NAURU GAME for Active Citizenship of Youth

Methodology Guide

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Introduction

What is this Methodology Guide?

The New Shores Methodology Guide is part of a **comprehensive educational kit** consisting of

1. multiplayer internet game *New Shores - a Game for Democracy*,
2. Game-based Workshop Scenario,
3. Methodology Guide,
4. E-learning platform.

All these materials have been developed parallelly as part of the Erasmus+ programme funded from the European Union.

Who and what is the Methodology Guide aimed at?

This Methodology Guide has been developed as a complementary document to the more practical game-based Workshop Scenario. Its main objective is to enable **youth educators** to fully exploit the educational potential of *New Shores - a Game for Democracy*, thus it provides the **general rationale behind the game-based learning** and introduces basic principles and concepts it stems from. We hope that together with a set of practical tips on how to lead a game session (see: Workshop Scenario), this Methodology Guide will increase your understanding of the importance of fun and active engagement of learners in education, and enable you to organise a successful game session.

What can be the *New Shores* game used for?

New Shores - a Game for Democracy is addressed mostly to **middle and secondary school pupils** and **students of higher education** (although with necessary guidance, it may turn successful also with younger kids.)

As its subtitle suggests, the game is mainly concerned with the concept of **democracy**, which we understand as an ability to have a share in shaping our present and future in a fair, respecting and inclusive society. However, as the democracy demands taking into account the needs of all people (such as e.g. basic right to shelter, food, education, healthcare or personal development), we have to consider it in the broader context of **sustainability**, understood as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland Report 1987).

Our Earth has planetary boundaries that have to be respected if we want to continue satisfying our needs without undermining the integrity and stability of the natural system. How should we manage our common resources then? Who should decide on their distribution? And finally, how and who should define what are “our needs”?

In a democratic setting we should all have a say in these matters because democracy may only be practiced through dissent and debate, which in turn require multiple social skills. The *New Shores*

game is designed as a sandbox for acquiring and practicing both social skills and hard (scientific) knowledge regarding the impact of human actions on the **environment** and the **society.**

In particular, *New Shores* has been developed to train and develop three key competencies of young people, needed in the context of democracy and sustainability:

1. **Social and civic skills** understood as personal, interpersonal and intercultural competences that equip individuals with skills to participate in an effective and constructive way in social and working life, and to resolve conflict where necessary.
2. **Mathematical and scientific skills** understood as the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations, relate facts and understand the basic principles of the natural world.
3. **Sense of initiative and entrepreneurship** understood as an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives.

The learning benefits connected to these values are studied in more detail in the section about game-based learning. To learn more about the Key Competences defined by the European Union, find their descriptions here.

What is your role in this game?

As an educator you are going to act as a moderator of the game. As such, **you don't have to be an expert on democracy or sustainability** (however if you believe your knowledge on the topics is not sufficient, look for the links to the inspiring articles and videos listed in the Workshop Scenario). Your priority would be to take care of all practical and technical issues related to the workshop organization (such as ensuring the appropriate equipment, managing rounds, facilitating gameflow and addressing various problems that may emerge during play).

A set of practical ideas on different intervention a moderator can take during the game is described in details in the Workshop Scenario that we recommend reading before setting up the workshop. To make these interventions even more adequate, you are highly encouraged to read the section on communication (page 9 of the Methodology Guide).

What are the Key Concepts described in this Methodology?

The following pages contain the theoretical background used for the development of the *New Shores* game and its supporting materials. These have been condensed into smaller pieces, only introducing ideas that are the most important for understanding the rationale behind using the game in education. Further literature is suggested at the end of the section.

System thinking in education

As our world is getting more complex than ever before, and our ability to understand it is evolving, progressive education requires a different approach to passing down knowledge. Information itself is not enough anymore (as often the facts learnt are no more valid by the time a student leaves school). **The focus of education has thus been shifted from presenting facts to passing on preparedness – a set of skills to survive and be successful in life** (Robinson, 2001).

With this, we have arrived to the realm of **system thinking theory**, which is basically saying that a system is more than the collection of its components. Components themselves are systems which interact with each other to build a more complex system, which is also embedded in a greater system – and all the components affect the others. Regarding education, it tells us that we need to look at participants of education as complex systems, and taking into consideration the notion of **competence**. Next to the knowledge of facts and contexts, competence also includes the skills, which enable them to use the gained knowledge, and the attitudes of the person learning, which enables them to wanting to use the learnt knowledge. (Based on: Suhajda (2012))

New Shores game is developed with exactly this aim in mind. The educator can choose **a teaching aim** (whether it is to teach about democracy, sustainability, social competences, mathematical competences or sense of initiative), and choose the appropriate **supporting activities** – and so ***develop the competences of the young people***.

The game itself is based on complex systems interacting with each other, and the learning experience reflects this complexity. The group of young people can gain factual knowledge (eg. how cutting trees affects the islands ecology), develop their skills (eg. how to be assertive in a social situation) and their attitudes (eg. willing to do something in order to save the environment in real life as well).

Experiential learning

“The only source of knowledge is experience.” - Albert Einstein

Like making music, telling stories, and painting pictures, a playful exploration of the world is intrinsic to humans across time and space (Zimmerman 2013). Young animals and kids are not taught to play - they do it out of natural curiosity, which tells them to take an object and study it until they learn all about it. This process is later repeated with yet another, usually more complex and challenging, object. This natural capacity of kids (and adults too!) to practise essential skills by exploring “transitional objects”’ (Guerts *et al.* 2007), such as toys and games, has rendered into growing interest in exploiting the linkage between active experimenting and knowledge acquisition.

Such **hands-on** or **experiential learning** approach (Kolb 1984) not only takes into consideration different learning and communication styles of individuals, but also highlights the fact that knowledge

acquisition is “created through the transformation of experience” (Kolb 1984). Effective learning may only happen by going through all four stages of the cycle:

1) encountering and experiencing a new situation (concrete experience);
2) reflecting on this experience (reflective observation);
3) formulating a new idea or modifying an existing one through conceptualisation (abstract conceptualisation);
4) active experimentation via applying new or modified ideas into the world to check what happens.

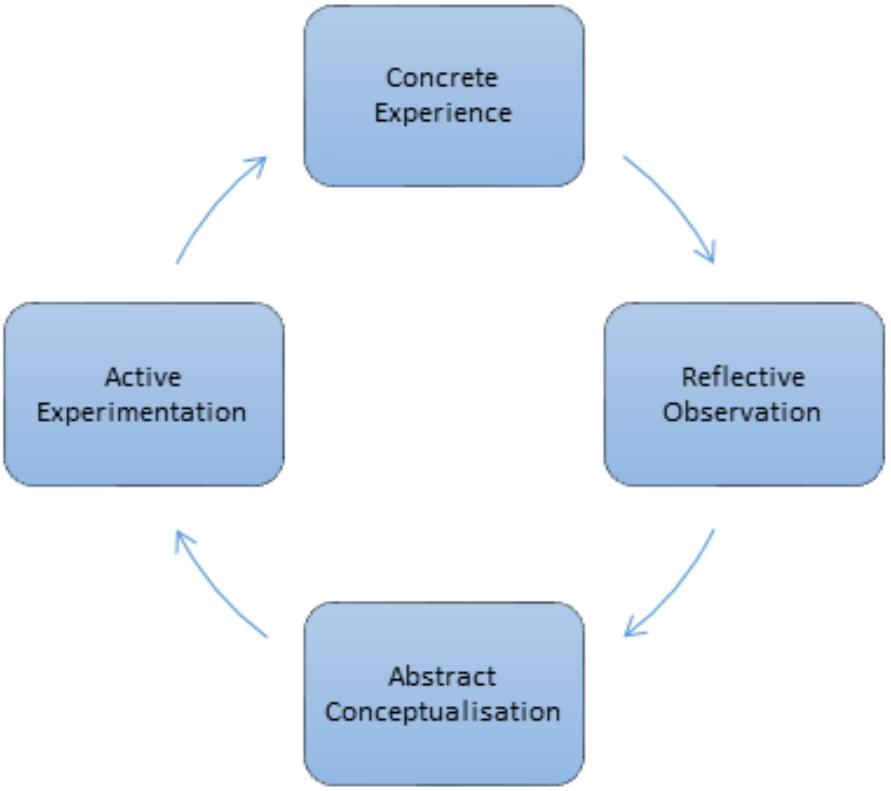

Fig. 1. Kolb’s cycle (Based on: https://fosterourfuture.co.nz/topic/kolbs-experiential-learning-cycle/)

At the very heart of Kolb’s approach is thus the natural “trial and error” process via which people usually conceptualize information and make strategic decisions. This process presupposes active interaction with the surrounding world and entails creativity to formulate new and modify already existing ideas. Going through this cycle more times leads to a reinforced learning. It enables learners of all styles to acquire knowledge in a self-guided, explorative way.

Games like *New Shores* are based on such ongoing learning process: every time a new rule is discovered or the game’s result is surprising, the cycle is restarted. New challenges give rise to new ideas to be tested in the evolving game’s conditions. Games offer one more advantage. In real life,

experiential learning requires time, as the internalisation and conceptualisation of new experiences is lengthy. Moreover, learners need to show their courage because an erroneous decision may lead to an unexpected outcome. Thanks to games, on the other hand, **the learning cycle is much faster**, as the game session rarely exceeds 2 or 3 hours. The safe "simulated" environment and mock decision making allow players to test their hypotheses and strategies actively, yet no potentially fatal consequences are born.

Game-based learning

Bearing in mind the parallels between play, exploration and learning, we decided to combine the advantages of experiential learning with the creative and playful process of gaming, and render them into a joint educational yet exciting experience, where strong emphasis is put on active engagement, peer-to-peer relationships, communication and self-reflection. The game-based learning approach has gained a lot of names, being referred to as **immersive learning simulations**, **educational simulations**, **serious games**, **game-based learning** or **edutainment**.

In contrast to games designed predominantly as free-time activities taken up for leisure or competition, "**serious games**" "*may be played seriously or casually, [but]... are not intended to be played primarily for amusement*" (Abt 1970). This (very early) definition of serious games is still adequate and embraces both digital and analog games whose focus is on a "serious" goal, be it education, skill training, self-development or increased work motivation, etc.

New Shores' **serious goal** is thus to shape citizens' attitudes and increase the awareness of social participation, sustainable development and climate change among youth. However, instead of presenting learners with dry facts and definitions, we decided to send them on a fascinating journey on the mysterious island where they get engaged in a variety of challenges and:

have fun: Although used for serious goals, *New Shores* exploits the same mechanism as "regular" games; it has a basic storyline which sets the context of the game, and it is bound by defined rules (such as the time allotted to the gameplay or a set of moves players are allowed to take). Like all games, it also involves the tension between rivalry and fair play, provoking various emotional responses in players, both positive (excitement, curiosity, empathy) and negative (anger, envy, guilt). This emotional aspect of the game makes it challenging for the moderator, but at the same time creates a perfect learning environment, as information acquired in emotionally charged situations is usually remembered better.

understand complex problems: As the narration of the game begins, the players land on the shores of an island. Equipped with nothing more than a basic hut and a couple of action points, they are soon thrust into a harsh reality of earning money, protecting their households and developing public infrastructure. On their way, they discover that all these actions are interlinked, and one unconscious move can disturb the island's ecological or social balance. Relying on a simple mechanism of cause-effect relation, *New Shores* is very effective at integrating many variables of such complex issues as greenhouse effect or homelessness. What happens is that the essence of these problems is passed to players not via mundane

lecturing but by offering them possibilities to test strategies that match their changing priorities.

get into contact with peers: Communication plays a key role whenever important decisions are to be made. The life on the *New Shores* island consists of a series of such decisions, each of them requiring collecting insights and perspectives of many people. One of the strengths of the game is that players are not restricted to any particular mode of communication, instead they are free to rely on whatever interaction pattern they believe matches their current need (be it pairwork, open group discussion or temporary allies with a couple of players). In this way the game encourages the exchange of experiences and perspectives, bridging gaps between diverse groups of students and motivating them to stay open to their distinct views, opinions and needs.

boost their creativity: Playing is one of the most liberating and engaging activity in the world. By entering a fictional world, your students can break free from their usual everyday roles. They thus become more relaxed and open for creative exploration of the options the island offers. At any time of the game, players can verify even the most revolutionary hypothesis and the consequences it entails become instantly evident. Although not always satisfactory, tested strategies always trigger novel alternatives, challenging players to follow any idea that has potential. In this way the safe environment of the game can help your students overcome fear of failure and encourage them to rely on their initiative to find way out of any adversity.

learn to build consensus: The tension between pursuing private goals and acting for the common good is often released in the face of adversity that affects all. The *New Shores* island holds many such unfortunate events. The scarcity of natural resources or the threat of devastating natural disasters often make even most competitive players seek consensus with others to protect their common future on the island. Some players collectively decide to start massive afforestation or to resign from using fossil fuels. Such trade-offs often call for personal sacrifice and thus offer a valuable lesson for your students to overcome their "greedy" instincts and practise mutual understanding.

get inspired to action: One of the most impactful moments of the *New Shores* workshop happens at the end of the game when we present players with two pictures: a screenshot of the green paradise they entered, and a current view of the (usually) devastated land they ended up with. This confrontation is often both painful and thought-provoking, as the players realize that the current condition of the island is the result of their action. What would they do differently if they had chance to play the game again? What would happen if they transfer their attitudes and decisions into the real life? Would our planet soon look like that? Such virtual looks into the past or future may help your students to experience a significant "aha" moment and inspire them to a long-term mindset and/ or behavior change, motivating them e.g. to adapt more pro-ecological attitudes or openly communicate their needs to others.

To further experience the benefits of *New Shores*, we highly recommend leading an extensive post-game **debriefing session**, that is "**the occasion and activity for the reflection on and the sharing of the game experience to turn it into learning**" (Crookall 2010). During such an event,

individuals who shared a gaming experience, have the opportunity to analyze their moves, view their opinions and air the emotions, generalizing their learnings from and between all participants.

A proper debriefing session allows moderators to clarify any debatable facts or situations encountered in game, and help participants go through any stressful aspects of the workshop, transforming them into positive and shared learning.

The Workshop Scenario document offers a repository of ideas on how to lead an inspiring debriefing session and post-game activities, which together with "calls for action", may move the *New Shores*' experience beyond the game context. Motivate your students to reflect back on the workshop and encourage them to share their success stories in the form of photos, posters, and testimonials which you may later publish on our e-learning platform.

Communication with players

It has been stated in the previous sections that the *New Shores* game is a rich social experience during which players are constantly exposed to different forms of interaction, negotiating, consulting, and collectively deciding on a variety of moves. This aspect of the game, together with the competitive element of relying on the same, limited resources may trigger strong emotional reactions, which have to be addressed by the moderator both during and after the game (while leading a debriefing session).

Although there is no widely accepted code of ethics for simulation and gaming, moderators should display sensitivity and consideration. Most people play games for fun, and may not be aware of potentially negative emotions that may emerge. As educators, it is our responsibility to create an atmosphere where participants feel safe enough to express themselves freely, without being afraid of judgement or being attacked by others. This atmosphere is essential when our aim is changing the attitude of participants.

Nonviolent communication

A useful model of communication that may be followed during the *New Shores* workshop is offered by **Marshall Rosenberg**, who described two modes of communication: the language of jackals and giraffes.

- The jackals see a social situation through the lenses of power, therefore they know only two ways of communicating. If they perceive their interlocutor as weaker, they attack him. If, however, the interlocutor seems stronger, the jackals give up.
- The giraffes, on the other hand, are enormous but very gentle – they could destroy their enemy by one kick – but they choose not to do it.

These are the two basic patterns of communication: violent and nonviolent. While it is natural, and sometimes appropriate to communicate as jackals, when emotions are at stake, in this methodology guide we adopt **the giraffe's mode of communication** with learners to enable them to feel safe enough to express their true feelings and thus open the way for change.

Useful guidelines for applying non-violent communication

Several nonviolent elements of communication may come in handy when moderating the *New Shores* game. Here is a list of suggestions every moderator can introduce in their groups, and ask participants to be considerate of these suggestions when communicating with each other. You can even agree on including these suggestions as rules of the game, so it is easier to refer back to them in an emotionally charged moment of the game. To make it even more understandable some example sentences have been included. These are:

1. **Observe** – do not interpret, just observe what the other is doing (but be precise!) (adding an example: *„When the suggestion to build a public school was raised by a participant, the group hasn't responded.")*
2. **Feel** – talk about what you feel (*„It made me feel curious why some of yoy haven't participated in the discussions.*")
3. **Need** – talk about what you need (*„I need to know if some of you feel uncomfortable.")*
4. **Ask** – If you need something, ask about it (*„I would like to ask you to listen to each other and be respectful when someone is talking.*")

Helping communication

Another communication approach worth recommending while conducting a *New Shores* workshop is that of **helping communication by Thomas Gordon**. The foundations of his model are similar to that of Rosenberg's: we should account for our own and other people's' feelings. In addition, we should avoid communication barriers which can prevent other people from sharing his/her emotions, and use active listening techniques, which encourage speakers to continue their narration.

In the following part we have included a list of communication barriers, so it is easier for each moderator to identify these. Here is the list of the most common **communication barriers**:

- **Commands**: When we are giving commands to others, we demonstrate our power over them. This might lead to the other person trying to hit back, which can result in a fight.
- **Threatening**: Threats make people feel attacked. They may also cause fear. A threatened person might change the behaviour, but in the long-term, this strategy disturbs the relationship between people.
- **Lecturing**: Lecturing person who is talking about their feelings, can easily create a sense of humiliation in the speaker.
- **Advising**: Giving advice to a person in distress, can create similar effects as lecturing. The person might feel "stupid" for not finding out the right solution themselves.
- **Own stories**: If someone talks about his/her feelings, and as a response we start to talk about us, it demonstrates our lack of interest in our interlocutor's emotional state, and may make him/her feel ignored.
- **Logical arguments**: Logical argumentation, just like advising, does not help anyone to face a problem. A person overwhelmed by his/her emotions is usually not able to listen to reasons, therefore they offer no solution to the situation.

- **Encouragement**: Although useful in certain situations, encouragement does not work for people overwhelmed by negative feelings. Asking somebody to "cheer up" when they are depressed, might make them feel forced to deny their emotions.
- **Criticizing**: Criticizing a speaker may make him/her defend him/herself rather than continuing sharing.
- **Joking**: Joking about someone's emotions can easily hurt them and prevent them from sharing more.
- **Labelling**: Judging and labelling other people can make them feel misunderstood and discourage them from sharing more.

While it is important to avoid the barriers above, we should also remember that there are some communication reinforcing techniques to demonstrate that we listen to and are interested in what the other person is saying.

Communication reinforcing techniques

- **Mirroring** ("I see that you were distressed when you lost your house."): When we use mirroring, you may just repeat key words or the last few words spoken. This shows you are trying to understand the speaker and acts as a prompt for him or her to continue. It doesn't really matter if you are exact in our observation or not, as the other can correct us and continue sharing.
- **Open questions** ("How did you feel about not being able to buy protection for your house?"): If we want to know more, we should phrase our questions in an open way, so that the others feel invited to share their feelings. If, however, someone chooses to reply with yes/ no without going into details, accept it.
- **Rephrasing** ("So you are saying that you were bored during the game."): Rephrasing one's comments serves the aim of making sure we understood him/her well, and also offers a chance for the speaker to describe his/her feelings in more details.
- **Self-exploration** ("I also feel angry when someone doesn't listen to my ideas."): You can reveal yourself a bit in order to facilitate discussion about feelings. However, don't shift the focus solely on you, just show that you often feel what the speaker feels..
- **Informing**: (e.g. "It's too noisy in here!") If possible, provide information in which a suggestion or a wish is implied as a possibility rather that order. Such message works better as it may motivate rather than express expectations.
- **Summarizing**: Summarizing what we have heard during a discussion can help people become more aware of what has happened. As a results, they may be able to draw more learning points from the experience: *I'm glad that most of you enjoyed playing the game and would like to try it once again some time.*

Whatever approach (non-violent or helping communication) you wish to adopt while working with your students, **be consistent.**

Choose some rules from the tips provided above, and set some basic rules of communication.

Remember that if you want students to follow the rules you - as a model - should follow them as well. It might be difficult at first, especially if you are not used to this way of communication. It is also a challenge, as our aim with *New Shores* is to provoke emotional response – but that is exactly the reason for which we have to be really conscious about facilitating the discussion during and debriefing session after the game.

More tips on how to address specific risky situations during play, may be found in the relevant sections of the Workshop Scenario.

E-learning: *New Shores* on Edmodo

The *New Shores* game and the Methodology Guide constitute only a part of the extensive learning experience. We did not want to create a single-use workshop that would make only one of your lessons more attractive, but have no long-term impact on you or your students. This is why we decided to establish a whole *New Shores* community that will exceed the geographical and economical barriers and enable moderators from all around the world to exchange their experience and feedback on *New Shores* workshop, share their success stories and promote good practices.

For this purpose, we have created the New Shores group on Edmodo platform. Unlike traditional MOOC-platforms, hosting massive open online courses, Edmodo functions on a basis of a communication, collaboration, and coaching platform to students and teachers. It allows teachers to create their own class, assign them homeworks, publish educational materials and monitor progress. It also serves as a storage where the *New Shores* game and its accompanying materials (including the *Methodology Guide* you are just reading, *Workshop Scenario*, video tutorial for moderators, learners' questionnaire) are hosted and available to all for free.

Moreover, to make your work with the *New Shores* game even easier we have prepared **a nine-days long e-learning course** which will guide you through the most important aspects of the game-based learning. It will not only deepen your theoretical knowledge but also equip you with practical skills to prepare, lead and evaluate *New Shores* game sessions. All materials published on the e-learning platform are downloadable. You can access and read/ watch it at your own pace.

How to use digital technology in education

The e-learning platform for moderators (educators) and players (learners) offers a number of advantages over more traditional, stationary forms of educations, as it:

stores all *New Shores* elements in one place, from which you can access, print or share them with your learners. The content is constantly updated so that you may be sure that all the materials to the game are always accurate and correspond to the current version of the game;

enables both asynchronous and synchronous activity: the published materials (such as e.g. video tutorial for moderator) allows you to familiarize with their content at your own pace,

taking as much time as you need to fully understand it. Chat options, on the other hand, allows you to connect with other platform users in real time);

enables moderators/educators to create "classes" and invite learners to join them. Thanks to it, you can assign your learners homeworks and achievement tests, monitor their progress and communicate them via chat;

allows moderators/educators to use ready materials that we've published, as well as create your own video-guides, assignments, quizzes, and polls;

eliminates geographical barriers: the published materials can be reached by anyone anywhere, which is especially useful in these contexts where a face-to-face meeting is impossible due to time limits or distance barriers. The materials are available in 4 languages: English, Hungarian, Slovak and Polish;

may be accessed on multiple of devices: the platform operates both on computers and mobile devices (tablets, smartphones using Android system), making teaching and learning possible in a variety of contexts (also e.g. during travel).

may be used to share success stories all around the world: inspire others and publish photos from your game-sessions, upload your learners' posters, projects and other results of "calls for actions" connected with post-game activities (see: Workshop Scenario) or write your testimonial related to the New Shores' experience.

To make use of all its functionalities, we strongly encourage you read the Edmono's User Guides which contain all relevant information on how to move around the platform.

Further literature

Experiential learning, game based learning and systems thinking

Abt, C. (1970). *Serious Games*. Viking Press;

Aldrich, C. (2009). *The Complete Guide to Simulations and Serious Games.* San Francisco: Pfeiffer;

Bogost, I. (2008). "The Rhetoric of Video Games." [in:] *The Ecology of Games: Connecting Youth, Games, and Learning*. Cambridge, MA: The MIT Press, pp. 117-140;

Bogost, I. (2010). *Persuasive Games. The Expressive Power of Videogames.* MIT Press;

Bachofen, C., Suarez, P., Steenbergen M,. and Grist, N. (2012). *Can Games Help People Manage the Climate Risks They Face? A participatory design of educational games.* The Hague: Red Cross/Red Crescent Climate Centre.

Bogost, I. (2007) Persuasive games: The expressive power of videogames. Cambridge: The MIT Press.

Crookall, D. (2010). *Serious Games, Debriefing, and Simulation/Gaming as a Discipline*. Simulation & Gaming, 41(6), 898-92;

Djaouti, D., Alvarez, J., Jessel, J., Rampnoux, O. (2011). "Origins of Serious Games." [In:] Ma, M., Oikonomou, A., Jain, L.C. (eds.) *Serious Games and Edutainment Applications*. Springer, pp. 25-43;

Duke, R. (1974). *Gaming: the future's language.* New York: Halstead Press;

Duke, R. and Geurts, J. (2004). *Policy games for strategic management.* Dutch University Press: Amsterdam;

Geurts, J., Duke, R. and Vermeulen, P. (2007). *Policy Gaming for Strategy and Change*. Long Range Planning. 40, pp. 535-558. 10.1016/j.lrp.2007.07.004;

Kolb, D. A. *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall;

Kwok, R. (2017) *Scientists are designing board, card and digital games to convey scientific concepts*. Nature 547, pp. 257-374;

McGonigal, J. (2011). *Reality is Broken: Why Games Make Us Better and How They Can Change the World*. New York: Penguin Press.

Robinson, K. (2001): *Out of Our Minds – Learning to be Creative*, Capstone Publishing Limited, Oxford;

Rumore, D., T. Schenk, L. Susskind (2016). *Role-play simulations for climate change adaptation education and engagement*. Nature Climate Change. Vol. 6, pp/ 745-750;

Suarez, P., Otto, F.,E., L., Kalra, N., Bachofen, C., Gordon, E. (2014*). *Loss and Damage in a Changing Climate: Games for Learning and Dialogue that Link HFA and UNFCCC*. Prepared for the Global

Assessment Report on Disaster Risk Reduction 2015. GAR Thematic Research Area 17 on adaptation and mitigation in the context of the HFA, pp. 10-11;

Suhajda, É. V. (2012). *A tanulás rendszerelméleti megközelítése*. PHD dissertation. Pécsi Tudományegyetem Bölcsészettudományi Kar, Nyelvtudományi Doktori Iskola, Kommunikáció Doktori Program;

Zimmerman E. (2013). "Manifesto for a Ludic Century".[In]: Walz S.P., Deterding, S. (eds). *The Gameful World. Approaches, Issues, applications.* Cambridge, London: The MIT Press;

Communication

Gordon, Thomas (1970). *Parent Effectiveness Training: The Proven Program for Raising Responsible Children*. Three Rivers Press, New York

Rosenberg, Marshall (1995). *Words Are Windows Or They're Walls. - Nonviolent Communication: Varighed 145 Min*. Create Your Life - Productions