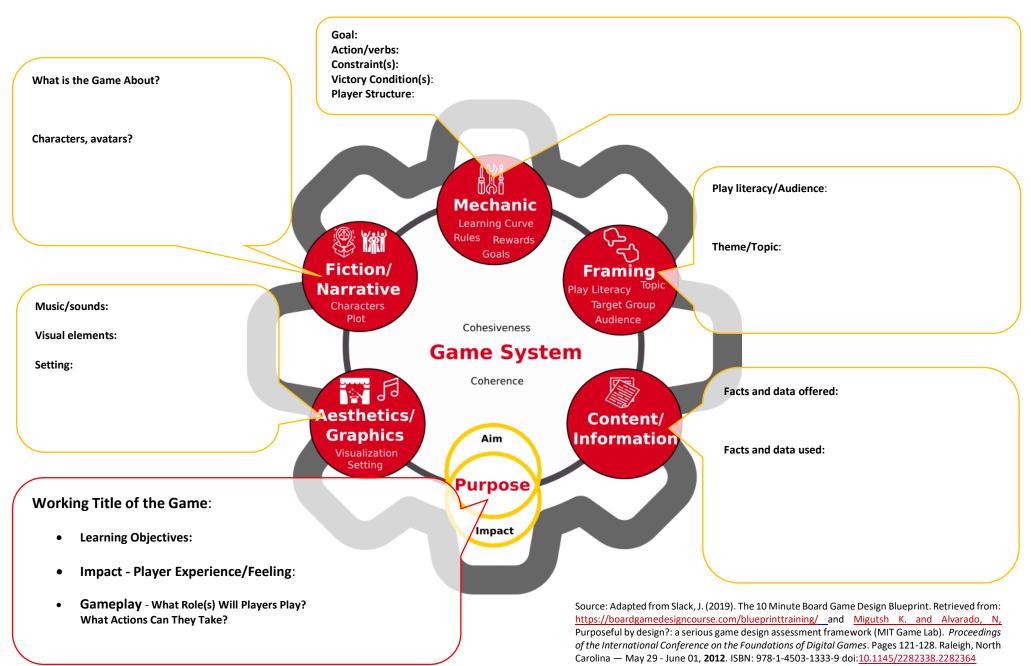


Sample of Serious Game Design Assessment Framework





How to Design and Build an Interactive Game for Teaching and Learning Workshop

Resources

Software

University Software Distribution: A variety of software is available to members of the university community. The software license agreement between the vendor and the University of Calgary will determine whether the software can be installed on university-owned computers (managed or unmanaged) or a person's personally-owned computer. For more information please visit:

https://iac01.ucalgary.ca/SDSWeb/

Game Creation and Prototyping

Gameblox (Free software):

https://gameblox.org/

Gdevelop (Free software): https://gdevelop-app.com/

Unity Game Engine / Game Editor Software (Propietary Software with free license for personal/educational use):

http://unity3d.com/unity/download

Unity Learning Materials and References:

- Self-Study Learning Materials
- http://unity3d.com/learn

• Unity Online Docs and Technical Manuals: http://docs.unity3d.com/Manual/index.html

Unity Game Assets and Program Extensions: Access to a huge assortment of texture, sounds, models, shaders. program extensions and more.

https://assetstore.unity.com/
Unity for Educators and Academic Institutions:
https://unity.com/education

Image Editing

Adobe Photoshop (UCalgary licensed software)
Gimp (free): https://www.gimp.org/

Graphics Editing & Design

Inkscape (free): https://inkscape.org/ Adobe Photoshop, Illustrator, Spark (UCalgary licensed software)

Autodesk 3ds Max (free educational account): http://www.autodesk.com/education/free-software/3ds-max

Blender (free): https://www.blender.org/ Adobe Animate, After Effects (UCalgary

Google SketchUp (free basic account for educators): http://www.sketchup.com/

Audio Assets

Free Sound Effects:

licensed software)

http://www.freesoundeffects.com/

(Many of the sounds on this site must be paid for, but there is a good selection of free sound effect as well)

Copyright

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https://library.ucalgary.ca/copyright

Selected Literature

Baaden, M. et al. Ten simple rules to create a serious game, illustrated with examples from structural biology. *PLOS Computational Biology* | March 8, **2018**. https://doi.org/10.1371/journal.pcbi.1005955

Baron, S. Cognitive flow: the psychology of great game design. *Gamasutra*, **2012**; http://go.nature.com/2gk6PKW Connolly, T. M. et al. A systematic literature review of empirical evidence on computer games and serious games. *Computers and Education*, **2012**, 59, 661-686. https://doi.org/10.1016/j.compedu.2012.03.004

https://doi.org/10.1016/j.compedu.2012.03.004 Han, E. Citizen Science:People Power | *Nature* 466, 685-687 (2010) | doi:10.1038/466685a

Kafai, Y. B. (2006). Playing and making games for learning: Instructionist and constructionist perspectives for game studies. *Games and Culture*, 1(1), 36–40.

Kwok, R. (2017). Game On. *Nature*, *547*, 369–371. http://doi.org/10.1038/nj7663-369a

Migutsh K. and Alvarado, N. Purposeful by design?: a serious game design assessment framework. *Proceedings of the International Conference on the Foundations of Digital Games*. Pages 121-128. Raleigh, North Carolina — May 29 - June 01, **2012**. ISBN: 978-1-4503-1333-9 doi:10.1145/2282338.2282364

Salen, K. and Zimmerman, E. (2003). Rules of Play: Game Design Fundamentals. MIT Press. (ISBN: 9780262240451) Schell, Jesse. The Art of Game Design, A Book of Ienses. 2nd Edition, 2014, Carnegie Mellon University. Smaldone, R. A., Thompson, C. M., Evans, M., Voit, W. Teaching science through video games. Nature Chemistry, 2017, Vol 9, 97-102. https://doi.org/10.1038/nchem.2694

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