or may be terminated by either party at any time upon thirty (30) days written notice to the other party. The Recipient's obligations under this Agreement shall survive termination of the Agreement between the parties and shall be binding upon the Recipient's heirs, successors and assigns. The Recipient's obligations with respect to all Confidential Information shall be terminated only pursuant to Section 4.

11. This Agreement shall be governed by and construed in accordance with the laws of California without reference to conflict of laws principles. Any disputes under this Agreement may be brought in the state courts and the Federal courts located in the City and County of San Francisco, California, and the parties hereby consent to the personal jurisdiction and venue of these courts. This Agreement may not be amended except by a writing signed by both parties hereto.

12. The Recipient hereby agrees that breach of this Agreement will cause Company irreparable damage for which recovery of damages would be inadequate, and that the Company shall therefore be entitled to obtain timely injunctive relief under this Agreement, as well as such further relief as may be granted by a court of competent jurisdiction.

13. If any provision of this Agreement is found by a proper authority to be unenforceable or invalid, such unenforceability or invalidity shall not render this Agreement unenforceable or invalid as a whole and, in such event, such provision shall be changed and interpreted so as to best accomplish the objectives of such unenforceable or invalid provision within the limits of applicable law or applicable court decisions.

14. The Recipient will not assign or transfer any rights or obligations under this Agreement without the prior written consent of the Company.

15. The Recipient shall not export, directly or indirectly, any technical data acquired pursuant to this Agreement or any product utilizing any such data to any country for which the U.S. Government or any agency thereof at the time of export requires an export license or other governmental approval without first obtaining such license or approval.

16. All notices or reports permitted or required under this Agreement shall be in writing and shall be delivered by personal delivery, electronic mail, facsimile transmission or by certified or registered mail, return receipt requested, and shall be deemed given upon personal delivery, five (5) days after deposit in the mail, or upon acknowledgment of receipt of electronic transmission. Notices shall be sent to the addresses set forth at the end of this Agreement or such other address as either party may specify in writing.

17. The Recipient acknowledges that Company's software programs contain valuable confidential information and agrees that it will not modify, reverse engineer, decompile, create other works from, or disassemble any software programs contained in the Confidential Information unless otherwise permitted in writing by the Company.

IN WITNESS WHEREOF, the parties hereto have caused this Non-Disclosure Agreement to be executed as of the Effective Date.

COMPANY:	**RECIPIENT:**
POSIT SCIENCE CORPORATION	_____
By:_____	By:_____
Name: _____	Name:_____
Address: 225 Bush Street, 7th Floor San Francisco, CA 94104	Address:_____ _____ _____

EDIT 242: Practicum in Instructional Technology

Practicum Experience Log

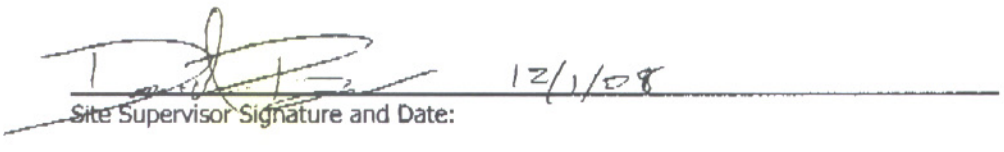
Use this form in Excel or make as many paper copies as needed to record your daily practicum experiences (tasks) you complete during your assignment. Record the date, a brief description, time on task in quarter-hour increments (.25), and the running total of hours worked to date. A total of at least 90 hours is expected.
This form must be signed by your site supervisor in order to receive course credit.

Date	Task Description	Time on Task	Running Total
3/8/08	Conversations with Sales Rep leading to contact with Director of Research and Development, Dr. Joe Hardy.	1	1.00
3/26/08	Phone meeting with Dr. Joe Hardy, discussion of intent and setting appointment for first meeting.	0.5	1.50
4/1/08	Research and prep for first meeting	1	2.50
4/4/08	Initial meeting, tour of facility, overview of company activities and general scope of interest. Provided overview of corporate structure and general operating procedure regarding project selection and overall direction as relevant to Research and Development function. Detailed overview of the "Brain Fitness Program" and the target audience to date. Discussion of potential new target audience as motivation for practicum project. Discussion of potential areas for practicum project and overview of possible plans.	3	5.50
4/13/08	Review of "The Brain Fitness" instructional users manual and installation of software, 1st workout	3.5	9.00
4/16/08	Review of "The Brain Fitness" instructional video and software exercise workout	1	10.00
4/18/08	Review of "The Brain Fitness" insdtructional video and software exercise workout	1	11.00
4/20/08	Software exercise workout	1	12.00
4/21/08	Research into Apple user demographics and stats	3	15.00
4/21/08	Apple Developer site research	1.5	16.50
5/12/08	Media conversion tools research	1.5	18.00
5/12/08	Research tutorials for modeling and rendering in 3DS	2	20.00
24-May-08	Phone conversation with Dr. Joe Hardy updating on my progress and setting next meeting date.	0.5	20.50
12-Jun-08	Prep for meeting	0.5	21.00
13-Jun-08	Second meeting, determination of project and basic scope.	2	23.00
16-Jun-08	Download, organization and review of existing digital assets	5	28.00
16-Jun-08	Conversion of digital .swf files to .mov files	2.5	30.50
17-Jun-08	Conversion of digital .swf files to .mov files	6	36.50
18-Jun-08	Conversion of mac-based media to PC-friendly format	2.5	39.00
19-Jun-08	Review of scientific literature regarding brain plasticity and audio processing	3	42.00
19-Jun-08	Research into cell phone usage, demographics, iPhone usage	4.5	46.50

Site Supervisor Signature and Date:

EDIT 242: Practicum in Instructional Technology

Date	Task Description	Time on Task	Running Total
20-Jun-08	Review of Apple Developer site for information about media format and design	4.5	51.00
20-Jun-08	Ideation for possible interface controls	3	54.00
30-Jun-08	InDesign sample layout designed for electronic help files	2.5	56.50
30-Jun-08	Electronic help files imported and formatted InDesign	4.5	61.00
30-Jun-08	Export of InDesign files to XML and XHTML	1.5	62.50
11-Jul-08	Import and format XML and XHTML files into Dreamweaver	10	72.50
20-Jul-08	Research 3D animation models of human brain	3.5	76.00
25-Jul-08	Tutorials for modeling in 3D Studio Max	5.5	81.50
25-Jul-08	Tutorials for material creation in 3D Studio Max	3	84.50
1-Aug-08	Modeling human brain mockup	8.5	93.00
2-Aug-08	Material creation for brain mockup	5	98.00
24-Aug-08	Tutorial for animation and environmental effects in 3D Studio Max	4	102.00
28-Sep-08	Fine-tuning the rendering	4	106.00
10/5/08	Research and further fine-tuning of the rendering	5	111.00
10/12/08	Tutorial and still more fine-tuning the rendering	4	115.00
11/22/08	Outline 30 second animation explaining brain plasticity	2	117.00
11/29/08	Mockup of 3D brain with fade-away material to reveal neural activity	3	120.00
11/30/08	Mockups of neural activity	6	126.00



Site Supervisor Signature and Date:

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EDIT 242: Practicum in Instructional Technology / San José State University

Site Supervisor Evaluation of I.T. Practicum Student

Using Microsoft Word, complete the form fields below.

Student Name: **Jayme Johnson** Date: December 1, 2008

Supervisor Name: Don Brenner Phone: 415-595-3028

Company: Posit Science

Rate the skills and activities that your intern was involved in (rate only those that apply).
(Use the drop down menu to choose: 1-poor 2-developing 3-average 4-above average 5- excellent)

3	Needs Assessment	3	Task Analysis	3	Instructional Design
3	Instructional Development	3	Implementation	3	Evaluation/Testing
3	Web-Based Design	3	Media Selection	3	Survey Development
3	Communication Skills	3	Promptness/Reliability	3	Initiative/Resourcefulness
3	Technical Skills	3	Research/Data Analysis	3	Administrative Tasks

Please specify skills, models/processes, journals/publications, software, conferences, or hardware that you would recommend to instructional technology professionals.

Instructional Design/Evaluation Models:

Software/Hardware:

Publications/Journals:

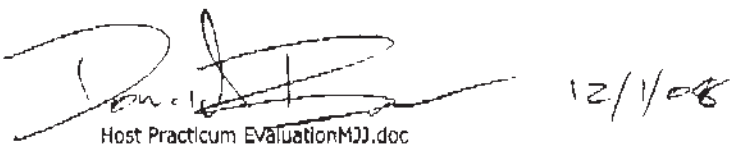
Instructional Design Skills:

Conferences/Workshops:

Organizations:

Other Skills:

Please list anyone in your organization that you would like to refer to the Instructional Technology Practicum Program. If you have other information you would like to share with us about the practicum, please include it below or contact the course instructor. ***Thank you for your support.***



Student Evaluation of I.T. Practicum Experience

Date: ____11-30-2008__-

Student Name: Michael James Jayme Johnson Phone: (home)408-725-9113__(Cell) 408-505-0567

Company: Posit Science Supervisor: Don Brenner

Organization type (government, K-12, corporate, etc.): Corporate

Rate the skills and activities that you were involved in (rate only those that apply).
(1-poor 2-needs improvement 3-average 4-above average 5- excellent)

3 Needs Assessment	4 Task Analysis	3 Instructional Design
3 Instructional Development	__ Implementation	__ Evaluation/Testing
3 Web-Based Design	4 Media Selection	__ Survey Development
3 Communication Skills	3 Promptness/Reliability	4 Initiative/Resourcefulness
5 Technical Skills	4 Research/Data Analysis	4 Administration Tasks
__ Other_____	__ Other_____	__ Other_____

Please rate your experience as a practicum intern (rate only those that apply).
(1-poor 2-needs improvement 3-average 4-above average 5- excellent)

5 Treated as a professional	5 Current skills utilized	5 New skills developed
__ Included in the organization	__ Adequate office space	5 Adequate resources
4 Supervision	3 Description of tasks/duties	3 Professional role models
3 Interest shown in intern		

How will the practicum experience effect your employment decisions for the future (check all that apply)?

__ Increase level of responsibility	__ Changing from current field	X Acquired new knowledge
__ Discovery of “ideal” job	X Made new contacts	__ Other_____

Would you recommend that other practicum students complete their practicum at this organization?
Yes or **No**. Briefly provide reasoning.

NO

I think my experience was singular and exceptional. I had a prior amount of knowledge and understanding that made it possible for me to operate as an independent contractor without the need for constant ongoing supervision. I believe this is atypical to the average graduate student need.

Please contribute any additional information about this practicum host site that would assist us in making the practicum experience in the future more effective or successful.

PositScience™
Your brain will thank you.

To whom it may concern,

I am writing this letter on behalf of Jayme Johnson, who has worked on a project for Posit Science as part of his master's degree practicum project.

The purpose of the project is to explore the potential of a new technology as a host for a module of the Brain Fitness Program: "High or Low?" The new target technology is the Apple iPhone, which offers a variety of interesting options in terms of how the end user can access and interact with the "High or Low?" program via the iPhone.

Jayme originally became familiar with Posit Science and the Brain Fitness Program through his work with a project for selecting software for students with learning disabilities, which provided a strong understanding of the concepts behind brain plasticity and how the Brain Fitness Program worked.

With an established understanding of the best practices for creating educational software, and a strong familiarity with the Brain Fitness Program, Jayme was able to immediately begin working on the conversion and development of instructional media. Jayme also set out to investigate the unique characteristics of the iPhone and its user base.

Jayme has worked independently to perform an analysis of the iPhone device, researched the demographics of iPhone users, converted educational video files and digital text files, as well as learning the fundamentals of a 3D Animation program creating 3D models of the human brain.

As a self-directed volunteer, Jayme has shown an ability to understand the fundamental aspects of designing and developing instructional media as well as the requisite concepts for translating instructional media to a new technology. While the original practicum length of 90 hours has been completed, Jayme continues to volunteer on the project and I look forward to seeing more of his work.

Sincerely,

10/16/08

Don, Brenner