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SIMS

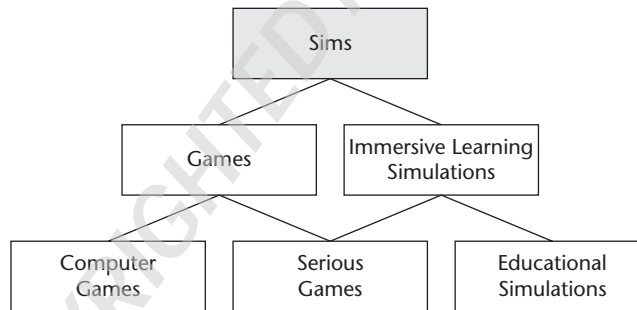## The New Media of "Learning to Do," Not Just "Learning to Know"

Sims are a broad genre of experiences, including computer games for entertainment and immersive learning simulations for formal learning programs.

Sims use simulation elements to capture and model experiences, including

- Actions, reflected in the interface
- How the actions then impact relevant systems
- How those systems produce feedback and outcomes, including desired results

The simulation elements are then used with game elements to make the Sim engaging and pedagogical elements (including scaffolding and coaching) to make it effective. The elements are also organized into tasks and levels to create incrementally challenging practice environments, leveraging linear content for motivation and context.

To further expand on the discussion, Sims, when virtual, differ from real microcosms, role-playing, and labs in that they more efficiently leverage economies of scale and pedagogy. Sims can be multiplayer. Sims may use any of the following elements as a platform, support them, or be supported by them:

- Massively multiplayer environments
- Real-world environments
- Informal learning
- Social networking environments

A Spectrum of Scale

The scale of the Sim also shapes the genre. For example, a Sim may be a huge, complex game or a tiny mobile game.

Complex Game

A type of computer game that represents investments of time and resources to create on par with those that are commercially viable today, between $5 million and $20 million if developed in the United States (contrast with costs for educational simulation).

A complex game typically has advanced graphics, campaign or single and multiplayer options, complex systems, and compelling and well-honed gameplay.

Author's note: While the difference in budgets between computer games and immersive learning simulations is pretty high, the actual difference in resources required is probably 100 times greater. This is because a commercial computer game is almost always a new example of a genre that has had hundreds of previous iterations before it. And each one of these iterations has experimented with new ideas while refining old techniques, including interface, display, and goals structures.

For example, when you play a first-person shooter released last month, you are accessing intellectual property that has been constantly refined since well before Castle Wolfenstein 3-D in the form of both design and supporting tools. If one had to truly build a similar first-person shooter from scratch today, it would probably cost about $1 billion.

The time spent in Sim is between fifteen and fifty hours. Typically, inevitably, a player learns high-level skills, such as personal responsibility for results and problem solving.

Most first-person shooters are examples of complex games. In contrast, most educational simulation genres like interactive spreadsheets or branching stories are not. For educational simulation genres, practiceware comes closest to sharing the attributes of a complex game.

Mobile Game

A mini game, frame game, or other game designed for cell phones or smart phones (such as an iPhone) and other highly portable devices. Typically, the genre of mobile games does not include hand-held game consoles.

Conclusion

These definitions are ostensibly obvious. But about three or four times a year, I have a conversation where a sponsor says something like, "I want you to build me a Sim that is as robust and addictive as World of Warcraft or the newest SimCity game, but that can be playable over a browser and that costs about 100K."