Using Games and Simulations to Support Learning in the Classroom

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places
spaces
environments
contexts

games
simulations
gbl ≠ gamification
games and simulations provide **contextualized** rule-based environments that can be leveraged to support active and constructive situated learning
games are nothing but problem-solving spaces

Gee, 2009
• rule based play in a simulated context
• progress/goal-oriented activity/engagement
• **typically** low risk:
  o iterative testing of hypotheses
  o assessment and evaluation are useful
• **ideally** low barrier to entry with high ceiling

leveraging frustration points | reward
how do games and simulations support learning and assessment?
scaffolding
feedback
agency
learning and assessment through

play + practice

art + creativity

storytelling

problem solving
play + practice
play is practice for life
play is problem solving
play is design
play

plato

huizinga

sutton-smith

steiner

vogosky

vuget

dewey

montessori

bruner

hall

von schiller

froebel

groos

groos

singer

It [play] is a significant function—that is to say, there is some sense to it. In play there is something "at play" which transcends the immediate needs of life and imparts meaning to the action. All play means something.

*Huizinga, 1955*
Games as play are social ecosystems and personal experience, and these dimensions are key aspects of a well-rounded literacy.

Zimmerman, 2013
games and simulations for learning
virtual game-based learning

connecting game and instructional design
game design for learning

moving from consumption to creation

art + creativity
STOP REX FROM HUNTING THE DINOSAURS!
problem solving
papers, please
storytelling
so ... what about the classroom?
considerations for the classroom

- authenticity: experience and expertise
- assessment: learning analytics and game reports
- student activity: from consumption to construction
- content-based application: design and develop
- classroom management: informal + formal
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