PRATITI 2023

...becoming aware

WEBINAR SERIES ON SIMULATION AND GAMING

Organized by

CENTRE OF EXCELLENCE IN SIMULATION AND GAMING (*COE_SG*)

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Campus: Indore – Ujjain State Highway, Indore – 453111 (M. P.), INDIA

Visit Online – https://www.svvv.edu.in/, http://www.coesag.svvv.edu.in/

The rising flame
epitomises leadership
through enlightenment

The bright orange colour
represents brilliance

The colour blue reflects
serenity and infinity

तमसो मा ज्योतिर्गमय
Lead me from
darkness to light.

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA
श्री वैष्णव विद्यापीठ विश्वविद्यालय
तमसो मा ज्योतिर्गमय

PREAMBLE

The university successfully organized 28 webinars between October 3, 2020 and August 21, 2021. The presentations were compiled in the form of a Book that was named **PRATITI**, which means **becoming aware**. It was well received and appreciated by the ISAGA fraternity. The University has established the ***Centre of Excellence in Simulation and Gaming (CoE_SG)*** to promote Simulation and Gamification as pedagogy and undertake research in this upcoming multidisciplinary area of interest. All of us felt that enthusiasm and tempo should be maintained and members of the ISAGA fraternity should meet regularly to exchange learnings. With this thought, the University decided to continue the Webinars under the CoE_SG in the form of Webinar series with the name **Pratiti …becoming aware**. The webinars were conducted once every month and a total of 13 webinars were conducted between December 17, 2021 and December 03, 2022, and 12 webinars were conducted in the year 2023. A total of 53 webinars have been conducted under the series till December 2023 included in *Pratiti 2021*, *Pratiti 2022* and now *Pratiti 2023*. We are grateful to all the presenters for having accepted our invitation and sparing their valuable time. We are thankful to the members of ISAGA and faculty as well as students of Shri Vaishnav Vidyapeeth Vishwavidyalaya for having attended the webinars. We are also grateful to Dr. Sebastiaan Meijer and Ms. Marike for their help in finalizing the speakers. The presentations have been compiled with a brief profile of the presenters in this volume that has been named ***PRATITI…becoming aware 2023***. We are confident that this compilation will be found useful by interested members of the fraternity.

We wish happy learning to all!

Upinder Dhar

Jigyasu Dubey

Date: January 03, 2024

विद्वत्त्वं दक्षता शीलं संक्रान्तिरनुशीलनम्।
शिक्षकस्य गुणाः सप्त सचेतस्त्वं प्रसन्नता॥

English Meaning-

Scholarship, cleverness, good conduct, teaching skills, repeated study, consciousness and kindness, these are the seven qualities of a teacher.

प्रेरकः सूचकश्चैव वाचको दर्शकस्तथा।
शिक्षको बोधकश्चैव षडेते गुरवः स्मृताः॥

English Meaning-

The one who inspires, one who informs, one who recites, one who guides,
one who teaches, and the one who awakens, these are the six Gurus to remember.

About SVVV

Shri Vaishnav Vidyapeeth Vishwavidyalaya is a state private university established under Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Adhiniyam in 2015 at Indore MP (India). The University has been established with a vision to be leader in shaping better future for mankind through quality education, training and research. The University Commenced its first academic session from July 2016 with Undergraduate, Postgraduate, Integrated, Dual degree and Doctoral programs in various disciplines through the following constituent institutions:

1. Shri Vaishnav Institute of Technology and Science
2. Shri Vaishnav Institute of Information Technology
3. Shri Vaishnav Institute of Textile Technology
4. Shri Vaishnav Institute of Architecture
5. Shri Vaishnav Institute of Computer Applications
6. Shri Vaishnav Institute of Forensic Science
7. Shri Vaishnav School of Management
8. Shri Vaishnav Institute of Journalism and Mass Communication
9. Shri Vaishnav Institute of Fine Arts
10. Shri Vaishnav Institute of Science
11. Shri Vaishnav Institute of Social Sciences, Humanities and Arts
12. Shri Vaishnav Institute of Commerce
13. Shri Vaishnav Institute of Law
14. Shri Vaishnav Institute of Agriculture
15. Shri Vaishnav Institute of Home Science
16. Shri Vaishnav Institute of Paramedical Sciences
17. Shri Vaishnav Institute of Planning
18. Shri Vaishnav Institute of Education
19. Faculty of Doctoral Studies and Research

About CoE_SG

Gamification is the application of game-design elements and principles in non-game contexts. A large body of research focuses on the interplay of self-awareness, causal attribution, and action. Researchers have focused on how individuals perceive their involvement in the cause of events leading to either success or failure. Experiments have shown that when people are induced to be more self-aware, they are likely to attribute the success to themselves. The researchers have also reported that gamified events were very effective at engaging Gen Z and that team-based gamification events were particularly engaging. The University has established the Centre of Excellence in Simulation and Gaming to promote Simulation and Gamification as pedagogy and undertake research in this upcoming multidisciplinary area of interest. The Centre will be coordinating with ISAGA and other such professional bodies for global networking.

The COE_SG of this University is organizing a Webinar series "PRATITI …becoming aware" on gaming simulations in association with International Simulation and Gaming Association (ISAGA). Our key speakers will be ISAGA members and other GS professionals. Under this Series, a total of 28 webinars have been conducted in the Year 2020-21 and a total of 13 webinars have been conducted in the Year 2022.

Patrons	**Shri Purushottamdas Pasari**, Hon'ble Chancellor
	Dr. Upinder Dhar, Hon'ble Vice Chancellor
Mentors	**Dr. Santosh Dhar**, Rector and Dean - Faculty of Doctoral Studies and Research
	Dr. Anand Rajavat, Director – Shri Vaishnav Institute of Information Technology
Coordinator	**Dr. Jigyasu Dubey**, Professor – Shri Vaishnav Institute of Information Technology

Index with YouTube Link

अनंत संसार समुद्र तार

नौकायिताभ्यां गुरुभक्तिदाभ्याम् ।

वैराग्य साम्राज्यद पूजनाभ्याम्

नमो नमः श्री गुरु पादुकाभ्याम् ॥

English Meaning-

My salutation to the holy sandals of my Guru, which serves as the boat to cross this endless cycle of worldly existence, which endow me with devotion to Guru, and which grace me with freedom from all worldly desires

Webinar – 01

Day, Date & Time:	**January 28, 2023 (Saturday) Time: 03 – 04:05 p.m. (IST)**
Invited Speaker:	**Mr. Jegatheeswaran Manoharan**
Country:	**Malaysia**
Title:	**Designing Rapid Facilitation Games and Activities**

Webinar Topic

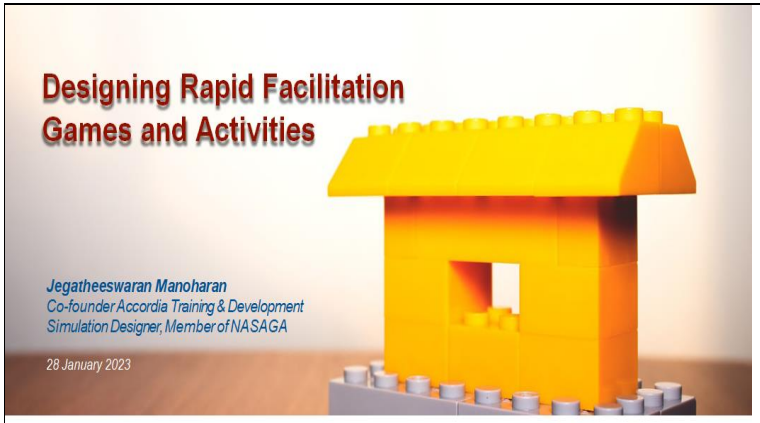
Designing Rapid Facilitation Games and Activities

Abstract

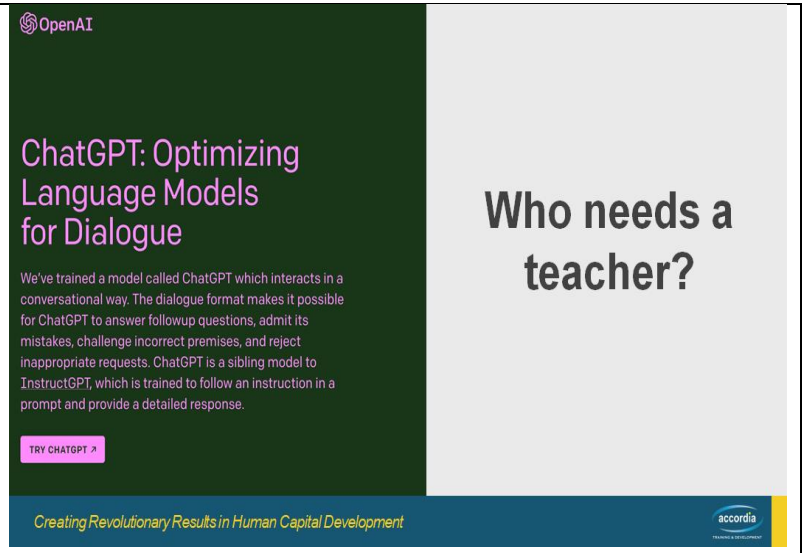
Artificial intelligence (AI) is rapidly changing the way we learn and access knowledge. As AI continues to fill the knowledge landscape, the traditional classroom model of "downloading" information is becoming less effective. Instead, classrooms must become a place of discourse, where students can actively engage with the material and engage in critical thinking. One way to achieve this is through the use of facilitation games and activities that inject fun into learning and provide alternative channels for expression. This talk will explore various activities that can be used to facilitate discussion and uncover learning in the classroom. These activities can range from interactive simulations and problem-solving exercises to debates and discussions, and they will be designed to allow students to explore new ideas, question assumptions, and express their own perspectives. Through the use of these activities, it is hoped that students will be in a better place to transform knowledge into practical skill.

Speaker Profile

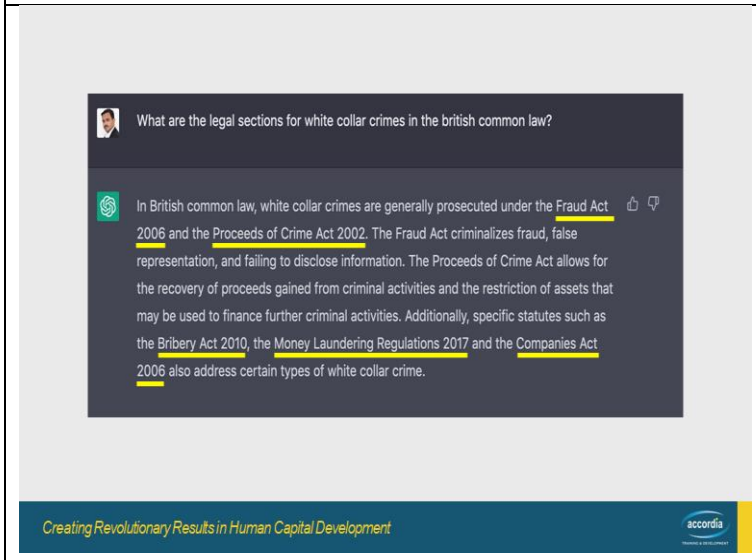
Jegatheeswaran Manoharan is a team leadership specialist, international speaker and a game & simulation developer. He is active advocate in the use of game based learning for corporate training. He has developed several learning games and simulations for adult learning. His highly interactive games have been used for team effectiveness, customer experience, culture transformation and leadership trainings. He runs a training organization in Malaysia that concentrates on game design to solve organizational issues. Jega is a former Executive Board Member of the North American Simulation & Gaming Association (NASAGA). He has been invited to share his ideas on application of games and simulation at NASAGA Conference in the US, ISAGA Conference in Thailand and India (virtually); and at the inaugural MASAGA Conference in Malaysia.


Designing Rapid Facilitation Games and Activities
Jegatheeswaran Manoharan
Co-founder Accordia Training & Development
Simulation Designer, Member of NASAGA
28 January 2023
accordia
TRAINING & DEVELOPMENT
Creating Revolutionary Results in Human Capital Development

1


OpenAI
ChatGPT: Optimizing Language Models for Dialogue
We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. ChatGPT is a sibling model to InstructGPT, which is trained to follow an instruction in a prompt and provide a detailed response.
TRY CHATGPT ↗
Who needs a teacher?
Creating Revolutionary Results in Human Capital Development
accordia

2


What are the legal sections for white collar crimes in the british common law?
In British common law, white collar crimes are generally prosecuted under the Fraud Act 2006 and the Proceeds of Crime Act 2002. The Fraud Act criminalizes fraud, false representation, and failing to disclose information. The Proceeds of Crime Act allows for the recovery of proceeds gained from criminal activities and the restriction of assets that may be used to finance further criminal activities. Additionally, specific statutes such as the Bribery Act 2010, the Money Laundering Regulations 2017 and the Companies Act 2006 also address certain types of white collar crime.
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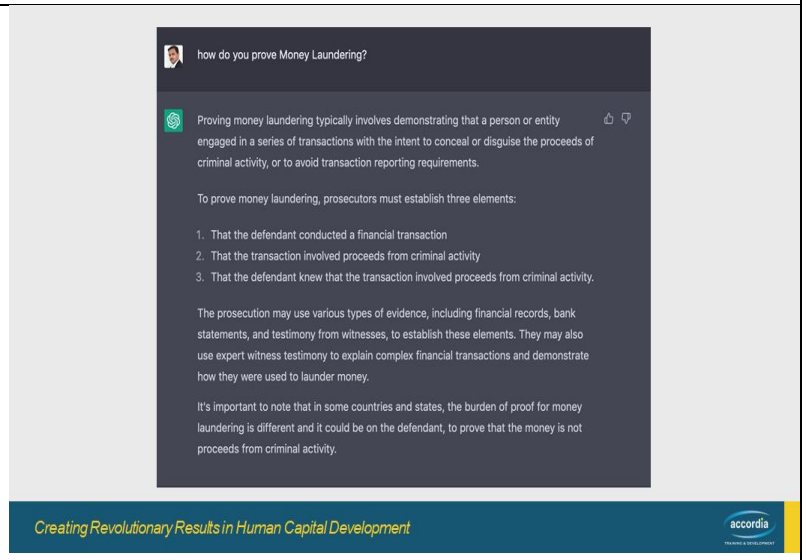
how do you prove Money Laundering?
Proving money laundering typically involves demonstrating that a person or entity engaged in a series of transactions with the intent to conceal or disguise the proceeds of criminal activity, or to avoid transaction reporting requirements.
To prove money laundering, prosecutors must establish three elements:
1. That the defendant conducted a financial transaction
2. That the transaction involved proceeds from criminal activity
3. That the defendant knew that the transaction involved proceeds from criminal activity.
The prosecution may use various types of evidence, including financial records, bank statements, and testimony from witnesses, to establish these elements. They may also use expert witness testimony to explain complex financial transactions and demonstrate how they were used to launder money.
It's important to note that in some countries and states, the burden of proof for money laundering is different and it could be on the defendant, to prove that the money is not proceeds from criminal activity.
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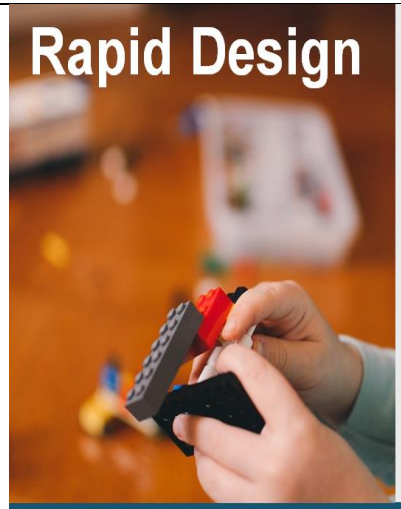
4

Challenge in designing games and activities:

- Time
- Know how

Thiagi's Philosophy:
Faster
Cheaper
Better



Rapid Design

Frames
Mechanics
Rules

Frames







Frames

- Existing game structures that can be used as a start
- Familiarity with different frames
- Use simple games - easy/familiar rules
- Short time to learn the game

Mechanics

- Various actions or processes in the game
- Is there another way to play this game?
- What can be removes, added or modified

9

Rules

- What can and cannot be done in the game
- Boundaries, limitation and allowances of players and game

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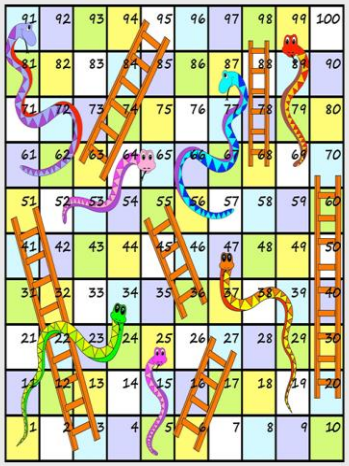

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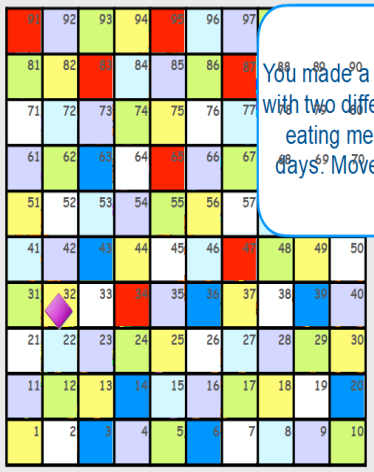

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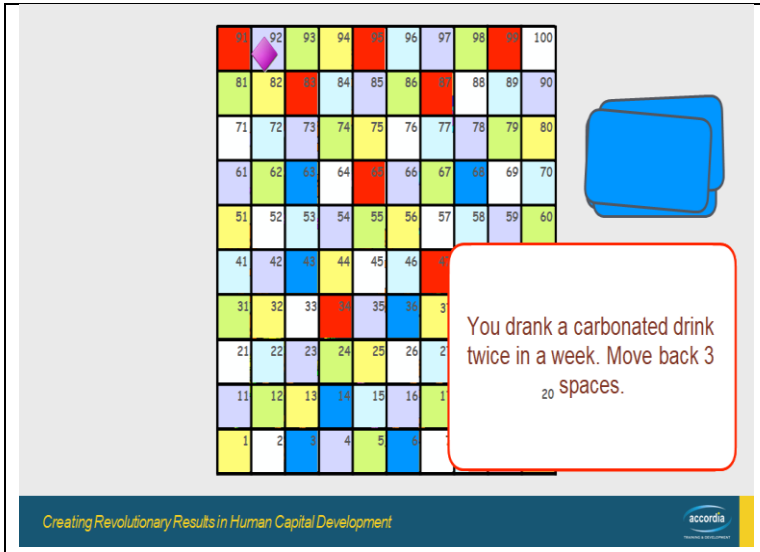

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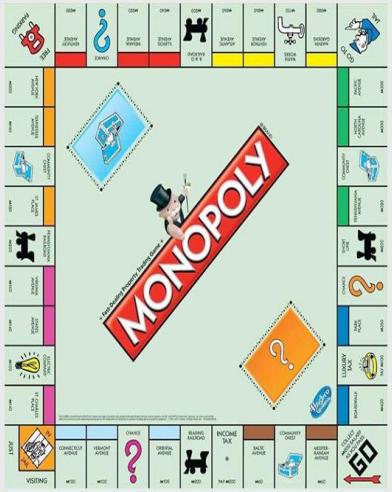

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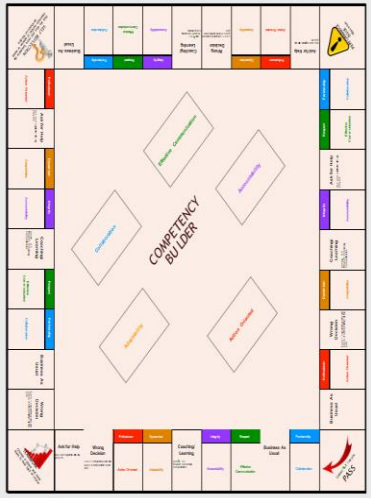

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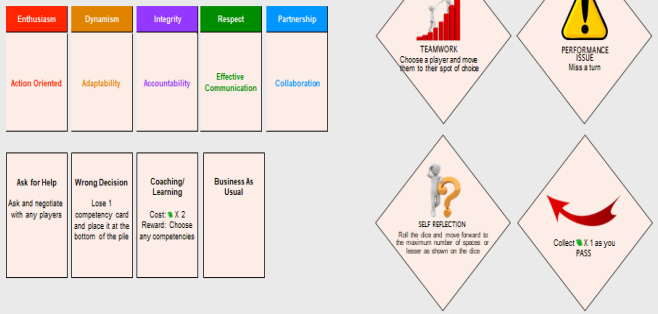

Creating Revolutionary Results in Human Capital Development

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Creating Revolutionary Results in Human Capital Development

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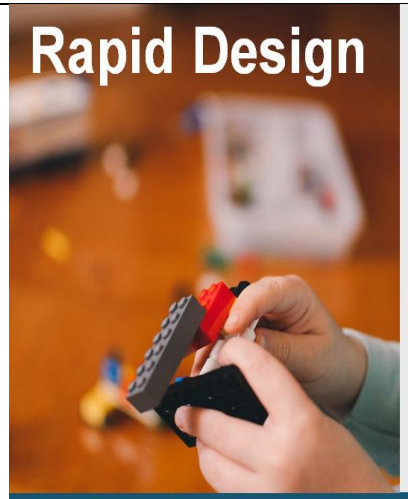

Rapid Design

Frames
Mechanics
Rules

Creating Revolutionary Results in Human Capital Development

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Creating Revolutionary Results in Human Capital Development

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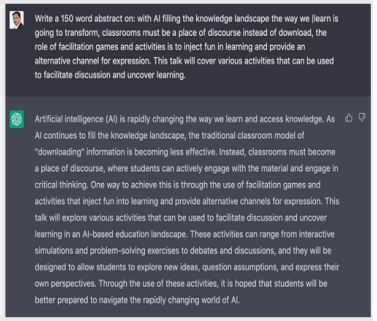
Topic: Designing Rapid Facilitation Games and Activities
Speaker: Jegatheeswaran Manoharan

Abstract:
Artificial intelligence (AI) is rapidly changing the way we learn and access knowledge. As AI continues to fill the knowledge landscape, the traditional classroom model of "downloading" information is becoming less effective. Instead, classrooms must become a place of discourse, where students can actively engage with the material and engage in critical thinking. One way to achieve this is through the use of facilitation games and activities that inject fun into learning and provide alternative channels for expression. This talk will explore various activities that can be used to facilitate discussion and uncover learning in the classroom. These activities can range from interactive simulations and problem-solving exercises to debates and discussions, and they will be designed to allow students to explore new ideas, question assumptions, and express their own perspectives. Through the use of these activities, it is hoped that students will be in a better place to transform knowledge into practical skill.



Creating Revolutionary Results in Human Capital Development

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Webinar – 02

Day, Date & Time: **February 27, 2023 (Monday) Time: 03 – 04:05 p.m. (IST)**

Invited Speaker: **Dr. Yusuke Toyoda**

Country: **Japan**

Title: **Local Knowledge Extraction Games for Resilience**

Webinar Topic

Local Knowledge Extraction Games for Resilience

Abstract

In the time of increasing risks and effects of climate change, importance of local knowledge to tackle natural hazards is getting more attention to integrate with scientific knowledge and learning as lessons for other areas. After laying out challenges of climate change, this webinar talk discusses the gamification mechanism and game approach contributing to enhancing knowledge sharing motivation. And it introduces games incorporating the gamification mechanism and game approach for extracting local knowledge on flood management. To verify the effectiveness of the game, focus group discussion was compared based on three knowledge extraction indicators. The talk ends with implications and limitations of the game.

Speaker Profile

Yusuke Toyoda, PhD, is an Associate Professor of the College of Policy Science, Ritsumeikan University. He is also a member of Institute of Disaster Mitigation for Urban Cultural Heritage AND Research and Development Institute of Regional Information, both with Ritsumeikan University. He utilizes S&G for study and practice on community-based disaster management and disaster education.

RITSUMEIKAN

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Centre of Excellence in Simulation and Gaming (CoE_SG)

PRATITI 2023

... becoming aware

Webinar II of Series

Date: February 27, 2023

Local Knowledge Extraction Games for Resilience

Yusuke Toyoda
College of Policy Science,
Ritsumeikan University

1

1. Background

2

1. Learning and Adapting Local Knowledge

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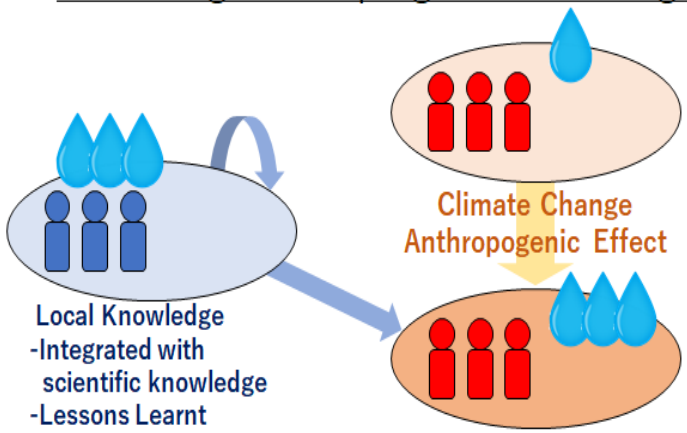

3

2. Previous Methods to Collect Local and Traditional Knowledge

4

- Participatory Mapping
- Filmmaking
- Participatory Art
- Focus Group Discussion (FGD)

4

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2. Why Gamification?

5

2. Why gamification for knowledge sharing

Gamification mechanics addressing knowledge sharing motivation

→**No study gamification for knowledge sharing for disaster resilience**

Gamification Mechanism
Competition
Cooperation
Feedback
Performance graph
Challenge
Rewards
Status

- Having Positive and negative aspects
- Gamification mechanism to be carefully imbedded into activities (often game styles)

Adapted from Friedrich, et al. 2020

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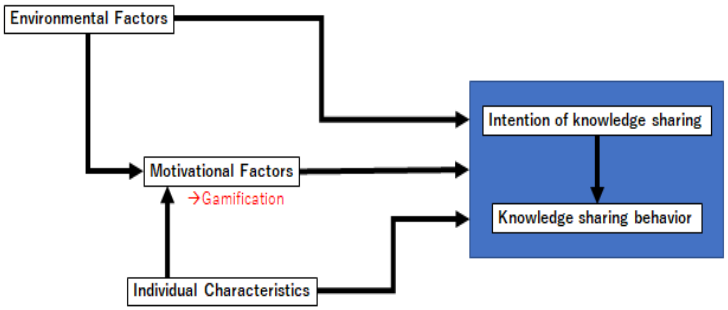
3.2 Framework of Knowledge Sharing Research



Adapted from Wang, et al. (2010)

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Game 1

Local Disaster Knowledge Extraction Game: Flood management in Thailand

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2. Objective of This Study

To identify the strengths of Gamification for collecting local knowledge to enhance community resilience (compared to Focus Group Discussion)

9

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3. Case and Sample Selection

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3.1 Case

Area: Local Community(**flood-prone area**) (Thailand)

Feature: Presented as one of the WHO's "**Safe Communities**"

Recent History of Flood

- Suffered from flooding in **2006** and **2011**
- Flood being about to occur in **2017**

Participants

- Sub-community leaders who dealt with the 2011 flood
- Official community volunteers (residents) who dealt with the 2011 flood
  →Deciding based on their availabilities and at random

(The then and present community leaders observed and got interviewed for feedback)

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3.2 Methodology

Game "Local Disaster Knowledge Extraction Game: Flood management in Thailand"	FGD
3 phases: pre-, during-, and post-flood with map **and flood simulation cover**	3 phases: pre-, during-, and post-flood with map
Choose what they did in 2011 flood from **18 activity cards** (made based on typical practice for flood management) and **blank cards** (on which they can write down)	Write what they did in 2011 flood on **practice card**
Getting questions if needed from the researchers	Getting questions if needed from the researchers
Getting **a true-or-false-quiz style feedback** from a researcher	
The number of knowledge (cards) written by players **shown** to all players	The number of knowledge (cards) recorded by the researcher but **not shown** to participants
10 participants	10 participants
25th May 2022 (2 hours)	26th May 2022 (1.5 hours)

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3.2 Game

1st-3rd Phase

- Showing what they did for 2011 flood with 18 prepared **activity cards** and filling out **blank cards** for additional activities
- Putting them on the map which they conducted the activities
- Researcher **asking questions** for further details
- Feedback from researcher in a **true-or-false-quiz style**
- Filling out **score table (numbers of cards)**

only 2nd phase (During-flood period)

- Covering the map with **2011 flood inundation area to show floodings situation**

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3.2 Game

14

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3.2 Methodology

Gamification Mechanism Embedded in the Game for Knowledge Sharing

Motivation for Knowledge Sharing	Gamification Mechanism
Fun/enjoyment	Challenge (Researcher's judgement) Feedback (True or false quiz)
Self-efficacy/visibility of achievements	Feedback (True or false quiz) Performance graphs (Table of knowledge count)
Reputation	Feedback (True or false quiz)
Signaling competence	Performance graphs (Table of knowledge count)

Adapted from Friedrich, et al. 2020

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3.2 Focus Group Discussion

1st-3rd Phase

- Filling out **practice cards** to show what they did in 2011 flood
- Putting them on the map which they conducted the activities
- Researcher **asking questions** for further details
- Researcher take a note on the number of knowledge on private note

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3.2 Focus Group Discussion

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3.2 Framework of Knowledge Sharing Research

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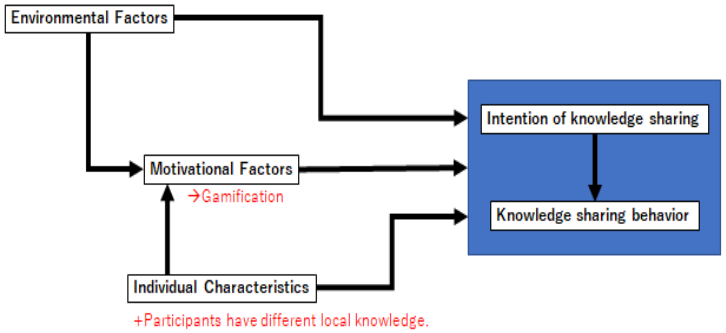

Adapted from Wang, et al. (2010)

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4. Analysis

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4. Indicators of Effective Knowledge Extraction for Disaster Resilience

20

1. **Grasping Local Contexts with LDK**
   Categorization table for LDK with local contexts

2. **Identifying Locally Specific LDK**
   Judgements by experts (and references & previous studies)

3. **Social learning enabler**
   Supplemental Explanation from Other Participants

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4.1 What Knowledge Should Be Shared More (Examples of Collected Knowledge)

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Content \ Function	Observation	Anticipation	Adaptation	Communication
Facts	Following up water level	Warning system	Not touching electric appliance	
Usage	Tracking information of water measurement points		Preparing community center	Working with city to clean community
Value			Preparing area for pet	Compensation for victims from community fund
System			Making plan to change location of emergency center	Making community map

Source: Authors adapting Dekens (2007)'s and Usher (2000)'s ideas to our definition of local knowledge

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4.1 Collected Knowledge Categorization

22

- More Knowledge on **Communication and Value** in the **game**
- Especially **blank cards** in the game showing more knowledge on **Value**

Knowledge Cards

Game	Observation	Anticipation	Adaptation	Communication	Total
Fact	0	1	34	0	35
Usage	1	0	142	62	205
Value	0	0	15	3	18
System	0	0	1	6	7
Total	1	1	192	71	265

FGD	Observation	Anticipation	Adaptation	Communication	Total
Fact	5	0	4	0	9
Usage	1	0	71	17	89
Value	0	0	2	3	5
System	0	0	0	4	4
Total	6	0	77	24	107

Knowledge Contents

Game	Observation	Anticipation	Adaptation	Communication	Total
Fact	0	1	9	0	10
Usage	1	0	44	18	63
Value	0	0	7	2	9
System	0	0	1	4	5
Total	1	1	61	24	87

FGD	Observation	Anticipation	Adaptation	Communication	Total
Fact	2	0	3	0	5
Usage	0	0	31	8	39
Value	0	0	1	3	4
System	0	0	0	4	4
Total	2	0	35	15	52

* Numbers with colors in the left tables are statistically significant (Mann–Whitney U Test, $p < 0.05$), while no statistical analysis on the right.

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4.1 Collected Knowledge Categorization

23

- More Knowledge on **Communication and Value** in the **Game**
- Especially **blank cards** in the game showing more knowledge on **Value**

Knowledge Cards

FGD	Observation	Anticipation	Adaptation	Communication	Total
Fact	5	0	4	0	9
Usage	1	0	71	17	89
Value	0	0	2	3	5
System	0	0	0	4	4
Total	6	0	77	24	107

Game-Blank	Observation	Anticipation	Adaptation	Communication	Total
Fact	0	1	0	0	1
Usage	1	0	25	10	36
Value	0	0	5	3	8
System	0	0	1	6	7
Total	1	1	31	19	52

Knowledge Contents

FGD	Observation	Anticipation	Adaptation	Communication	Total
Fact	2	0	3	0	5
Usage	0	0	31	8	39
Value	0	0	1	3	4
System	0	0	0	4	4
Total	2	0	35	15	52

Game-Blank	Observation	Anticipation	Adaptation	Communication	Total
Fact	0	1	0	0	1
Usage	1	0	18	11	30
Value	0	0	4	2	6
System	0	0	1	4	5
Total	1	1	23	17	42

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4.2 Identifying Locally Specific LDK

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① **Expert judgements**

- **DDPM staff** (Department of Disaster Prevention and Management, Thailand)
- **ADPC staff** (Asia Disaster Preparedness Center)
- **Freelance** (working with DDPM, ADPC, JICA, etc.)

② **References**

- Flood management **guidelines** (ALLWELLHEALTHCARE 2011, CENDRU 2012, Thairath Press 2021, DDPM 2021, Thai Meteorological Department n.d., and Water Analysis and Assessment Division n.d.)
- Previous **studies** on the community (Tanwattana 2018; Tanwattana and Toyoda 2018)

24

4.2 Identifying Locally Specific LDK

25

- The game could **extract more locally specific LDK**
- No locally specific LDK extracted only by FGD
- The game could **extract LDK which was not found** by the long-term involvement

	①All experts judged as locally specific	②Not listed in guidelines	②Mentioned in the studies
Before flood			
Common	Checking equipment's stock of the community fund	○	○
After flood			
Game	Career's promotion by distribute seeds for crop in the pot that hanging on the wall because flooding affect inability to plant on the ground.	○	×
Common	Community fund pay the compensation	○	○
Game	Conclusion and Evaluation of the plan	○	○
Game	Pay attention to the community funds for continue in the future (by community)	○	○

25

4.3 More Support from Other Players to Explain

26

- To get "true" from researcher as feedback, players seemed to **support** other players to explain more about local knowledge especially for knowledge on **communication** to convince researchers

Ratio of Support by Other Participants in Q&A Sessions

		Obasevation			Anticipation			Adaptation			Communication			Total		
		Q&A Session	Support Session	Ratio	Q&A Session	Support Session	Ratio	Q&A Session	Support Session	Ratio	Q&A Session	Support Session	Ratio	Q&A Session	Support Session	Ratio
GS	Total							8	6	75.0%	7	5	71.4%	15	11	73.3%
FGD	Total	2	1	50.0%	0	0		14	7	50.0%	10	1	10.0%	26	9	34.6%

(Fisher Exact Test, $p < 0.05$, $n = 41$ [total number of Q&A sessions])

26

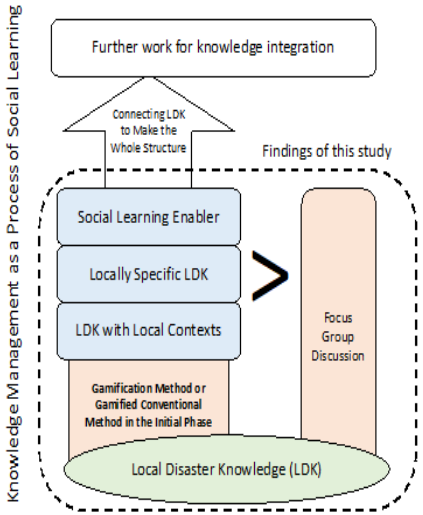
3.3 Game

27

27

4.4 Summary of Findings

28



28

RITSUMEIKAN

5. Conclusion

29

5.1 Conclusion

1. **The game as an effective tool** for knowledge extraction for disaster resilience
2. The Game "Local Disaster Knowledge Extraction Game: Flood management in Thailand" **can be used** as the essential process of knowledge management for disaster resilience OR can **be incorporated into conventional tools**.

5.2 Limitation

1. **Not enough depths** and needing more intervention to get deeper knowledge
2. **Varieties of factors** affecting knowledge sharing
3. Important local knowledge **lacking** in both methodologies: checking water measurement in an upstream, etc.
4. **Appropriateness to play games** to disaster affected areas

30

Game 2

Flood Management Game for Lessons (FMGL)

31

3. Process of the Game

1. Role assignment

32

33

You are...

Mayor
(local government)

<Community Residents>

Volunteer
(supporting leaders and help community members)

Community Leader

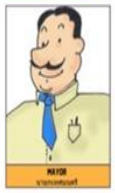
Community Member

33

34

Your Objectives are...

Mayor
To keep all players scores above 0



<Community Residents>

Volunteer
To keep all players scores above 0

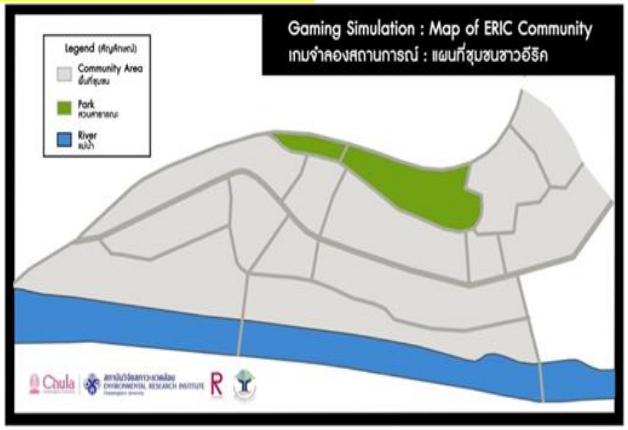
Community Leader
To keep all players scores above 0

Community Member
To get more score than other community members

34

35

You live in ERIC Community with the risk of flood!!



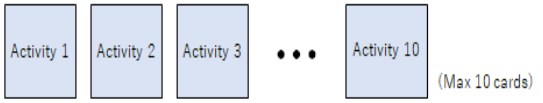
35

3. Process of the Game

1. Role assignment
2. Explanation

<**Game play: players can talk during the play**>

1. Playing the 1st phase (before flood)

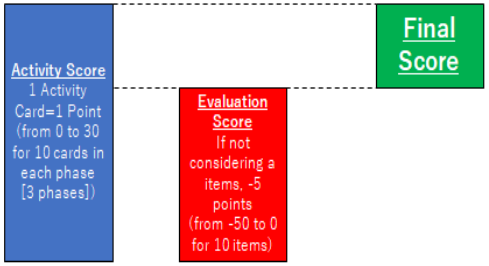


2. Playing the 2nd phase (during flood)
3. Playing the 3rd phase (after flood)
4. Brief explanation by some of the players on what they considered in activities
5. Feedback and score calculation

36

3. Process of the Game

How to calculate scores



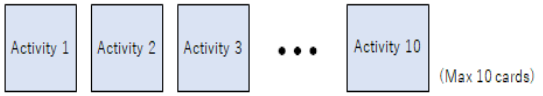
37

3. Process of the Game

1. Role assignment
2. Explanation

<**Game play: players can talk during the play**>

1. Playing the 1st phase (before flood)



2. Playing the 2nd phase (during flood)
3. Playing the 3rd phase (after flood)
4. Brief explanation by some of the players on what they considered in activities
5. Feedback and score calculation

Playing the 2nd round

38

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3.2 Methodology

Gamification Mechanism Embedded in the Game for Knowledge Sharing

Motivation for Knowledge Sharing	Gamification Mechanism
Fun/enjoyment	Feedback (Evacuation)
Self-efficacy/visibility of achievements	Feedback (Evacuation) Performance graphs (Final points)
Reputation	Performance graphs (Final points)
Signaling competence	Performance graphs (Final points)

Adapted from Friedrich, et al. 2020

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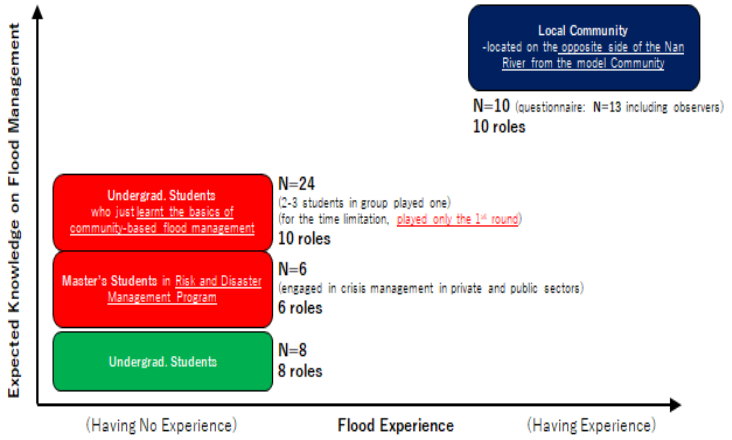
3. Targets (Participants of the Game)



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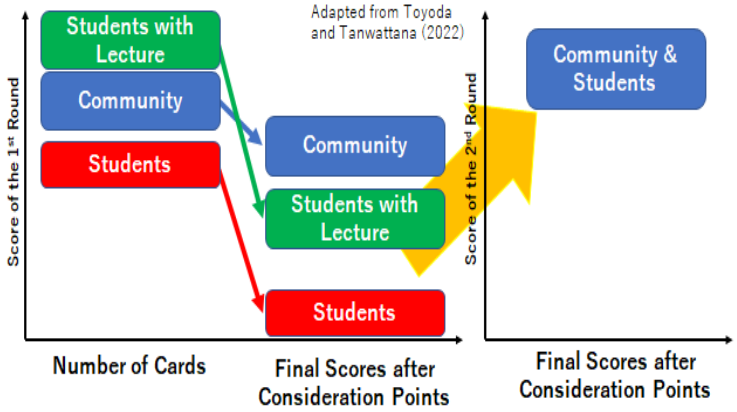
3. Targets (Participants of the Game)

41

Validation of the Game: Scores of participants with and without flood experience and knowledge



42

There would be a trend of flood management knowledge of university students (compared with the community one)

- Picking up only **leaders and volunteers** which may not be familiar to university students

Frequencies of Categories (1st round)

Fact	Usage	Value	System	Total
20220919class-climate and disaster resilience				
7	28	1	0	36
20221002class-Disaster Management-RDM course				
7	30	5	3	45
20221026class-Our Environments				
13	115	6	4	138
Ban Pa Haad Community				
7	60	5	9	81

Ratios of Categories (1st round)

Fact	Usage	Value	System
20220919class-climate and disaster resilience			
19.4%	77.8%	2.8%	0.0%
20221002class-Disaster Management-RDM course			
15.6%	66.7%	11.1%	6.7%
20221026class-Our Environments			
9.4%	83.3%	4.3%	2.9%
Ban Pa Haad Community			
8.6%	74.1%	6.2%	11.1%

43

5. Conclusion

1. **Developing the game "Flood Management Game for Lessons (FMGL)"** which can reflect participants' knowledge (and experience) of the model community on community-based flood risk management by the scores

2. **Enhancing participants' knowledge** on how to cope with flood in a community (especially the model community on community-based flood risk management) **by the game**

3. **Demonstrating differences in flood management knowledge by the game** between Thai community and Thai university students (personal knowledge) → to grasp participants' own knowledge trends

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RITSUMEIKAN

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Centre of Excellence in Simulation and Gaming (CoE_SG)

PRATITI 2023

... becoming aware

Webinar II of Series

Date: February 27, 2023

Thank you very much

This presentation is based on:

Toyoda Yusuke, Tanwattana Puntita 'Collecting Local Practice on Flood Management by Gaming Simulation and Focus Group Discussion' The Association of Pacific Rim Universities (APRU) "17th APRU (Association of Pacific Rim Universities) Multi-Hazards Symposium 2022" 29th-30th November 2022, Mandarin Hotel Bangkok (Samyan), in Bangkok, Thailand and Online.

&

Toyoda Yusuke, Tanwattana Puntita 'Gaming Simulation for Learning Flood Disaster Local Knowledge' The Asian Regional Organization of the Society for Risk Analysis "Society for Risk Analysis-Asia Conference 2022" 18-19 November 2022, Online.

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Webinar – 03

Day, Date & Time:	**March 24, 2023 (Friday) Time: 03 – 04:05 p.m. (IST)**
Invited Speaker:	**Dr. Ivo Wenzler**
Country:	**Netherlands**
Title:	**Why is Change Difficult and How can Serious Gaming Help**

Webinar Topic

Why is Change Difficult and How can Serious Gaming Help

Abstract

Performance improvements can only be achieved by proactively managing the change process. However, getting to and benefiting from transformational change is often not easy. The change journey presents a variety of structural, behavioral, individual and systemic challenges inherent in the very nature of transformational change. Serious games are an effective and efficient approach to addressing these challenges of change and should be an essential element of any change program. The presentation will outline in detail what are the main challenges for successful change and provide examples of different serious games which successfully addressed these challenges.

Speaker Profile

Dr. Ivo Wenzler is Professor Emeritus of Serious Gaming at the NHL Stenden University of Applied Sciences, where he was conducting innovative research into the design, implementation, and value contribution of serious gaming. Prior to the appointment at NHL Stenden, he had a 23-year career as a Senior Principal at Accenture Strategy and he held the position of the Associate Professor at the Delft University of Technology. Throughout his consulting and academic career, he has been focusing on development and implementation of change management, business modeling, workforce planning, and simulation and serious gaming approaches aimed at helping his clients deal with their transformation challenges. He often presents at international conferences and has published in the field of serious gaming, change management, and simulation-based modeling.

SERIOUS GAMING

WHY IS CHANGE DIFFICULT AND HOW CAN SERIOUS GAMING HELP

IVO WENZLER

SERIOUS GAMING @ NHLS

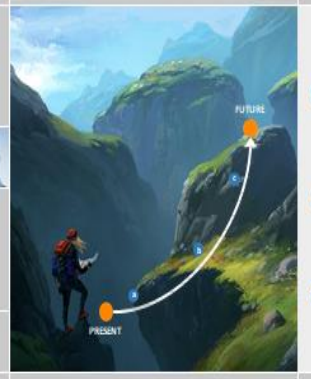
1

CHANGE

GETTING TO AND BENEFITING FROM CHANGE IMPLIES A CHANGE JOURNEY

If you focus on results, you will never change. If you focus on change, you will get results.

Jack Dixon



ENVISION THE CHANGE

A Where do we want to be, why do we want to be there, and how do we start?

ENABLE THE CHANGE

B How do we get there, what do we need to do, and how to ensure we do not stop?

LIVE THE CHANGE

C How do we make it work, assess our success, and ensure we do not fall back?

SERIOUS GAMING @ NHLS

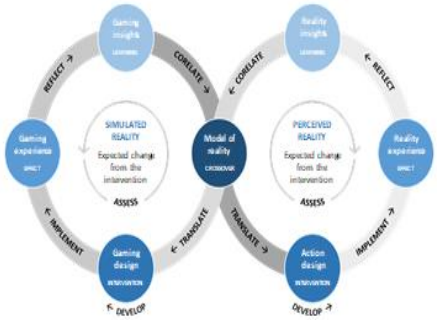
2

LEMNISCATE APPROACH

A JOURNEY FROM THE PERCEIVED REALITY TO THE SIMULATED REALITY AND BACK

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

Ivo Wenzler



SERIOUS GAMING @ NHLS

3

CHANGE

ORGANIZATIONAL, INSTITUTIONAL, AS WELL AS SOCIAL CHANGE IS NOT EASY

If you don't like change, you are going to like irrelevance even less.

Eric Shinsekiç

Change is very often accompanied by a variety of structural, behavioral, individual and systemic challenges and reasons making that change not easy.

SERIOUS GAMING @ NHLS

4

CHALLENGE #1

ELEMENTS OF AN ORGANIZATION ARE CHANGING AT DIFFERENT SPEEDS

RECOGNIZING THE LIMITS TO CHANGE

How to recognize the speed limits at which different elements of organizations can change?

MANAGING THE CHANGE BY MANAGING THE SLIPPAGE

How to prevent slow elements blocking the flow of the quick ones, and the quick ones tearing up the slow ones with their constant change?

Have you ever noticed. Anybody going slower than you is an idiot. And anyone going faster is a maniac.

George Carlin

OBJECTIVE

Getting insight into challenges and benefits of changing the organization from a function centric to a customer centric one.

OUTCOME

Increased engagement and reduced resistance to change.

SERIOUS GAMING @ NHLS

CASE

5

CHALLENGE #2

WE MOSTLY PLAN FOR EGAP BUT NEGAP IS USUALLY THE NORM

REDEFINING THE RULES OF THE GAME

How to avoid a deliberate overestimating of benefits and underestimating of costs in order to increase the likelihood of gaining approval and funding?

BUILDING THE CAPABILITIES TO PLAN FOR UNCERTAINTY

How to enable decisions based on a rational weighting of gains, losses, and probabilities rather than on delusional optimism?

For every complex problem, there is a solution that is simple, neat and wrong.

Henry L. Mencken

OBJECTIVE

Exploring organizational aspects contributing to business resilience and longevity, under a set of different future scenarios.

OUTCOME

Positioning of the organization along the key drivers of resilience and the plan of action.

SERIOUS GAMING @ NHLS

CASE

6

CHALLENGE #3

CHANGE IMPLIES MANY DIVERSE AND CONFLICTING INTERESTS

CREATING THE WIN-WIN SITUATION FOR ALL

How to align expectations of different stakeholders and minimize conflicts of interests between them?

MINIMIZING THE VALLEY OF DESPAIR

How to productively engage all stakeholders, reduce their resistance to change, and motivate them for action?

I don't understand you. You don't understand me. What else do we have in common?

Ashleigh Brilliant

OBJECTIVE

Getting insight into the complexity of energy transition, dependencies between stakeholders, and impact of measures on CO2 reduction.

OUTCOME

Increased understanding of stakeholder interests, constraints, and options within energy transition.

SERIOUS GAMING @ NHLS

CASE

7

CHALLENGE #4

CHANGE REQUIRES SYMBIOTIC AND NOT PREDATORY RELATIONSHIPS

DELIVERING SUCCESS THROUGH NETWORKING AND NOT COMBAT

How to create and maintain both internal and external change networks and alliances?

MANAGING THE CHANGE THROUGH CO-EVOLUTION

How to encourage self-organizing and emergent behavior and an ongoing interplay of competition, cooperation, creation, and mutual adaptation?

Life is relationships; the rest is just details.

Gary Smalley

OBJECTIVE

Getting insight into importance of leadership, communication, and cooperation within a complex network organization.

OUTCOME

Behaviors for leveraging vertical and horizontal alignment to improve performance.

SERIOUS GAMING @ NHLS

CASE

8

CHALLENGE #5

CHANGE IS NOT AN EVENT BUT A CONTINUOUSLY EVOLVING PROCESS

If you're in a bad situation, don't worry it'll change. If you're in a good situation, don't worry it'll change.

John A. Simone

SQUARING THE CIRCLE OF CHANGE

How to overcome a natural resistance to change even when apparently illogical in demanding change when we are most successful?

PREVENTING DEATH FROM EQUILIBRIUM

How to plan for change and ensure the speed and adaptability instead of focusing on the size and stability?

OBJECTIVE

Experiencing how to engage with a client to understand its need, develop an effective change plan, and present it in a compelling way.

OUTCOME

Actionable insights into the elements of an effective organizational change journey.

SERIOUS GAMING @ NHLS

CASE

9

CHALLENGE #6

THERE ARE SOME COMPETING THEORIES ON HOW TO ACHIEVE CHANGE

In theory there is no difference between theory and practice. In practice there is.

Yogi Berra

SHAPING REALITY THROUGH EXPECTATIONS

How to cultivate moments of insights since large scale behavior change requires a large-scale change in mental maps?

SHAPING IDENTITY THROUGH ATTENTION DENSITY

How to create and sustain repeated, purposeful, and focused attention required to hardwire insights for successful change, given the brain's limited working memory?

OBJECTIVE

Getting insight into the supplier management process and the steps to be taken while developing a business case for innovation.

OUTCOME

Knowledge, skills, and behaviors required for an effective supplier management process.

SERIOUS GAMING @ NHLS

CASE

10

CHALLENGE #7

CHANGE CREATES PSYCHOLOGICAL AND PHYSIOLOGICAL DISCOMFORT

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

Lily Tomlin

UNDERSTANDING AND MANAGING THE LIMITS TO CHANGE

How to ensure that those introducing and promoting change fully understand the impact of change on all stakeholders and are able to act on it?

CHANGING AND HARDWIRING NEW HABITS WITH SPEED

How to ensure the speed of transferring the work from prefrontal cortex to basal ganglia, which has a larger storage capacity and requires much less energy?

OBJECTIVE

Building and testing leadership competencies required to balance result focus, client focus, and the organizational focus.

OUTCOME

Assessment of leadership skills and an actionable personal development plan.

SERIOUS GAMING @ NHLS

CASE

11

CHALLENGE #8

THERE IS A PARADOX WITHIN LEARNING, WE LEARN IN ORDER NOT TO LEARN

It's easier to learn many other things, if you first learn how to learn.

Ashleigh Brilliant

UNRAVELING THE LEARNING PARADOX

How to determine the timing and balance between learning for acquiring habits, for changing habits, and for changing the ways in which we change habits?

USING LEARNING AS THE MOST SUSTAINABLE COMPETITIVE ADVANTAGE

How to develop and maintain the ability to learn faster and better than the competition?

OBJECTIVE

Experiencing the importance of clear communication and sharing of insights when interchangeably dependent on collaboration.

OUTCOME

Increased awareness of teamwork, leadership and communication competencies.

SERIOUS GAMING @ NHLS

CASE

12

CHALLENGE #9

COMMUNICATION AS A MAIN VEHICLE FOR CHANGE IS UNRELIABLE

The greatest problem in communication is the illusion that it has been accomplished.

Hubert H. Humphrey

GOING BEYOND THE LANGUAGE

How to ensure that communication is understandable, relevant, timely, measured, and actionable?

COMMUNICATING BY WALKING THE TALK

How to inspire and enable change not only through traditional communication interventions, but through structures, processes, and stakeholder behaviors?

OBJECTIVE

Reflecting on the communication challenges in an unfamiliar situation, and the impact of these challenges on performance.

OUTCOME

Requirements for a clear communication and how to translate them to action.

SERIOUS GAMING @ NHLS

CASE

13

Webinar – 04

Day, Date & Time:	**April 24, 2023 (Monday) Time: 03 – 04:05 p.m. (IST**
Invited Speaker:	**Ms. Himani Chandorkar**
Country:	**India**
Title:	**Driving leadership lessons via a Virtual Everest Climb Simulation - The Game Design Elements to Make it Happen**

Webinar Topic

Driving Leadership Lessons via a Virtual Everest Climb Simulation - The Game Design Elements to make it Happen

Abstract

Everest is a trainer without parallels, even when you experience it through a simulation! MISSION EVEREST a simulation to build high performance teams is thus the next best substitute to actually climbing up the deadly 29000 feet without risking your lives! Everest serves as a universal metaphor for challenging & aspirational goals in life. Whether climbing the Mt. Everest or the metaphorical Everests at work and in life, its vital not just to focus on the summit but focus on summiting with a healthy team. A message that gets clearly experienced during the simulation through various challenges that the team tackles. A simulation experienced by thousands of participants from companies across the globe - this webinar will give a glimpse of how it works.

Speaker Profile

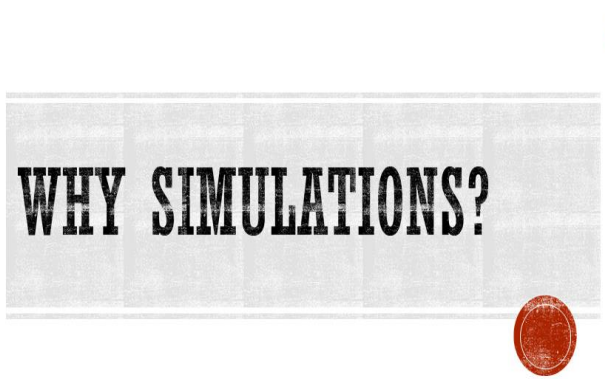
A seasoned L&D professional with 19 years of experience she is the Co-founder, Acumen360, which has positively impacted hundreds of companies & 50,000+ individuals across industries and countries through it's learning & development solutions. She is also co-founder, Etude360, rated in the TOP 20 ventures incubated with IIM Bangalore - NSRCEL 2021 for innovative & impactful experiential learning simulations. Certified in NLP as well as certified in TA from ITAA (International Transactional Analysis Association), her passion to make learning interventions deliver on outcomes has earned her & her company awards and accolades. She has also been invited multiple times to present at International Learning & Gamification Conferences. An avid adventurer and blogger, she is also co-authoring a book on small business management.


SIMULATION
MISSION EVEREST
A VIRTUAL EXPEDITION SIMULATION
A TOOL TO HELP TEAMS ACCOMPLISH THEIR
EVEREST GOALS
POWERED BY
Étude 360
unlock your potential

1


MOUNTAINS & LEADERSHIP
Étude

2


Étude
WHY SIMULATIONS?

3


WHY SIMULATIONS
Étude
SIMULATION
AIRLINES REQUIRE PILOTS TO LOG SIMULATOR HOURS
IT'S ALL ABOUT THE AIM

4

SIMULATION

MISSION EVEREST

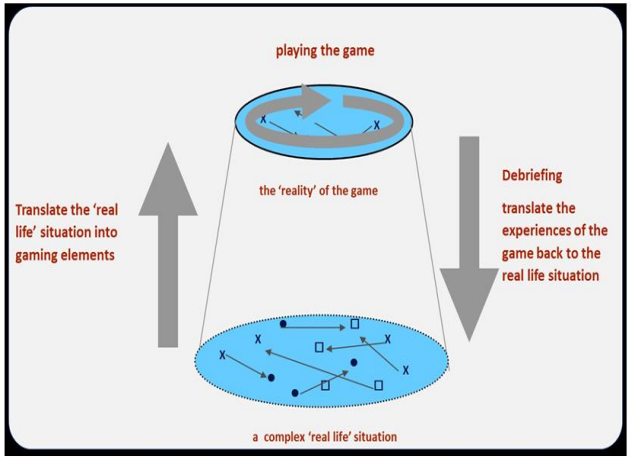
A VIRTUAL EXPEDITION SIMULATION

POWERED BY

Étude 360 unlock your potential

5

6



SIMULATION*GAMES*-*A*CONCISE*INTRODUCTION*TO*THE*DESIGN*PROCESS-
Vincent'Peters' Marleen'van'de'Westelaken' Nijmegen,'2014'

7

SIMULATION

MISSION EVEREST

A VIRTUAL EXPEDITION SIMULATION

POWERED BY

Étude 360

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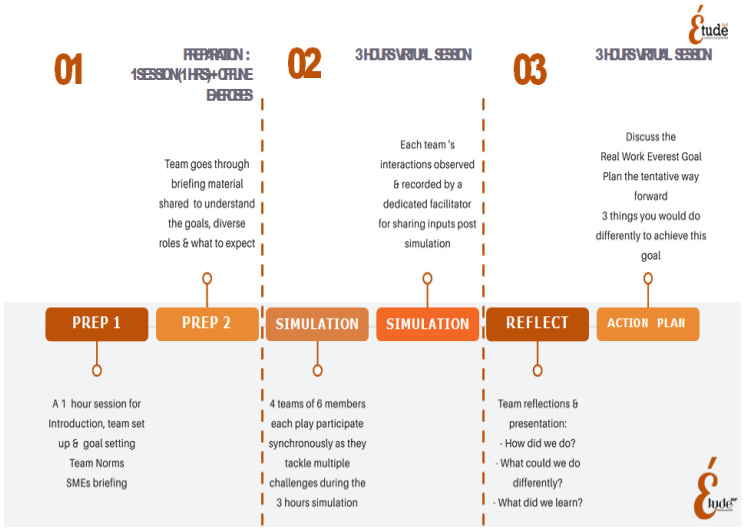
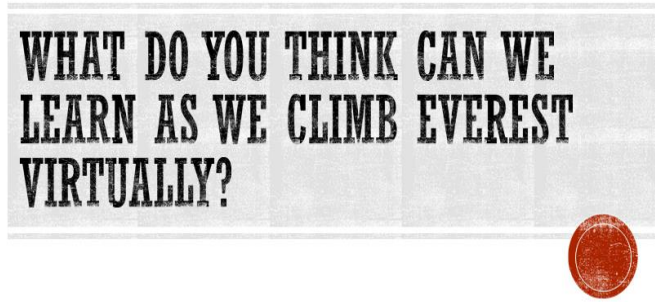

01
PREPARATION :
1SESSION(1 HRS)+ONLINE EXERCISES
02
3 HOURS VIRTUAL SESSION
03
3 HOURS VIRTUAL SESSION
Team goes through briefing material shared to understand the goals, diverse roles & what to expect
Each team 's interactions observed & recorded by a dedicated facilitator for sharing inputs post simulation
Discuss the Real Work Everest Goal
Plan the tentative way forward
3 things you would do differently to achieve this goal
PREP 1
PREP 2
SIMULATION
SIMULATION
REFLECT
ACTION PLAN
A 1 hour session for Introduction, team set up & goal setting
Team Norms
SMEs briefing
4 teams of 6 members each play participate synchronously as they tackle multiple challenges during the 3 hours simulation
Team reflections & presentation:
- How did we do?
- What could we do differently?
- What did we learn?

9


WHAT DO YOU THINK CAN WE LEARN AS WE CLIMB EVEREST VIRTUALLY?

10


MISSION EVEREST developed in consultation with Real Everester, Entrepreneur, TEDx speaker Aditya Gupta
ADITYA GUPTA
7 LESSONS FROM EVEREST
Nikon

11


7 KEY LESSONS FROM EVEREST
PREPARATION+PASSION =PERFORMANCE
MAKE FRIENDS WITH FEAR
TIME IS OXYGEN
POWER OF FOCUS
EXPECT THE UNEXPECTED
SCALE NEED NOT SCARE YOU
ONE STEP AT A TIME

12


OBJECTIVES OF THE SIMULATION
1. Passion + Preparation = Performance
2. Power of Focus
3. Scale need not scare
4. One step at a time
5. Make friends with fears
6. Expect the unexpected
7. Time is oxygen
WHO?
• Young leaders
• Established leaders
• Intact teams
Hybrid - Tactical + Social
• A combination of data dependency + social processes to achieve goals
EVENTS
• Planned - Weather
• Chance - The spin wheel
• Ad-Hoc - Team member swaps
OBJECTIVES IN THE SIMULATION?
• Climb Everest
• Reach the Summit with a healthy team
• Maximize your Health score
Elements
• Phases of a process : e.g. the decision process
• Units of knowledge or information : documents
• Actors/stakeholders : roles
Relations between the elements
• Responsibilities : assignments
• Exchange of resources : money, means materials
• Exchange of knowledge or information
• Causes and consequences
ROLES
• Subject Matter Experts
• Weather
• Acclimatization
• Oxygen
• Cold emergencies
• Medicine
• Icefall & Avalanches
Play testing
• Talk through
• Walk through
• Round 1 play testing
• Dress Rehearsal
• Still a Work in Progress :)
Online vs Physical

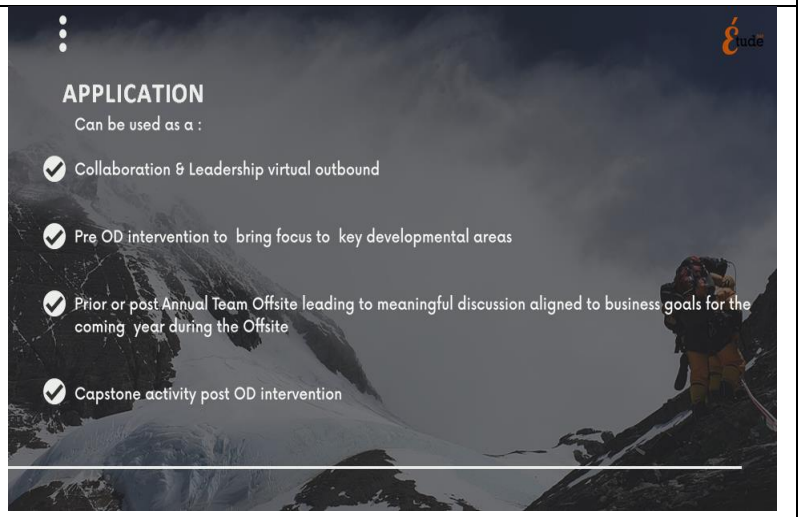
13


US PEACE CORP, JAMAICA TEAM

14


LEADING SELF
Displaying adaptability
Learning agility
Passion to succeed
Self awareness
Self accountability
Think innovatively
Planning & organizing
LEADING PEOPLE
Handling diversity & differences
Mutual Respect, Equity & Inclusion
Communicating effectively
Managing conflicts
Influence & Impact
Problem solving
Decision making
Delegation
Leading change
WORKING IN TEAMS
Ability to work with others toward a shared goal
Participating actively
Sharing responsibility and rewards
Contributing to the capability of the team.
COMPETENCIES THAT CAN BE ADDRESSED

15


APPLICATION
Can be used as a :
Collaboration & Leadership virtual outbound
Pre OD intervention to bring focus to key developmental areas
Prior or post Annual Team Offsite leading to meaningful discussion aligned to business goals for the coming year during the Offsite
Capstone activity post OD intervention

16

17

THANK YOU

Contact us if there are any questions.

Phone Number
93276 69366 / 95121 01012

Email Address
teameverest@etude360.com

18

Webinar – 05

Day, Date & Time: **May 24, 2023 (Wednesday) Time 03:00 p.m. (IST)**

Invited Speaker: **Ms. Jagoda Gandziarowska-Ziołecka**

Country: **Poland**

Title: **Games and Simulations as "Flight Simulators" of Good Cooperation in Teams and Organizations**

Webinar Topic

Games and Simulations as “Flight Simulators” of Good Cooperation in Teams and Organizations

Abstract

How a passion for playing and designing games resulted in a consulting company helping shape company cultures and stimulating cooperation by making people play games together.
In the new world of remote and hybrid working it can be a challenge to keep teams in organizations connected and to help them fully understand new information, goals and strategies. Our passion is to help teams navigate those challenges through dynamic conversations inspired by the fun of simulation games. Our story began 15 years ago with our passion to support business and non-profit teams by providing a fun and engaging way to learn and grow together. I invite you to learn this story to see the power of games.

Speaker Profile

Jagoda is Sociologist, Learning designer and organizational consultant and co-owner in a group of companies using games and simulations for team building and leadership development. (www.assimilate.eu, www.pracowniagier.com ; www.gamechangersacademy.com www.experiencecorner.com)
Academic lecturer using games in a course on Social Relationship Management for managers and leaders at the SWPS University of Social Sciences and Humanities in Poland. She loves to apply games to make people and teams aware of their talents and potential according to the Cliftonstrengths approach of the Gallup Institute.

Games and Simulations
as "Flight Simulators" of Good Cooperation
in Teams and Organizations

Jagoda Gandziarowska-Ziołecka
www.assimilate.eu
jagoda@pracowniagier.com

1

FLIGHT SIMULATORS.
MANAGERS LIKE PILOTS
John Sterman, MIT Sloan School of Management

2

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2004

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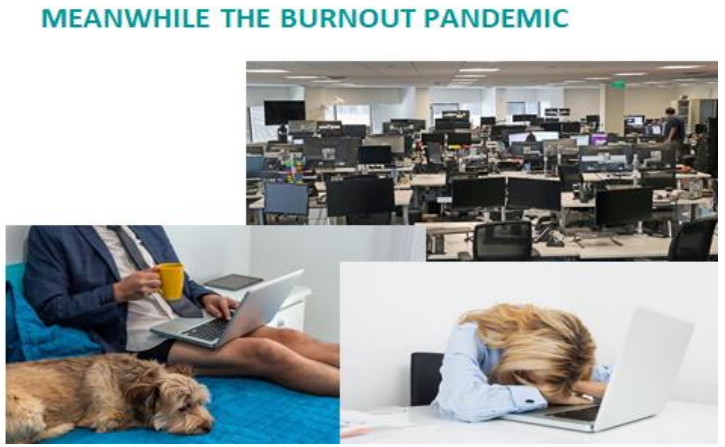
Why did noone explain it to me before?

6


...I have never seen such energy in our team before!

7


MEANWHILE THE BURNOUT PANDEMIC

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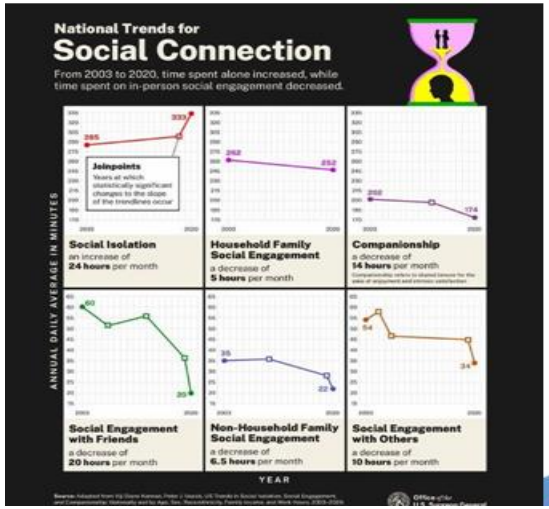

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HOW GAMES AND SIMULATIONS HELP

FOR TEAMS

Provide unusual moments of common emotions

Engaging common experience

Joyful quality time together

Fresh perspectives and out of the box thinking

FOR A LEADER

Allow to see yourself „in a mirror"

Understand how you influence others

Understand and manage your reactions

10

Source:Pittsburgh Public School Photographs, MSP 117, Detre Library & Archives, Heinz History Center

11

Source: time.com „Life goes to genius school 1948"

12

13

14

Leadership skills vs levels of consciousness

Robert Kegan, Harvard Business School

15

Leadership skills vs levels of consciousness

* 8%

The XXI century leadership skills*

- Strategic thinking
- Collaboiration
- System thinking
- Leading change
- Experiencing comfort in ambiguous, changing and volatile contexts
- Learning agility

2014 *Center for Creative Leadership

*4100 managers

16

17

FLIGHT SIMULATORS.
MANAGERS LIKE PILOTS
John Sterman, MIT Sloan School of Management

18

www.assimilate.eu

jagoda@pracowniagier.com

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Webinar – 06

Day, Date & Time:	**June 26, 2023 (Monday) Time: 03 – 04:05 p.m. (IST)**
Invited Speaker:	**Dr. Vinod Dumblekar**
Country:	**India**
Title:	**Experiential Learning from Simulations and Games**

Webinar Topic

Experiential Learning from Simulations and Games

Abstract

The presentation will begin with simple definitions of simulations, games, experience and learning with appropriate examples. Conceptual models in learning (Bloom) and experiential learning (Kolb) will be the foundation of the topic. The speaker would explain some learning themes such as competitiveness, self-efficacy and satisfaction that were outcomes of personal empirical games research. He may play 1-2 games and refer to many others to clarify how games produce learning. He would discuss some elements that produce learning in some games. Finally, he would refer to related topics in games and learning for the benefit of students, teachers, trainers and researchers.

Speaker Profile

Dr Vinod Dumblekar is the founder of MANTIS which has created and conducted simulation-based games and learning experiences since 2003 in business operations, business strategy, corporate strategy, marketing and brand management, entrepreneurship and project management, for managers and post-graduate management students. His interests are in arithmetic and empirical research, learning behaviour, applied psychology and quantum physics.


Experiential Learning
from
Simulations and Games
26 June 2023
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

1


Dr Vinod Dumblekar
Simulation Games
mantis.co.in, April 2003
Design, development,
facilitation, research.
Teaching, training,
consulting.

2


How do YOU play?

3


What is a simulation?
A representation, narration, demonstration or enactment of an event, a scenario or an environment, whether real or imagined, in the past, present or future.
- A story, panchatantra, stage or roleplay, video or film, newsreport, case study, toy car, plagiarism, ventriloquist in action, passport photo, book

4

5

What is a game?

A set of voluntary interactions (controlled by rules and constraints) between individuals or teams to overcome common challenges, accomplish a goal and be recognised as a winner.

- cricket, ludo, PUBG, chess, SimCity, mission-us, (settlers of) Catan, scrabble, rummy, battleship
- Crimes, terrorists, pickpockets, politics, scams

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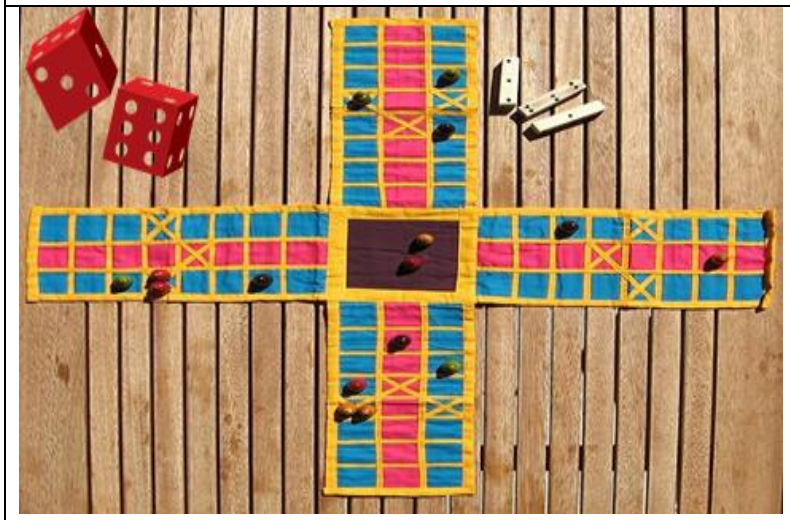

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What is an experience?

- a particular instance of personally encountering or undergoing something
- the process or fact of personally observing, encountering, or undergoing something
- Sensation + Emotion + Memory

- breakfast, accident, loss, achievement, win, IPL, Netflix, holiday, insult, failure, pain, surprise, error

8

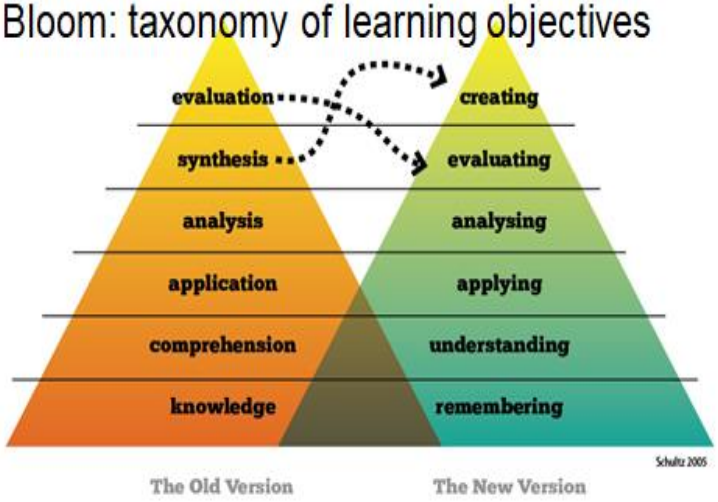
What is learning?

- the act or process of acquiring knowledge or skill
- the knowledge acquired by systematic study and scholarly application
- change in behaviour
- understanding more than before, behaving anew

- knowledge, attitude, skill, behaviour

9

Bloom: taxonomy of learning objectives



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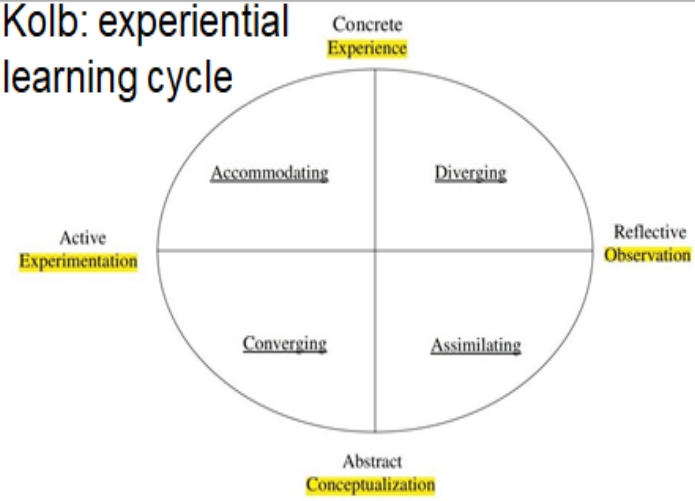
What do the wise say?

- Any fool can know. The point is to understand. – Albert Einstein
- We do not learn from experience. We learn from reflecting on experience. - John Dewey
- The great aim of education is not knowledge but action. - Herbert Spencer
- We only think when confronted with a problem. - John Dewey

11

Kolb: experiential learning cycle



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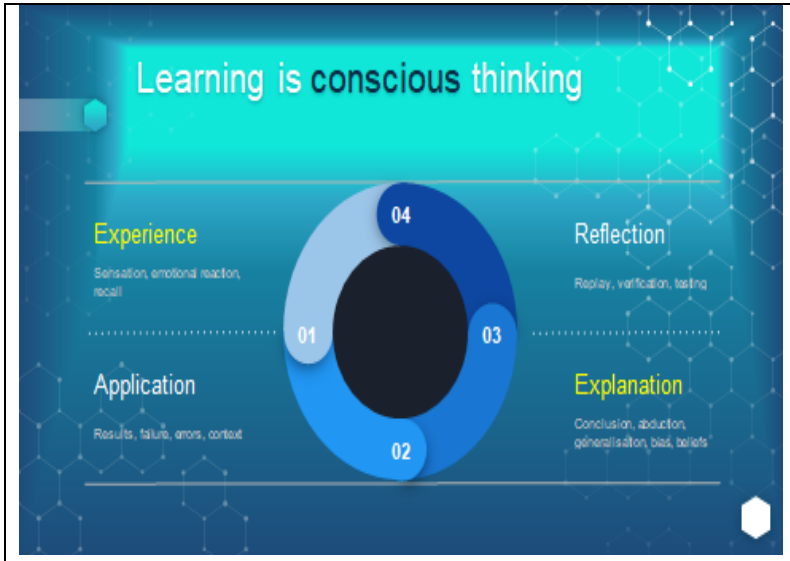
Learning is conscious thinking
Experience
Sensation, emotional reaction, recall
Reflection
Replay, verification, testing
Application
Results, failure, errors, context
Explanation
Conclusion, abduction, generalisation, bias, beliefs
01
02
03
04

13


From observation to learning

14


Discoveries from my games research
Experimentation
Exploration
Innovation
Proactivity
Measured aggression
Teamwork
Collaboration
Competitiveness
Ideation
Business skills
Self-efficacy
How players think
Self-discovery
Team victory
Openness: novelty
Winning orientation
Implicit intelligence
Mastery goal
Performance goal
Team cohesion
15

15


Learning from doing, repetition and error

16

XLRI FMS 2023

Learning by comparison

Cumulative and final results

Ranks

Computations	XLRI 1	XLRI 2	XLRI 3	XLRI 4	XLRI 5	XLRI 6	XLRI 7	XLRI 8	XLRI 9	XLRI 10
Sales (units)	35,975	35,245	32,403	34,342	34,916	35,377	34,115	34,900	34,883	34,707
Revenues (Q, 000)	78,734	79,868	72,567	77,872	78,920	78,738	75,577	77,854	77,791	77,418
Price/car (Q)	2,189	2,266	2,240	2,268	2,260	2,226	2,215	2,231	2,230	2,231
Wealth (Q, 000)	1,287	2,379	2,834	2,000	4,974	2,371	2,659	5,131	5,159	5,060
Market share (%)	10.37	10.16	9.34	9.90	10.07	10.20	9.84	10.06	10.06	10.01
Advertising/car (Q)	152	187	131	142	148	146	129	125	125	125
Commission/car (Q)	153	88	88	112	94	135	113	98	98	98
Credit policy / Qrr (Q)	25	28	34	35	36	31	41	34	34	34
Unused rawmaterials	0	0	0	14	0	0	0	1	1	1
Unsold cars	293	605	223	600	1022	222	241	1,320	1,347	1,323
Cash bal (Q, 1000)	3,433	2,248	4,349	2,328	3,334	5,375	3,109	2,511	2,423	2,420

17

XLRI FMS 2023 Cumulative and final results Ranks

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	XLRI FMS @ Q9: Cumulative [Q0-Q9] and final results: RANKS									
Sales (units)	1	3	10	8	4	2	9	5	6	7
Revenues (Q, 000)	4	1	10	5	2	3	9	6	7	8
Price/car (Q)	10	2	4	1	3	8	9	5	7	6
Wealth (Q, 000)	10	7	5	9	4	8	6	2	1	3
Market share (%)	1	3	10	8	4	2	9	5	6	7
Advertising/car (Q)	2	1	6	5	3	4	7	9	10	8
Commission/car (Q)	1	9	10	4	8	2	3	6	7	5
Credit policy / Qrr (Q)	10	9	4	3	2	8	1	5	5	5
Unused rawmaterials	5	5	5	1	5	5	5	2	2	2
Unsold cars	7	5	9	6	4	10	8	3	1	2
Cash bal (Q, 1000)	3	10	2	9	4	1	5	6	7	8

18

XLRI FMS 2023 Cumulative and final results Ranks

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Advertising/car (Q)	2	1	6	5	3	4	7	9	10	8
Commission/car (Q)	1	9	10	4	8	2	3	6	7	5
Credit policy / Qrr (Q)	10	9	4	3	2	8	1	5	5	5
Unused rawmaterials	5	5	5	1	5	5	5	2	2	2
Unsold cars	7	5	9	6	4	10	8	3	1	2
Cash bal (Q, 1000)	3	10	2	9	4	1	5	6	7	8

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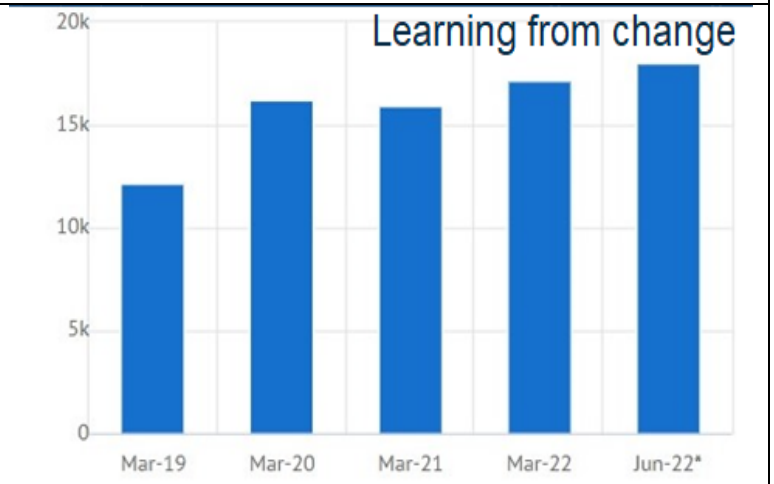

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ONE WAY
ONE WAY

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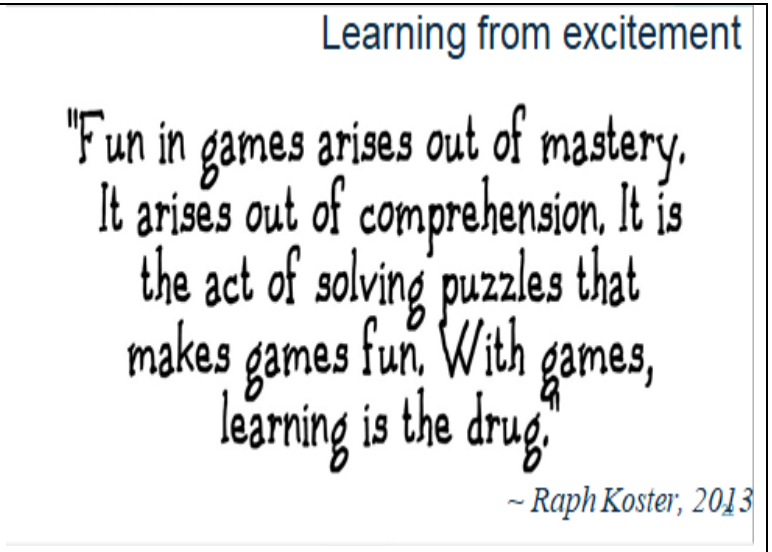

Learning from excitement
"Fun in games arises out of mastery. It arises out of comprehension. It is the act of solving puzzles that makes games fun. With games, learning is the drug."
~ Raph Koster, 2013

22


Learning from excitement

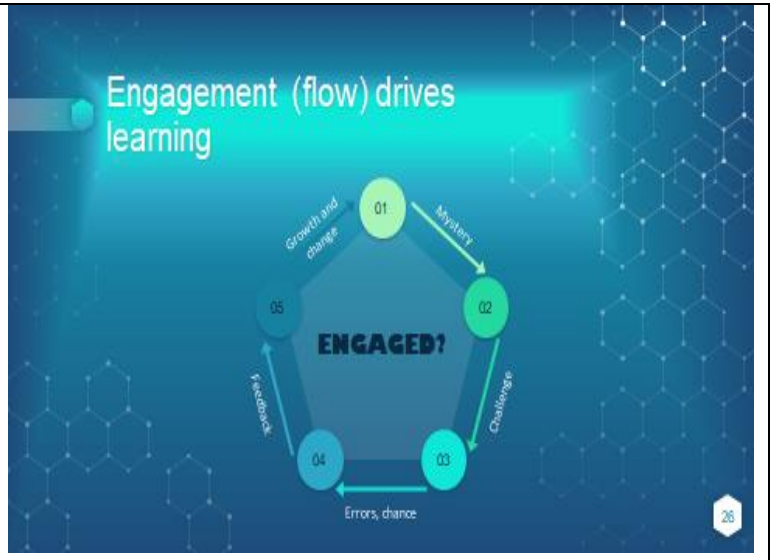
23


Facilitation - the big picture
Reflection: honesty, confirmation bias
Process: what, repetition. Competition: mastery
Attitude: worry, stress, optimism, cool, resilience
New conviction! Irrevocable change!
Self-taught: No textbook, lecture, test or grades
Emotions: worry, stress, optimism, cool, resilience
Interactions: exchange, help, communicate, listen
Confront problems, proactive, tolerate ambiguity
Self-discovery: strengths, weaknesses,

24


Game-based learning themes
Game theory vs gamification vs gaming
Games people play (Eric Berne): transactional analysis: I'm OK – You're OK (Thomas Harris)
The Art of War (Sun Tzu), strategy (Michael Porter)
Coopetition (Nalebuff and Brandenburger)
Arthashastra (Kautilya)
Nudge (Nobel Laureate Thaler, 2017)
Blink; Thinking – fast and slow, Art of thinking clearly
25

25


Engagement (flow) drives learning
ENGAGED?
01
02
03
04
05
Mystery
Challenge
Errors, chance
Feedback
Growth and change
26

26


So, how do YOU learn?
Walking; friends!

27


Enlightening
Fun
Unforgettabl
e
Addictive
High RoI
28

28


Thank you
for your
listening and participation
Mantis
Discovery is Learning
Shri Vaishnav Vidyapeeth
Vishwavidyalaya, Indore

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Webinar – 07

Day, Date & Time: **July 21, 2023 (Friday) Time: 03:00 to 04:05 p.m. (IST)**

Invited Speaker: **Ms. Marieke de Wijse**

Country: **Netherlands**

Title: **Shedding Light on the Black Box of Learning in Simulation Games**

Webinar Topic

Shedding Light on the Black Box of Learning in Simulation Games

Abstract

In this webinar I will show examples on how you can open the black box of learning in SG`s. SG show the potential to engage and motivate learners via agency by following their own learning paths and receive personalized feedback. The potential downside is that we don't know what players will learn because we do not now ahead what path they will take. However, there numerous learning interventions and evaluation methods available to us that open the black box. Evaluative methods and formative assessment techniques can provide both learners and facilitators with handholds on what is being learned and bring focus to the goals of the game turning the black box into a clear learning path.

Speaker Profile

Marieke de Wijse-Van Heeswijk is PhD researcher at Nijmegen school of Management (Radboud University, the Netherlands). Marieke studies the effects of interventions in and around game simulations on learning/change with participants. Marieke is a member of the ISAGA board (from 2004-2008 and 2021 until now) and community (since 2004) and member of the Dutch ISAGA branch Saganet (since 2004) and NASAGA (since 2020). Marieke was guest editor for the special issue facilitation of simulation games in the Game and Simulation Journal. Marieke was a change and learning consultant and game designer/facilitator for GITP International from 2004 until 2015. From 2015 she started her research on the effects of different facilitation approaches in various types of simulation games. Marieke uses both Qualitative, quantitative and action research methodology and is used to a multidisciplinary research approach taking in perspectives from sociology, organizational sciences, public administration and philosophy.

Opening the black box of learning in Simulation Games

July 21 2023
Marieke de Wijse, researcher Radboud University
Webinar 2 for INDORE ISAGA

Radboud University

1

PRESENTATION SETUP

1. **Why:** opening the black box?
2. **What**: different types of learning in different types of SGS
3. **When**: suggestions and examples for when to apply what method
4. **How**: approaches and methods that deliver results about learning in and from the gameplay

Radboud University

2

WHY IN GENERAL DO WE NEED TO OPEN THE BLACK BOX OF LEARNING?

1. Professionalization of Simulation Games/ Game Based Learning/ Serious gaming/Gamification to a higher level, monitor effects
2. With knowledge on learning effects facilitators can optimize learning effects & enhance motivation, skill and opportunity

for example via formative assessment and game mechanics

- **Game mechanics attached to game logs** that provide overview (direct feedback on decision making)
- **In game pre designed learning loops**: build in game reflections and group learning
- **Experienced low distance**: players are triggered to bring their own input and reflections
- **Sufficient scope**: players can follow their own learning paths and obtain personalized feedback

Lit refs: de Wijse

Radboud University

3

WHY II DO WE NEED TO OPEN THE BLACK BOX OF GAMING :TO REALLY KNOW WHAT WAS LEARNED?

1. **Currently most evaluations of learnings are Self Reports**

?

Self reports are limited because:

- contain one perspective of either participants and/or facilitator
- Learners do not always realize what they have learned (Klabbers, Harteveld and others)
  - because of **embodiment (Klabbers)**
  - because learners still **need time to process (Leigh)**
  - because learners **might have trouble explicating** what they have learned (Kriz), also it may be different from what they expected (frustrations, valley of despair, not obtained the result they aimed for)

2. **In game results do not show us what is learned and who learned most (Teach)**

- Groups with highest scores often have beginners' luck
- Groups in the middle often learn most; experiment more, receive more diversified feedback

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4

ON **WHAT** LEVELS OF LEARNING PARTICIPANTS MAY LEARN

Argyris 3 levels of learning

1. **first order learning: WHAT** knowledge and procedures
2. **second order learning: HOW** knowledge on change of processes
3. **third order learning: WHY and WHEN** knowing how to add value and when to contribute to a more sustainable future (Marieke's operationalization)

We need all 3!

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5

GAMES ON A CONTINUUM OF CLOSED -OPEN GAMES & IMPLICATIONS

Future borrowed from [illegible]

Participation
Collaboration
Wicked problems
Exploration
Multi level decisions

CLOSED SIMULATION GAMES

- Rule based
- Predetermination on what is the 'right' outcome for example a policy test

Potential loss of acceptance of results because of
- Lack of autonomy/agency
- Differences with the reference system can be enlarged

Usuallly fit for First order (WHAT) learning

OPEN POLICY GAMES

- As few rules and pre-set conditions as possible, just the rules that are needed for realistic gameplay
- Allows for accessing assumptions
- Players experience a lot of agency and therefore will accept results with higher probability

Potential risk: highly dependend on skills and expertise of the facilitator(s)

Often fit for all types of learning especially second (HOW) and third order learning (behavior)

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6

THE ROLE OF THIRD ORDER LEARNING IN OPEN (POLICY) SIMULATION GAMES

what **third order learning outcomes** may look like in SGs

Participation without actual power redistribution only frustrates stakeholders

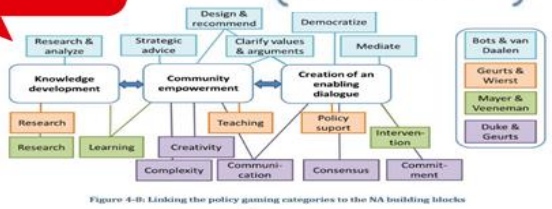

Figure 4-8: Linking the policy gaming categories to the NA building blocks

Source: Vavier, 2014

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7

SCIENTIFIC META PERSPECTIVES ON EVALUATION

- **Psychology based hypothesis testing:**
  - Wants to tick the boxes
  - Reduce the complexity
  - Find if a then b, or a results in b mediated by...etc

- **Sociology based grounded theory:**
  - Assumes more complexity
- First see what happened then see if theory fits or generalization can be made if all

....and everything in between these streams is possible but then you have to motivate and find the right journal

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8

WHEN TO APPLY MEASUREMENTS (EVALUATION)/ FORMATIVE ASSESSMENT MECHANICS

Before a SG	During a SG	After
• Learning goals/aims (as an excercise)	• Scenario method (what went well, not so well, what do you need to improve? After each game round or given timeframe) *(Alfet al. 2023 in Press SG Journal)*	• self report questionnaire that also maps how participants and facilitator experienced the SG (Petri)
• Pre knowledge (cognitive mapping)	• In game data game feedback (logs and formative feedback systems) and challenges	• Letter to a future player: what advice would you give and why
• Pre game questionnaires on self efficacy, game literacy, motivation (intrinsic, extrinsic etc.), contextual factors	• Coded transcriptions (IPA, content coding, decision analysis)	• Make a model of how you think the game system worked
		• Your journey through the game (Klabbers) for reflections on process levels (2nd order)

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9

HOW TO OPEN THE BLACK BOX WITH RESEARCH METHODS

- **Qualitative methods**: provices in depth information on what happened and probably why
  - Advantage: rich data
  - Disadvantage: often takes time, though atlas ti can now perform AI text analysis
- **Quantitative methods** (for example questionnaires with likert scales)
  - Advantage: quick to work with especially when N is large
  - Disadvantage: doesn`t deliver in depth explanations
- **Mixed methods** (a questionnaire with open and closed questions)
  - self reports alone are not sufficient!!
  - 2 examples of cognitive map, scenario method

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10

10

EXAMPLE OF

A FORMATIVE ASSESSMENT IN AN EDUCATIONAL SETTING AS EVALUATION METHOD

Gather before game start and during gameplay

- Goal setting
- Logs during gameplay
- Feedback they receive during gameplay

Scenario method with repeated questions (per game round?) (Alf, De Wijse, Trautwein, 2023 in press)

- **What went well?**
- **What could be improved?**
- **What do you need from yourself and others to improve?**

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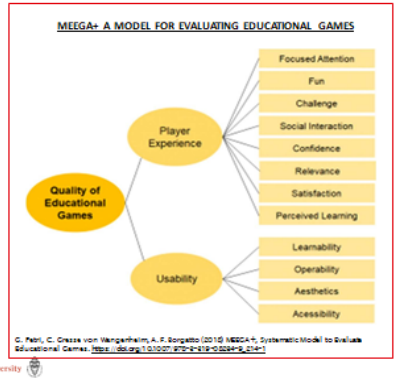
MEEGA+method

Educational games evaluated on 2 dimensions + control variables:

1. **'Player experience'**
   with 8 subcategories, including challenge, social interaction, and perceived learning
2. **'Usability'**
   with 4 subcategories, including learnability, operability, and aesthetics
3. **Control variables**
   The survey includes control questions, including age, gender, previous experience with educational games.



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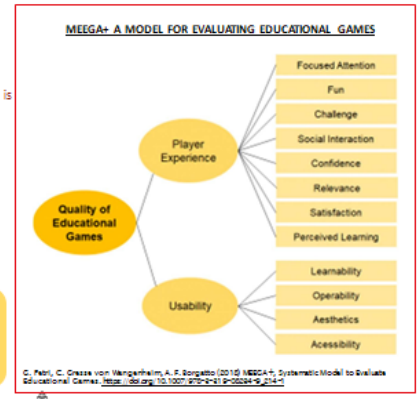
MEEGA+method

All information and materials of MEEGA+ method is available for free here including a facilitators questionaire:
http://www.gqs.ufsc.br/quality-evaluation/meega-plus/

Of course you can make adaptations to the questionnaire

The reference to cite:
G. Petri, C. Gresse von Wangenheim, A.F. Borgatto A.F. **MEEGA+, Systematic Model to Evaluate Educational Games**. In: Lee N. (eds) Encyclopedia of Computer Graphics and Games. Springer, 2018.



C. Petri, C. Gresse von Wangenheim, A. F. Borgatto (2016) MEEGA+, Systematic Model to Evaluate Educational Games. https://doi.org/10.1007/978-3-319-08234-9_214-1

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EXAMPLE VIA DR LINDA CARTON, RADBOUD UNIVERSITY THE NETHERLANDS

During the game: Example of evaluating the 'process'

Question asked to participants during the game, 3 times, in 'Urban Network' game played with Brabant Cities, simulating the future of "development planning" in a simulation game:

How does the administrative and spatial development evolve until now? Indicate your opinion on the following characteristics (scale 1–10; three repeated measurements during the game).

The process seems, at the moment, characterized as:

1. 'Viscous' versus decisive
2. Conservative versus innovative
3. Out of control versus well managed
4. Short-term thinking versus long-term thinking
5. Disjointed versus integral consideration
6. Every man for himself versus co-operation
7. Closed process versus open process
8. Opposition versus support

Ref: Mayer et al (2004) Gaming the future of an urban network. Futures 36, 811–888, https://www.doi.org/10.1016/S0016-8287(03)00159-9

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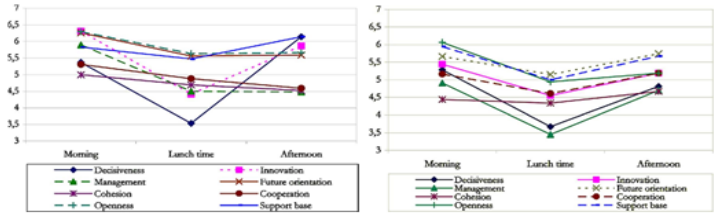
UFL LAB 3

During the game: Example of evaluating the 'process'



Game run 1, process characteristics.

Game run 2, process characteristics.

Ref: Mayer et al (2004) Gaming the future of an urban network. Futures 36, 811–888, https://www.doi.org/10.1016/S0016-8287(03)00159-9

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During the game: Example of evaluating the 'process'

Process characteristics, by quotes and reporting what happened during the game.

Quote: ...one of the participants remarked:
"They're still so busy talking with each other that all I can see in the game is their backs. But that's the kind of inward-looking administrative attitude that you also come across in reality."

Reporting dynamics and actions:
The mutual trust between parties turned out to have a decisive influence on the choices they made when realizing projects and on their attitude during administrative negotiations. For example,
the small municipalities chose to sell land to project developers rather than to the large municipalities, which they regarded as a threat.

During the game: network 'Brabant city' in session.

Ref: Mayer et al (2004) Gaming the future of an urban network. Futures 36, 811–888, https://www.doi.org/10.1016/S0016-8287(03)00159-9

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HOW.

CHALLENGES IN EVALUATING AND RESEARCHING EFFECTS *OF* AND EFFECTS *IN* SGS

A TRADEOFF: *an evaluation in any form can also influence your result and this may be a positive effect in a learning context but might also be negative*

Whereas in research you do not want to influence people too much

Complexity/variation from context, participants, interaction with the simulation game all creating a unique setting

- you **cannot look inside heads** and even if you could this would not always be representative
- **difficulty of measuring tacit**/embodied knowledge
- **difficulty of measuring what people do not realize** they have learned (but not impossible)

time/resources and other limitations component

- example everyone wants to leave quickly at the end of the SG
- measurements during without interrupting the game flow

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WHAT TO AVOID

- profit scores/best team indicators
- Using a single method
- That participants feel assessed when they are not!

The goal is learning, SGs are not by definition fit for assessment

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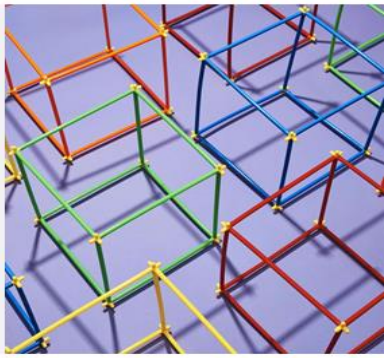
ETHICAL CONSIDERATIONS

- dependence on educational institute on good grade
- dependence on co workers,
- not wanting to be the negative person showing doubts of effects of learning etc.
- be clear on what you are going to do with the results, how and when
- Informed consent
- anonymization or not?
- how are you going to reveal your research results
- dealing with the limitations of your gatherings



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Other interesting literature:

The evaluation of a discipline, a framework for evaluating simulation games (Peters, Everwijn et al. 2014)

10 years of evaluation research (Kriz and Auchter 2016)

Formative assessment and simulation games. (De Wijse-Kriz, 2023)

Literature on the use of cognitive maps in SGs:

Review literature

de Ries, K. E., et al. (2021). "A literature review of open-ended concept maps as a research instrument to study knowledge and learning." Quality & Quantity: 1-35.

Example literature

Palmunen, L.-M., et al. (2021). "Towards a manager's mental model: Conceptual change through business simulation." The International Journal of Management Education 19(2): 100460.

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WEBSITES AND ORGANIZATIONS

- Saganet www.saganet.nl (Dutch game simulation association)
- ISAGA www.isaga.com (International game simulation association)
- DIGRA www.digra.com (digital gaming association)
- ABSEL experimental learning organization
- www.thiagi.com for games and inspiration
- TU Delft, WUR, RU repositories for interesting thesis on simulation gaming (Bekebrede, Bakius, Harteveld, Onecan, Van der Wal, Vavier)
- On youtube dennis meadows, extra credits for game design

For all the games from Dennis Meadows systems thinking playbook watch part 1 and 2 of the workshops in Uppsala
https://www.youtube.com/watch?v=-8uR0lw1IQs&t=6s

And many very interesting free webinars on SG design, facilitation and evaluation on:

- https://isaga.com/our-activities/isaga-webinars-hosted-by-svvv/

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GAME SIMULATION BOOKS AND JOURNAL

- **Simulation and gaming journal** (from the '60)
- **The magic circle** prof Jan Klabbers
- **Gaming the future's language** prof. Richard Duke (free copy at www.isaga.com)
- **Policy games pathways into the unknown**) (free copy at www.isaga.com)
- **Gaming as cultural commons** Kikkawa and Kriz 2022

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PUBLICATIONS SO FAR (PAGE 1)

1. Alf, T., De Wijse-van Heeswijk, M., Trautwein, F.(Submitted February 2023) , **"The role of reflection in learning with simulation games – a multi-method quasi experimental research"**, Simulation and Gaming Journal.
2. Angelini, M.L, and De Wijse-van Heeswijk, M. **A comprehensive View of Simulation Applications. Simulation for Participatory Education**. Virtual Exchange and Worldwide Collaboration, eds. Angelini et al., release summer 2023 by Springer
3. Laere, van, J., Lindblom, J. and de Wijse-van Heeswijk, M. (2021) **"Complexifying Facilitation by Immersing in Lived Experiences of on-the-fly Facilitation"**, *Simulation & Gaming*.
4. Leigh, E., Tipton, E., De Wijse-van Heeswijk, M., (2019), **A journey to the Role of the Facilitator: personal stories unfolding alongside world trends**, in Wardaszko, M. conference proceedings *SIMULATION& GAMING THROUGH TIMES AND ACROSS DISCIPLINES*. Akademia Leona Koźmińskiego.
5. Leigh, E.,Likhaeva, E., Tipton, E, De Wijse-van Heeswijk, M. (2021), **"Why Facilitation?" design of simulation games**, special issue Journal of gaming and simulation, Sage publishing, 52(3): 247-254
6. Meijer, S., De Wijse-van Heeswijk, M., Lukasch, H., Klabbers, J. (submitted March 2023) **Identifying Game Science: taking stock of the epistemic, ontological and theoretical state of the art & science**, Simulation and Gaming Journal
7. Roungas, B., de Wijse, M., Meijer, S., & Verbraeck, A. (2016). **Pitfalls for debriefing games and simulations: Theory and practice. In Intersections in simulation and gaming** (pp. 101-115). Springer.
8. Wijse-van Heeswijk, de, M., (2021), **The ethical role of the facilitator in simulation games. Don't take yourself too seriously, on the other hand do because you need to be a professional**. in special issue on facilitation, Game and Simulation Journal June 2021

23

PUBLICATIONS SO FAR (PAGE 2)

9.Wijse- van Heeswijk, de, M., 2022, **Facilitation interventions to increase learning effectiveness in game simulations.** Book chapter in A generic approach of facilitation applicable to a broad variety of simulation games. Simulation for Participatory Education. Virtual Exchange and Worldwide Collaboration, eds. Angelini et al., release April 2023 by Springer

10.Wijse- van Heeswijk, de, M. and Kriz, W.C. 2023. **A design science perspective on formative evaluation in simulation games.** Book chapter in A generic approach of facilitation applicable to a broad variety of simulation games. Simulation for Participatory Education. Virtual Exchange and Worldwide Collaboration, eds. Angelini et al., release April 2023 by Springer

11.Wijse- van Heeswijk, de, M., Rouwette, E. and Van Laere, J., 2022, **A case study report on facilitation interventions to increase learning effectiveness in game simulations**, Book chapter in A generic approach of facilitation applicable to a broad variety of simulation games. Simulation for Participatory Education. Virtual Exchange and Worldwide Collaboration, eds. Angelini et al., release January 2023 by Springer

12.Wijse-van Heeswijk, de, M. and E. Leigh (2022) **Ethics and Simulation Games in a Cultural Context: Why Should We Bother? And What Can We Learn?** Book chapter in Gaming as a Cultural Commons: Risks, Challenges, and Opportunities. T. Kikkawa, W.C. Kriz and J. Sugiura. Singapore, Springer Nature Singapore: 149-167.

13.Wijse-van Heeswijk, de, M., Rouwette E., Meijerink, S., (submitted March 2023) **The learning effects of first, second and third order interventions in a rule based and open simulation game, Academy of management learning**

14.Wijse- van Heeswijk, de (in writing 2023) **Debriefing and transfer (Kriz and Kikkawa eds.)** book chapter in Game Simulations and Transfer, by Springer

15.Wijse-van Heeswijk, de (in writing 2023) **The role of models in the future's language, model based participative design of simulation games and playful learning environments.** Book chapter in A tribute to the founders of Games and Simulations Richard Duke and Cathy Greenblatt, By Sage

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Webinar – 08

Day, Date & Time: **August 22, 2023 (Tuesday) Time 12:00 to 01:05 p.m. (IST)**

Invited Speaker: **Dr. Sandeep Athavale**

Country: **India**

Title: **Endogenous Design of Educational Games**

Webinar Topic

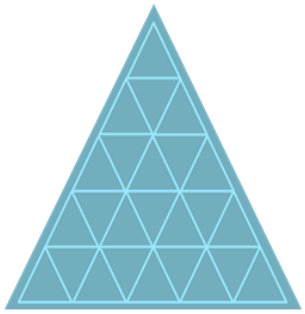
Endogenous Design of Educational Games

Abstract

Educational games are expected to harness the fascination of games to deliver learning in an interesting way. However educational games are yet to realize the promise of engaging the learners effectively. The commonplace technique of superimposing unrelated gameplay over the educational content (called exogenous design) creates incoherence between the act of learning and playing, rendering such games ineffective.
However, games with 'endogenous' design have the potential to deliver learning through the mere act of playing. In endogenous design, game elements are derived from 'within' the educational content. This leads to the creation of unique, novel, and pertinent gameplay for every learning topic. Designing such games, however, is challenging.
This talk will bring forth the pitfalls of exogenous design and introduce and describe the approach for endogenous design with real-world examples. This approach can be extended to designing applied games in various other contexts.

Speaker Profile

Sandeep leads the Purposeful Games lab at TCS Research. His work focuses on the study and application of games for teaching-learning in academic, corporate, and societal contexts. He has also worked on the design of games and playful activities for enhancing user experience in the domain of healthcare. He has a Ph.D. in Educational Game Design from Design School IIT Bombay (2020). His Ph.D. work on endogenous design brings distinctiveness to the education solutions offered by the TCS.
Sandeep is a Chief Mentor for Educational Game Marketplace Program at TCS. He is also on advisory panel of the INAE-SERB Digital Games Initiative (Department of Science and Tech, GOI). He has been a visiting faculty at NID Bangalore and IDC IIT Bombay for a Master's course in Game Design. He has been a panelist at NASSCOM Game Conference and India Game Development Conference in the field of serious games. He was an advisor to professional bodies such as PMI India on games and has conducted faculty development programs through AICTE and IEEE. Sandeep has several publications and a few patents in his name.
He has a Bachelor's degree in Electronics Engineering (1992) and a Master's in Business Administration (1995), both from Pune University, and has several years of experience in the IT industry prior to starting research in 2011.



MAKING LEARNING FUN

THROUGH

ENDOGENOUS DESIGN

WEBINAR AT SVV/ ISAGA

22 AUG 2023

DR SANDEEP ATHAVALE
TCS RESEARCH

1

COMMON GROUND: GAME, GAMIFICATION AND MORE

Game

..is an artificial environment in which players voluntarily participate for amusement and challenge with lusory attitude

1. Salen Zimmerman, 2. Suits, 3. Prensky, 4. Deterding

2

EDUCATIONAL GAMES ?

SKILL

STRATEGY

PHILOSOPHY

Images ownership with respective creators

3

GAMES – A VEHICLE FUN RIDE FOR LEARNING

Nature's edtech[1]

Games are the most ancient and **time-honored vehicle for education.**

They are the original educational technology, the natural one, having received the seal of approval of natural selection

Desirable Characteristics [2]

Skills exhibited in games such as **persistence, risktaking, problem solving, collaboration, and information search** are also the key ingredients for education in school

Games unlike free play offer a combination of freedom and structure, which is essential for authentic learning

Need of the hour[2]

Existing learning mechanisms inadequate to engage a cross section of the millennial population.

Compelling option is not available in learn from home situation

Shorter attention spans - The persuasive challenges that games present can activate the information processing faculty of players, as well as improve their concentration span, which is otherwise shrinking.

1. Crawford, 2. Klopfer

4

EDUCATIONAL GAMES THAT WE ENCOUNTER

Sample Topic:

Rocks and Soil in 6th Geography

Rated as Boring by students

5

5

EDUCATIONAL GAMES PROMISE TO MAKE EDUCATION FUN

ARE THEY FUN ?

- Any three edu games that students' voluntary download/play ?
- Any three successful educational games ?

WHY AREN'T THEY ?

- Exogenous Design – Playing and learning stays separate
- Neither playing nor learning experience is enjoyable
- Putting a coating of game on the content is akin to a 'chocolate coated broccoli'
- Lack of agency

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6

LIMITED REACH SO FAR

Function	Knowledge Acquisition	Knowledge Application	Knowledge Assessment
Type of Content	Facts	Procedures	Concept
Learning Paradigms	Behaviorism	Constructivism	Constructionism
Type of Integration	Exogenous	Endogenous	

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7

DESIRABLE

- Games should be played because they are fun
- Games should go beyond mere fact tours and quizzes/assessment
- Playing alone should lead to learning (no separate layer of learning)

IS IT POSSIBLE ?

8

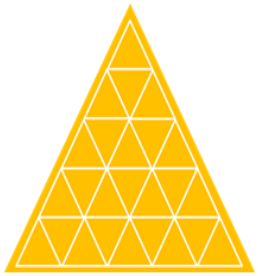
8

ENTER ENDOGENOUS DESIGN

Endogenous design: creating a design from within
I.e., finding game elements within the content

Three simple steps

1. Finding the interesting elements in the content/context
2. Translating these elements to game elements
3. Composing game elements into a meaningful game



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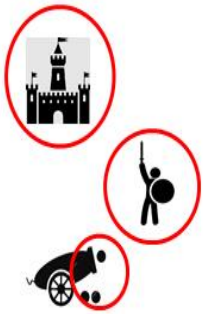
STEP 1 - ELEMENTS OF INTEREST

Finding the Actors, Motivation, Objects, Actions, Environment, Events, Changes, Movements, Plots, Constraints, Contrasts from the content



Images ownership with respective creators

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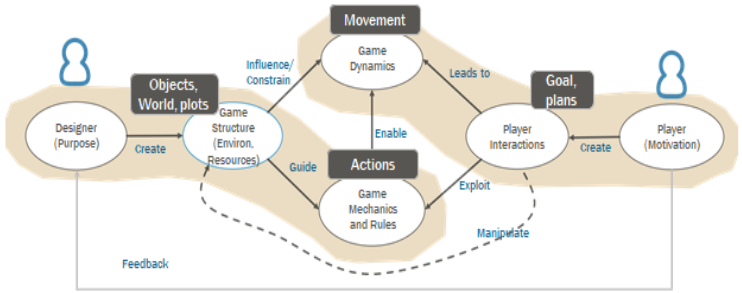
A QUICK LOOK AT GAME SYSTEM



UNIFIED GAME DESIGN MODEL[1]

1. Athavale and Agrawal

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STEP 2 - TRANSLATE TO GAME ELEMENTS

- Actors to Characters :
  - Kings, builders and Warriors
- Motivations to Goals :
  - Grow Kingdom
- Objects to Resources:
  - Rocks to build, attack, treasure, burn
- Actions to Mechanics:
  - Build, attack, capture, trade, travel, search
- Events to Chance:
  - Volcanoes leading to new rocks
- Environment to World:
  - Territorial
- Situations to Plots
  - Constraints to Rules

12

STEP 3 - COMPOSE

Multiplayer game where each player/team owns a kingdom and has to grow/defend it by using rocks from various sources. Players can.....

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MORE EXAMPLES - PHYSICS

14

GEOMETRY, CHEMISTRY

ENTANGLE

ATOMIC

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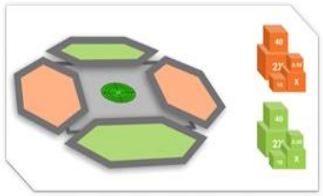
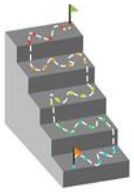
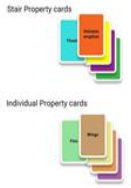
MATH, ECOLOGY







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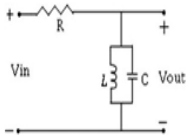
ELECTRONICS ENGINEERING

Unlock



Elements
Resistors
Transistors
Capacitors
Coils

World
Mystery Land Various circuits needs to be corrected to unlock doors, get power etc, each team wants to progress but block opponent

Resources
Resistors
Transistors
Capacitors
Coils

Mechanics
Collect
Trade
Balance circuit

Opposition Mechanics
Block
Change parameters (power) etc

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NON ACADEMIC CONTEXTS

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EDUCATION++ → AWARENESS, TESTING, PROBLEM SOLVING

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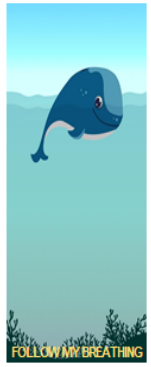
SEVERAL CONTEXTS



- Finance and Insurance
- Health, Rehab
- Wellbeing
- Sustainability
- Places/Museum
- City Life
- Industry
- And so on...

20

20

INDUSTRIAL CONTEXTS

SUPPLY CHAIN MANAGEMENT


PLANTVILLE FROM SIEMENS

FINANCIAL MANAGEMENT

PLANT SAFETY


CLEAN ENERGY


BEHAVIOR MANAGEMENT


KNOWLEDGE CAPTURE


IDEA GENERATION

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ENDOGENOUS DESIGN – FOR EVERYONE

22

ANYONE CAN DESIGN

First, know the user - what the users need, what they like, in what form, and when

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ANYONE CAN DESIGN

Then three simple steps

1. Finding the interesting elements in the content/context
2. Translating these content elements to game elements
3. Composing game elements into a meaningful game

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OUR APPROACH – CONTENT TO GAME ELEMENTS

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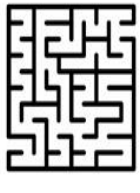
ANOTHER APPROACH – GAME ELEMENTS TO CONTENT



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DEEPER INTEREST? - ENDOGEN FRAMEWORK

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RANGE OF GAMEFUL TEACHING

- Identify game like structures in content, use them in examples
- Design mini games
- Use game plots
- Create game structure around animations, stories, interactivity
- Give game design assignments to students

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GAMEFUL ASSIGNMENTS

- Design a game which requires application of modem concepts – it can be about sending messages to spies
- You are a detective, Find a secrete code stored at specific address in a register
- Enemy has attacked our comm system using analog signals, we have to use a DAC to neutralize that signal

TAKE AWAYS TODAY

1. Educational game design needs a rethink
2. Endogenous design has promise
3. Few basic steps necessary to create endogenous design
   - Key is to identify game elements, fun elements within the content
   - Reaching the user is important
4. Everyone can apply this approach in their context to make teaching/ learning interesting

APPLIED GAMES LAB @ TCS RESEARCH

What we do

- Generate concepts
- Develop methods/frameworks
- Provide advisory, methods, templates and review to BUs /other labs/CoEs
- BUT we rely on partners to do detail design and engineering

Focus areas

- Methods for contextual game design
- Automated game generation
- Sensor based games

We did build one

- Tappy - Integrate playful app for employee wellbeing

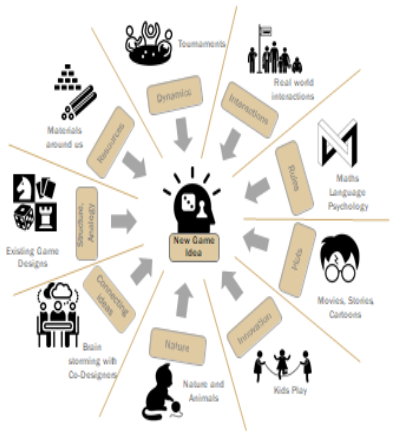
Applications so far..

- Learning in various contexts
- Therapy, wellbeing

THANK YOU

athavale.sandeep@tcs.com

IDEATION STRATEGIES



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GAMIFICATION

Gamification is **enhancing/restructuring** the core content/tasks using game-like motivational elements

Audience preferences are important	• Who is the audience? • How will they know about the new solution? / Where will they encounter it? • When will they use it? For what duration?
Audience motivation is important	• Why isn't the current task inherently motivating? • What motivates the audience? (Social, leadership, convenience, awesomeness, a larger cause, etc.) • Which game elements/constructs* will enhance the motivation of the intended audience?
Context is important	• Is a game/game-like solution appropriate for the context? • Is the gameplay relevant to the context? • Common pitfalls include inserting unrelated gameplay on serious subjects

*Mere visual treatment, quizzes, points, leaderboards etc, will not work everywhere

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LIMITATIONS OF ENDOGENOUS DESIGN

- Costly, not scalable
- Requires initial training

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Webinar – 09

Day, Date & Time: **September 23, 2023 (Saturday) Time 12:00 to 01:05 p.m. (IST)**

Invited Speaker: **Dr. Ramech Chander Sharma**

Country: **India**

Title: **"Leveling Up Learning: Harnessing Simulations and Games for Engaging Education and Effective Training"**

Webinar Topic

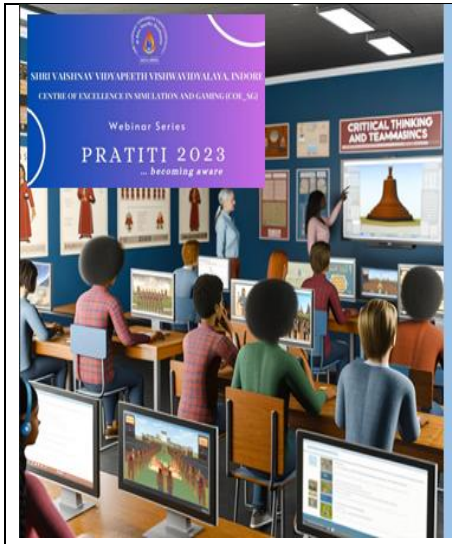
"Leveling Up Learning: Harnessing Simulations and Games for Engaging Education and Effective Training"

Abstract

This presentation discusses the transformative potential of simulations and games in education and business. Join us to explore these immersive tools' design intricacies, pedagogical impact, and assessment benefits. Experience real-world case studies showcasing their success in medical training and corporate leadership. Embrace the evolving landscape of virtual reality, augmented reality, and AI-driven experiences, and learn how to elevate engagement, effectiveness, and achievement assessment. Faculty members are invited to discover a new dimension of impactful teaching and training. Through dynamic examples and insights, you'll uncover how simulations and games captivate learners, promote active participation, and foster skill mastery. Be part of this engaging session to shape the future of learning and training.

Speaker Profile

Dr Ramesh Sharma is Adjunct Computer Science and Engineering Professor at Graphic Era Hill University, Dehradun. He is a Research Fellow at INTI International University, Malaysia and International Visiting Professor at the Polytechnic University of The Philippines, Republic of the Philippines.
Earlier he has taught Educational Technology and Learning Resources at Wawasan Open University, Malaysia. He is an expert in open and distance and technology mediated learning and has served as a visiting Professor at Universidade do Estado da Bahia, UNEB, Salvador, Bahia, Brazil, visiting Professor at University of Fiji, Fiji, Commonwealth of Learning as Director of the Commonwealth Educational Media Centre for Asia, New Delhi, Regional Director of Indira Gandhi National Open University, India and Director of Distance Education at University of Guyana, Guyana, South America.



Leveling Up Learning: Harnessing Simulations and Games for Engaging Education and Effective Training

Ramesh Sharma

23 September 2023

* Most of the images in this presentation are AI-generated.

1

Digital Tools

- Diminishing attention spans and the paramount importance of engagement challenge traditional teaching methods.
- Traditional approaches may not effectively capture the interest and involvement

2

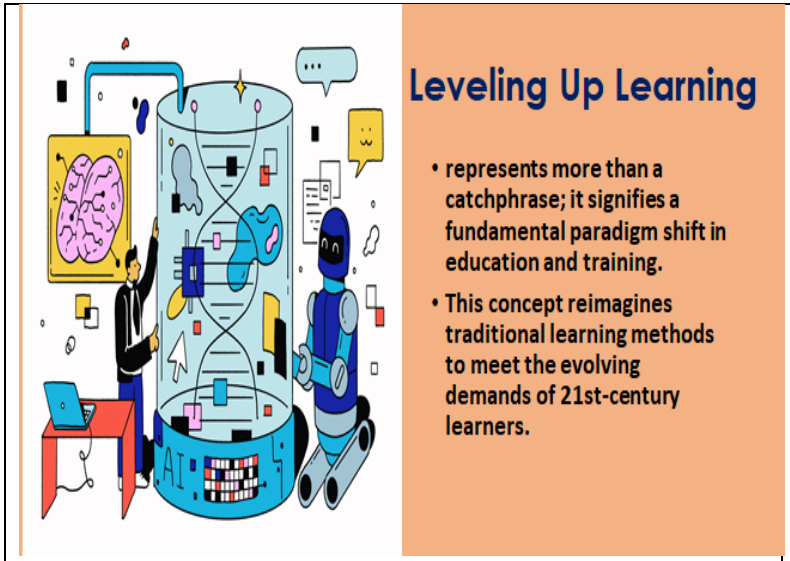
seamless integration with pedagogical principles

3

Transformative impact of simulations and games

- Medical students practice complex surgical procedures safely in virtual environments, like "Touch Surgery," improving skills without the risk to patients.
- Aspiring pilots become experts through "Microsoft Flight Simulator," facing various weather conditions and learning cockpit controls.
- Corporate leaders enhance their decision-making abilities using immersive simulations from "Harvard Business Publishing's Leadership Direct."
- These examples illustrate the broad and transformative impact of simulations and games across different fields of education and professional training.

3

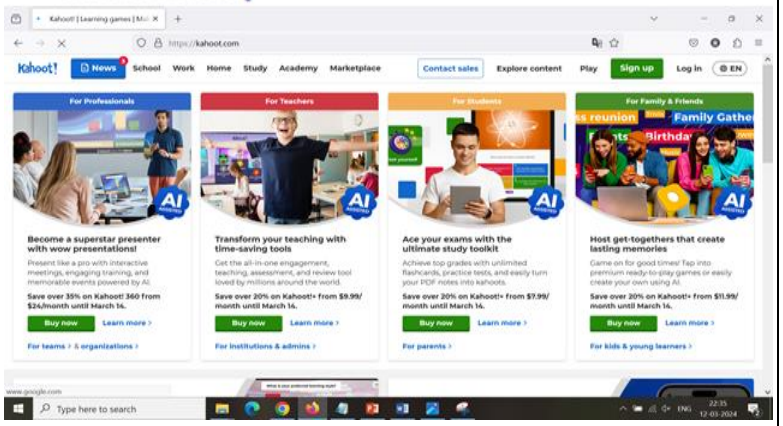


Leveling Up Learning

- represents more than a catchphrase; it signifies a fundamental paradigm shift in education and training.
- This concept reimagines traditional learning methods to meet the evolving demands of 21st-century learners.

4

Immediate Engagement through Interactivity



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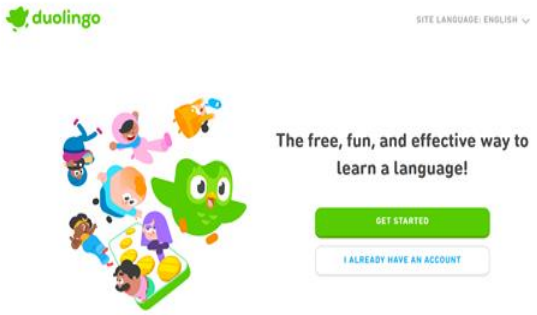
Personalized Learning Pathways



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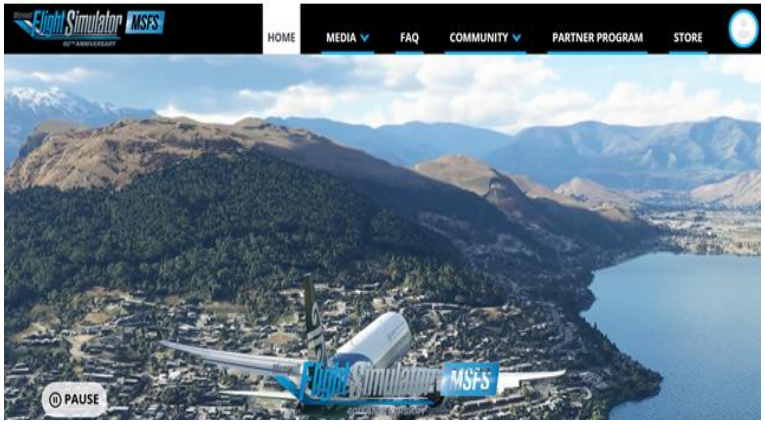
Realistic Scenarios for Application



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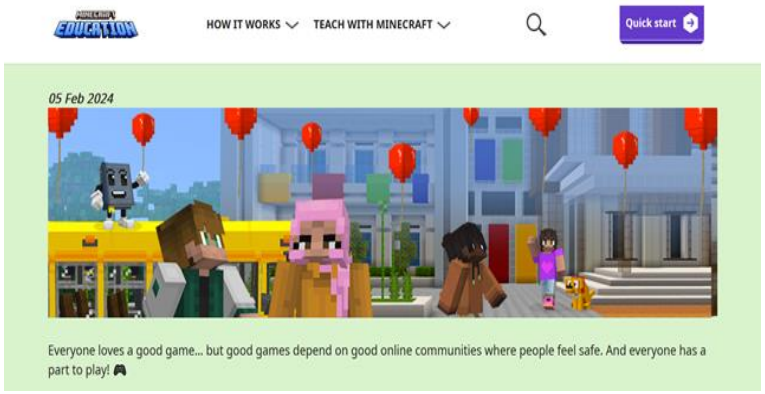
Instant Feedback and Progress Tracking

9

Competitive Elements



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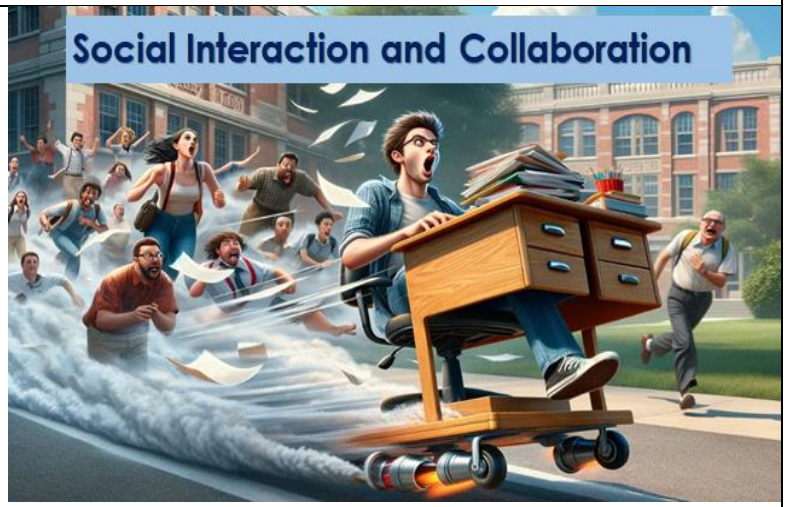
Social Interaction and Collaboration



11

Safe Learning Environment

12

Rich Visual and Auditory Content

13

14

Gamified Assessments

15

The Power of Engagement

Thank you!

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Webinar – 10

Day, Date & Time: **October 26, 2023 (Thursday) Time 03:00 to 04:05 p.m. (IST)**

Invited Speaker: **Dr. Jan H.G. Klabbers**

Country: **Netherlands**

Title: **“The Game Science Approach to Education”**

Webinar Topic

"The Game Science Approach to Education"

Abstract

In his webinar, Jan Klabbers will explore the game science approach to education. Playing games is a total experience involving the whole person, including embodiment, cognition, conation, skills, norms and values. Game sessions enhance experience-in-action, tapping explicit, tacit, local (situated), and enculturated knowing. Klabbers will distinguish three typical learning environments: the classroom, the flight simulator and free play. They are based on different views on knowledge and knowledge transfer.

Speaker Profile

Dr. Jan H.G. Klabbers is involved in the game science approach to social systems development: organization and management development, and action learning. He has held professor and research positions in the U.S. (MIT, Case Western Reserve University), the Netherlands, and Norway. He has been ISAGA General Secretary from 1976 until 2004 and is honorary member of ISAGA and SAGSAGA. His publications cover game science, social systems theory, design science and analytical science methodology. His book "The magic circle: principles of gaming & simulation" (2009), is an essential reading for gaming and simulation scholars and practitioners. It provides the general framework for game science, which he presents as the design and use of games and simulations to advance research, design, and development of social systems.

Note: The ppts of this presentation have not been included, because speaker did not want to share them.

Webinar – 11

Day, Date & Time: **November 24, 2023 (Friday) Time 03:00 to 04:05 p.m. (IST)**

Invited Speaker: **Ms. Birgit Zuern**

Country: **Germany**

Title: **Success Factors for the Use of Simulation Games in Higher Education Curricula**

Webinar Topic

Success Factors for the Use of Simulation Games in Higher Education Curricula

Abstract

Future skills such as critical thinking, dealing with complexity and interdisciplinary cooperation are becoming increasingly important in university education. Business games have the potential to train these skills. However, the use of the method in university teaching depends on many success factors such as curricular integration, well-trained facilitators and the choice of the right tool. How can the use of simulation games in teaching be optimised? Which success factors are important? How can simulation games be integrated into the curriculum? These questions and more will be addressed in the lecture.

Speaker Profile

Birgit Zuern is an economist and has been active in university teaching for over 35 years. Since then, she has used business games as an interactive learning method. As head of the Centre for Management Simulation at the Cooperative State University Baden-Wuerttemberg in Stuttgart, she is responsible for organising over 200 courses with business games each year. She optimises didactic settings, trains facilitators and is responsible for the European Simulation and Gaming Forum. Birgit Zuern is also an EB member of SAGSAGA (German-speaking professional association) and ISAGA (International Simulation and Gaming Association).

DHBW

Success Factors for the Use of Simulation Games in Higher Education Curricula?

Dipl. oec. Birgit Zürn | Head of Centre of Management Simulation at DHBW Stuttgart

Pratiti Webinar Series 2023

1

DHBW

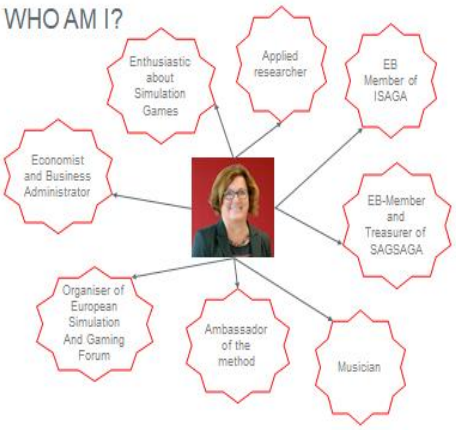
OUTLINE

- Presentation of the Centre of Management Simulation
- Challenges of university teaching today
- Activity - Survey
- Success factors

2

DHBW

WHO AM I?



3

DHBW

WHAT IS THE ZMS?

- Development of innovative seminar concepts using the business game method
- Promotion of students' professional, methodological and social competences
- Preparing students to take on responsibility in business practice
- 5,000 students per year, 250 business game courses, over 30 different business games

4

DHBW

CHALLENGES OF TEACHING AT UNIVERSITIES TODAY

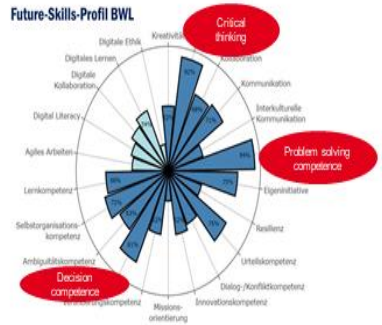
- ✓ Heterogeneity of students
- ✓ Digitalisation
- ✓ Artificial Intelligence
- ✓ VUCA World
- ✓ Rapid change in fast pace
- ✓ Complexity
- ✓ Big Data
- ✓ Fake news
- ✓ ....

5

DHBW

FUTURE SKILLS

Source: Future of Jobs Report 2020, World Economic Forum Davos



Source: CHE Centrum für Hochschulentwicklung, https://www.che.de/2023/foerderung-von-future-skills-in-der-hochschullehre-aus-professorinnensicht-fuer-acht-faecher/

6

Success factors in using Simulation Games in teaching

49 responses

7

DHBW

SUCCESS FACTORS OF SIMULATION GAMES

8

ROOM

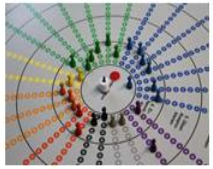
- Room design has a significant impact on learning behaviour
- Promotion of collaboration and exchange of knowledge and ideas
- Flexibility in adapting the rooms to the requirements of the learning situation
- Calm and organized learning atmosphere

9

SUCCESS FACTORS OF SIMULATION GAMES

10

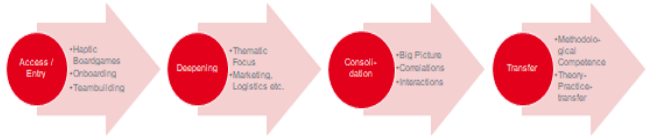
GAME



11

DIDACTIC CONCEPT
Integration in the curriculum



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SUCCESS FACTORS OF SIMULATION GAMES

13

FACILITATOR

10 IMPULSES FOR SUCCESSFUL FACILITATION OF SIMULATION GAMES

1. Deal intensively with the simulation game and the thematic field.
2. Prepare the seminar and the learning environment well.
3. Provide structure and leave room for flexibility.
4. See yourself as a learning facilitator and not as a teacher.
5. Allow for mistakes - they are not only allowed but encouraged.
6. Take the participants and their knowledge, needs and experiences seriously.
7. Allow sufficient time for debriefing.
8. Support the participants in the transfer of their everyday life.
9. Understand criticism of and questions about the (game) system as learning opportunities.
10. Reflect on your own behaviour as a simulation game facilitator.

Source: SAGSAGA Webpage https://sagsaga.org/Quality

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14

FACILITATOR

Roles and Tasks

Van Laere, Lindblom and Wijse-van Heeswijk:

Source: van Laere, J., Lindblom, J. & Wijse-van Heeswijk, M. de (2021). Complexifying Facilitation by Immersing in Lived Experiences of on-the-fly Facilitation. Simulation & Gaming, 52(3), S. 346-383.

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SUCCESS FACTORS OF SIMULATION GAMES

16

SEMINAR CONCEPTION

Block event in presence

Block event online

Split up during the semester

Blended Learning Concepts

- Flow
- External training centres
- Setting up haptic games

- Dealing with the experience
- Game phases in presence or self-study
- Debriefings in presence

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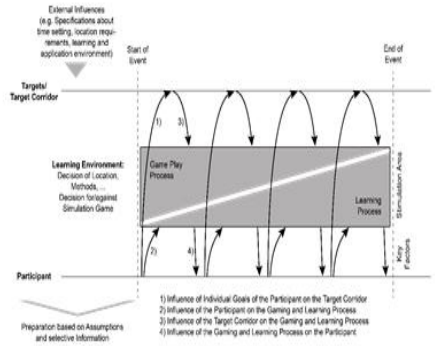
SEMINAR CONCEPTION



Source: Schwägele, S., Zürn, B., Lukosch, H. K., & Freese, M. (2021). Design of an Impulse-Debriefing-Spiral for Simulation Game Facilitation. Simulation and Gaming, 52(3), 364-385. https://doi.org/10.1177/1046878121 1006752

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SUCCESS FACTORS OF SIMULATION GAMES

19

PARTICIPANT

20

PARTICIPANT

HOW DO YOU REACH SATISFACTION AND LEARNING?

- Assessment of Learning expectations
- Line-up According to prior knowledge
- Bring participants into game roles and unroll them
- Appreciative and student-centred teaching style

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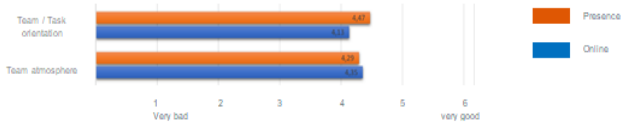
SUCCESS FACTORS OF SIMULATION GAMES

22

INFLUENCE OF THE TEAM



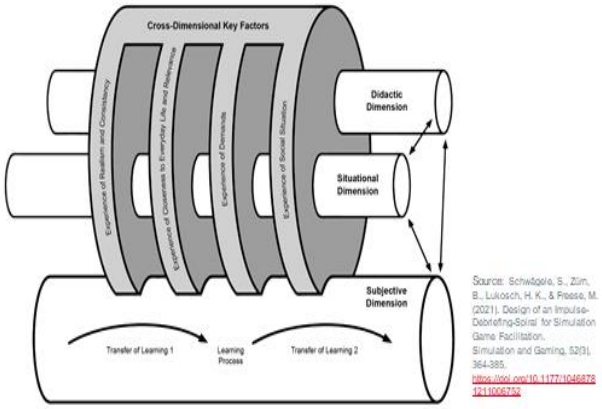
- Hardly any differences presence / online
- Significant: Team / task-orientation:
  Items: "Everyone in our team had a function." "I knew exactly what my tasks were"

23

SUCCESS FACTORS OF SIMULATION GAMES

24

LEARNING TRANSFER



Source: Schwägele, S., Zürn, B., Lukosch, H. K., & Freese, M. (2021). Design of an Impulse-Debriefing-Spiral for Simulation Game Facilitation. Simulation and Gaming, 52(3), 364-385. https://doi.org/10.1177/1046878121100675

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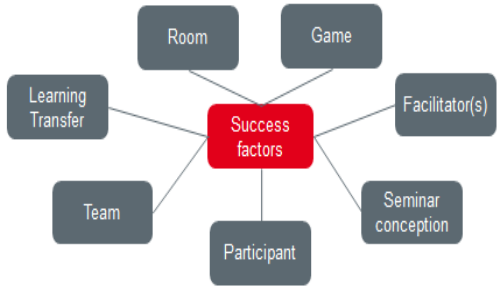
SUCCESS FACTORS OF SIMULATION GAMES



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CONCLUSION AND OUTLOOK

Teaching scenarios will be more flexible

More interdisciplinarity and international events

New content

Integration of new technologies

Peer exchange of facilitators

27

THANK YOU VERY MUCH!

Birgit Zuern
Centre for Management Simulation

www.zms.dhbw-stuttgart.de

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Webinar – 12

Day, Date & Time: **December 18, 2023 Time 03 to 04:05 p.m. (IST)**

Invited Speaker: **Mr. Jaap de goede**

Country: **Netherlands**

Title: **Cooperative Games and Cultural Transition**

Webinar Topic

Cooperative Games and Cultural Transition

Abstract

In games, competition has been the long time norm. Team games require some form of cooperation, but are competitive on the whole. True cooperative games, where all or most players must cooperate to reach the game's goals were long scarce. However, many situations in real life require cooperation rather than competition. In serious games this lesson was already taught, but not always explicit. Now, since about fifteen years, a turnaround is made. Cooperative games are on the rise. "Pandemic" by Matt Leacock (2008) was a breakthrough, and in an ironic way it even foreshadowed the international cooperation we needed to learn to quell the COVID pandemic.
I would like to discuss this change from competition to cooperation. I would like to argue that it may both be a sign of a "new" paradigm for how we run our society, and possibly also a tool to change our mindsets faster.

Speaker Profile

Jaap de Goede, Social Psychologist MA, designs both serious games and entertainment games with hidden lessons. Important subjects are societal and climate transition, and our economic and money system. He has worked long time in journalism, documentary and national television.

Cooperation or Competition?

The rise of Cooperative Games

And Cooperation and Inclusion in society

1

Who am I?

- a. Jaap de Goede
- b. (Serious) Game Designer
- c. Film, News & Documentary Professional
- d. Social Psychologist

2

My Games

- Coop Storytelling Games
- Money – Energy Transition
- Imagine the Future

3

Cooperation or Competition?

The rise of Cooperative Games

And Cooperation and Inclusion in society

4

Game = Competition?

- Monopoly & Risk
- Sports, Competitive
- But not any more, since 2000s
- Earlier rise in serious games

5

Or... Game = Cooperation?

6

Cooperation in Society

7

Is there a Link?

8

Reflection
of
Society?

9

Many New Coop Games

10

But Why?

11

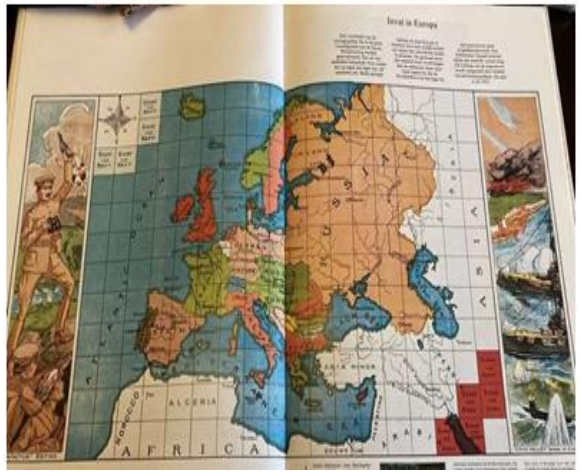
Escaping to another World?

12

Or... Teaching New Ways?

13

Propaganda Games



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The real origin of Monopoly

15

Different Messages

16

Saving Energy with Games

17

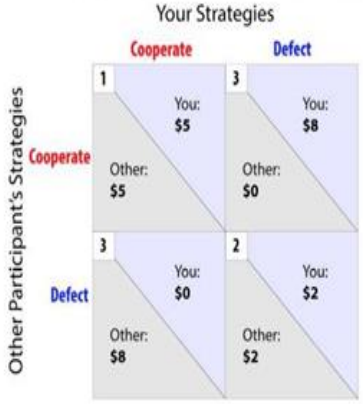
Exploring New Ways?

18

Need to Cooperate

19

What Makes Us Cooperate?



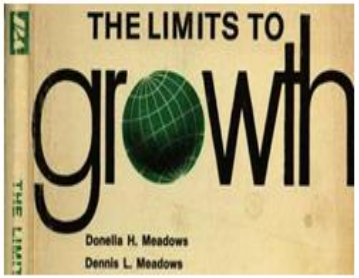
- Prisoners dilemma game

20

Meadows & Meadows

21

Systems Thinking & Serious Games



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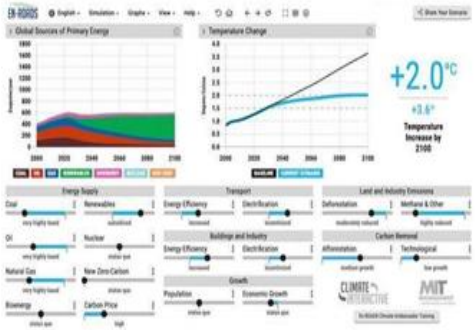
World Climate Simulation

MIT C-ROADS, EN-ROADS



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Games as a Microcosm

- Hexagon – serious game by Dick Duke

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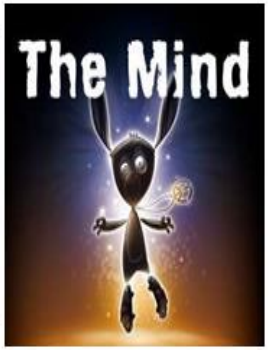
Learning a New Mindset



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Early Coop Boardgames

26

Coop Online Games

27

Escape Rooms

28

Players vs the Board

29

Traitor Games

30

Couples Games

31

Communication Games

32

Competition Meets Cooperation

- Diplomacy

33

Cooperative Storytelling

34

Use the Games!

- to Teach
- Explore
- and Learn

35

Epilogue

Artificial intelligence (AI) is rapidly changing the way we learn and access knowledge. As AI continues to fill the knowledge landscape, the traditional classroom model of "downloading" information is becoming less effective. Instead, classrooms must become a place of discourse, where students can actively engage with the material and engage in critical thinking. One way to achieve this is through the use of facilitation games and activities that inject fun into learning and provide alternative channels for expression. There are various activities that can be used to facilitate discussion and uncover learning in the classroom. These activities can range from interactive simulations and problem-solving exercises to debates and discussions, and they will be designed to allow students to explore new ideas, question assumptions, and express their own perspectives. Through the use of these activities, it is hoped that students will be in a better place to transform knowledge into practical skill.

In the time of increasing risks and effects of climate change, importance of local knowledge to tackle natural hazards is getting more attention to integrate with scientific knowledge and learning as lessons for other areas. The gamification mechanism and game approach contributing to enhancing knowledge sharing motivation regarding challenges of climate change. The games incorporating the gamification mechanism and game approach for extracting local knowledge on flood management.

Performance improvements can only be achieved by proactively managing the change process. However, getting to and benefiting from transformational change is often not easy. The change journey presents a variety of structural, behavioral, individual and systemic challenges inherent in the very nature of transformational change. Serious games are an effective and efficient approach to addressing these challenges of change and should be an essential element of any change program. There are challenges for successful change and different serious games can successfully addressed these challenges.

Everest is a trainer without parallels, even when you experience it through a simulation! MISSION EVEREST a simulation to build high performance teams is thus the next best substitute to actually climbing up the deadly 29000 feet without risking your lives! Everest serves as a universal metaphor for challenging & aspirational goals in life. Whether climbing the Mt. Everest or the metaphorical Everests at work and in life, it's vital not just to focus on the summit but focus on summiting with a healthy team. A message that gets clearly experienced during the simulation through various challenges that the team tackles.

In the new world of remote and hybrid working it can be a challenge to keep teams in organizations connected and to help them fully understand new information, goals and strategies. The teams navigate those challenges through dynamic conversations inspired by the fun of simulation games. Some learning themes such as competitiveness, self-efficacy and satisfaction were outcomes of personal empirical games research.

SG shows the potential to engage and motivate learners via agency by following their own learning paths and receive personalized feedback. The potential downside is that we don't know what players will learn because we do not now ahead what path they will take. However, there numerous learning interventions and evaluation methods available to us that open the black box. Evaluative methods and formative assessment techniques can provide both learners and facilitators with handholds on what is being learned and bring focus to the goals of the game turning the black box into a clear learning path.

Educational games are expected to harness the fascination of games to deliver learning in an interesting way. However educational games are yet to realize the promise of engaging the learners effectively. The commonplace technique of superimposing unrelated gameplay over the educational content (called exogenous design) creates incoherence between the act of learning and playing, rendering such games ineffective. However, games with 'endogenous' design have the potential to deliver learning through the mere act of playing. In endogenous design, game elements are derived from 'within' the educational content. This leads to the creation of unique, novel, and

pertinent gameplay for every learning topic. Designing such games, however, is challenging.

The simulations and games have transformative potential in education and business. There are immersive tools' design intricacies, pedagogical impact, and assessment benefits. Embrace the evolving landscape of virtual reality, augmented reality, and AI-driven experiences, and learn how to elevate engagement, effectiveness, and achievement assessment. Playing games is a total experience involving the whole person, including embodiment, cognition, conation, skills, norms and values. Game sessions enhance experience-in-action, tapping explicit, tacit, local (situated), and enculturated knowing. The three typical learning environments: the classroom, the flight simulator and free play are based on different views on knowledge and knowledge transfer. Future skills such as critical thinking, dealing with complexity and interdisciplinary cooperation are becoming increasingly important in university education. Business games have the potential to train these skills. However, the use of the method in university teaching depends on many success factors such as curricular integration, well-trained facilitators and the choice of the right tool.

In games, competition has been the long time norm. Team games require some form of cooperation, but are competitive on the whole. True cooperative games, where all or most players must cooperate to reach the game’s goals were long scarce. However, many situations in real life require cooperation rather than competition. In serious games this lesson was already taught, but not always explicit. Now, since about fifteen years, a turnaround is made. Cooperative games are on the rise. “Pandemic” by Matt Leacock (2008) was a breakthrough, and in an ironic way it even foreshadowed the international cooperation we needed to learn to quell the COVID pandemic.

Author Index

VISION

To create an educational environment that engages deep intellectual, moral and spiritual stimulation, thereby nurturing leadership.

MISSION

To pioneer a 'mentoring' based education system with an intellectual, moral and spiritual culture of its own, rooted in Indian ethos and in tune with global vision of the times; To inculcate learning through understanding, knowledge enhancement, skill development and positive attitude formation; To encourage innovative thinking with self discipline and social responsibility.

VALUES

Endurance, Excellence, Fairness, Honesty and Transparency.

Shri Vaishnav Vidyapeeth Vishwavidyalaya

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