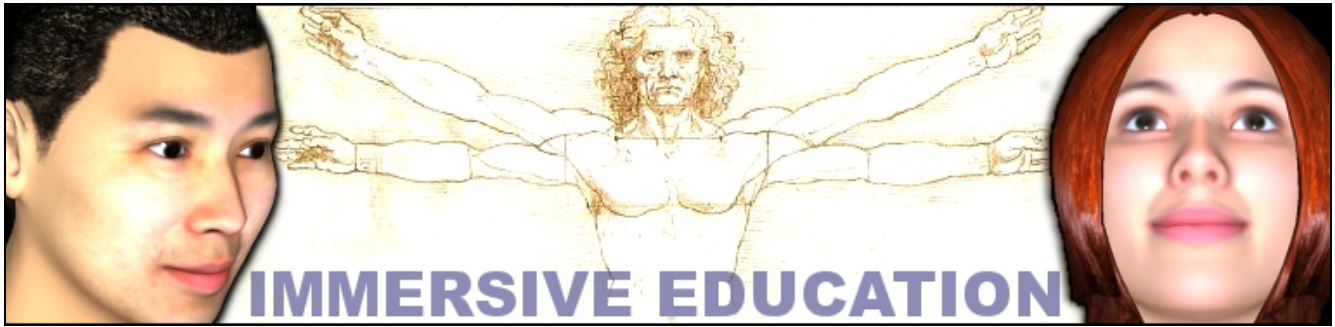




TALKING POINTS: IMMERSIVE EDUCATION INITIATIVE



What is Immersive Education?

Immersive Education combines 3D and virtual reality (VR) technologies with digital media to bring distance education and self-directed learning to a new level. Unlike traditional learning technologies, Immersive Education is **designed to engage** students in the same way that today's best video games grab and keep the attention of players.

Immersive Education thoughtfully **combines virtual worlds, simulators, learning games and sophisticated digital media** (voice chat, game-based learning modules, audio/video, and so forth) with collaborative **online learning environments, study rooms, and classrooms.**



Immersive Education **gives learners a sense of "being there"** even when attending class in person is not possible or practical. This, in turn provides educators and remote learners with the ability to connect, communicate, and collaborate in a way that greatly enhances the learning experience.

Immersive Education is **freely available** through the Immersive Education Initiative (ImmersiveEducation.org).

What is the Immersive Education Initiative?

The Immersive Education Initiative is an merit-based, **non-profit international collaboration of universities, colleges, research institutes, consortia and companies** working together to define and develop open standards, best practices, platforms, and communities of support for virtual worlds, simulators and game-based learning and training systems.

Hundreds of faculty, researchers, staff, administrators and students are members of the Immersive Education Initiative, which is growing at the rate of approximately **2 new members every day**.

The Immersive Education Initiative is an official activity of the **international Media Grid standards group**. The Media Grid standards group actively applies open standards to specific problem spaces, such as distance education, digital libraries, and the impact of digital media on culture and society. Media Grid members and Immersive Education Initiative participants include faculty, staff, administrators and students from a range of organizations.

Immersive Education and the Media Grid were recently recognized with a prestigious national award by Computerworld for being

“innovative, promising technologies which hold the potential to significantly affect society in the near future”



Students in the Voting Hall (Sala dello Scrutinio) of the Doges Palace, Venice Italy
>> compare to the Immersive Education virtual reality version <<



1st GENERATION (2001-2003) : Virtual Reality Modeling Language (VRML)
AVATAR in the 3D/VR Rendition of the Voting Hall of Doges Palace, Italy

What do members of the Initiative do?

Members of the Immersive Education Initiative collaborate in **ten focus areas** chaired by faculty, administrators, and researchers from Boston College, Loyola Marymount University, Columbia University, M.I.T., and other leading organizations. Visit ImmersiveEducation.org/about.html for details:

1. **Platform Ecosystem and Education Grid.** In the context of Immersive Education the term *platform* refers to any virtual world, simulator or 3D environment that may be used for teaching or training purposes. The Immersive Education platform has evolved considerably over the past decade and the 3rd generation ("next generation") is now under development. Whereas the previous two generations were based on specific client-side platforms tied to proprietary server-side infrastructures, the future of Immersive Education revolves around multiple client-side platforms working in unison through the server-side Education Grid. The Platform Ecosystem and Education Grid provide educators with a comprehensive end-to-end infrastructure for a new generation of learning environments, learning games, and simulations.
2. **Design and develop "Web3D Books".** Web3D Books are Web-based digital books that support bidirectional interaction with Immersive Education learning experiences. Web3D Books are used to assemble and present any combination of text, imagery (such as images and videos), audio, Web content (HTML pages, Flash animation, etc.), and Web-based 3D content (such as Shockwave and X3D). A Web3D Book can be thought of as a Web-based presentation container that seamlessly guides learners through three-dimensional (3D) immersive learning experiences.
3. **Define, develop and publish best practices related to pedagogy, learning assessment, and learning outcomes.** How, for example, do we conduct classes or training and educational sessions in a virtual learning environment? How do we assess how well our students and learners are doing? How do we determine that desired learning outcomes have been achieved?
4. **Define, develop and publish best practices for constructing Immersive Education learning environments** (classes, training scenarios, and simulations), including student-faculty course content development ecosystems.
5. **Design, develop and promote open and platform-neutral file formats** that enable interoperable learning environments to be seamlessly deployed across a wide variety of virtual world and game platforms (e.g., Second Life, World of Warcraft, Open Croquet, Wonderland, There.com, and other 3D/VR platforms).
6. **Curricula.** We are developing a complete curriculum that teaches students, faculty, and trainers how to a) create compelling Immersive Education experiences, and b) how to conduct courses using Immersive Education technology.
7. **A.I. and game-based learning frameworks.** We are developing advanced forms of Artificial Intelligence (A.I.) and game-based learning tools for guided and self-directed education and training environments.
8. **Immersive illness (mental health).** As virtual world and game-based learning systems become more compelling and powerful, numerous forms of so-called "immersive illness" (such as addiction, alienation, and mental schisms) will affect some users. The Immersive Education Initiative is defining best practices and early-warning systems that will help teachers, faculty, and trainers identify and assist at-risk users.
9. **Summits, conferences, meetings and training.** Starting in 2008 Immersive Education will have a dedicated track at Boston's annual Digital Media Summit. Faculty and staff will receive hands-on training and support during Summits and also at meetings and conferences convened throughout the year.
10. **Communities of Support.** Many organizations don't have the resources, staff expertise, or funding necessary to take full advantage of virtual world and game-based learning technology, which is why we are developing open standards and technologies that are easy to use, well documented and free. But that alone won't do it; best practices, student-faculty content creation ecosystems, and sustainable communities of support are equally as important. To support these objectives, the Immersive Education Initiative is developing funding models to provide long term sources of funding for our members.

What benefits do members enjoy?

Immersive Education Initiative members enjoy a wide range of benefits, including:

- **“Teach the Teacher” Training Courses.** The Initiative’s “Teach the Teacher” training courses prepare educators to teach, assess, and grade using virtual worlds, simulators and game-based learning technologies. Technologies covered include Second Life, Wonderland, Croquet/Cobalt, and the Education Grid. Teaching techniques covered include:
 - Hover Above
 - Walk 'n Talk
 - Face-to-Face
 - Work the Room
 - Gesture Chains
 - Split the Room
 - Spin the Av
 - AWAY (but not!)
 - Self-directed learning formats and teaching schedules

- **Free technology and at-cost professional services.** Initiative members have full access to the spectrum of technologies upon which Immersive Education is built, free of charge. Members can host Immersive Education virtual world servers on their own networks at no cost, for example, or they can be hosted on the Education Grid at cost (at-cost hosting, with no overhead or additional costs). Members can also take advantage of our at-cost professional services, such as virtual world course design, content development and programming services.

- **In-world events.** Initiative members are able to participate in a wide range of special events that are held in-world (in virtual worlds) every month. A full schedule of events, along with related materials (such as images, videos and audio transcripts), is online at ImmersiveEducation.org/events. Past in-world events include discussions and demonstrations about:
 - High-resolution avatars, objects, and environments
 - Platform Ecosystem and Education Grid status and review
 - The role of surface (touch) input devices in Immersive Education
 - Content review, ranking, tagging, and vetting
 - Avatar tracking and analysis (“metrics” for teaching in virtual worlds)

- **Summits, symposia, and conferences.** Members of the Initiative receive discounted rates and the ability to present at Immersive Education summits, symposia and conferences. Summits are annual events that began in Boston, MA, in 2006 (visit MediaGrid.org/summit for summit programs and archives). Planning is now underway for international Immersive Education summits, symposia and conferences in Asia, Europe, and other locations around the world.

- **“Immersive Education Day at [YOUR SCHOOL HERE]”.** With assistance and guidance from Initiative chairs any member can host Immersive Education Days at their school, and also attend events hosted by other members. The “Immersive Education Day at [YOUR SCHOOL HERE]” program was launched last year with Immersive Education Day at Harvard University. This year the program expands internationally, beginning with Immersive Education Day at Fundación Universitaria Sanitas (Bogota, Columbia), with more events planned for Latin America, Europe, Asia and other locations around the world.

- **K-12 programs.** This fall Immersive Education technologies and immersive courses will become available for K-12 (kindergarten through 12th grade) with the launch of the Initiative’s K-12 program. This summer the Initiative is conducting K-12 program pilot trials with K-12 schools in the United States,

the results of which will inform the official K-12 program launch in fall. Initiative members have early access to the K-12 program by participating in the summer pilot.

- **The Education Grid.** Initiative members have early access to [the Education Grid](#) where they can conduct classes on secure, privately hosted nodes (servers) for Second Life and Wonderland. With the Education Grid our members can also build their own custom virtual learning environments that are hosted by the Initiative, by the member's own school, or at multiple locations for fail-safe redundancy. Through the Education Grid our members also have early access to content delivery services and Cobalt/Croquet world storage (persistence) services. In addition to having early access to the Education Grid, members are also able to become "nodes" on the Education Grid to make their immersive learning environments widely available to the academic community.
- **Science, technology, engineering and math (STEM) programs.** The Initiative recently received a [\\$1.2 Million STEM donation from the John C. Ford Program](#). The donation consists of 67 STEM programs and associated learning materials and technologies that will be integrated into the next generation of Immersive Education learning environments. Members of the Initiative have immediate access to these STEM materials, and also have access to the new immersive learning environments that our members are now building with these materials.
- **Technology Working Groups (TWGs).** Technology Working Groups develop, deliver and maintain technological materials such as technical reports, design documents, specifications, software implementations, conformance test suites, best practices, and formal reviews of deliverables produced by other groups. Initiative members are able to participate in a wide range of Immersive Education Technology Working Groups, including:
 - Artificial Intelligence TWG
 - Assessment, Evaluation and Grading TWG
 - Content Tagging, Rating and Review TWG
 - Education Grid TWG
 - Foreign Language TWG
 - Library TWG
 - Metadata and Taxonomy TWG
 - Metrics TWG
 - Open File Formats TWG
 - Open Protocols TWG
 - Open Worlds TWG
- **Community Groups (CGs).** Community Groups support discussions and collaborations among members who have similar interests. Initiative members are able to participate in a wide range of Immersive Education Community Groups, including:
 - Immersive Education Day at [YOUR SCHOOL HERE] CG
 - K-12 and Higher Education CGs
 - Second Life user, builder, developer and administrator CGs
 - Wonderland user, builder developer, and administrator CGs
 - Cobalt/Croquet user, builder, developer and administrator CGs
 - World of Warcraft (WOW) research and educators CGs
- **Direct access to pioneers, inventors and researchers.** Initiative members have direct access to the individuals and organizations that are building the next generation of Immersive Education and the pioneers who are using these technologies. Through the Initiative's Wonderland User Community Group, for example, nearly 200 educators have immediate and direct access to the entire Wonderland development team at Sun Microsystems (the company responsible for Wonderland) and also to leading university researchers who are using Wonderland to build Immersive Education learning worlds.
- **Grants and Sponsored Research Programs.** Members are able to participate in our federal grant programs and other forms of sponsored research, such as the joint Immersive Education Technology Grant program recently established by the Initiative and Sun Microsystems.

Who can join?

Immersive Education is a merit-based, not-for-profit initiative of the Media Grid international standards group. Membership is open to the public but restricted to organizations and individuals that have experience using virtual worlds, simulations, or game-based learning technologies. To join, or for more information, visit ImmersiveEducation.org or contact the Media Grid standards group Director:

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