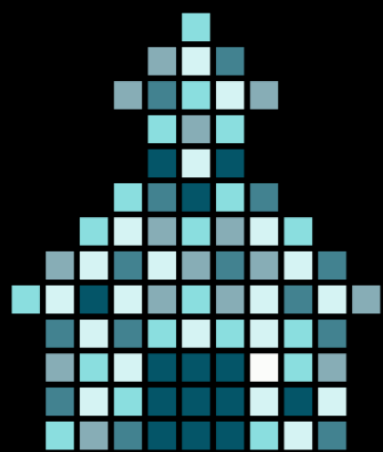




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Introducing simSchool
Infinite data. Infinite scale. Infinite possibilities.™
www.simschool.org

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What is simSchool?



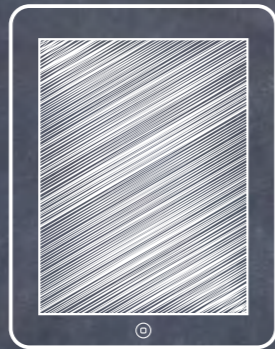
simSchool is a fully-scalable, data-rich, persistent, and flexible simulation and content authoring platform.



simSchool provides a safe environment where educators can explore both familiar and unfamiliar concepts in a new and innovative way: creating and teaching virtual, artificially intelligent students that behave as real students would.

The sim students are virtual, but the learning is very real.

What is simSchool?



device independent
cross-platform compatible
cloud-based
low bandwidth requirement
live authoring & reporting

How does it work?

The underlying intelligence algorithms of simSchool draw upon widely published theories of intelligence & emotional modeling to drive the behaviors of simulated students to facilitate a highly flexible, dynamic teaching experience on demand.





simSchool's engine can generate
10 trillion different
student profiles and
enable the authoring of
10 trillion
unique instructional tasks

Pedagogies & strategies supported include:

- Problem-based learning
- Project-based learning
- Inquiry /Discovery learning
- Peer-led discussion
- Small-group/team-based Learning
- Blended Instruction
- Independent Study
- Didactic method
- Synchronous & Asynchronous Online Learning

Selected psychological, physical, cognitive and instructional models referenced to build the simSchool computation model of learning and agent psychology include:

- Cattell-Horn-Carroll Theory of Intelligence (incorporating Cattell-Horn Gf-Gc Theory and Carroll's Three-Stratum Theory)
- OCEAN model of Emotion (McCrae & Costa)
- Interpersonal Circumplex Theory
- standard models of language learning and language proficiency used to diagnose ELL students
- structural functional and social constructivist theories of learning

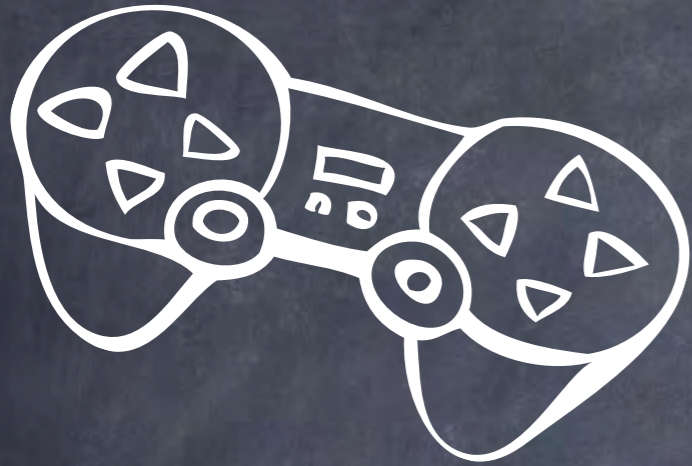


But is it useful?

(i.e. Are there predictable, measurable outcomes?)

Research-validated outcomes of simSchool include:

- increased confidence in teaching
- increased technology self efficacy
- increased retention in education courses
- increased knowledge of instructional strategies
- increased knowledge of classroom management techniques
- increased edTPA pass rates
- increased retention in teaching in the field post-graduation
- increased understanding of student cognitive, emotional, and cultural differences



initial outcomes...

With **90 minutes**
of time spent in simSchool,
research findings show
a **change in attitude**
about using games and
sims in teaching



deeper outcomes...

With 4-6 hours of time
of spent in simSchool,
research findings show an
increase in general
knowledge about classroom
management, differentiating
instruction, and confidence
as a teacher.

Major outcomes...

With 12 hrs of time spent in simSchool, users manifest a dramatic change in reported *Locus of Control* and an *understanding of student learning, emotional, and cultural differences*



SITE 2016 Conference:

Exploring simSchool: A Simulation-Based Learning Tool for Educators
David Collum, Melanie Bishop, Timothy Delicath, Missouri Baptist University

“The teacher effectiveness data captured in the simSchool modules showed increasing trend lines from the first time a module was taught until the last time the module was taught thus suggesting that simSchool increased the preservice teachers’ understanding of the educational needs of diverse learners.”

Student reflection, Liberty University:

“I learned that it’s not hard to get students to stay engaged when they like the task. The problems come when they don’t like the task.”

(3.6 hrs of use)

“This was difficult lesson. The students had difficulty listening to directions. I did learn a lot from this lesson. With having students of a diverse background and multiple IEP's and English Learning Language there was a difficulty having them follow directions.”

(6.4 hrs of use)

Student reflection, Hannibal LaGrange:

“They will become bored really easily if they are not taught in ways they prefer to learn. And when they become bored, they become disruptive. I need to concentrate on differentiating instruction next time I meet with them.”

(4.2 hrs of use)

“I didn’t realize how much the student’s emotions impact learning. I may try more differentiation to aid in student happiness, to see if that leads to more rapid academic progress. I need to look at their profiles and not just concentrate on getting through the tasks in the lesson plan.”

(7.2 hrs of use)

Student reflection, Missouri Baptist:

“simSchool did a fantastic job in helping me understand the needs of diverse learners. I think I learned more in this topic than any other that simSchool presented. Comparing the online experience to real life experience, I believe that simSchool hit it dead on. I was given different tasks and options to give students when trying to teach them. This is exactly like a real classroom: I would provide multiple different tasks to meet the needs of my diverse learners. SimSchool also gave me this option just like a real-life classroom setting. I think my understanding of the needs of diverse learners has increased dramatically; which surprised me since it isn't even a real classroom.”

(16 hrs of use)

How do institutions use simSchool?

- Low-stakes environment for practicing strategies, instructional task design and more
- “Lab experience” aligned to course content and activity for undergraduates
- A discussion and exploration environment for Masters-level students
- Research sandbox for PhD candidates
- Strategy in teacher induction providing universities with a pathway to maintain dialogue with grads
- Intervention tool for teachers in praxis at risk due to poor school evaluations
- Professional development tool for graduate assistants and adjuncts

What are the growing uses we observe?

- Supplement and substitute for physical field work
- Tool for exploring and enacting research models as a strategy for scaffolding teacher performance assessment and licensure assessment
- As a way to meet difficult-to-address requirements for field work (state and federal), particularly CAEP standard 4
- A tool for aggregating data on institutional and/or program effectiveness
- An environment in which tasks and concepts that are risky, difficult, or even impossible to practice in real life can be safely explored as a way to build candidate resilience and improve teacher expectations for diverse learners

What are some of those ways simSchool can help us identify and reflect on inequity in educational expectations?

- We've run a series of experiments with a distributed network of education programs in the Great Lakes and Midwest.
- Candidates were presented with two classes of elementary simSchool students.
- Secret: The narrative was different, but the classes were exactly the same. Same lesson plan, same task expectations, exactly the same student profiles.

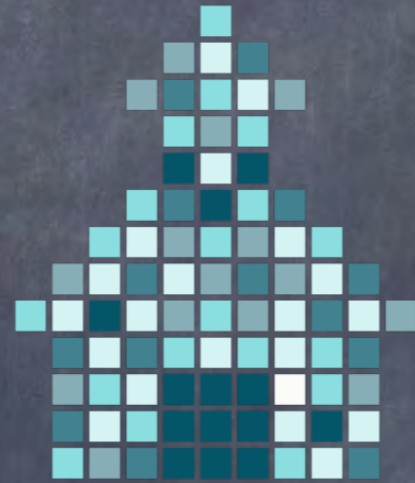
The only thing different was the perception the candidate might have formulated based on the narrative.



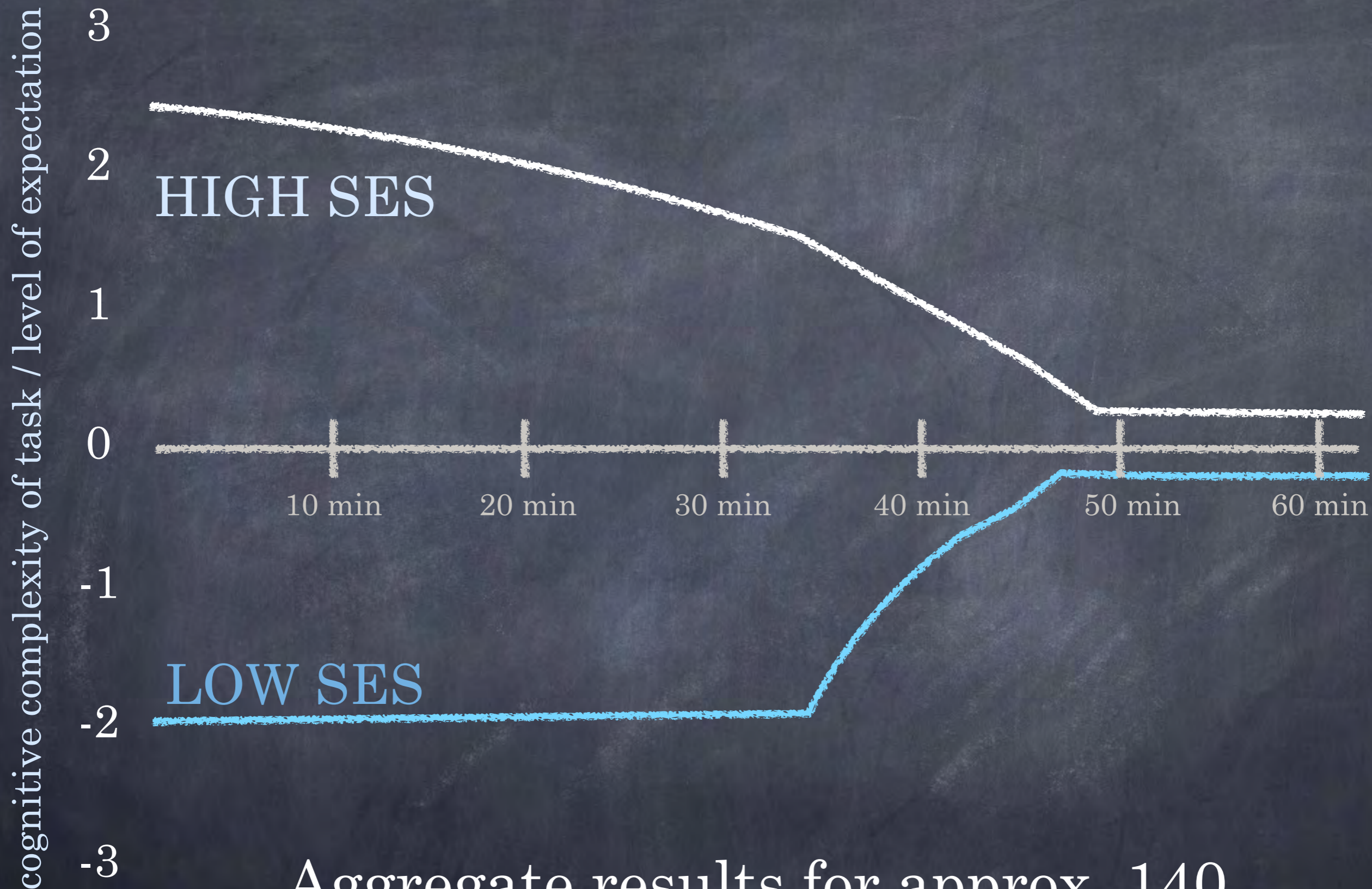
Welcome to Anywhere Elementary. You have been assigned to a 2nd grade classroom where the students are beginning work on a project-based learning activity. In this particular class, the majority of students are **middle to upper class**. Most live on the west side of town, a mostly residential area with many parks and shopping areas. Other teachers at this school report that this group of students is **highly energetic and very creative**.



Welcome to Anywhere Elementary. You have been assigned to a 2nd grade classroom where the students are beginning work on a project-based learning activity. In this particular class, the majority of students qualify for **free and reduced lunch**. Most live on the lower east side of town, a largely commercial area with affordable housing. Other teachers at the school report that this group of students is **difficult to manage and hard to focus**.



What happened?



Aggregate results for approx. 140 students across 10 teaching sessions

Regardless of the fact that the profiles of the simStudents were exactly the same and available for review at all times...

- Candidates had dramatically lower educational expectations for the low SES class
- Candidates took far longer to adjust their instructional strategies in the low SES class
- The conversational tone adopted by candidates for the low SES class was more authoritative and harsh
- Result: The “reveal” to candidates that the only thing different was their perception inspired denial, then debate, then strong emotions and a commitment on the part of participating candidates to carefully monitor their own practices and consider personal bias

There is no denying the data that results from simSchool sessions, and that opens a world of opportunity for exploring realities just like this one in ways that can only help real students and teachers.



Why do institutions use simSchool?

Scalable. Efficient. Effective. Flexible. Proven.

There is no practical limit to the ways in which simSchool can be used.

Each day we learn of new and innovative ways partner institutions are finding value and meaning in simSchool experiences.

Contact us today to learn about ways simSchool can add value to your program.



simSchool

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Infinite scale.

Infinite possibilities.™

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