LEARNING FOR CHANGE WITH SERIOUS GAMING



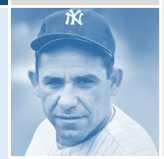
© IVO WENZLER

FUTURE

FUTURE IS AND WILL BE DISCONTINUOUS AND UNCERTAINTY IS THE ONLY CERTAINTY

The future is not what it used to be.

Yogi Berra



There is a theory that states that if anyone discovers exactly what the universe is for and why it is there, it will instantly disappear and be replaced by something even more bizarre and inexplicable.

D. Adams



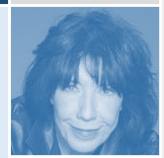


ABOUT FUTURE

- There is no one single future but a multitude of futures
- Future does not happen to us, but we happen to it
- Future is and it will continue to be discontinuous
- Future without uncertainty is a future without life
- To prepare for future standing still is not an option
- Memories of the past are of limited value for the future
- Future requires survival and not avoidance of mistakes

REALITY

OUR REALITY IS COMPLEX AND REQUIRES LEARNING FOR CHANGE



Reality is the leading cause of stress amongst those in touch with it.

Lily Tomlin



WONDERLAND

... croquet game in which the balls are live hedgehogs and go private ways, the wickets are playing cards and more than usually unstable, the mallets are live flamingos with wills of their own, and the rules are constantly changing ...

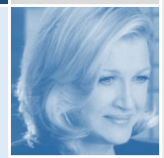


REALITYLAND

... environment in which *decisions* are like live hedgehogs and go private ways, *objectives* are like playing cards and more than usually unstable, *solutions* are like live flamingos with wills of their own, and the *policies* are constantly changing ...

THEORIES

THERE ARE SEVERAL THEORIES OF HOW LEARNING AND CHANGE HAPPENS



I think the one lesson I have learned is that there is no substitute for paying attention.

Diane Sawyer

THEORIES ON LEARNING

Associative

Learning through a combination of structured tasks, associative processes, trial and error, and reinforcement • *behaviorism*.

Cognitive

Learning through the development of understanding and the construction of knowledge derived from self-directed experiences • *psychological constructivism*.

Situated

Learning through social participation, imitation, modelling, and collaboratively constructing knowledge • *social constructivism*.

THEORIES ON CHANGE

Associative

For each person, there is a specific set of incentives; with the right combination of rewards and consequences, change will occur • *behaviorism*.

Persuasive

The person-centered approach utilizes self-esteem, emotional needs, and individual values as key levers for promoting behavioral change • *humanism*.

Attentive

The mental act of shaping reality through expectations and focusing attention stabilizes the associated brain circuits • *attention density*.

CHALLENGES

THERE ARE SEVERAL CHALLENGES OF LEARNING AND CHANGE

Become a student of change. It is the only thing that will remain constant.

Anthony J. D'Angelo



For more information on challenges of change, see presentation: **Why is change difficult.**

CHALLENGES OF LEARNING

What of learning

The challenge is to recognizing whether to maintain existing habits, change them, or rethink the very way we approach changing them.

Why of learning

The challenge is to understand that survival depends on our capacity to learn and adapt in an ever-changing world.

How of learning

The challenge is to organize learning as an experiential and social process of discovery and play – the deeper the engagement, the greater the learning.

When of learning

The challenge is to enable continuous learning and ensure action based on what has been learned, as this remains the most sustainable competitive advantage.

CHALLENGES OF CHANGE

What of change

The challenge is to envision the necessary changes and the benefits they will deliver.

Why of change

The challenge is to recognize both the importance and the urgency of change.

How of change

The challenge is to acquire the knowledge, skills, and behaviors needed to drive change.

When of change

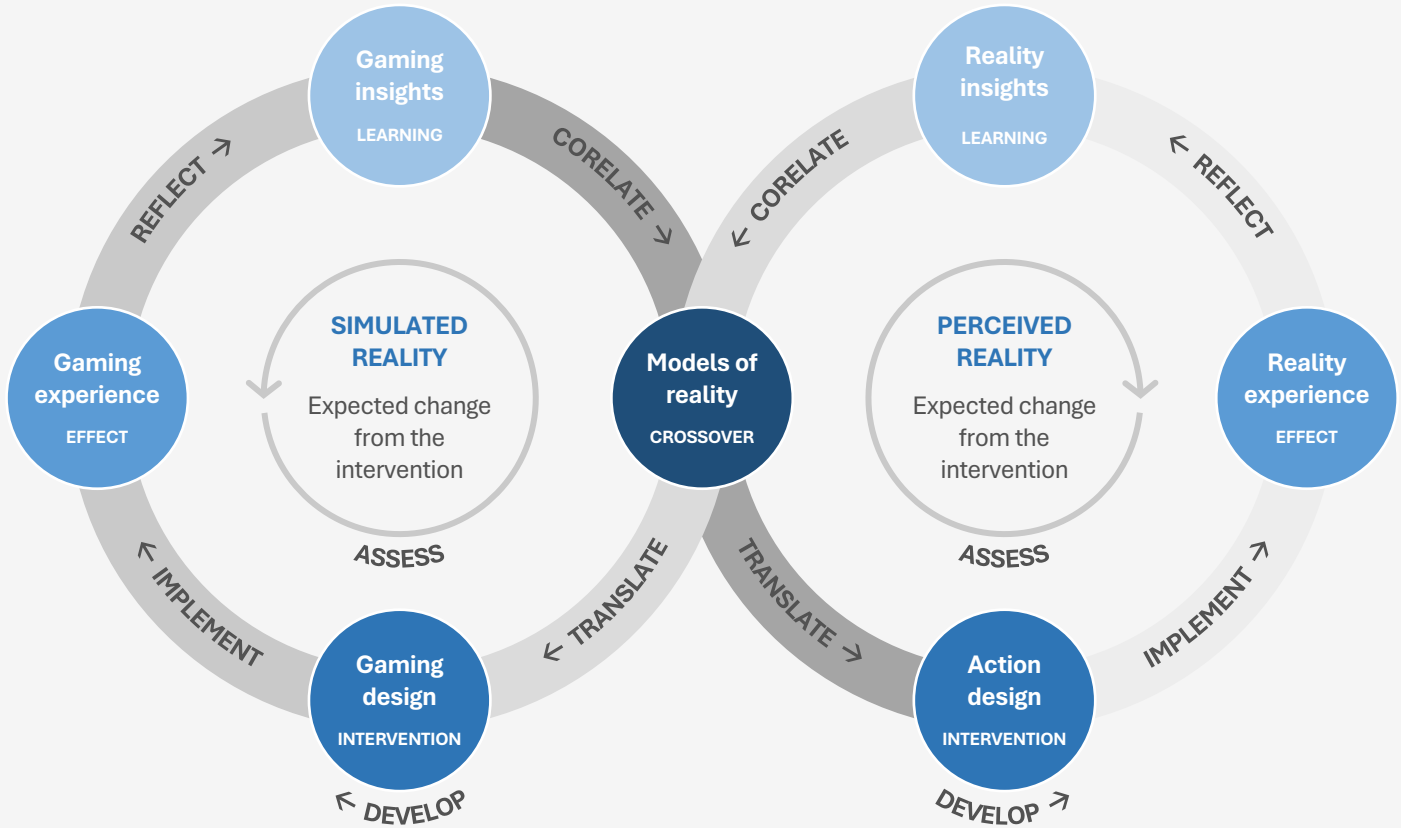
The challenge is to take timely action to achieve and sustain the envisioned benefits.

LEMNISCATE OF REALITY IS AT THE CORE OF THE APPROACH TO LEARNING FOR CHANGE

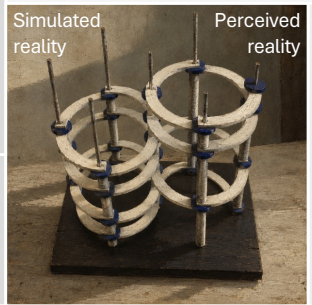


In everything that we do, an experience of what we perceive as reality is always preceded by a simulation of reality – over and over again.

Ivo Wenzler



For more information on the lemniscate of reality and gaming, see presentation: **Serious gaming methodology.**



THERE ARE SEVERAL PERSPECTIVES ON WHAT IS SERIOUS GAMING AND THE THEORIES BEHIND

Simulations aren't about finding optimal solutions; they are about discovering what stories make sense.

Michael Schrage





SIMULATION OF PERCEIVED REALITY

Serious gaming is an abstracted representation of our perceived reality that provides a safe environment for exploration and learning.



Simulated realities theory • N. Bostrom

LANGUAGE OF THE FUTURE

Serious gaming is a form of human interaction that integrates multisensory information into a coherent mental model.



Future's language theory • R. D. Duke

PLAYGROUND FOR EXPERIENCE

Serious gaming is an experiential learning environment that provides relevant and contextualized learning experiences.



Situated learning theory • J. Lave

LABORATORY FOR CHANGE

Serious gaming is an experimental environment that fosters changes in knowledge, skills, and behaviors



Attention density theory • J. Schwartz

SERIOUS GAMING

IN THEIR ESSENCE SERIOUS GAMES ARE LEARNING ENVIRONMENTS

Learning is a process of discovery, and we must each be our own discoverer, other could not do it for you.

Charles Handy



TYPES OF LEARNING ENABLED BY SERIOUS GAMES

- Natural learning
- Case based learning
- Failure driven learning
- Goal directed learning
- Incidental learning
- Explorative learning
- Accommodative learning

SERIOUS GAMES FOR EDUCATION

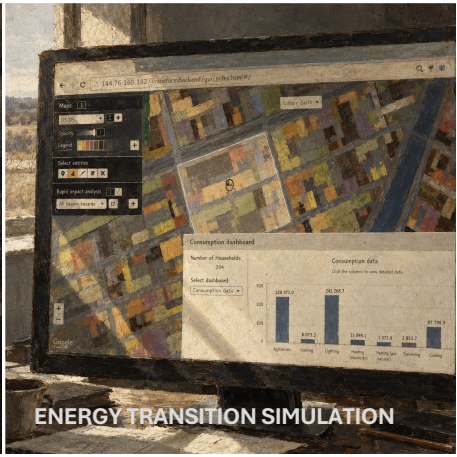
Serious games can be used to transfer knowledge and develop the skills and behaviors needed for effective change.



BANKING GAME

SERIOUS GAMES FOR RESEARCH

Serious games can also serve as tools for exploring the unknown, generating new insights and knowledge essential for successful change.



ENERGY TRANSITION SIMULATION

SERIOUS GAMING CAN TAKE DIFFERENT, TECHNOLOGY RELATED FORMS

Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

Stewart Brand



ANALOGUE	DIGITAL	ALTERNATE REALITY	AUGMENTED REALITY
Multi-player social interaction games, mostly at a higher level of abstraction.	Single-player or multi-player interactions within 2D or 3D virtual worlds.	Multi-player interactive narratives using real-life processes and systems as a platform.	Interaction through an overlap between our perceived reality and virtual reality.


BIG PICTURE GAME


LIFE SAVING RULES GAME


UTILITIES DAY-IN-A-LIFE GAME


PINPIN

The type of serious game to be developed and implemented depends on the nature of the problem, the objectives it aims to achieve, the intended players, and the experiences and insights it is designed to provide.

THERE ARE SEVERAL PERSPECTIVES ON THE OUTCOMES OF SERIOUS GAMING AND THE THEORIES BEHIND

Commitment is what transforms a promise into a reality.

Abraham Lincoln





HOLISTIC VIEW

Helping players gain a gestalt insight and understanding of what change needs to happen and the benefits it will deliver.



Gestalt theory
• C. von Ehrenfels

SHARED AWARENESS

Enabling players to exchange perspectives and attach a socially constructed meaning to why is change necessary.



Collective intelligence theory • T. Matus

MEMORIES OF FUTURE

Supporting players in generating actionable insights about how to implement the change and equip them with the competencies they need.



Predictive coding theory
• K. J. Friston

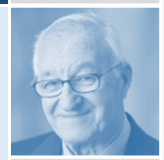
EXPERIENCE OF BENEFITS

Helping players build the commitment to action and to when the action should take place to achieve and sustain expected benefits.



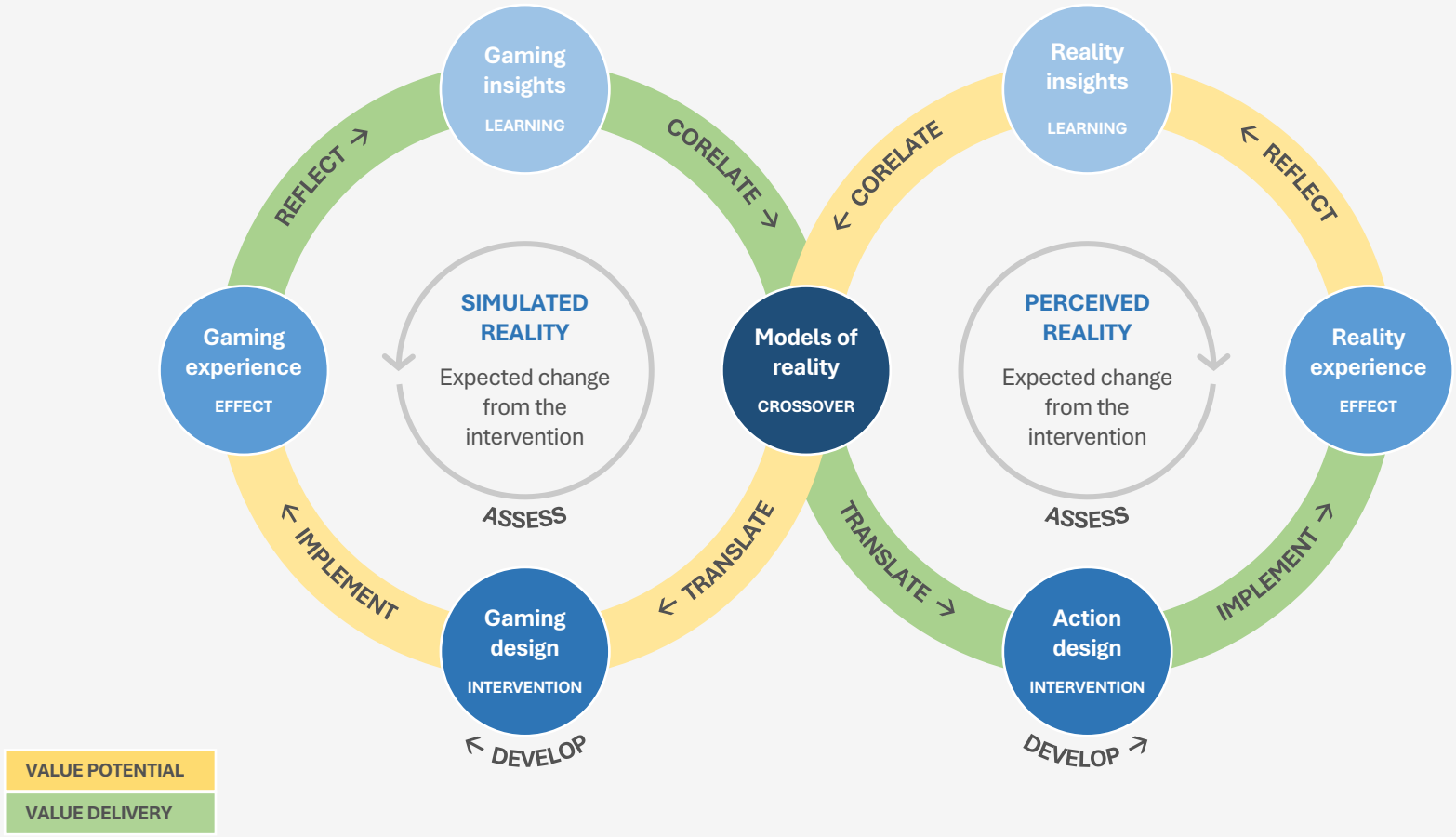
Self efficacy theory
• A. Bandura

LEMNISCATE OF REALITY IS A JOURNEY FROM VALUE POTENTIAL TO VALUE DELIVERY



Learning is bidirectional. We learn from the environment, and the environment learns and is modified thanks to our actions.

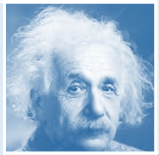
Albert Bandura



SERIOUS GAMING CAN DELIVER VALUE IN DIFFERENT WAYS

Strive not to be a success, but rather to be of value.

Albert Einstein



For more information on how to ensure games deliver value, see presentation: **Delivering value with serious gaming.**

WE LEARN FASTER

Serious games enable exploration of change within a condensed timeframe, leading to faster learning and quicker application in practice.



WE LEARN MORE

Serious games provide a multi-sensory experience that enhances retention, resulting in more sustainable improvements.



WE PAY LESS

Serious games offer opportunities to test different solutions when it is too costly or impractical to do so in real life or real time.



WE DECIDE BETTER

Serious games allow safe experimentation, supporting more effective and efficient decision-making.



SOME QUESTIONS FOR THE FUTURE

Prediction is very difficult, especially if it's about the future.

Nils Bohr





TRANSFER WITHIN OR OUTSIDE

How can we ensure that learning happens not only within the game but can be also translated to learning outside the game?



Literal and figural transfer theory • J. M. Royer

REALITY OR SIMULATED REALITY

How can we leverage that simulated worlds can feel as real as the actual world to enhance the sustainable impact of serious gaming?



Modal realism theory • D. K. Lewis

THEORY OR PRACTICE

How can we use serious gaming as an integrator of both theory and practice to enable discovery, learning, and action?



Expansivism theory • D. Rasmussen

DBR OR RBD

How can we integrate gaming as design-based research and games as research-based design to create a unified approach?



Design-based research theory • C. Hoadley

LEARNING FOR CHANGE
WITH SERIOUS GAMING



THANK YOU

© IVO WENZLER