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Great to meet all of you and to learn more about your exciting programs in teacher education and instructional design at National University. Spent some time the last few nights reading about your school and the courses that Cynthia mentioned.

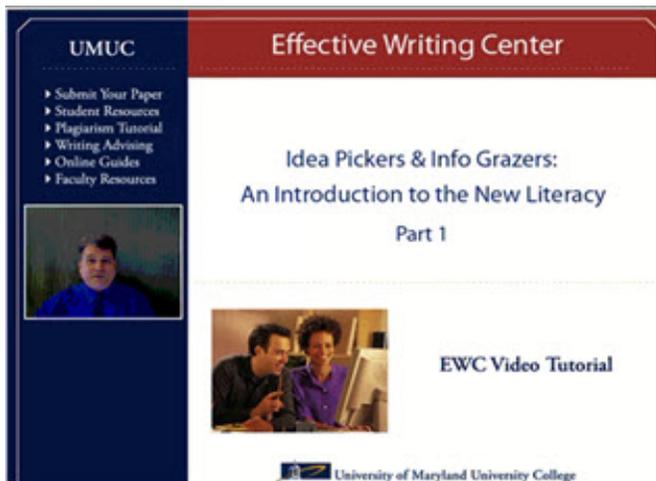
Before anything else, I have to say how gratifying it is to learn about your efforts and to meet more educators that believe as strongly as I do in this statement from the description of your Master of Science in Education and Instructional Technology degree:

“... as human learning moves from print and classroom-based instruction to digital media.”

When I said something similar at the finish of a presentation in February at the Conference on College Composition and Communication, the rotten tomatoes started flying. Teachers aren't known as early adopters, and maybe it's worse at tribal functions, but the resistance was surprisingly strong to something so obvious and crucial.

In the managerial communications course I teach, we've altered your statement to "as human **communication** moves from print to digital media." My goal is to help students deal with the greatest revolution in human communication since Gutenberg's converted wine press. Chunking, info mapping, PowerPoint, visual design live conferencing and the rest are administered in strong doses. The course deals first with the "new literacy." Below are the first few slides. Throughout the lecture, students get a strong warning that yesterday's

text documents are increasingly inadequate for today's audiences.



ADOBE CAPTIVATE

As Kathy mentioned, this is my choice for interactive tutorials in composition. The study of essay strategies, punctuation, and usage lends itself well to Captivate's multimedia capabilities, branching scenarios and score reporting. One of the aspects I like best about Captivate is how well integrated it is with a wide range of tools, especially [Media Semantic's](#) Character Builder tool for plug-and-play animated avatars. I've actually heard an online student say after viewing a

Captivate lesson that was delivered by an avatar, "It's so great to finally have a *real person* present this material." Reactions like that speak to the deafening silence of text-based online instruction and the hunger for interaction that it builds. But the testimony of this starved student also speaks to the potential effectiveness of avatars as pedagogical agents.

THE AVATAR REVOLUTION

Research documents the effectiveness of pedagogical agents. If animated avatars can elicit a similar degree of connection between the learner and the lesson as a human's live video can, avatars could produce a mini-revolution inside this larger one of digital education because of their relative lower cost of production, ease of production, and lower bandwidth in comparison to human subjects and video.

THE PHOTOFIT AGENT

An exciting development a few months ago was Media Semantic's upgrade to their Character Builder program to PhotoFit capability. PhotoFit allows the animator to import a person's photograph (head shot) then render that photograph into an avatar with a strong likeness to the subject. The program also has tools for tweaking the avatar to make it more or less realistic, younger or older, plainer or more beautiful—in other words, for someone to have the virtual face that they've always wanted, no aging allowed.



PHOTOFIT DEMO

Below is an example of a writing adviser who submitted a photo to be avatared for use in short introductions to text material in her classroom. The subject (whose materials are used with her permission) was able to provide specific directions on adjustments to her likeness and to the office background. Now that her avatar is done, she needs to provide only an mp3 for future introductions.



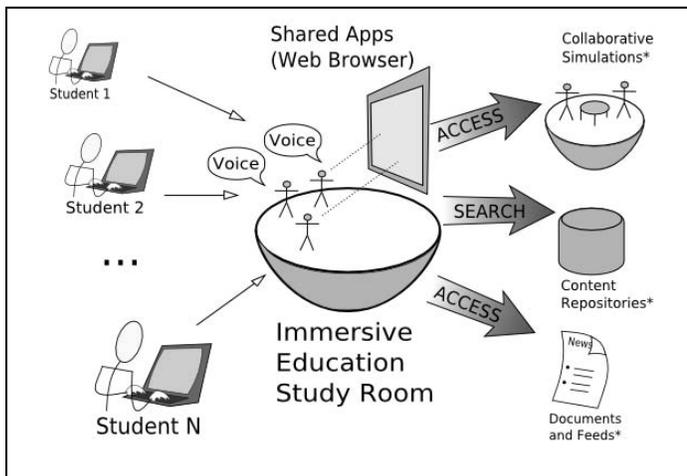
SECOND LIFE

For any teacher still pondering the role that SL or other virtual realities might play in the future of education, this [report](#) from [Gartner Research](#) should get their attention: "80% of active Internet users will have a 'Second Life' in the virtual world by the end of 2011." And if they don't like Gartner, there is always [Forrester](#), who said earlier this year: "Within five years, the 3-D Internet will be as important for work as the Web is today."

When it comes to digital media and online education, we seem to be rocketing down an Autobahn with no off ramps. Destination: the re-creation online of every aspect of real life education except the inconvenience. And just when we think we've reached top speed, suddenly appears Linden Labs, [Clever Zebra](#), or an initiative that has great promise: [Media Grid](#), a free, online immersive learning solution made possible through a consortium of schools, research institutes, and Sun Microsystems (see current membership [here](#)).

IMMERSIVE EDUCATION STUDY ROOMS

The Media Grid calls itself a “public utility for digital media” and models itself after a revamped national power grid that can deliver: “Immersive Education; on-demand digital cinema and interactive movies; distributed film and movie rendering; truly immersive multiplayer games and virtual reality; real-time visualization of complex data (weather, medical, engineering, and so forth); telepresence and telemedicine (remote surgery, medical imaging, drug design, etc.); vehicle and aircraft design and simulation; and similar high-performance media applications.”



The heart of the Media Grid will be its library, housing [Immersive Education Study Rooms](#) where students can access content using a variety of immersive learning platforms: Second Life, Cobalt/Croquet, Wonderland, and others. Teachers and content developers can house their content on any platform in any digital form. Media Grid provides the sample learning scenario below.

Following a foreign language class in Japanese a group of American students gather in an Immersive Education study room in preparation for a virtual field trip to reinforce the classroom learning. The students use library services available in the study room to identify a virtual Japanese restaurant simulation and instantaneously “travel” to the virtual location. There, they are immediately paired with other participants in the simulation and walk through a restaurant experience which is a combination of scripted AI behavior and live interaction all of which reinforce the material gained in the classroom learning experience. They use a shared word processor to prepare notes on the experience.

AOL & THE METAVERSE

In contrast to the members-only, self-contained application of Second Life, the Media Grid seems to be a serious attempt by players such as Sun Microsystems, MIT, NASA, the New Media Consortium and others to build a Worldwide Web version of a metaverse, a word popularized in Neal Stephenson’s 1992 novel, *Snow Crash*.

Am I the only one reminded of 1995, the explosion of the Worldwide Web and the eventual fate of hubristic AOL? Once Americans realized that AOL was **not** the Internet, the flaws of AOL’s content and financial model were revealed. Like AOL, Second Life has risen from a basement of competitors, fueled by the hype of lamestream media, and has become synonymous with online 3-D virtual reality. As educators, we have little choice but to build there. But Second Life’s infamous “lag” problem is eerily reminiscent of AOL’s bandwidth problems in the mid 90s. Technically, AOL could not **be** the Internet, just as Linden Labs and its Second Life grid, as currently configured, cannot **be** the metaverse.

THE CHOICE OF SECOND LIFE

It’s hard to say when Second Life’s *AOL Moment* will arrive. In the meantime, Second Life provides the best option for educators exploring the use of immersive learning experiences in multi-user virtual environments. The 218 educational institutions and organizations from around the world with campuses in Second Life seem to agree for the time being.

To date, I have developed two properties to meet the needs of two different groups of students at the University of Maryland University College.

My duties as senior adviser at UMUC's [Effective Writing Center](#) (a 100% online facility) include developing multimedia lessons for use by our 20+ online advisers and in the 60+ guest lectures we conduct each semester in online classrooms for teachers from a variety of disciplines. These materials are available in Second Life at [Escribir House](#), our in-world writing center, where advisers can also conduct live tutoring and small-group instruction.

[Escribir Park](#) is for students taking online writing and communications classes from me in the undergraduate and graduate schools. Weekly video lectures and other materials are available on a Codeee YouTube player that holds up to seven videos. Students can also conduct group meetings here. Escribir Park's main use is for students to practice and present PowerPoint or video productions for class assignments. Second Life technically is not the best place for PowerPoint presentations: the audio can be problematic and animated slides become static textures. But PowerPoints are something easy for students to produce, and thus serve as a gateway to other learning activities in SL. Another advantage is that students can go to Second Life at any time, unlike other live teleconferencing programs like Adobe Connect and Wimba, which the teacher must schedule.

Pedagogical Agent Resources on the Web

- David Slater's Interactive Animated Pedagogical Agents Website
- Pedagogical Agents Systems Technology Assessment (PASTA)
- Pedagogical Agents and Learning Systems (PALS)
- AgentWeb (University of Maryland Baltimore)
- A Taxonomy for Autonomous Agents
- Avatar as Content Delivery Platform
- Microsoft Agent

