



# What is ID?

# Do We Need ID?

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# Who is in the Room

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- Who are we as a group?
- Who is each of us individually?
- Why did you join this session?
- What do you want to take from this session?



# Definition & Terminology

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- What is an ID
  - Instructional Design
  - Instructional Development
  - Instructional Design and Development
  - Instructional Systems Design
  - Instructional Technology
  - Educational Technology



# Definition & Terminology

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- Elements & Components of ID
  - Analysis
  - Design
  - Development
  - Implementation
  - Evaluation
  - Utilization
  - Management

# Definition & Terminology

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- Instructional Systems Design (ISD) is the process for creating instructional systems. An instructional system may be defined as an arrangement of resources and procedures used to facilitate learning. ISD includes several phases, including analysis, design, development, implementation, and evaluation.
  - Robert Gagné, Walter Wager, Katharine Golas & John Keller *Principles of instructional design*

# Definition & Terminology

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- Instructional Technology is the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning.
  - *AECT Definitions and Terminology Committee*



# Questions & Discussions

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- In your opinions, what is an ID?
- Let's split into groups and create our own definitions!



# History of ID

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- The Origins of ID: World War II
  - Psychologists and educators including Robert Gagné, Leslie Briggs, John Flanagan...
  - Conduct research and develop training materials for the military services
  - Testing and evaluation
  - A new role emerged – between subject matter expert and technical experts

# History of ID

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- The Programmed Instruction Movement (1950s-1960s)
  - B.F. Skinner – *The Science of Learning and the Art of Teaching* (1954)
  - Present instruction in small steps, require overt responses to frequent questions, provide immediate feedback, allow for learner self-pacing
  - Learners would answer all questions correctly and thus be positively reinforced by the feedback they received

# History of ID

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- The Popularization of Behavioral Objectives
  - Ralph Tyler and eight year study (1933-1941)
  - Robert Mager – *Preparing Objectives for Programmed Instruction* (1962)
    - Desired learner behaviors
    - Conditions
    - Standards/criteria

# History of ID

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- The Criterion – Referenced Testing Movement (early 1960s)
  - Norm – referenced testing: designed to spread out the performance of learners, resulting in some students doing well in a test and others doing poorly
  - Criterion – referenced testing: how well an individual can perform a particular behavior or set of behaviors, irrespective of how well others perform (Robert Glaser, 1963)

# History of ID

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- Robert M. Gagné: *The Conditions of Learning* (1965)
  - Five domains – verbal information, intellectual skills, psychomotor skills, attitudes and cognitive strategies
  - Nine events of instruction – gain attention, inform learner of objectives, stimulate recall of prior learning, present stimulus materials, provide learner guidance, elicit performance, provide feedback, assess performance, enhance retention and transfer

# History of ID

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## ○ Sputnik and Evaluation

- Oct. 4 1957 Soviet Union the first orbiting space satellite
- Federal funds for math and science education
- Michael Scriven (1967) – formative evaluation and summative evaluation



# History of ID

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- Any other event missing here?



# ID Models

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- ID models serve as conceptual, management, and communication tools for analyzing, designing, creating and evaluation guided learning, ranging from broad educational environments to narrow training applications.

# ID Models

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| Typical Output                                 | One or a few hours of instruction | Self-instructional or instructor – delivered package | Course or entire curriculum |
|--|-----------------------------------|--|-----------------------------|
| Resources Committed to Development             | Very low                          | High   | High                        |
| Team or Individual Effort                      | Individual                        | Usually a team                                       | Team                        |
| ID Skill/Experience                            | Low                               | High   | High/very high              |
| Emphasis on Development or Selection           | Selection                         | Development  | Development                 |
| Amount of Front-End Analysis/ Needs Assessment | Low                               | Low to medium  | Very high                   |
| Technological Complexity of Delivery Media     | Low                               | Medium to high                                       | Medium to high              |
| Amount of Tryout and Revision                  | Low to medium                     | Very high  | Medium to high              |
| Amount of Distribution/Dissemination           | None                              | High   | Medium to High              |



# ID Models

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- Early ID Models (1950s – 1960s)
  - Barson model, Michigan State University
  - L.C. Silvern, military and aerospace industry
  - Hamreus, Teaching Research Division of the Oregon State System of Higher Education



# ID Models

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- ADDIE Model
  - **A**nalysis
  - **D**esign
  - **D**evelopment
  - **I**mplementation
  - **E**valuation

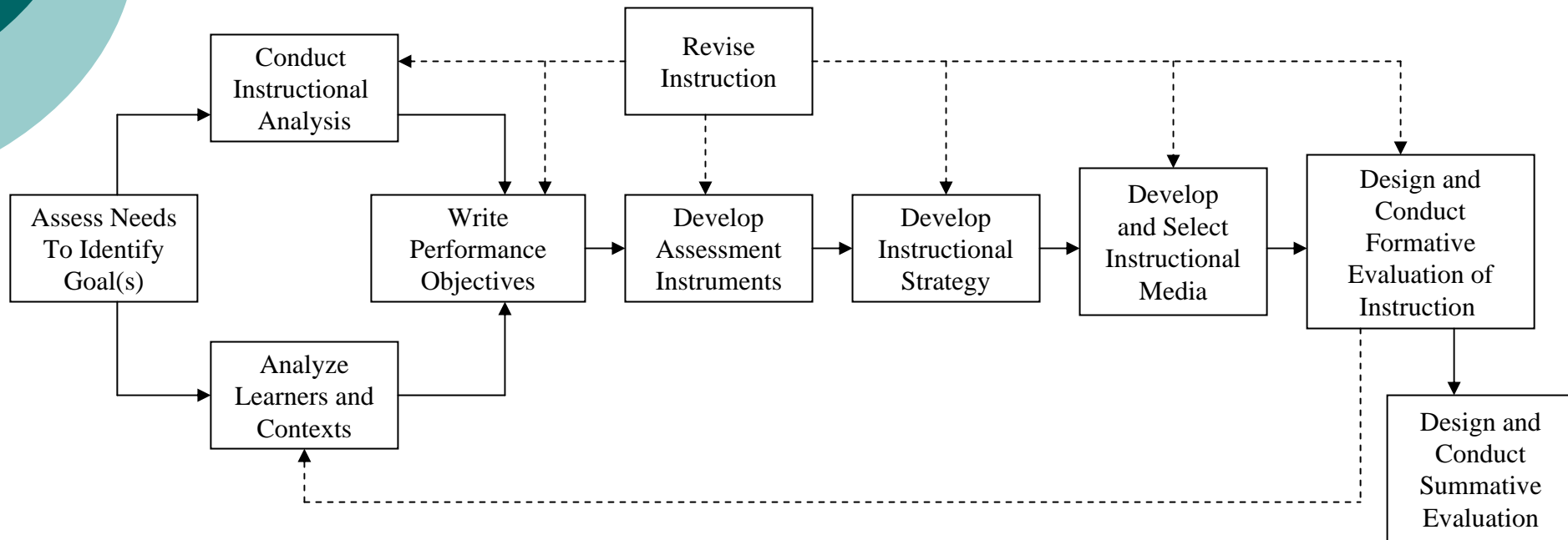
# ID Models

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- ASSURE Model – Heinich, Molenda, Russell and Smaldino (1999)
  - **A**nalyze learners
  - **S**tate objectives
  - **S**elect media and materials
  - **U**tilize media and materials
  - **R**equire learner participation
  - **E**valuate and revise

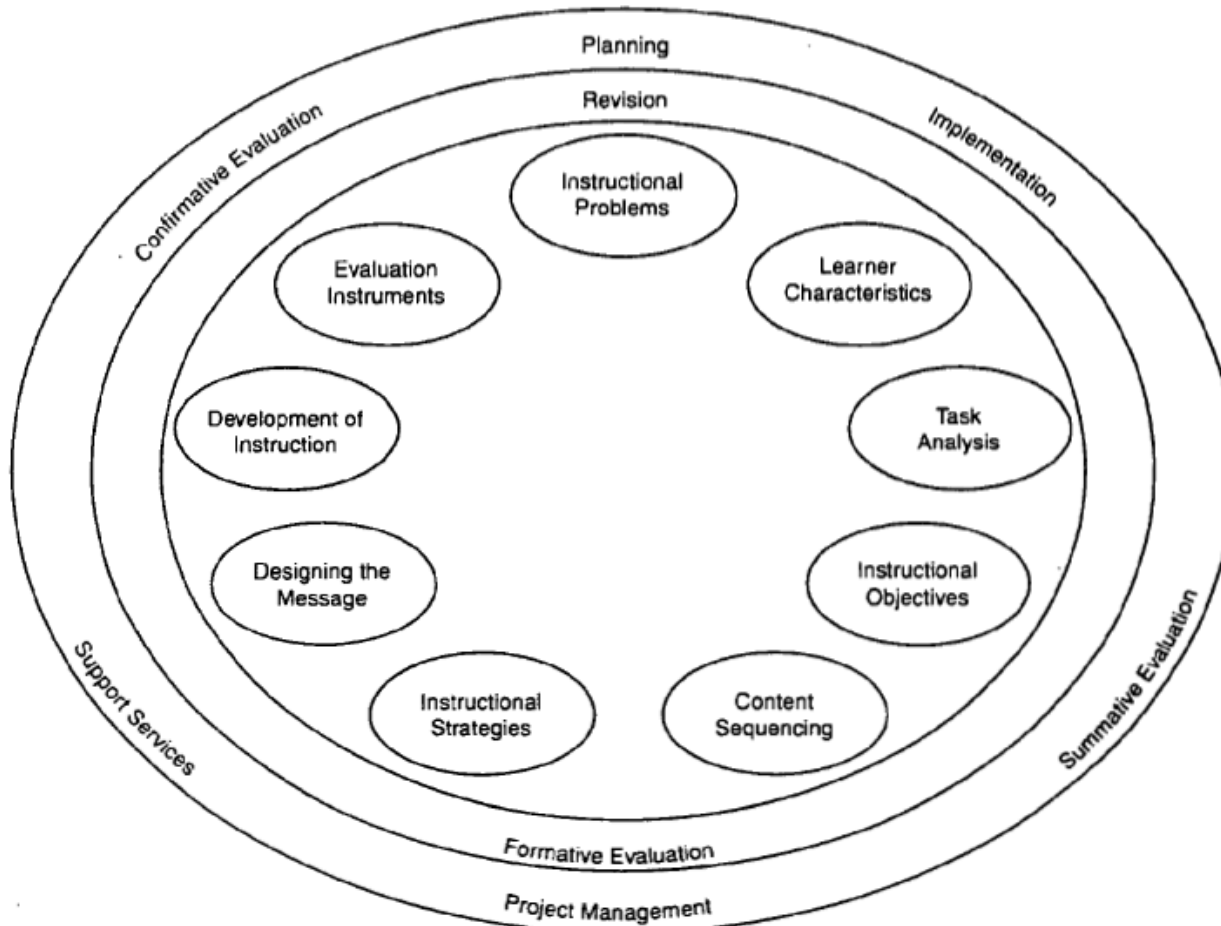
# ID Models

## Dick, Carey and Carey Model (2001)



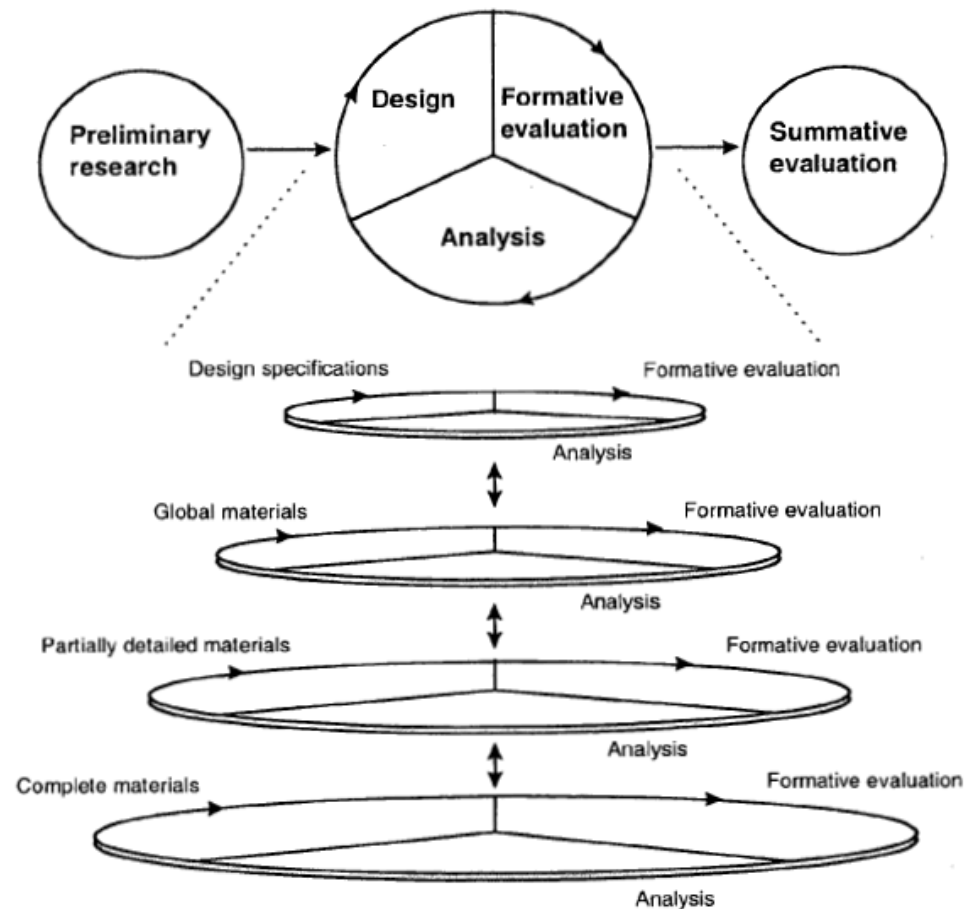
# ID Models

Morrison, Ross and Kemp model (2001)



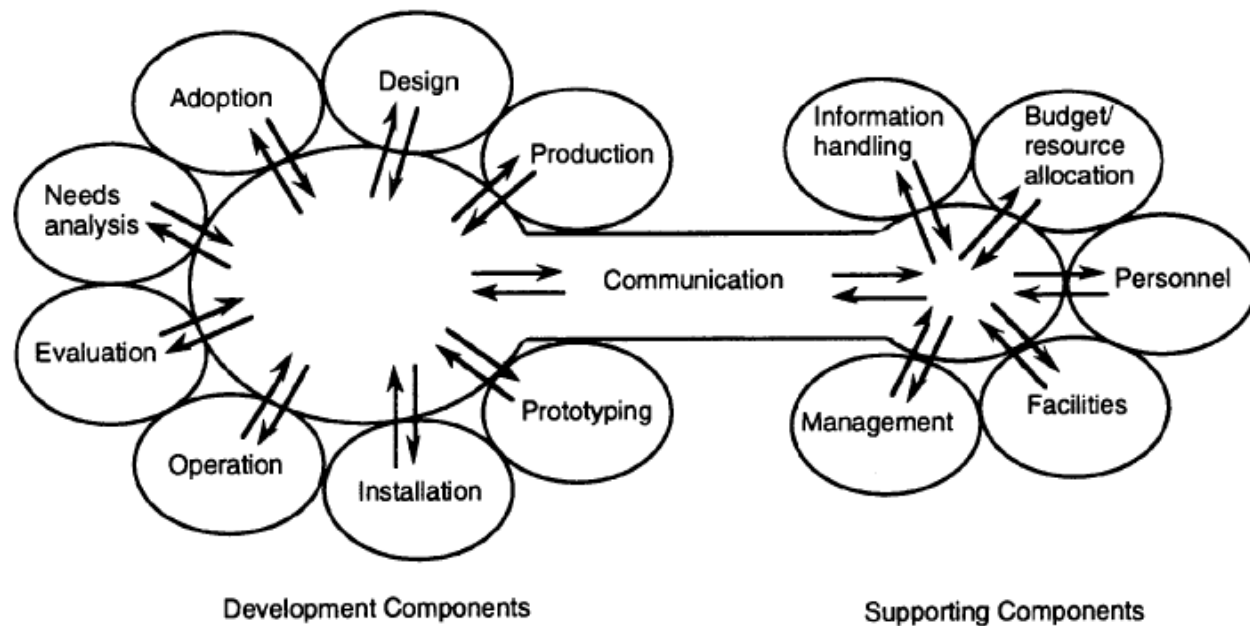
# ID Models

## The Nieveen model (1997) Holland



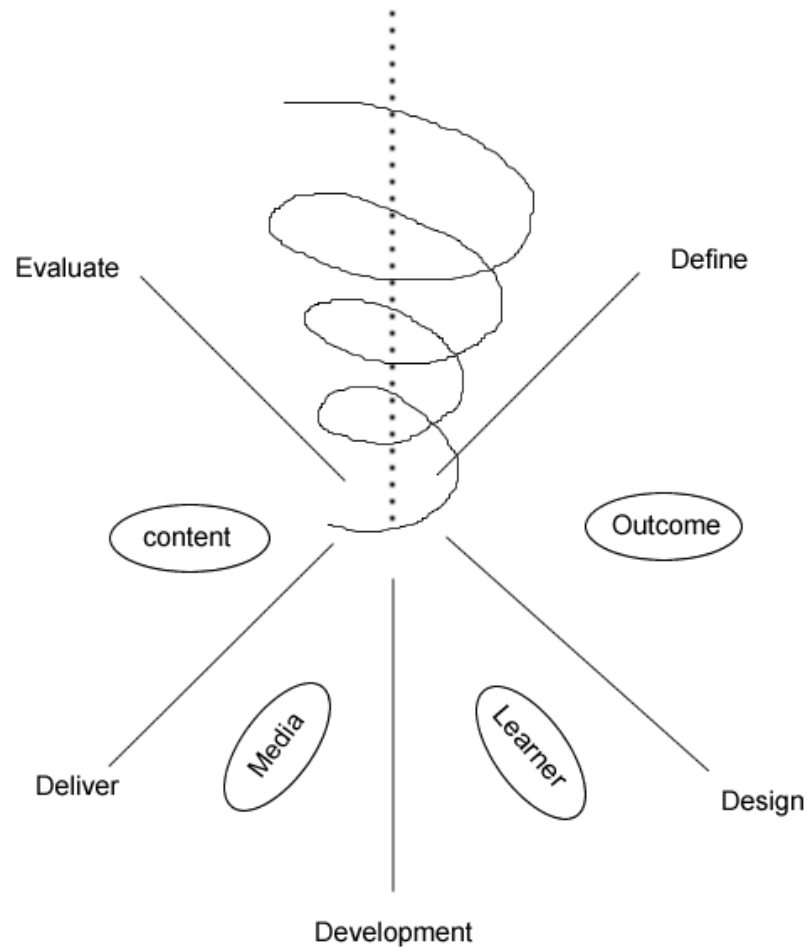
# ID Models

## Gentry – Instructional Project Development and Management (IPDM) Model (1994)



# ID Models

Adapted from Spiral Model (Boehm, 1988) and Rapid Prototyping Model (Dorsey, Goodrum, & Schwen, 1997)





# Questions & Discussions

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- What ID model(s) do you usually use?
- Hard to tell? Then what do you usually do when you work on an ID project?
- What works and what does not?




# Trends and Issues

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- Influence of learning theories on ID process
- Internet for distance education
- Wireless learning environment
- Performance technology movement
- Electronic performance support systems
- Knowledge management

# What an ID Can Do

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- I prepared for my class so well. Why was the feedback from my students not accordingly positive?
- Pedagogy? I have been teaching for 20 years. I know what I am doing!
- Joan offers an online course this semester, should I? Why should I? And how?
- PPT + discussion, done! 😊
- No, No, No!!! Technology is too much for me! 
- Does what I did really help my students to learn?



# Questions and Discussions

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- In your opinions, what can an ID do?

# Examples

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- <http://web.uncg.edu/dcl/courses/mythology/default.asp>
- <http://web.uncg.edu/dcl/courses/china/default.asp>
- <http://courses.cropsci.ncsu.edu/cs230/index.html>
- <http://www.cals.ncsu.edu/course/pp315/>
- <http://www.nln.ac.uk/materials/>

# Examples

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- <http://www.ict4lt.org/en/index.htm>
- [http://www.scican.net/hall/library\\_files/Signs%20in%20the%20Stitching%20WebQuest.htm](http://www.scican.net/hall/library_files/Signs%20in%20the%20Stitching%20WebQuest.htm)
- <http://www.btcs.org/tutorials/WebQuests/chocolate/index.html>
- <http://innovateonline.info/index.php?view=article&id=218>
- [http://www.tltgroup.org/resources/F\\_Eval\\_Cases/WSU\\_ID.htm](http://www.tltgroup.org/resources/F_Eval_Cases/WSU_ID.htm)



# Questions and Discussions

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- Any examples you want to share with us?

# Credits

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- Gustafson, K. L. & Branch, R. M (2002). *Survey of instructional development models*. New York: ERIC Clearinghouse on Information & Technology.
- Reiser, R. A. (2001). A history of instructional design and technology: Part II: A history of instructional design. *Educational Technology Research & Development*, 49(2), 57-67.
- Shrock, S. A. (1995). A brief history of instructional development. In Anglin, G. (Ed.), *Instructional technology: Past present and future* (pp. 11-19). Eaglewood, CO: Libraries Unlimited.



# Discussions

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- Any trends or change in your college related to ID?
- Stories, news, hot topics or issues you want to share?



# Topic for Our Next Session

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- Learning Space Design - Sharon Pitt
  - How should spaces/classrooms be designed to support student learning?
  - What faculty support needs to be in place for technology enhanced spaces?
  - Seeking: other ideas/presenters for this topic