

## Technology Applied to Instruction

### Integrating Technology into 21<sup>st</sup> Century Classrooms

#### Educ 572 \* Unit 2 Lecture

Print Out the Study Guide PP for taking notes!  
Use Pause & Play along with Table of Contents!

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## Instructional Software

- What is Instructional Software?
- **Program** Languages... B,F,C! Assembly, C+, Java...
- **System** Software... Windows(IBM) and OS(MAC)
- **Production** Software... WP,SS,DB,PP, etc...
- **Instruction Software is for Teaching & Learning...**
- D&P, T, S, G, PS stand-alone & ILS district wide!
- Early Days of Instructional SW: CAI, CBI, CBL, etc...
- Early Days of Main Frames & Punched Cards...
- Much improvement of On/Off Line Instructional SW!

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## Drill & Practice SW

- Drill & Practice is **not** Drill & Kill! Use with care!
- Common uses: Definitions, Spell, Math, Science...
- Criteria, Benefits, Limits/Problems...
- Attributes D&P promote success for all students...
- Control, Feedback, Individual Pace, etc...
- Constructivists **do not** like Drill & Practice... **Why?**
- Evaluation & Selection is critical for success...
- Language Arts, Social Studies, Math & Science...
- TimezAttack, Alien Rescue, Keyboarding...

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## Tutorial Software

- Tutorial SW is Linear or Branching... Small Steps!
- Commonly uses in all curriculum areas...
- Criteria, Benefits, Limits/Problems...
- Attributes promote self & life long learning ...
- Interaction, Motivation, Learning at all levels...
- Constructivists **do not** like Tutorials! **Why?**
- Evaluation & Selection is critical for success...
- MS Office: WP, SS, DB, PP... (**Big Three**)
- History Alive!, Grammar Gorillas, PC Languages...

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## Simulation Software

- Simulations imitate a Real World situation...
- More and more used since Hi Speed access...
- Criteria, Benefits, Limits/Problems... **Videos!**
- Attributes provides virtual experience for users...
- **Ss** are Relevant & Manipulative in nature...
- Constructivists **approve** of Simulations! **Why?**
- Evaluation & Selection is critical for success...
- **All areas:** Oregon Trail, Virtual Labs, Stock Market,
- Driving, Flying, Sports, Hiking, so many...

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## Game Software

- Stigma of Game SW still exists... Improved?
- Commonly used to motivate **Digital Kids**...
- Criteria, Benefits, Limits/Problems... **Videos!**
- Attributes are **relevant** for today's Digital Kids...
- Challenging & Competitive in nature...
- Over the years... More Interactive & Engaging!
- Constructivists **not sure about** Games!
- As in all software, does it meet expectations...
- Parents Channel, The Learning Shop, Mr. Nussbaum...

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## Problem Solving SW

- Content area skills... Content area focus...
- Non-Content skills... **Critical Thinking**...
- Criteria, Benefits, Limits/Problems...
- Attributes of PS promote a wide variety of skills...
- PS is logical and procedure in nature...
- Evaluation & Selection is critical for success...
- Constructivists **like** Problem Solving! **Why?**
- Problem Solving software is valuable in all areas...
- WebQuests, Cause/Effect, Cooperative Learning...

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## ILS Software

- **What is Integrated Learning Software (ILS)?**
- Criteria for ILS Software... District Wide \$\$\$?
- Benefits for ILS Software... Specific Users?
- Limits & Problems of ILS **to** Stand Alone...
- Many Pros and Cons for ILS software **but** exists...
- Highly Interactive & Provides Personal Feedback...
- Measures, Monitors, Maintains individual results...
- ILSs use PLATO... Constructivists **approve!** **Why?**
- SchoolNet, Compass Learning, etc... Google/Wiki?

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## Conclusion Unit 2

- Summary of: Instructional Software ( **T & L** )
- Inst SW: DP, T, S, G, PS... Also, ILS...
- Summary of: Production Software
- **Big Three:** WP, SS, DB, PP... Classrooms/Labs?
  
- Good resource for software: *CCV & ER magazines*...
  
- **@ Pause & Play** along with **Table of Contents @**
- **Lecture, Textbook, Investigations, Case Studies, TDs...**

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