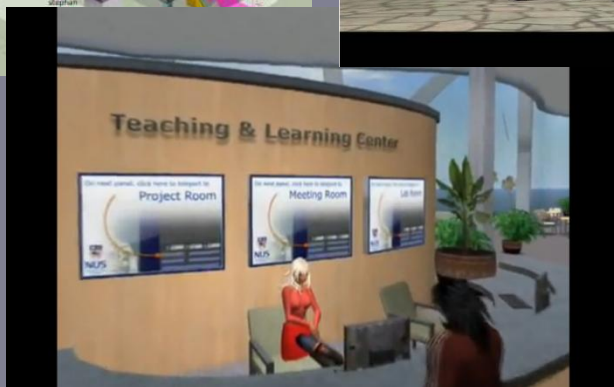




Virtual Worlds - SERIOUSLY

Pursuing augmentations





- › Briefly about me and my background. Serious Games and Virtual Worlds? How do they (not) hang together (with me)?
- › Examples of what is being done with virtual worlds and education in Singapore and other places
- › How does this relate to the workshop theme: VW and augmenting/augmented reality? Variations of augmentation...
- › Conclusions?
- › Discussion?



Serious Games on a Global Market Place 2007-2011



- › Funded by The Danish Council for Strategic Research.
- › Postdoc in educational cultures and serious games on a global market place
- › Research program: Media and ICT in a Learning Perspective
- › Danish School of Education, Aarhus University



Follow Mingoville.com



- › A Danish developed virtual universe for beginning English teaching and learning







Distinctions at play



- › Real / Virtual
- › In-world / out-of-world
- › In-game / out-of-game
- › VLE / Physical school environment



Engagements



- › Full
 - › In / out
 - › Connected / disconnected
- › Partial
 - › Many nuances and forms of engagements all of which involve partial (dis-)connections

Workshop concepts



- › Augmenting: to increase, make greater, stronger, extent, enlarge...
- › Reality: what is real, what is existing, how things appear, state of being, quality of being...
- › Public domain / space: general domains/spaces? Domains / spaces concerning people or communities? not private? Meaning it is a matter of institutional augmentations? A matter of being on the street, not at home? That it is a matter of governmental institutions and not private?



Approached differently with some samenesses



- › Building: VLE – platforms – contexts for activities
- › Focus on ‘more real’ / authentic / more actual / more situated learning experiences
- › Immersion
- › Fun, engaging and motivating
- › Simulating / modelling
- › Experiential
- › Interactive
- › Situated
- › Instructional / clarifying / explaining
- › Assessment tool...



Blurred boundaries and hybridities



- › Virtual World and VLE
- › School and virtual world
- › Home schooling and virtual world
- › Serious virtual world and entertaining virtual world
- › Public and private virtual world
- › Local and global virtual world...
- › Government and local virtual world



- › (complex) skills training (e.g. problem solving and critical thinking)
- › Realistic role-play
- › (In)formal learning



Where do we find educational engagements in virtual worlds?



- › Schools (primary, secondary and tertiary)
- › Museums
- › Military
- › Commerce
- › Health
- › Informal learning...

Category of virtual world	Examples	Value for learning and education
1. Role play worlds	World of Warcraft, Everquest, Guild Wars	Potential for learning in vicarious ways. Team-working skills, leadership skills, communications. There has been little research into the learning or educational benefits of MMORGS, however anecdotal evidence implies there may be potential here. The scope for learning may be in role play approaches perhaps focusing upon professional development.
2. Social worlds	Second Life, CyWorld, ActiveWorlds For children Habbo Hotel, Club Penguin	Social worlds tend to be immersive worlds without specific quests. The worlds are social primarily and focus upon community building activities and social communications between friends and colleagues. Social worlds for children and young adults are often animated and 2D/2.5D. Children use these environments for communicating with other friends, or sharing content. The success of these environments has led to a proliferation of formats and worlds. Some virtual worlds for children have tie-ins with toys or films, eg BarbieGirls World, and are marketed as part of the franchise.
3. Working worlds	Project Wonderland, IBM's Metaverse	These worlds focus upon corporate communications and business support facilities. Project Wonderland is a form of interactive video conferencing with capabilities for voice and document sharing. Increasingly businesses are global concerns and often staff are location independent workers without access to offices; this makes the use of 3D rich environments for collaboration appealing and cost saving.
4. Training worlds	America's Army, platforms such as the OLIVE platform	These worlds are specifically for training. They are focused upon particular professions and aim to provide training that may not be possible in real situations, is life threatening or has many possible scenarios or outcomes. While to date these have often focused upon military training, increasingly medical education and training are making use of the tools.
5. Mirror worlds	Google Earth, Planet Earth, Unype	Mirror worlds are quite literally worlds or 3D visualisations that mirror the physical world. Google Earth is the most well known of these worlds. Increasingly through mash-ups mirror worlds can be embedded into other unrelated applications. The bringing together of different applications is facilitated by interoperability – and this presents interesting options for education and training especially where a blend of real and virtual spaces may be beneficial, eg field trips, multimedia production.

Table 3: Five categories of virtual worlds.

This table is not meant to be a definitive categorisation of virtual worlds, but can be used as a starting point for understanding the wide range of applications that are currently available.

(De Freitas, S. , 2008, p. 14)

- › **Educational simulations** use rigorously structured scenarios with a highly refined set of rules, challenges, and strategies which are carefully designed to develop specific competencies that can be directly transferred into the real world.
- ›
- ✱ **Games** are fun engaging activities usually used purely for entertainment, but they may also allow people to gain exposure to a particular set of tools, motions, or ideas. All games are played in a synthetic (or virtual) world structured by specific rules, feedback mechanisms, and requisite tools to support them – although these are not as defined as in simulations.
- ›
- › **Virtual worlds** are multiplayer (and often massively multiplayer) 3D persistent social environments, but without the focus on a particular goal, such as advancing to the next level or successfully navigating the scenario. (Ulicsac, M. and Wright, M., 2010, p. 17)

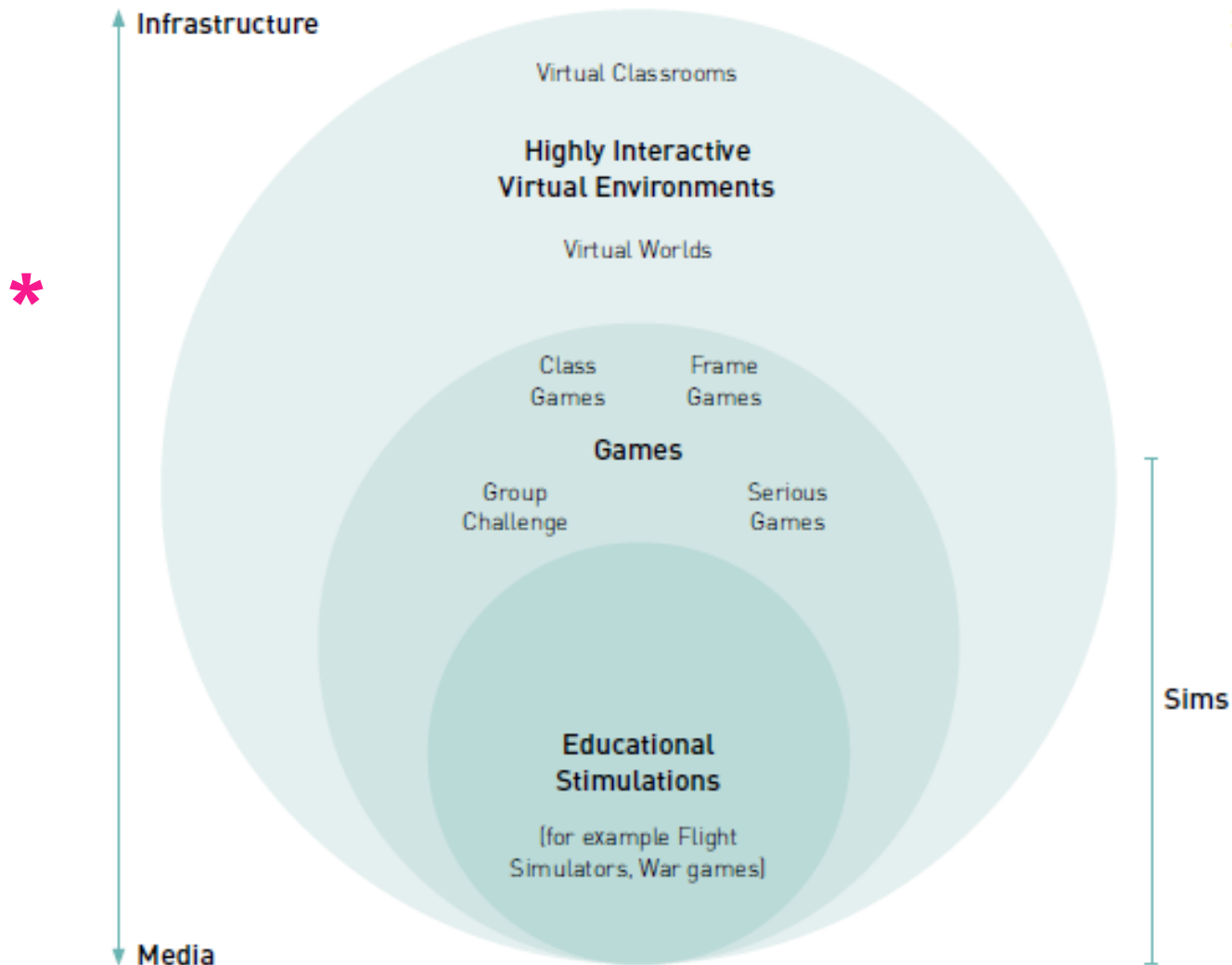


Figure 1:
The HIVE continuum
(taken from Aldrich 2009, p1)

No agreements in definitions of either serious games, games, virtual worlds or serious virtual worlds...



Designed / constructed *with the intention* of education/educating/teaching/learning – that is they generate particular educational engagements...

Of course this raises the central question: how are educational engagements achieved? Where can they be found? How do they emerge?

Ways to reach, connect/engage the dis- engaged/-connected

- * — ➤ People/nations lacking educational options
(Mingoville in Chile)
- Pupils, children, youth, adults with learning disabilities... challenged / talented learners...
- Bring into the educational context what is 'normally' without reach (teachers, educational options, differentiation..)

Different ways to augment. Different forms of augmentation.

Singapore - examples



History – Singapore in 1800's

The teachers and students log in and their avatars find themselves at the Singapore River in the past. They start of on a virtual excursion of the Singapore River dressed up as natives in that time period. They walked along the riverside and see the bumboats, with coolies and samsui women walking around. The warehouses are lined up on both sides of the river. The teacher and student avatars walk along the five-foot way and stop to chat with a coolie. The students choose from a list of questions to ask the coolie, such as how his life is like, and the coolie gives them a description of his everyday activities. They then walk on and start another conversation with a samsui woman, who told them of her life story coming down to Singapore from China. The student avatars continue to explore and experience the rich sights and sounds of the virtual Singapore River in the past, collecting tokens along the way at different checkpoints, and at each location finding out the different aspects of how life was like then.

Inspired by secondlife and Questat Atlantis.com



Ingolstadt: The Plague Unit

This Unit is designed to help young people **develop persuasive writing skills** as they explore the role that ethics play in science and technology, begin to consider whether "the ends justify the means" in a particular situation, and begin to think about the importance of companionship, and about what it means to be "human."



Ngee Ann Secondary – Virtual art gallery



- > “It integrates the Artful Thinking pedagogy developed out of Harvard, and adds a whole new dimension to the study and critique of art.”
- > <http://www.youtube.com/watch?v=2MO2EaVev5M>





- › Based on CASEL's Social-Emotional Learning pedagogy, this build is designed to let students roleplay superheros and learn about handling challenging situations constructively and ethically.

<http://www.youtube.com/figmenttv#p/a/u/2/Q3g24rXecJo>





- > Dedicated to the cultivation of Howard Garner's 'Respectful Mind', Pulau Olympia (a YOG-themed build on Second Life) was developed in partnership with NAS for their students and twinning counterparts overseas.
- > http://www.youtube.com/figmenttv#p/a/u/1/noeADJU4_uU



"Learning in NUS Second Life" is 1 of 3 videos created by FIGMENT on behalf of the National University of Singapore. A 60 second preview of the institutions virtual world presence in Second Life.



The 3D world enables distance learning, teaching, sharing and social interaction. An ongoing project "Co-Designed, Co-Built and Co-Owned" by the faculty staff and students.

<http://www.youtube.com/watch?v=OECS5tSAx1A>









Future Schools:

* — “As part of the Singapore Government’s move towards a more interactive and engaging learning environment through innovative use of ICT under Masterplan 3, the government has identified five schools as “FutureSchools@Singapore” and for each school, they will carry out individual innovative education schemes to explore the integrated use of ICT in education.

The government has set aside over \$80 million to develop these five schools with four specially chosen consortia led by **Civica, Hewlett Packard, Singapore Telecommunications and ST Electronics (Training and Simulation Systems)** to develop and deploy innovative infocomm-enabled learning applications with the five schools.

“The use of technology in each FutureSchool is anchored on the school’s envisioned teaching and learning approaches,” said Dr Koh Thiam Seng, Director, Educational Technology Division, Ministry of Education. “The FutureSchools, together with MOE and IDA will work closely with industry partners to develop the technology solutions which support these teaching and learning approaches.”



Merging virtual worlds, serious games and virtual learning environments / LMS



* — “For Jurong Secondary School, Civica will be developing a “Journey of Discovery”, an introduction of **a problem-based, adaptive learning solution** in January 2009.(2) Students will be able to create **online avatars** powered by **artificial intelligence**. According to Mr Marc Nolan, Executive Director of Strategic Development at Civica Library & Learning, these solutions are grounded in sound pedagogy and focused on “learning outcomes enabled by appropriate emerging technologies”.(3)

What the “Journey of Discovery” will do is that it will change the constraints of traditional learning methods such as physical location, classroom design and time.”

“For Beacon Primary School, the consortium led by ST Electronics (Training and Simulation Systems) will be developing **an immersive and interactive 3D Virtual Learning Environment** called Beacon World, encompassing a variety of virtual learning tools and spaces...

The students will immerse themselves in new applications that include the **Personal Interactive Enrichment (PIE) Book, Creative Studio, Funky Gallery, Live Arena, Exploratory Lab** and **Interactive I-MAX** - all creating an appealing environment for interactive learning.”



ITE

- * _____
 - > Authentic learning in virtual worlds
 - > Hotel or Hospital



› Built-in pedagogy?

- › In the construction of the virtual world/serious game itself
- › In the design of the activities *in* the virtual world / serious game

› Pedagogy as transcendent to virtual worlds and serious games....

- › Involves sociomaterial arrangements of virtual worlds and serious games
- › The shifting platformations of those: accessing from where? Engaging towards what?

What makes it 'serious'?



- Built / designed structured around/for serious purposes with learning goals/purposes
- Used for serious purposes with learning goals/purposes
- The imaginary that learning transfer happens from the serious game/gaming / virtual world situation to other situations...
- ...



Variations

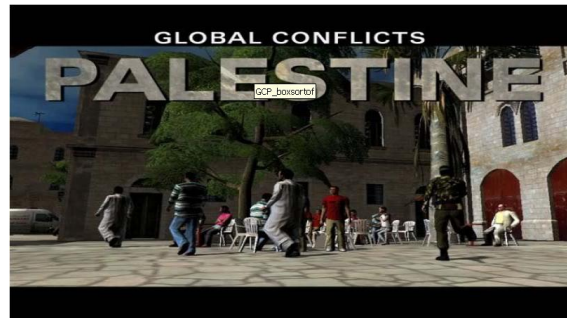


1. Virtual worlds used for / engaged in local educational situations (e.g. secondlife and Singaporean virtual world constructed for education and youth engagement)
2. Virtual world / learning environment developed locally with serious aims (e.g. Beacon Primary,)

Serious games/virtual worlds with a broader scope/market and more broad educational aim – 'educational oxygens'



- › Serious Game / 'virtual world' of Global Conflicts (finished product - short periodic event – a role-play simulation - go through game from start to end in a few lessons. A more or less fixed pathway)



- › Mingoville.com (emerging concept - engaged as a brief fun moment of variation / as an integrated aspect of teaching activities across a school year / home schooling option / home entertainment option)



Mikala Hansbøl // Postdoc in Serious Games

Research program: Media, ICT, and Learning

Department of Curriculum Research

The Danish School of Education

Aarhus University

Tuborgvej 164, B343

2400 København NV

Denmark

E-mail: mhan@dpu.dk

