



## An Introduction to Curriculum Design for Games, Game-based Worlds and Immersive Environments

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**Duration** : 6 hours

### Course Description

This course will provide teachers with an introduction to the nature of learning that is possible in Game-based Worlds and Immersive Environments. The course is crafted in recognition of the increasing interest among teachers in leveraging the affordances for learning of such worlds and environments in both formal and non-formal contexts within schools. Participants will have the opportunity to discuss a diversity of authentic examples from school-based usage cases in Singapore; no prior experience or knowledge of games or immersive environments will be assumed.

All teachers with a healthy interest in exploring how such worlds and environments might be applied to their respective subject-disciplines are welcome to attend. No prior experience is required.

Before attending the course, participants are kindly requested to raise a Service Request through MOE Information Technology Branch / NCS for *Second Life* to be installed on their respective notebook computers.

### Course Objectives

At the end of the course, participants will be able to

- Explain the fundamental pedagogical principles of game-based worlds and immersive environments for learning
- Describe and analyse a diversity of lesson units in terms of a systematic curricular framework

### Course Content and Schedule

#### Session 1 – Understanding the Potentialities for Learning in Games, Game-based worlds and Immersive environments

##### Date, time, venue

- 1) Introduction to Games, Game-based worlds and Immersive environments: (60 mins)
- 2) Fundamental principles of learning in such worlds and environments (60 mins)
- 3) Thinking critically about designing for learning in such worlds and environments (60 mins)

This session will ease participants in to games, game-based worlds and immersive environments, with a particular view to deriving a shared understanding of the nature of learning that might potentially take place. From this initial understanding, participants will be encouraged to think critically about how to design environments which leverage these specific affordances for learning.

Readings:

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Gee, J. P. (2007). *What video games have to teach us about learning and literacy*. Palgrave Macmillian.

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**Session 2 – The Six Learnings framework for curricular design: Case examples from ‘real classes’**

**Date, time, venue**

- 1) What are the Six Learnings? (60 mins)
- 2) What do lesson units structured around the Six Learnings look like? (60 mins)
- 3) Disciplinary Intuitions and Assessment for Learning (60 mins)

This concluding session builds on the preceding one by introducing a formalized structure for thinking about the design of effective learning environments in games, game-based worlds and immersive environments. Participants will be introduced to the Six Learnings framework for curricular design, and be presented with ample opportunity to familiarize themselves with, analyse, and subsequently deconstruct lesson plans of actual lessons which were successfully carried out in a variety of schools, age cohorts, and infrastructural settings. This will be with a view to eventually applying the Six Learnings framework to possible lesson ideas from within each participant’s respective subject-discipline. Assessment for this course as a whole will be conducted in terms of individual participation during the course and small-group presentations.

Readings:

diSessa, A. A., & Sherin, B. L. (2000). Meta-representation: An introduction. *Journal of Mathematical Behavior*, 19(4), 187-190.

Lim. K. Y. T. (2009). The Six Learnings of Second Life: A Framework for Designing Curricular Interventions In-world. *Journal of Virtual Worlds Research*, 2(1).

## Other Information Specific to the Module

### Core References

- diSessa, A. A., & Sherin, B. L. (2000). Meta-representation: An introduction. *Journal of Mathematical Behavior*, 19(4), 187-190.
- Gee, J. P. (2007). *What video games have to teach us about learning and literacy*. Palgrave Macmillan.
- Jarmon, L., K. Y. T. Lim and B. Stephen Carpenter II (eds.), (2009). *Journal of Virtual Worlds Research*, special issue on "Pedagogy, education and innovation in virtual worlds", 2(1).
- Lim, K. Y. T., Y. H. Cho and M. Vallance (eds.), (2013). *Journal of Virtual Worlds Research*, special issue on "Asian perspectives", 5(2).
- Lim, K. Y. T. (2013). The Six Learnings framework: exploring the dialectics of intuition and adaptivity in citizenship education, In Hung, D., K. Y. T. Lim and S.-S. Lee (Eds.) *Adaptivity as a transformative disposition for learning in the 21st century*. Springer.
- Lim, K. Y. T., D. Hung and D. Huang (2011). Towards a situative view of extending and scaling innovation in education – a case study of the Six Learnings framework. *Educational Research for Policy and Practice*, 10(2).
- Lim, K. Y. T. (2010). Implications of Placedness to Learning in Multi-User Virtual Environments. *Educational Technology*, 50(5).
- Lim, K. Y. T. (2009). The Six Learnings of Second Life: A Framework for Designing Curricular Interventions In-world. *Journal of Virtual Worlds Research*, 2(1).