



Wisconsin Center for Education Research
SCHOOL OF EDUCATION | UNIVERSITY OF WISCONSIN-MADISON



GAMES +
LEARNING +
SOCIETY



FilamentGames
Real games. Real learning.

LEARNING
games
NETWORK



GEARLEARNING

Wisconsin Center for Education Research • UW-Madison School of Education

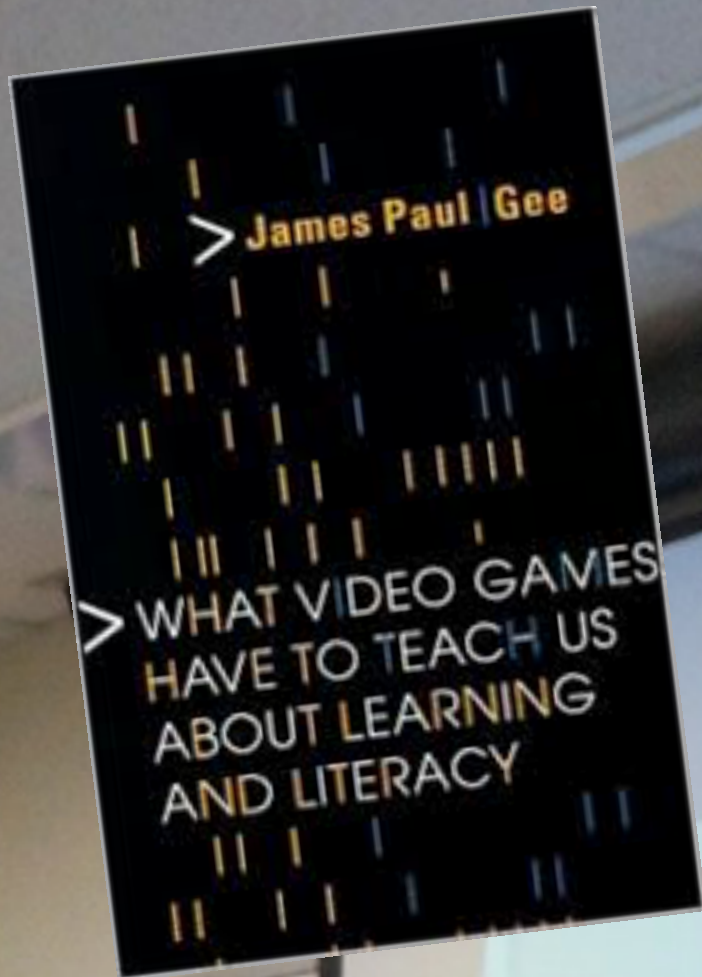
FIELD
DAY

Games for Learning Design and Assessment

Rich Halverson
University of Wisconsin-Madison
August 23, 2019



School of Education
UNIVERSITY OF WISCONSIN-MADISON



good games are models for good learning

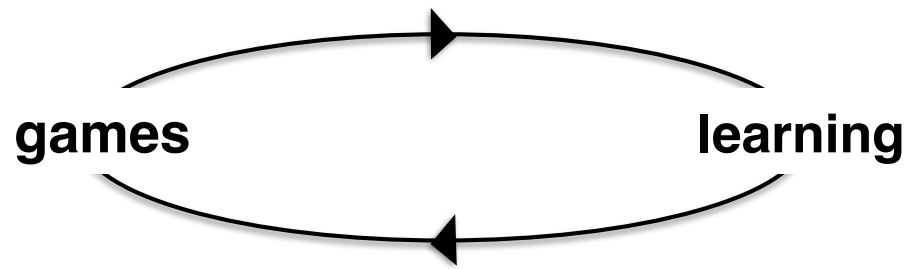
games

learning

games

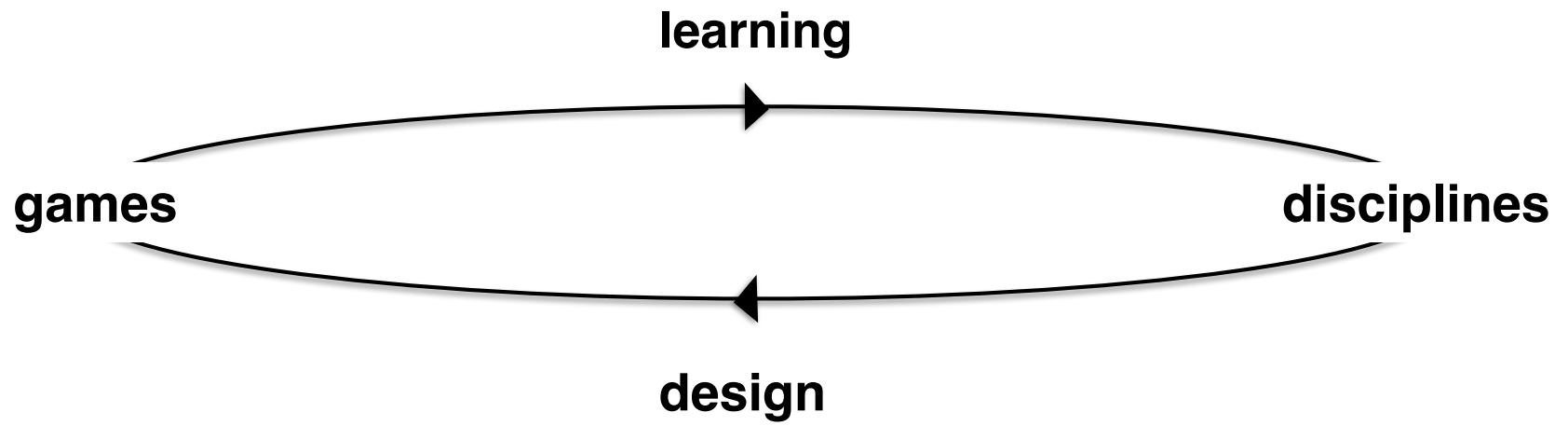
learning

disciplines



disciplines





role of assessment in learning game design

comparison to outcomes we care about

math games may have most impact for students with low math scores

Hieftje, et. al. 2017

digital games significantly enhanced student learning relative to non-game conditions

Clark, Tanner-Smith & Killingsworth, 2016

students who play online video games obtain higher scores on PISA tests

Posso, 2016

what can the learner do (as a result of play)?

The John D. and Catherine T. MacArthur Foundation Reports on
Digital Media and Learning

Confronting the Challenges of Participatory Culture

Media Education for the 21st Century

Henry Jenkins

with Ravi Purushotma, Margaret Weigel, Katie Clinton,
and Alice J. Robison



MACARTHUR
The John D. and Catherine T. MacArthur Foundation

Henry Jenkins
USC

in which communities does the player meaningfully participate?

Jenkins, et. al. 2009

affiliations

expressions

collaborative problem-solving

circulations

330 345 N 15 30 NE 60 75



SAMSONSIMPSO

#1 Victory Royale!

affiliations

\$3,062
mpson99 • 10x

300 300

PLACE TRAP EQUIP WALL TRAP

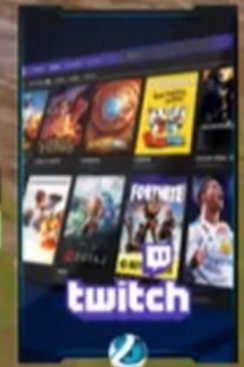


NINJA

now spectating you
us is now spectating you

3 | 261

26 100
+ 100 100

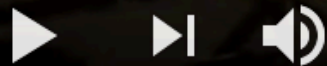


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expressions



RED DEAD REDEMPTION 2 TIPS TO KNOW BEFORE YOU PLAY



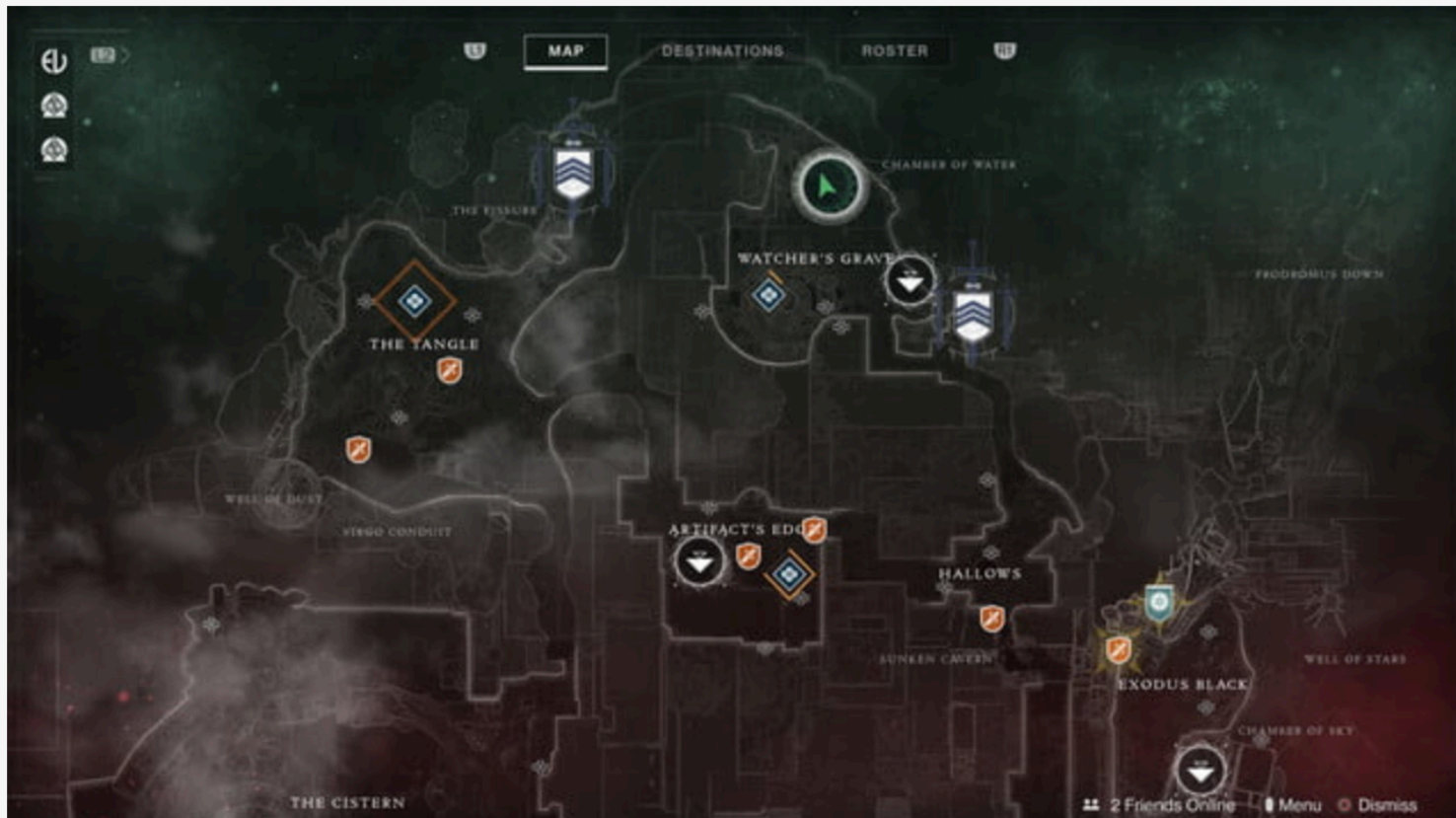
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WHERE IS XUR AND HIS WARES FOR THE WEEK

(August 9 – August 13)

You can find Xur on Nessus this week, located near the Watcher's Grave area. Spawn into this part of the map and start heading north, but rather than go toward the large tree he used to be located at, look farther forward for a giant floating ship. Climb to the top of this ship and go to the far edge and you'll find Xur waiting for you.

collaborative problem-solving



SIMSTAGRAM

circulations

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This website is not affiliated with The Sims or Instagram. This is a fan made social network based on the sims.



kinsleystone♡

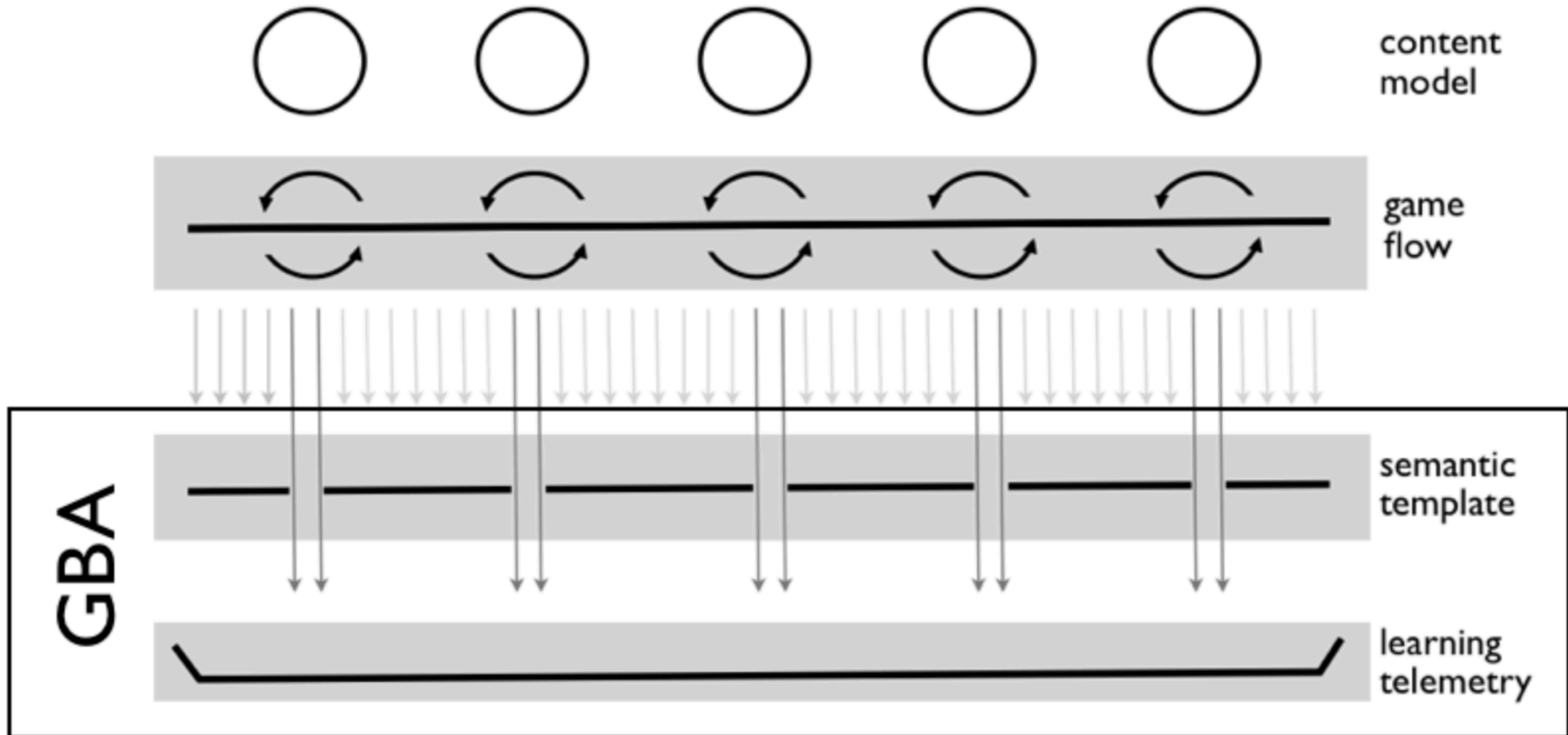
2 days ago · 1 min

first post♡ meet my daughter, Zaylee!



what can we learn from game data?

Halverson, Owen, Wills & Shapiro, 2012



what can we learn from game data?

Halverson & Owen 2014



Right Collect (Success)

Health Runs Out (Failure)



Wrong Collect (Failure)

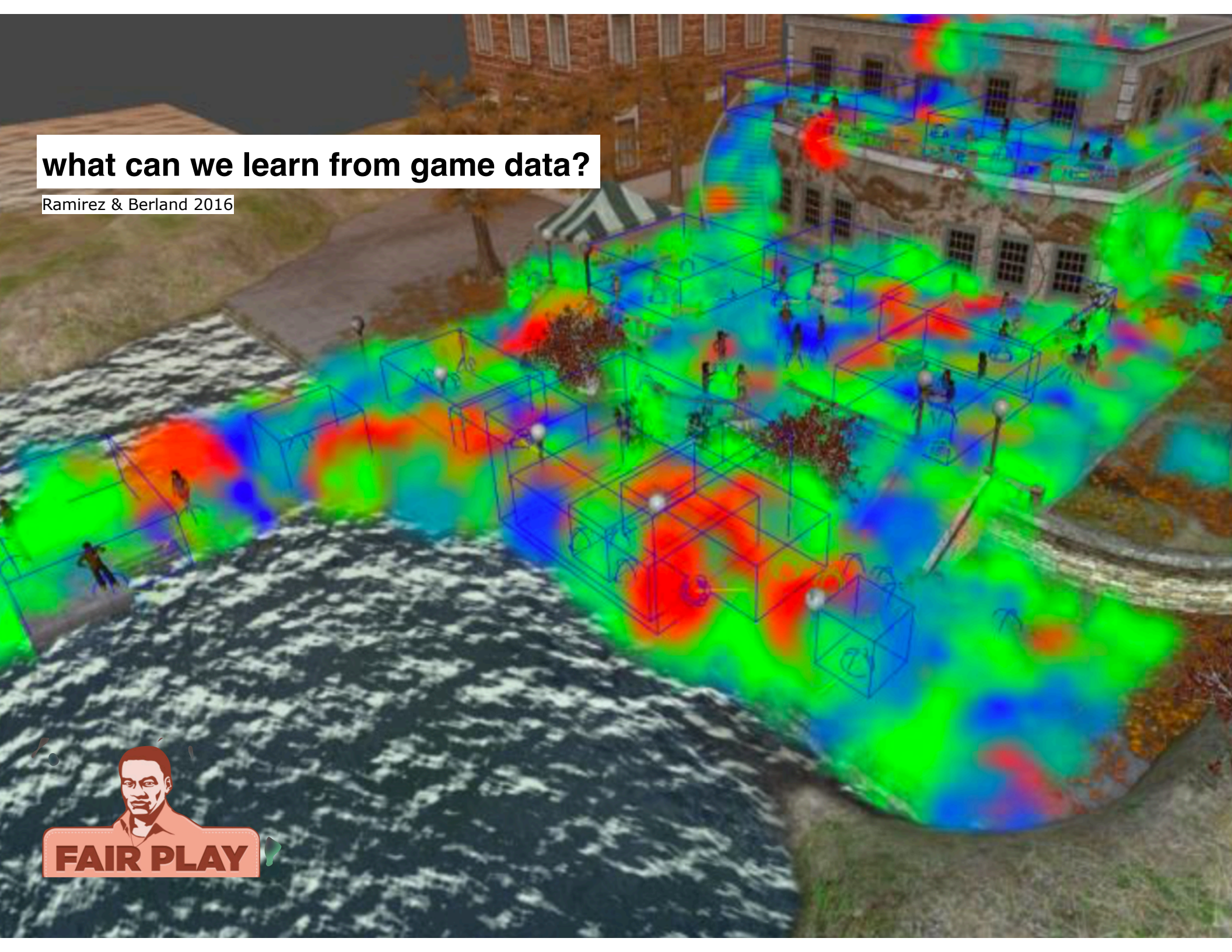
Health Runs Out – Wrong Grid (Failure)

F
A
R

F
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what can we learn from game data?

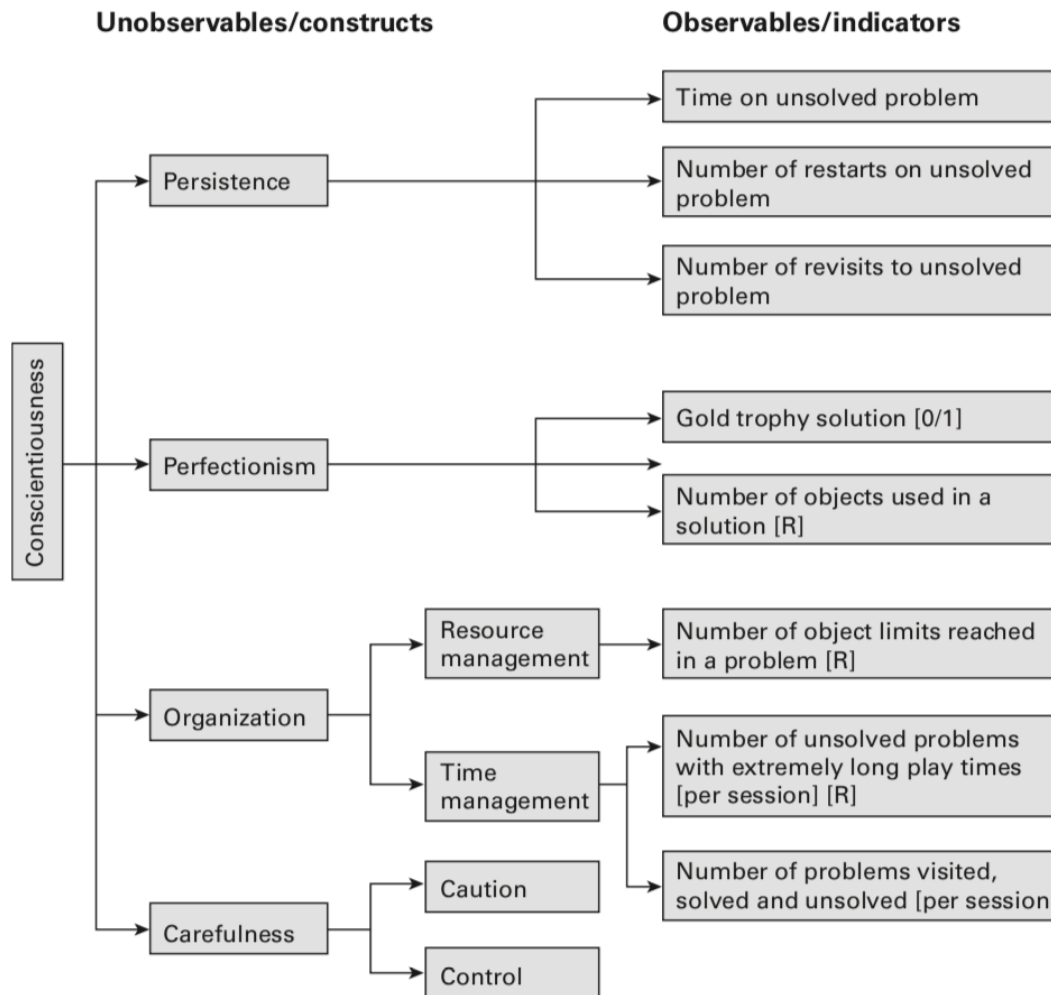
Ramirez & Berland 2016



what can we learn about player characteristics from play data?

stealth assessment

Shute & Ventura, 2013



Persistence

DiCerbo, 2014

Figure 5

Competency model of conscientiousness with indicators from *Newton's Playground*

what can we learn about changes in player values and perspectives?

epistemic network analysis

Shaffer & Ruis, 2017

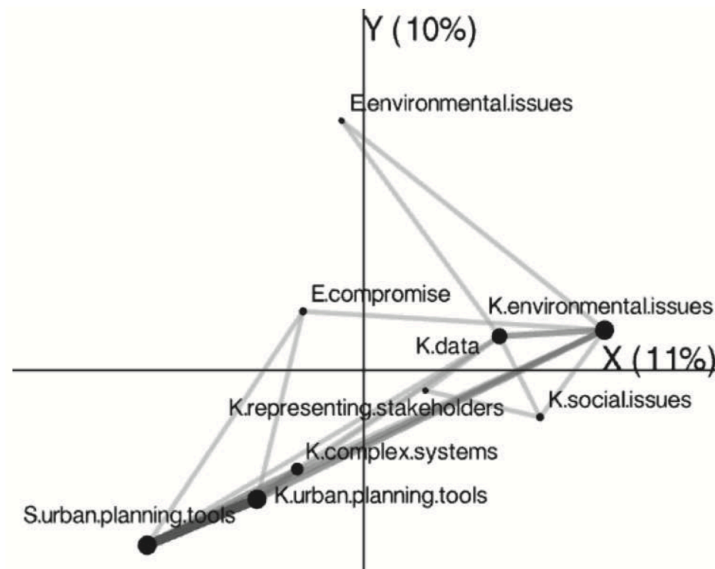


Figure 15.1. Epistemic network of a high school student (Student A) representing the structure of cognitive connections the student made while solving a simulated urban redevelopment problem. Percentages in parentheses indicate the total variance in the model accounted for by each dimension. the integration of multiple sources of data.

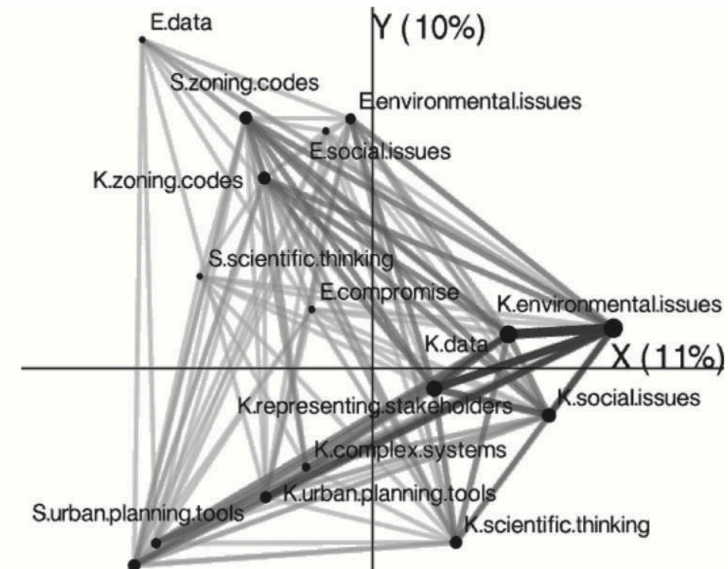
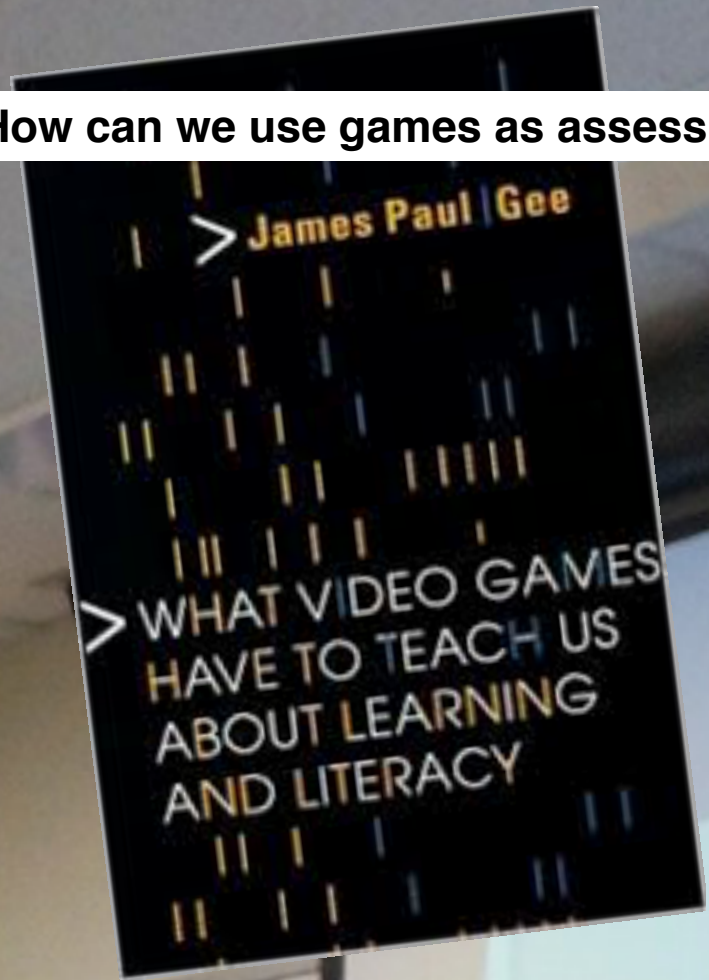


Figure 15.2. Epistemic network of a high school student (Student B) representing the cognitive connections the student made while solving a simulated urban redevelopment problem.

How can we use games as assessments?



Playful Assessment



AT PLAY IN THE COSMOS



GEARLEARNING

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JO WILDER AND THE CAPITOL CASE

Play as Jo Wilder, a scrappy girl who spends her days with her pet badger Teddy and her grandpa, a historian. When some mysterious artifacts show up at the History Museum, you must unravel the clues to find the real stories behind the artifacts.

[LEARN MORE](#)



LAKELAND



FOREVER MINE



SIFTR

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[LEARN MORE](#)





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