



ACRE

Accountability and Curriculum Revision Effort
in Response to *A Framework For Change*

PUBLIC SCHOOLS OF NORTH CAROLINA State Board of Education | Department of Public Instruction

Immersive Technology

Gaming, Simulations and Virtual Environments



Innovative Assessment Research Team (I-ART)

State Board of Education Friday Update

July 2009

Current research shows that immersive technologies can have a positive impact on student achievement when integrated appropriately into instruction and assessment.

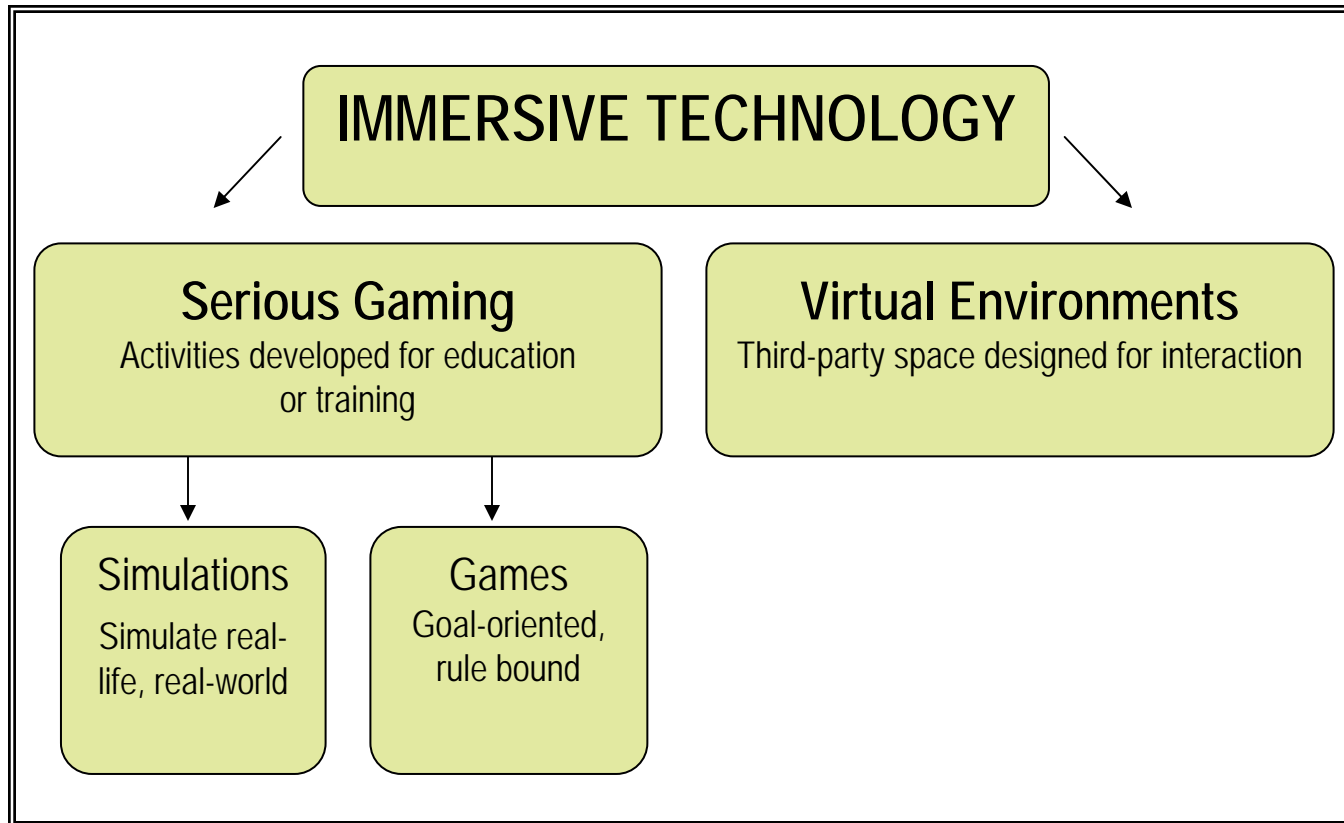


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What is Immersive Technology?



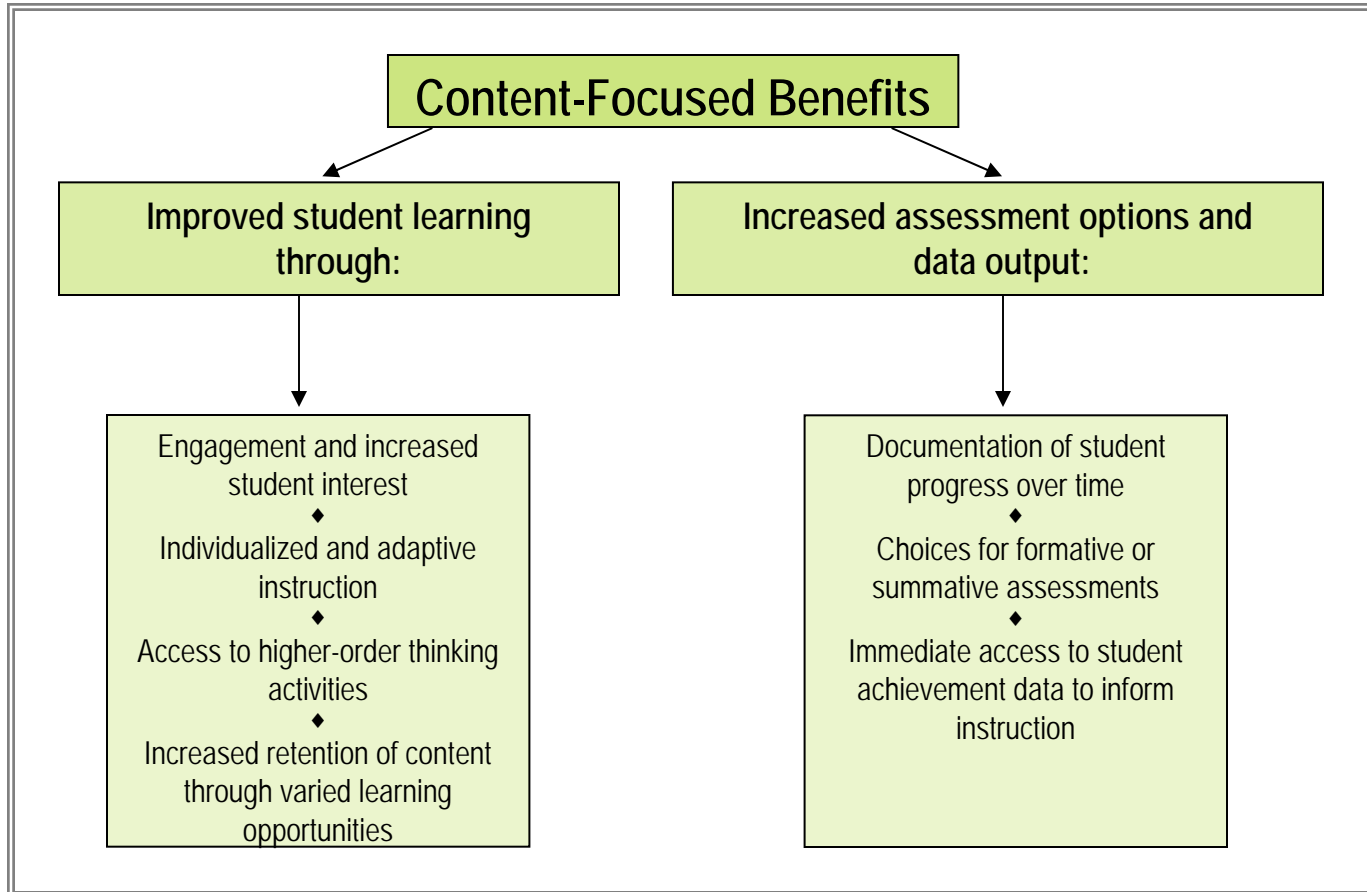
Dispelling Myths about Immersive Technology

<u>Myth</u>		<u>Current Understanding</u>
Replaces teacher instruction	→	Is an instructional tool, not a teacher.
Is just "fun" and games	→	Educates or trains
Guarantees student engagement and learning	→	Is not for all students. One of many instructional strategies.



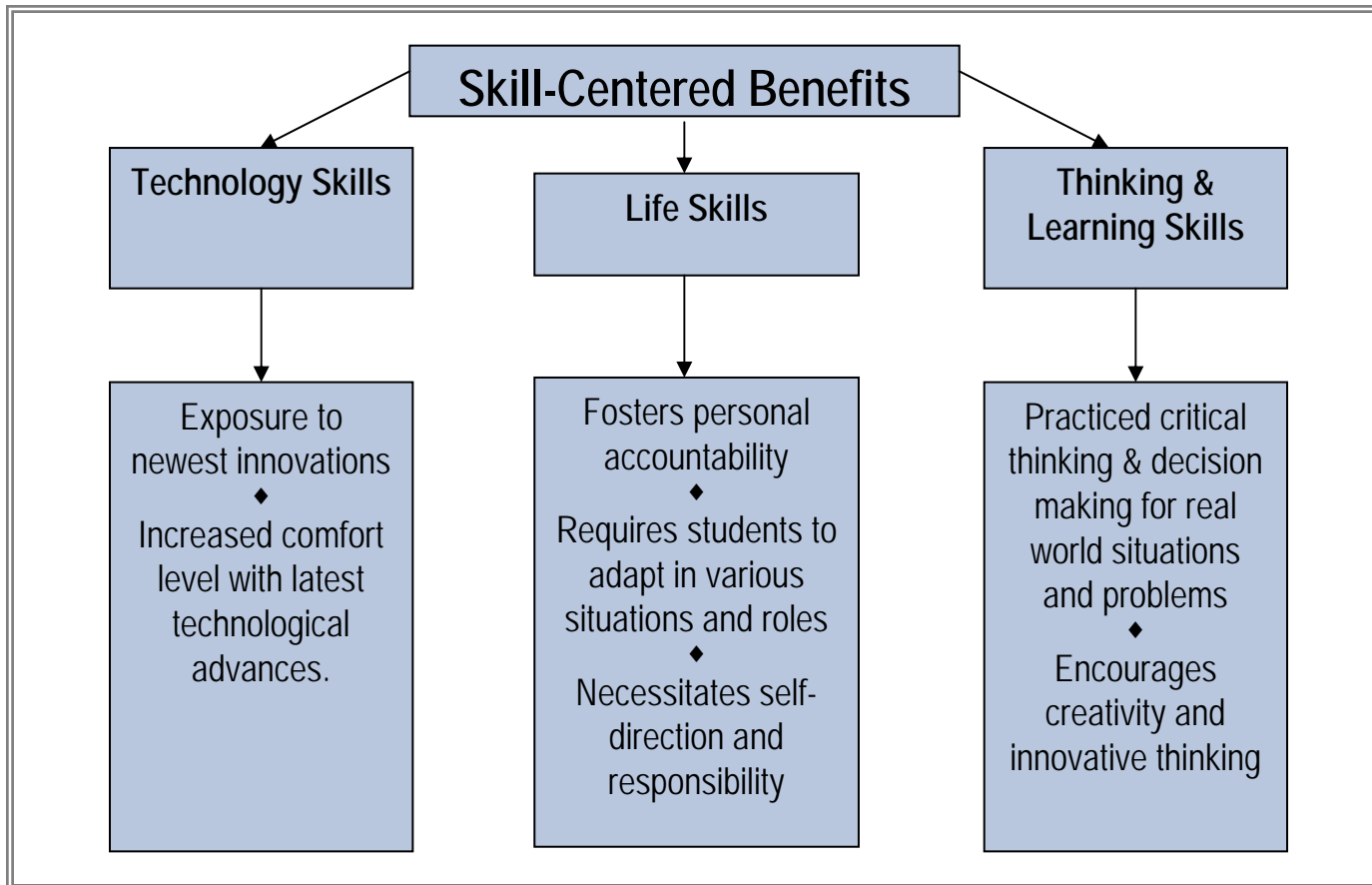
Benefits of Immersive Technology

Content Focused

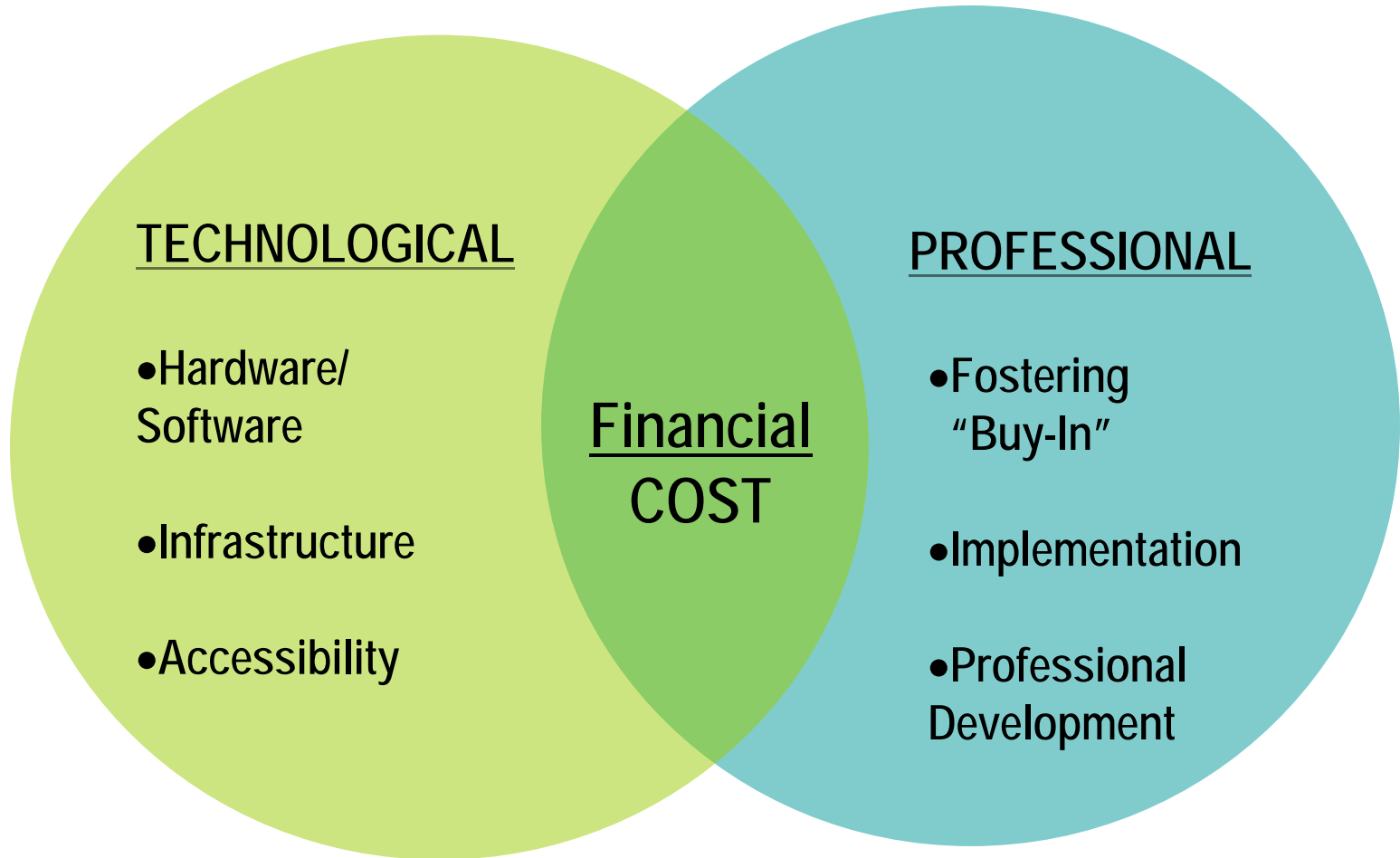


Benefits of Immersive Technology

Skill-Centered



Challenges of Statewide Implementation



Current Uses of Immersive Technologies in North Carolina

- NC State STEM Gaming Initiative

NC State Researchers will work with members of the class of 2011 to pilot gaming as a means to motivate more students to pursue science, technology, engineering and mathematics-related (STEM) degrees and careers.

- DimensionM™

An immersive video game world that engages students in completing pre-algebra and algebra objectives through a series of missions. Currently being used in grades 6-8 at Cape Fear Middle School.

- Quest Atlantis

Is a game based in a virtual world credited with rapidly advancing students of all abilities in the areas of reading, writing, mathematics, and science.

- The AET Zone (AETZ)

AETZ is a multi-user virtual environment created by Appalachian State University. Beyond college-level use for courses and programs, AETZ is used to provide professional development to teachers in neighboring LEAs.

- **Game Art and Design Project**

DPI has developed two game-art courses that will be added to the existing CTE visualization sequence. Courses require and enable students to design their own serious games.



National View of Immersive Technology

- **NCDPI Survey**

- In a national survey conducted by NCDPI, with the help of The Council of Chief State School Officers (CCSSO), 43%, of the 28 responding states, were interested in exploring the potential use of immersive technology as an assessment tool.

- **Instructional Use**

- 29 states have established some type of school using virtual environment, including NC
- Nevada has partnered with a company to develop serious games for math and science

- **Assessment Use**

- NAEP will implement some simulation-based assessment items in 2010
- Minnesota has full implementation of simulation-based testing of science for grades 5, 8, and 10
- Nevada has a USED grant to study the use of simulation-based science assessments (formative, summative and benchmark). NC will be piloting their work in 2009-10.



Recommendations

- Conduct additional research regarding the use of immersive technologies for student statewide assessment.
- Encourage local initiatives using immersive technology for instructional practices.
- Establish and maintain partnerships outside of DPI to leverage resources and human capital.



For more information

For more detailed information, please review the brief:

Immersive Technology: Gaming, Simulations and Virtual Environments

