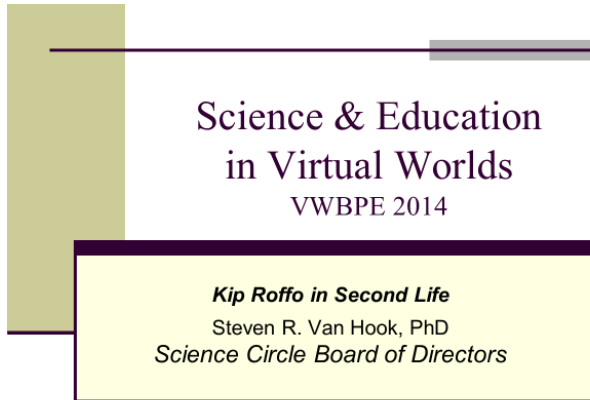


Virtual Worlds: Best Practices in Education
Second Life In-World Conference

April 11, 2014

Presenter: Steven R. Van Hook, PhD



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Bio: Steven R. Van Hook, PhD

Steven R. Van Hook, PhD (Kip Roffo) has been building educational resources in [Second Life](#) for seven years. Since 2000 he has designed online courses for UCLA, UCSB, Cal Lutheran, Saylor Academy, Cardean Learning Group, and elsewhere. He has published articles on access to global learning and transcultural teaching in journals including UNESCO's [Prospects](#), [Journal of Research in International Education](#), [Journal of Distance Learning Administration](#), and others. He is president of Educare Research inc, a nonprofit 501(c)(3) think tank of international educators and tech innovators: <http://educares.net>

Question: Why should educators participate in Science Circle and other educational Virtual World groups?

I'm going to answer question this as a nonscientific academe ... as I assume many of you are ... on why I joined Science Circle. I was a little apprehensive at first – one of those right-brained-education PhDs ... intimidated by a bunch of scientific people sitting around with calculators deciphering astrophysics, microbiology, and quantum mechanics.

Well ... They are pretty smart people, but it wasn't like that at all. Furthermore, Science Circle welcomed me as a fellow scientist – a researcher in education as part of the social sciences, right along with other members in life sciences, physical sciences, the applied sciences.

So what good comes from joining such groups in virtual worlds?

Teaching Ideals



Kerckoff Hall
UCLA



Korean Students from
Hanyang University

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Well, let me agree with many critics right off the start that learning in virtual worlds can be a poor substitute for the real-life thing. I wish everyone around the world could join me at my classroom at Kerckoff Hall on the UCLA campus ... as these Korean students did. It's a gorgeous building – reeking of the finest academic trappings and tradition.

The ideal learning environment would be a diverse and well-appointed campus serving all comers, fully equipped classrooms, reasonable numbers of students, and justly compensated instructors. That, unfortunately, is not where we're at, and it's certainly not where we're headed.

Socratic Method

Formula for Ideal Teaching:

1 student
+ 1 Socrates
Best Learning
Environment



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It's also been said the ideal teaching environment is Socrates on one end of a log, and a student on the other. That's not going to happen either. We can't even build enough single classrooms seating hundreds of students ... at least in the developing world for millions if not billions of precluded aspiring learners.

So as well intentioned and practical educators, we turn to technology to fill the gaps. As we have for decades before.

Winky Dink: Innovative Immersion

- Bill Gates: “The *very first* interactive TV show!”
- Originally aired 1953-57



<http://www.umich.edu/~csie/comicart/winkydink/aboutwinkydink.html>

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It's nothing new. Interactive and immersive worlds have been around for decades tapping old technologies.

There was a show called *Winky Dink* that started way back in the 1950s – which Bill Gates praised as the first interactive television program.

With a magic screen on your TV set, you could become engineers, tacticians, part of the program – drawing in bridges, ropes, cages – to save the day. It encouraged children to be innovative, creative, problem solvers. Those of us who couldn't afford the 50-cents for the mail-away magic screen just drew right on the TV.

Gumby



“He can walk into any book with his pony pal Pokey, too ... If you've got a heart then Gumby's a part of you.”



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The *Gumby Show* in the 60s let us break through flat-dimensional world of the physical book into rich worlds of living claymated imagination. My favorite were the space travels. The theme song still echoes in my head, 40 years later.

Here's the link: https://www.youtube.com/watch?v=K5Ik_LiqBOc

Experiential Learning

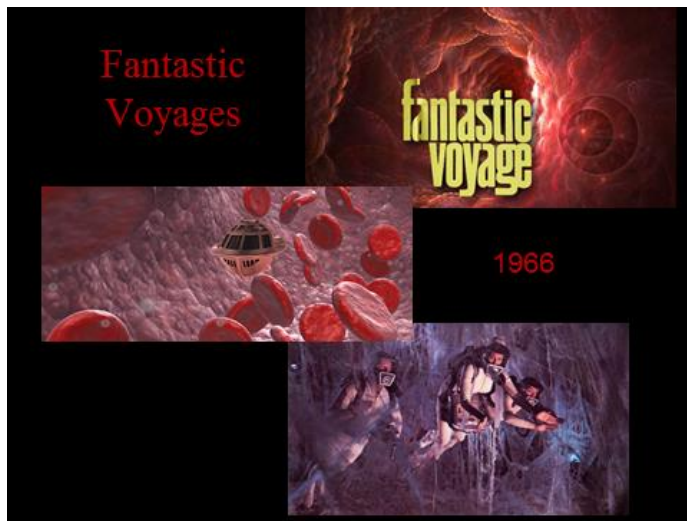


Disneyland's ride through the molecular and atomic construction of a snowflake



Slide 6

The Inner-Space ride at Disneyland shrunk us to subatomic size so we could ride through the molecules and atoms of a snowflake. And suddenly there was the red pulsating nucleus.



Slide 7

Movies picked up on that, shrinking us down to cellular size to traverse a human body in the film, *Fantastic Voyage*.

Second Life founder Philip Rosedale was saying the other day – one reason virtual worlds have proven so attractive to educators and students is our desire for company in learning – we want to look at each other, see facial expressions and gestures, even as we're alone at our desk. And it's not just our desire for a sense of *other*; but also our desire for a sense of *place*.

It's a natural inclination of children ... students ...and even we jaded academes – we don't just want to observe something; we want to experience it. We don't want to look through the windows; we want to become part of it.

Sense of Place

"Students expressed their higher-education experience through images of where they have been, and where they are ... The common theme: broadening horizons."

"A Sense of Place" slideshow
The New York Times, 2009

http://www.nytimes.com/slideshow/2009/07/26/education/26_ss_Place_index.html



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A *New York Times* photo spread talked with college students about their memories of higher education. What the students recalled most vividly was not the ideas they learned ... but the places they saw, the experiences they felt. That was the most profound part of their learning.

Educare Virtual Learning Centers



Sakura Learning Center
by Educare Research on
Imzadi Island

Non-profit 501(c)(3)



Free college courses,
English read-along
books, videos, career
development, transfer
credit possible through
Saylor Academy.



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Since 2007 I have been building learning centers in [Second Life](#) where students from around the world can enjoy a sense of 'place' along with free learning materials for courses in international communications and business.

Whatever field we're in – hard science, psychology, economics, sociology, education, nonprofit management – we can somehow bring it alive. Make it real ... even for an online student far removed from academia in jungles and bush and deserts.

Where through interactive and immersive media they can touch things; walk in someone's skin; hold a meeting of minds within avatar bodies. We can offer a sense of 'place' while remaining placeless.

**Slide 10**

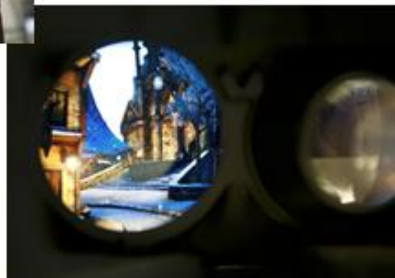
There have been times over the last few years when I've recalled a conversation with a colleague or a student, and I couldn't remember whether it had happened on-ground or online, since the interaction was so rich in-world. Most anyone who has ever clicked on a dance ball knows how real the projection into a virtual world can feel.

Immersive Technologies



Immersive headset company Oculus VR bought for \$2-billion by Facebook in 2014.

"Imagine ... studying in a classroom of students and teachers all over the world or consulting with a doctor face-to-face, just by putting on goggles in your home."
~ Mark Zuckerberg

**Slide 11**

New technologies are going to make that experience ever more immersive and realistic. Tickling all our senses. Literally.

Virtual Retinal Display

AIRScouter



Direct laser beam onto the retina, bypassing need for a screen.

<http://www.engadget.com/2011/09/17/brothers-airscouter-floats-a-16-inch-display-onto-your-eye-also/>

Slide 12

The accessories are going to get smaller, cheaper, ever more effective. Instead of big bulky screens on walls or glasses ... tiny lasers will beam images directly onto our retinas, floating images before us large and three-dimensional.

Smart Phone Universality

- 5-billion of 6-billion cellphones worldwide are used in developing nations
- Used for agriculture, health, financial services, education, employment, government ...
- Bandwidth is doubling every 18 months, expanding into rural areas
- Fastest-ramping device around the world



(World Bank)

Slide 13

And it's all going to plug in so easily to our smart phones and pads.

Right now – today -- there are more than 6-billion mobile phones globally – 5-billion of them in developing countries. They're used in applied sciences for agriculture, health, financial services, governance, entrepreneurship, employment ... says the [World Bank](#).

Cellphones are becoming ever cheaper ... network bandwidth is doubling every 18 months and expanding into rural areas worldwide. Many services and educational opportunities are offered for free on these simple devices.

Internet-enabled tablets are the fastest-ramping device around the world, and solar-powered tablets are especially promising in areas where electricity is iffy. In South Africa, there are more cellphones than flush toilets.

Internationality – Transculturalism

- English as Lingua Franca (1.5-billion people worldwide conversant in English)
- Transculturally resonant themes for context (children, families, animals, life cycles, sports, water)
- Appreciation and respect for differences



<http://wwmr.us/support/transculturalism.pdf>

Slide 14

And, as educators, as we consider technological access to education in the sciences, we also have to consider socially appropriate access. How can we connect with a global student body in ways that are inclusive and engaging?

Well, by necessity we will typically use English as our common language – 25% of the world speaks it, at least conversationally as a second language.

But we should also consider a cross-culturally resonant context ... culturally inclusive case studies, and discussion topics. By finding our common ground, we come to better appreciate and respect and enjoy one another's differences.

My article on transcultural international learning was recently published by UNESCO, and I'd be glad to share copies. You can find a brief [video](#) demonstrating transcultural methods and a link to the article at the [Sakura Learning Center](#): <http://wwmr.us/support/transculturalism.pdf>

Why Participate in Science Circle?

- Science is at the core of most all practical knowledge
- Support those bringing science to others
- Make science accessible, attractive, interactive, immersive, engaging, inspiring, enlightening, participatory, exploratory, entertaining, and – incidentally – educational!



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And so, finally, here is how I would answer the question, why should we participate in Science Circle ... even non-scientific academes such as myself.

At the very root of science is the simple concept of 'knowing.' In that regard, we are all scientists. So we should support those who bring science to new platforms. It's in all our interests to make science accessible, attractive, interactive, immersive, engaging, inspiring, illuminating, enlightening, participatory, exploratory, entertaining, and – by the way – educational!

In Closing:

Those of us who have worked at plugging education into virtual worlds have been often dismissed by our colleagues as adolescent dreamers.

The platforms have been dissed by our students for excessive overhead and a laughable interface.

But we keep working at it – spending hours and hours, Linden dollar after Linden dollar. Enduring all the disappointments, frustrations, jeers. We know where this is going. We have this gravitational pull ... even as might we want to escape it.

And we don't let ourselves be frustrated by the limitations of *what is* ... but we ever keep pushing the edges towards *what will be*. You all are heros and I'm honored to meet with you today.

And that's what I see in Science Circle – and why I chose to participate in it.