

From Reality to Game and Back — A View on the Teambuilding Aspects of a New Concept for Game Design Workshops Through a Game Designer's Lens

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Abstract

In March 2014, nine gifted youths aged 13 to 17 joined with an interdisciplinary workshop team to gain insight into concepts of good game design. Within a five day workshop, the group set out to transfer the system of the currently relevant and complex sociopolitical issue *The Transparent Citizen* into the atmospheric setting and logic of a board game.

One advantage of games is that they allow players to look at the world from a different angle. Thinking out of the box is one of the most important prerequisites for finding new approaches and innovative solutions for complex problems. Through a variety of game based methods, the participants were encouraged to take up unfamiliar perspectives in looking at themselves, the other participants and the problem and thus become aware of their own limitations, mental models and role as team members.

This report about a practical workshop experience will impart a view on the setup and the team processes through the lens of various game designers and finally build a bridge to the implications it has on designing a future model of education, shifting the role of teachers to that of coaches and partners in learning.

Keywords

cooperation, teambuilding, boardgame, gamedesign

"All the geography, trigonometry and arithmetic in the world are useless unless you learn to think for yourself. No school teaches you that. It's not on the curriculum"
(Carlos Ruiz Zafon: Marina)

1 From reality to game and back

In March 2014, we organized a five day game design workshop for gifted youths to test game designing as a method for building up collective and self-learning competencies needed for solving complex problems. This report about our practical experiment will describe the design and development of the workshop idea from a game designer's perspective.

After a short introduction into current challenges of our education system, the report will impart a view through various game designers' lenses on why this new workshop concept was developed and how it was finally put into practice. In the style of designing of Alternate Reality Games, principles of game design will be applied to evaluate the most relevant aspects of this workshop: meaning, cooperation and teamwork. Learnings from the workshop will finally be transferred to our current and a future model of education.

1.1 From reality: Today's school system - based on industrialization's needs

Hardly any other area is of such a central significance for living together in today's society as our education system. However, many students, parents, teachers, university professors and other stakeholders like politicians and employers struggle with our current education system. Discussions on how to get students prepared for the challenges of the next decades and raise them to be active and democratic members of our community are usually very controversial and do most times not find general consensus in the public. Many efforts to reform the current school system in Germany have led to suboptimal solutions. A vivid example of such a half-baked reform is the shortening of school years under the German G8 system which was only introduced a few years ago and is currently under discussion to be rolled back. New concepts for promising, but isolated approaches can be found on the homepage of the *Archiv der Zukunft* (adz, n.d.). Yet, schools and other educational institutions that strive for innovative solutions struggle hard to win recognition for their new ideas, as they have to compete with the established system and their results are compared to predefined standards.

According to Welzer (2013, p. 63), one major problem is that our current school system is still relying on a grading system which focuses on virtues like punctuality, accuracy or tidiness. In times of Industrialization, these were necessary to meet the needs of an evolving working system based on divided, synchronized labor and competition. Today, in times where learning is focused on meeting the requirements of Bologna and G8, these evaluations are not only used to distinguish between the achievements of individual students. Measuring methods under the worldwide Pisa study put pressure on schools and universities, federal states or even countries to compete with each other in performance. As a consequence, today's students can hardly imagine that it makes sense to learn matters

of their personal interest just for the sake of it. Instead, they focus primarily on achieving the goals required by course assessments and exams. Thus, learning merely appears to be acquisition and retention of as much information as possible. However, in times of digitalization and always-on information systems, factual learning has lost some of its significance. Most players in politics, economy and society are aware about the need to build up new skills to manage the increasingly complex problems of our constantly changing environment. In his book *The Fifth discipline*, Peter Senge raises the appeal to take up a more holistic approach to current challenges in our society. Instead of constantly fragmenting the world which keeps us from seeing the consequences of our actions we need to build up "organizations, where people continually expand their capacity to create the result they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge, 1990, p. 3). Under this assumption, results of the Pisa study appear to be too limited to account as valid markers for the overall quality of a desirable education system.

2 To game: Design of a new method for learning how to learn

According to my personal experience, games as a cultural medium can train and improve the skills, which Senge refers to as core disciplines that define a learning organization: Personal Mastery, Mental Models, Shared Vision, Team Learning and – as the combining factor – Systems Thinking. In their special form as board games they can describe convoluted systems and problems in a nutshell: despite being limited to the space you find on a table, they are miniatures of complex worlds without boundaries as they take place in an unlimited phantasy setting (Randolph, 2002, pp. 7-8).

Designing a game, i.e, reducing a system to its most relevant elements and their interrelationships, is a demanding process and most game designers take months or even years to implement their ideas. In order to observe and to analyze the results of combining differing competencies, we invited a number of talented youths to an experiment: In a five day game design workshop in March 2014, we tried to find out what it takes to transform a group of heterogeneous, individualistic and lateral thinkers into a team with a shared vision.

2.1 Meaning as the driver for gameplay and new ideas

Huizinga (1949), one of the founders of modern cultural history, already underlined the meaning of play to man more than fifty years ago in his book *Homo Ludens*. Despite games having played an important role in human cultures at all times, games are still widely regarded as being merely a nice pastime for children or adults who need to relax. A mental attitude that has visible effects on raising

our children: from kindergarten where they learn *how to play* together with other children to school where they learn *how to work* individually on given assignments. Thus, the role of games is banished to a children's world of leisure and play which is strictly separated from an adult's world of work.

In the past years, I have been using board games for fostering the potentials of gifted children and have often come across this attitude towards games when talking about my projects. At the same time, I met many children that despite their extraordinary cognitive potentials have various problems at school. Some of them are underachievers who stay way below their potentials and feel that they are not good at anything. However, when playing board games the same children appear to be extremely engaged, motivated and socially integrating each other. Realizing this discrepancy in behavior and school performance, my central question has become: In which way can games help people to find their individual potentials and develop their strengths?

In a TED-talk, McGonigal (2010) states that her "goal for the next decade is to try to make it as easy to save the world in real life as it is to save the world in online games". In her corresponding book *Reality is broken*, she says that there are millions of gamers who despite being experts in their field are publicly seen as escapists and have a low self-esteem as they themselves feel that they fail in real life. McGonigal regards these young adults who have just finished school as being "potentially an unprecedented human resource: hundreds of millions of people worldwide who are going to be exceptionally good at the same thing – whatever it is games make us good at. Which brings us to the million-dollar question for the future: What, exactly, are gamers getting good at?". She finally comes to the conclusion that they have "Collaboration Superpowers" which she defines as a special way of working together, requiring three distinctive kinds of effort: cooperating, coordinating and cocreating (2011, pp. 267-268).

2.2 Analytical Game Design — Overall research question

Finally inspired by a simulation game design workshop that I had taken part in summer 2013 at the *Academy for Civic Education* in Tutzing (Bavaria), I decided to adapt the concept to a group of gifted children. Would they be able to solve a complex problem if we succeeded to build a shared vision?

And deriving from that:

- How can game-design workshops as a method help to acquire important team competencies like trust, mutual respect and cooperation or commitment to work, roles and tasks?
- How can they foster self-learning capacities needed for building up (common) knowledge?
- To what extent do they drive analytical and logical thinking?
- How can they raise awareness for a topic, in our case a sociopolitical theme?

- How can they help to combine knowledge, analytical competencies and soft skills and enable the participants to do the necessary transfer to find a new solution to a problem?

2.3 Playtesting — Setup

Within a short timeframe, I found matching team members for a first testing round designed for five to ten youths: On board were a professional game designer with ample teambuilding experience as workshop leader, a psychologist with special expertise in giftedness to cover any upcoming pedagogic and psychological issues and myself. We had found a suitable time-frame and an inspiring location near Munich.

Mid-December 2013, the invitation was sent out describing the workshop's contents and goals:

- designing and developing of a mutual idea for an entertaining board or card game, up to a first prototype
- immersing into a workshop theme addressing a sociopolitical issue
- getting to know different mechanisms
- experiencing methods for teambuilding and creativity
- working in a heterogeneous team
- discovering, involving and enhancing of own potentials in a participative design process
- changing perspectives through discussions with other lateral thinkers

In order to assess the participants' self-motivation, we asked for applications including personal backgrounds and interests, gaming experience and theme suggestions. Like this, we could customize the workshop and make sure that our mutual expectations were in line. Considering the applicants' replies, we picked up the current NSA affair discussions about data security and decided to go for the theme *The 'Transparent Citizen*. By mid of January 2014, the workshop was booked out.

2.4 Playtesting — First Implementation

In March 2014, we started the workshop with a group of nine youths aged 13 to 17 with this schedule:

- Day 1: Introduction, becoming acquainted, expectations, teambuilding, perceptions and assumptions
- Day 2: Game fundamentals and thematic research
- Day 3: Game design: Brainstorming, mapping, development
- Day 4: Development and testing
- Day 5: Marketing aspects, prospects, and feedback round

First day: After a first introduction game of *Two truths and a Lie*, in which the youths had to introduce their partner to the group, we asked about their gaming experience. We found a wide range from playing simple board games like *Settlers of Catan* up to first experiences in developing their own computer games. However, personal expectations for that week were more or less the same: most answers stressed finding new ideas for games, experiencing teamwork and having fun.

The schedule was very tight with only five days for finding and developing an idea and building a first prototype for such a complex theme. Therefore, we had reserved the whole day for teambuilding activities in order to achieve a relaxed and cooperative work atmosphere for the rest of the week. Besides a variety of cooperative board, card or activity games we played several team games that focus on change of perspectives in order to animate the youths to leave their trodden paths:

- In the *Marshmallow Challenge* they had to find a quick solution with their partner on how to build the highest stand-alone tower from spaghetti that is able to hold a Marshmallow on top.
- In a Blindfolded Team Building Game they had to find their way around the premises with bound eyes guarded by a partner who was instructed to keep absolutely quiet and only to intervene in dangerous situations. Thus, the blind were encouraged to concentrate only on their tactile and acoustic senses for orientation and at the same time to build up trust in their partner. Their guiding angels at the same time had to take over full responsibility for their partners and to make sure they were not hurt. Experiences in both roles were new and challenging.

On the second day, fundamentals of game design were introduced with a mix of inputs, group discussions and film clips from well-known game designers. In the afternoon, two-person teams were built and asked to do some research into the workshop theme *The Transparent Citizen* and to discuss on aspects which they would like to reproduce in the game.

At this point, we had to change course for the first time. One team concentrated on finding interesting game mechanics and persuaded the others to follow their suggestion to adapt the content to their mechanic. The workshop leader was willing to support the group in their chosen modus operandi, but we soon realized that one of the workshops goals might be jeopardized by that approach: One of our intentions had been to encourage the participants to intensively look into the subject by reflecting on risks and chances of a digitalized world. In order to reflect their attention to the theme, we watched the movie *Auf Nummer sicher?* (ZDF, 2007) in the evening. By the example of human microchip implants, this mixture of documentary and thriller movie vividly illustrates the threats and consequences of data abuse.

On the third day after we had started with more teambuilding games, the group entered a discussion on the movie: Which facts were real or mere science fiction? When talking about ethical and moral aspects, the youths came to a conclusion on the meaning the game should have: players should experience a feeling of insecurity and uncertainty and of being controlled by third parties. The last step to building a shared vision was asking the group to design the box for the game on a flipchart as a constant and visible reminder. Together they defined the basic information that should be on the cover: title and illustration, number and age of players, publisher and group name. From that moment on the group had a visualized goal.

In an increasingly self-organized group process, the group agreed on rules for their discussions and elected rotating moderators. Thus, the workshop leader could concentrate on his role as coach and consultant and his expertise in game design. In a constructive and respectful atmosphere the group soon found the idea for a card game and a core mechanism that reinforced the theme.

On day four, we started with a game of *Sculptor and Statues*. One participant was blindfold and had to manually explore the posture of one partner acting as a model and to guide a third person to mimic the posture of the model. Like this, we encouraged the group to remain in their emotional and creative mood.

From this, the process went into an iterative phase where small teams took over different jobs: discussing the general system and details on the cards, writing rules, producing cards for the first test rounds, elaborating the cover design or delivering messages from team to team. On the afternoon of day four, the group had found their final game idea: A card game, in which players have different characteristics or personal backgrounds that in the course of the game might become public and lead to fines and punishment by changing laws. Besides some material for playtesting, they also had produced a written documentation of basic rules.

On our last day we talked about the necessary steps to finalize the game and possible ways of active marketing. The afternoon was reserved for an extended group feedback round.

3 Comparison to fundamentals of good game design

How can we objectively evaluate if a new concept is working? When talking to other people about the workshop week, I was asked a lot of times which game we had finally invented. When I answered that we had no presentable prototype but had developed a very interesting idea, somebody mentioned that next time it would be better to form smaller teams in order to have a result. At first I was a bit disappointed – of course, it would have been nice to have a real game in hands in the end. But had that been our primary goal? When judging about success or failure of a process it is fundamental to be clear about the goals and the adequate

criteria to measure them. In my personal reflection on this game design workshop I will therefore concentrate on the goals that were in focus:

- Will others – participants, their parents, stakeholders in the educational system, sponsors – find a meaning in the workshop concept?
- Will we manage to form such a big group into a team cooperatively working?
- Which skills are required in a team to handle the various challenges of this experimental situation?

In the style of designing *Alternate Reality Games* as described by McGonigal in "Part II: Reinventing Reality" (McGonigal, 2012, p. 15), I will use criteria from the new field of Computer Game Studies to evaluate our workshop by the aspects that were most relevant to me: meaning, cooperation and teamwork.

3.1 How does a game become a good game?

It is hard to determine what exactly turns a game into a good game, but there are some typical characteristics which have an impact on how successful they are: interesting idea, innovative structure, attractive processes and events, surprise effects, good timing, interaction, open and equal chances of winning, physical and mental involvement until the end of game and consistency. These criteria could also be applied as indicators for our pilot workshop and through a game designer's lens would show that the general concept for our workshop was well designed. However, what made it so special to both team members and participants?

3.2 How does a good game become an excellent game? The importance of meaning

"Meaningful play occurs when the relationship between actions and outcomes in a game are both discernable and integrated into the larger context of the game. Creating meaningful play is the goal of successful game design" (Salen & Zimmerman, 2004, p. 34). Earlier in this paper, I described the idea and meaning behind the workshop. But would the concept make sense to other stakeholders as well? The feedback was positive: the first booking came on the day the invitation had been sent out and the workshop was fully booked beginning of January after only three weeks with one participant coming all the way from Berlin. So there was demand.

The feedback round on our last day was positive without exception. When asked to evaluate the general workshop setup by putting stickers on a scale system, all stickers were way above the middle line for expectations met. One was even put above the scale. The youths were asked if their personal workshop goals had been reached and to write notes on what they had learned or disliked and the impressions they wanted to take with them. All answers were very positive.

3.3 The Lenses of cooperation and the team

In his book *The Art of Game design* Jesse Schell introduces "a deck of lenses" that he uses to look at his games from various angles. Here I found the right questions to reflect on the remaining two aspects:

37: *The Lens of Cooperation:* "Collaborating and succeeding as a team is a special pleasure that can create lasting social bonds. [...] Ask yourself these questions: Cooperation requires communication. Do my players have enough opportunity to communicate? How could cooperation be enhanced?" (Schell, 2008, p. 187).

The workshop times were filled with teambuilding games, group discussions, or partner work. During breaks, we encouraged the participants to join us on walks in the nearby forest. In the evenings we offered board games or movies. On the last evening we all went bowling and had a hilarious time.

The group had many nice and special moments with each other and grew together. Apart from minor conflicts which could be solved quickly within the group, the atmosphere was cheerful at all times. In our feedback round, one girl said that she had laughed more in those five days than usually in a whole year. One of the boys said that this had been the most valuable workshop that he had ever been to, and that he had never experienced such an atmosphere of mutual respect and appreciation. Later, we got the same feedback from some of the parents. Upon leaving, all participants were in high spirit, wanted to keep up contacts, and went home with a high level of motivation to proceed with the game.

89: *The Lens of the Team:* "To make sure your team is operating like a well-oiled machine, ask yourself these questions: Is this the right team for this project? Why?" (Schell, 2008, P. 380).

This exceptional team effort was only possible because of the special team setup: one games expert in charge of content, one psychologist in charge of emotional aspects and one person to watch the process and jump in if the situations seemed to get out of balance. We all had our special focus and respect for the others' skills. Likewise, we all had some experience in the other domains and thus were able to support each other: the game designer was constantly watching the team process and integrating the individual personalities and potentials. The psychologist gave new impulses whenever the youths got stuck with their ideas for the game. And due to open communication both within the team and with the participants, we were able to react flexibly to unforeseen developments and adjust the workshop contents to the situation.

Working for five days until late in the evening with some challenging characters was a very intensive and strenuous experience. Nevertheless, it was at the same time very rewarding to the team members to see what we had achieved in the end with regard to the development of soft skills and motivation of the youths. Provided that minor changes would be made to the concept – e.g. extended time-frame – all team members said they would like to repeat this experiment.

4 Back to reality: From successful game set up to the future of education

To make such a *Shift from Teaching to Learning* as experienced in our workshop, in my opinion we urgently need a shift of mind and to rethink how and what should be taught in schools to meet future challenges. The practical experience and learnings of this workshop can offer some new perspectives and serve as a model for combining many of the postulations that regularly come up in the discourse about our education system:

- Like in our workshop experiment, we need a student centered focus on processes instead of output. The main goal should be to support students to find and practice their own methods of individual and collective learning. We need structures and training methods that enable students to turn their individual potentials into competencies, stimulate cooperation between students and build up their capacities to find new solutions to complex and challenging problems.
- We need customized evaluation methods instead of generalized one-size-fits-all benchmark systems: New processes have to be measured by their individually predefined outcome, not by comparison to existing measures that focus on different goals. Output – which would have been a perfect prototype in our workshop – depends on multiple parameters, many of them (e.g. different personalities in heterogeneous groups) are beyond control of teachers. And soft skills cannot be measured by school marks.
- New definitions and self-conceptions: School as an inviting environment which inspires to self-driven and participative learning experiences that meet individual interests, needs and potentials of students. Teachers as coaches who work with the students on a basis of mutual respect and appreciation and who are ready for reciprocal learning experiences and new perspectives. Our workshop illustrates that though it might be strenuous to constantly adjust the schedules or displeasing to experience one's own limitations and having to leave questions unanswered, in the end a flexible approach to teaching can be very rewarding for all parties.

The key factors for the success of our workshop are not new. They can be found in many existing innovative concepts: An appealing theme as a peg that motivates self-learning; a holistic and participative method that is fostering the competencies needed for building up knowledge, self-organization, decision-making, responsibility and ethical behavior; a well-functioning coaching tandem with different backgrounds covering the pedagogic and the content side in equal measure meeting the individual needs of students and capable of steering students in a predetermined process to the envisioned goal. Most times it is only a new combination of known ingredients that make a real innovation.

Willingness to invest in the initial cost of people, time and money for building up new systems would pay out in the long run and lead to win-win-scenarios on all levels:

- On the micro-level it would lead to more educational equality for all students as they would find appreciation of their whole personality. Teachers would experience more self-efficacy and thus find new motivation to change perspectives and take up new impulses for their personal development.
- On the meso-level this would lead to constant improvement of classroom teaching methods and adjustment of our education system to the various needs of our society.
- And on the meta-level it would have a big impact on our and our children's future if we manage to educate whole generations of students to master Senge's five core disciplines of a learning organization.

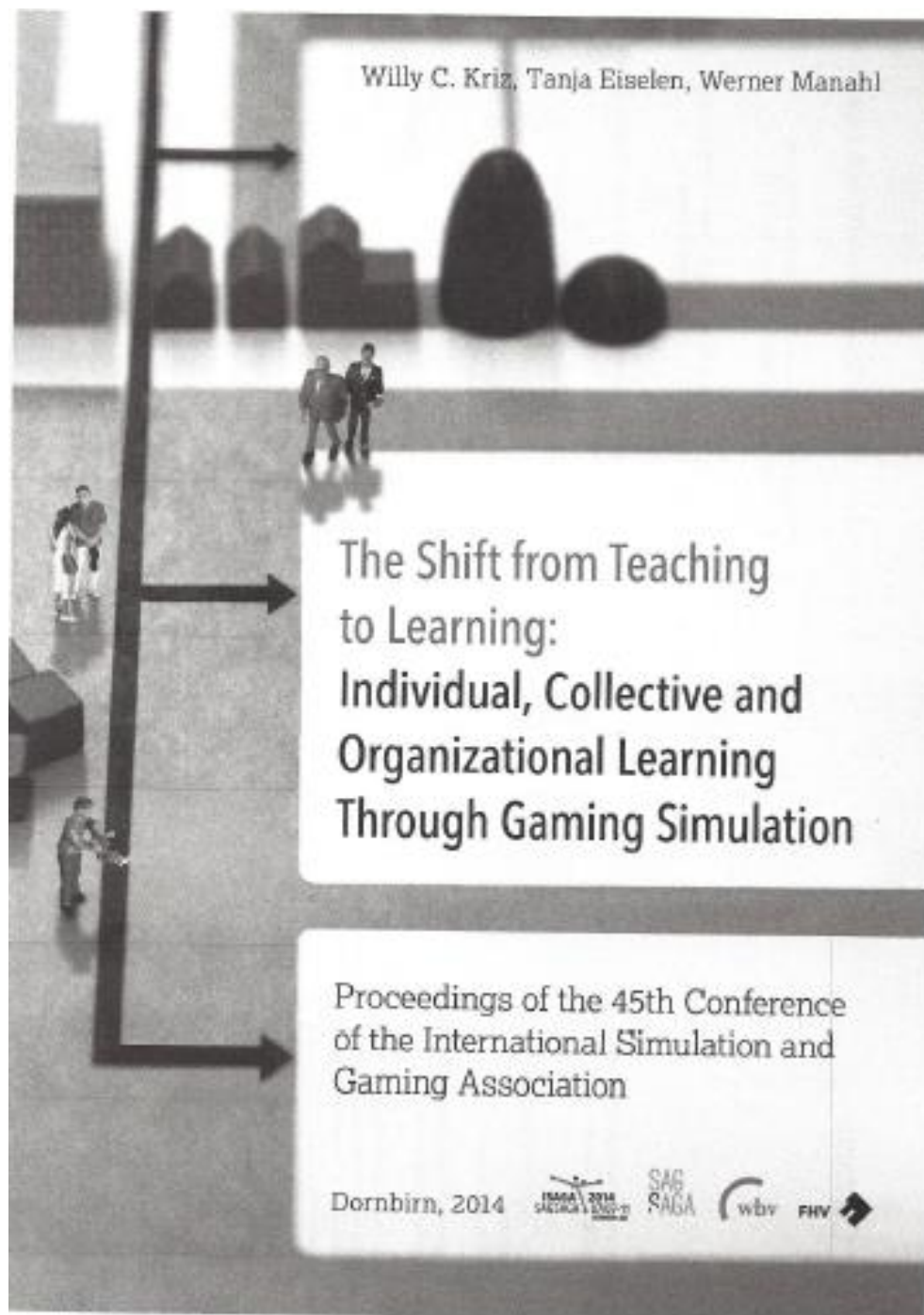
Redesigning more learning processes by methods that support self-paced and collective learning will certainly not meet McGonigal's goal to save the world by tomorrow but in my opinion it would be a big step into the right direction. In our experiment, we have successfully tested the method of game designing as one way for building up necessary metacompetencies – and who knows, maybe sometimes in the future it will turn out that some of the youths involved will use their upgraded expertise in gaming and simulation to find solutions to real world problems!

References

- adz (n.d.). Archiv der Zukunft. Online: <http://www.adz-netzwerk.de/>
- Heinecke, A. (2014). Neun Köpfe - ein Thema - eine Spielidee - ein Team! Online: <http://schlaue-spiele.org/2014/03/12/neun-koepfe-ein-thema-eine-spielidee-ein-team/>
- Huizinga, J. (1949). *Homo ludens. A study of the play-element in culture*. London: Routledge & Kegan Paul Ltd.
- McGonigal, J. (2010). Gaming can make a better world. TED Conference 2010. Online: http://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world
- McGonigal, J. (2012). *Reality is broken. Why games make us better and how they can change the world*. London: Vintage.
- Randolph, A. (2002). Eröffnungsvortrag zum Colloquium »Board Games in Academia«. Florenz. 1993. Uehlfeld: Drei Magier Verlag
- Schell, J. (2008). *The art of game design. A book on lenses*. Boston.: Elsevier/Morgan Kaufmann.
- Senge, P. M. (1990). *The fifth discipline. The art and practice of the learning-organization*. New York: Doubleday/Currency.
- Salen, K. & Zimmerman. E. (2004). *Rules of play. Game design fundamentals*. Cambridge, Mass: MIT Press.
- Welzer, H. (2013). *Selbst denken. Eine Anleitung zum Widerstand*. Frankfurt a.M.: S. Fischer.
- ZDF (2007). Auf Nummer sicher? Online: <http://www.youtube.com/watch?v=5Y264bgOj6Q>

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