Engaging Learners With Feedback and Collaborative Learning Environments
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Responsive and creative use of technology can improve outcomes for students. But how do you successfully apply it for better learning?

In this webinar, we look at recent practices and research on technology, including Skype in the Classroom and Minecraft that personalize learning. We discuss student-centered curriculum for innovation, creativity, and 21st century skills through deep learning.

Specifically, how technology helps to:

• Connect and engage learners,
• Personalize instruction,
• Support student collaboration, and
• Use problem-based learning to drive greater understanding.
Education Transformation Framework

- Leadership and Policy
  - Organizational Capacity, Strategic Planning and Quality Assurance
  - Partnerships and Capacity Building
  - Inclusion, Accessibility and Sustainability
- Establishing a Vision
- Curriculum and Assessment
- Developing a Learning Community
- Teacher and Leader Capacity
- Physical Learning Environments
- Designing Technology for Efficient and Effective Schools
- Personalized Learning
- 21st Century Pedagogy
Microsoft Education Transformation Framework
http://www.microsoft.com/education/leaders
Personalized learning has the potential to overcome socio-economic, time and space limitations and maximize educational opportunities.

Clear guidelines from UNESCO present a roadmap towards individualized education.
Engaging Learners with Feedback and Collaborative Learning Environments

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About MVLRI

• Research, Policy, Innovation, & Networks
• Expands Michigan’s capacity to
  • support new learning models,
  • engage in active research to inform new policies in online and blended learning, and
  • strengthen the state’s infrastructures for sharing best practices.
Agenda

• Personalized learning – theory and research
• UNESCO – 12 elements of personalized learning
• Examples from you!
• Questions
Personalized learning: Theory and research

Theory

- Cognitivism, constructivism, UDL, situated learning, connectivism, differentiation, revised Bloom’s taxonomy, depth of knowledge

Research

- Winnetka plan, Dalton plan, Montessori, Victor Garcia Hoz
### UNESCO’s 12 elements of personalized learning

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Differentiating & Engaging Learners

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Differentiating & Engaging Learners

11. Developmental and individual differences
12. Creating motivated learners

Case, 1978; Chen et al., 1998; Deci & Ryan, 1985; Dweck, 1989; Gardner, 1991; Gardner, 1993; Lepper & Hodell, 1989; Spaulding, 1992
Differentiating & Engaging Learners

Examples from you!
Sway
https://sway.com

Create and share interactive reports, presentations, personal stories, and more.

Get started

A few ideas of what you can make in Sway

- Reports
- Presentations
- Newsletters
- Personal Stories
Teach the way you want

Teaching is a tough job, and it becomes harder when the tools don’t fit the job.

Pen and paper have been critical tools for teaching and learning since the dawn of formalized education systems. With the introduction of computers into the classroom, teachers are struggling to balance between digital and analog curriculum, and teaching materials. Tablets like Surface with an active pen give educators the freedom to teach the way they want.

“I’m saving huge amounts of time. I don’t bring papers home to grade anymore—I do it all at school. It’s all on my computer so I can look at it during any open period.”

Elementary School Teacher
Creating Meaningful Learning Opportunities

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Creating Meaningful Learning Opportunities

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Creating Meaningful Learning Opportunities

Examples from you!
Classroom Pulse
https://www.microsoft.com/pulse/classroom/

Quizzes and poll questions
Set up instant quizzes and poll questions to monitor comprehension in real time – no grading time required.

Organize and group your class results
Easily analyze responses through a sophisticated teacher dashboard that’s intuitive to use and works across all your devices.
**Introducing Minecraft: Education Edition**

Summer 2016, optimized for education and emphasizing STEAM
- Curriculum and programming plug-in planned to empower Minecraft modders
- Teacher-generated curriculum & lesson plans

Empowering a community of educators
- “For teachers, by teachers” built on MinecraftEdu, on game-based learning research
- Skype mentor program connects experienced Minecraft educators with the new-to-Minecraft

"Minecraft is a virtual indeterminate 'maker-space,' a sandbox in which kids can practice both STEM (science, technology, engineering, math) and ELA (English language arts) skills in a socially contextualized way. They count, measure, invent, speculate, and assess while constructing complex narratives and communicative scenarios for and with other players. Minecraft seems to make anything possible."

--Jordan Shapiro, PhD, Forbes, June 2015
Cultivating Shift from Prior Knowledge → New Knowledge

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Cultivating Shift from Prior Knowledge  New Knowledge

4. Relating new info to prior knowledge
7. Restructuring prior knowledge
9. Helping students learn to transfer

Bransford, 1979; Bransford, Brown & Cocking, 1999; Bruer, 1993; Bruer, Carretero & Voss, 1994; Bereiter, 1997; Driver, Guesne & Tiberghien, 1985; Schnotz, Vosniadou & Carretero, 1999; Vosniadou & Brewer, 1992
Cultivating Shift from Prior Knowledge ➔ New Knowledge

Examples from you!
11 Ways to rule school with OneNote

TAKE AMAZING NOTES
WORK WITH FRIENDS
FINISH HOMEWORK FASTER

Take amazing notes
Computational Thinking tools
https://msdn.microsoft.com/imagine/imagine-access

Featured software for beginning coders
- Download Kodu Game Lab and make your first video game
- Launch TouchDevelop and make your first app
- Launch Windows App Studio and share your ideas and stories

Featured software for taking your next steps into coding
- Download Project Spark and play in the world you make
- Download Microsoft SmallBasic and learn coding the easy way
- Download Microsoft WebMatrix and create your own websites

Featured software for advanced coding students
- Visual Studio Community 2015
Developing Self-regulatory Strategies

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Developing Self-regulatory Strategies

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10. Taking time to practice

Brown, 1975; Boekaerts, Pintrich & Zeidner, 2000; Marton & Booth, 1997; Mayer, 1987; Palincsar & Brown, 1984; White & Frederickson, 1998
Developing Self-regulatory Strategies

Examples from you!
Interactive Online Lessons Made Simple

**Teacher Basics**
- What is Office Mix?
- Get Office Mix
- Office Mix Step-by-Step Tutorials
- Getting Started: Tips & Tricks
- Download the Office Mix Help Guide

**Teacher Scenarios**
- Flipping your Classroom with Office Mix
- Office Mix for Student Learning
- Example Mixes
- How to connect Office Mix with your LMS

**Additional Resources**
- Seven Steps for Creating Mixes that Students Will Love
- Resources for Evangelizing Office Mix in Your Community
- Stay Up-to-Date with Office Blogs
- Read *Superheroes in the Classroom* Episode 1, Episode 2, ...
- Ask Your IT Director to Install Office Mix
- Office Mix Knowledge Base
- Accessibility features in Office Mix

http://www.mixforteachers.com/
Skype in the Classroom

https://education.microsoft.com/skypeintheclassroom
Where do we go from here?

• Technology allows more options for personalized learning but still requires a teacher
• Move research out of the lab and into the classroom
• Make research accessible to practitioners
• Bring practitioners into the conversation
Questions
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