



Network for Computational Nanotechnology (NCN)

Purdue, Norfolk State, Northwestern, UC Berkeley, Univ. of Illinois, UTEP

Welcome/Overview ***Backwards Design for Instruction***

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PURDUE
UNIVERSITY

NCN Simulation-based Learning Workshop

Chicago, November 6, 2009



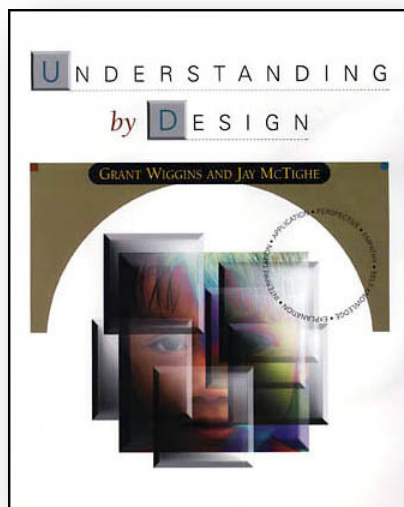
Design Process: Working Backwards

Planning



Implementation

Identifying teaching methods and sequence to support students' achievement of learning objectives (outcomes)

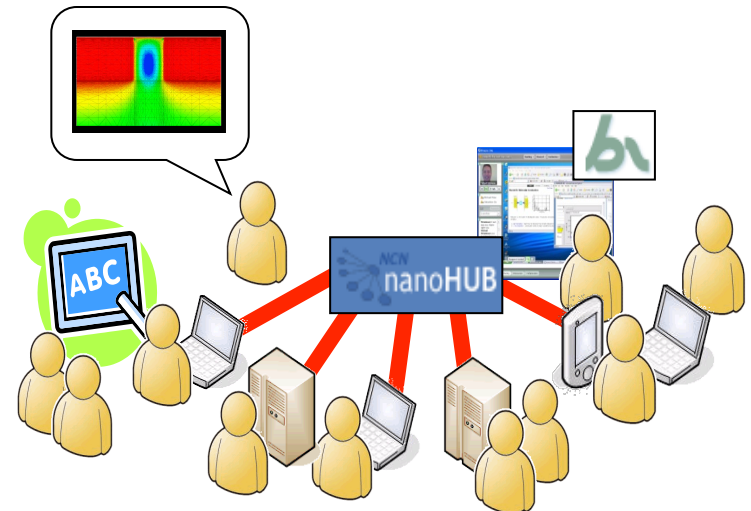
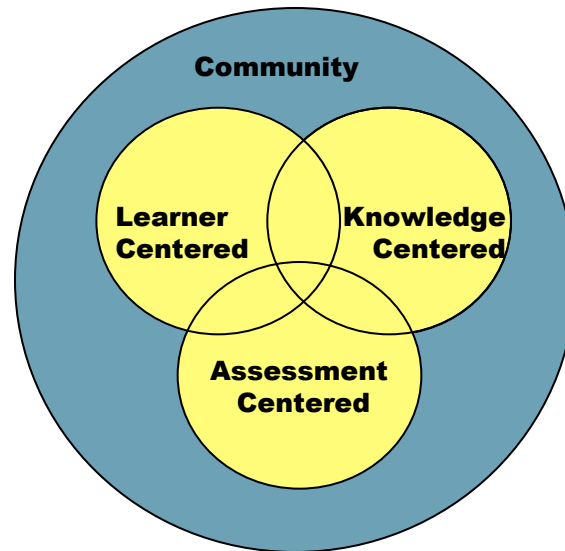
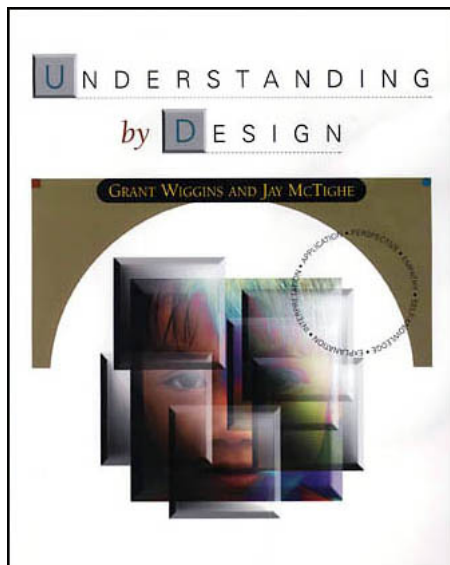
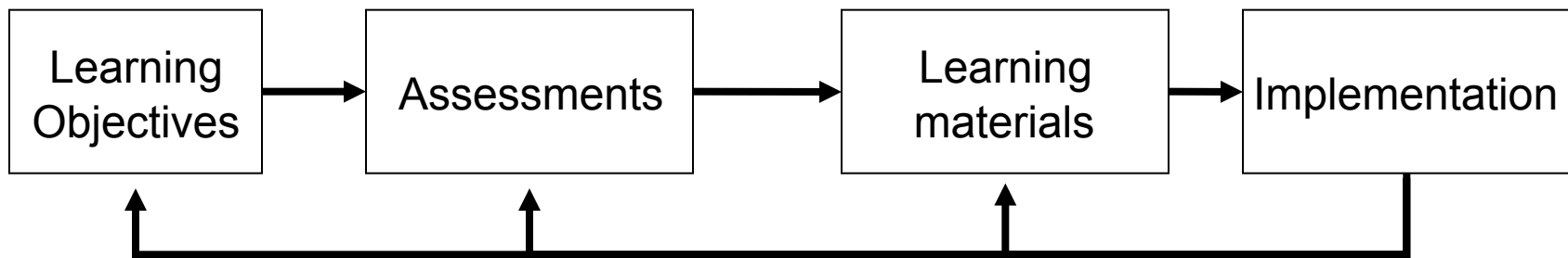


Instructional Design Process

What are students going to learn?

What evidence will indicate students learned it?

How will students learn it?



- Objectives for the workshop
 - » Identify objectives and indicators of learning
 - » Increase awareness of...
 - ✓ current nanoHub resources
 - ✓ how student learn with simulations
 - ✓ instructional methods to support learning
 - » Generate new ideas for your course
 - » Think about how to share your work with others
 - » Connect with other instructors using nanoHUB

- Plan for the day
 - » Overview of the Instructional Design Process
 - » Identifying Learning Objectives
 - » Learning more about how others use nanoHUB
 - » Review resources and learning materials on nanoHUB
 - » Working session to generate

- How people learn – Bransford, Brown and Cocking
 - » http://www.nap.edu/openbook.php?record_id=6160
- Understanding by Design – Wiggins and McTighe
 - » [Google Books reference](#)
 - ✓ http://books.google.com/books?id=N2EfKlyUN4QC&dq=understanding+by+design&printsec=frontcover&source=bn&hl=en&ei=yOu5S9TiKIGdlgfCmsGVCg&sa=X&oi=book_result&ct=result&resnum=4&ved=0CBkQ6AEwAw#v=onepage&q=&f=false

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