



WANT TO STEP UP YOUR SERIOUS GAMING?

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Serious Gaming is increasingly used to train teams and to develop effective leadership in organizations. What advantages does this form of learning offer over traditional training in terms of knowledge, skills, and attitude? Where can you best apply Serious Gaming in your organization, and when would it be better to opt for traditional training? It is clear that our learning needs are changing. We want it to be faster, it has to be fun and different, and more impactful. What's more, we want to challenge people and invite them to think and work out of the box from time to time.

Effectiveness of the Serious Game

We all experience the world in unique ways, and as a result, how we learn differs. [1] Understanding these different learning styles, and knowing when to apply which type, positively affects the outcome. Learning can be done in different ways, for example, through traditional education, where an expert goes through the theory with the participants, or Serious Gaming, in which different learning styles are applied. The latter form is increasingly meeting the needs of employees.

Serious Games are also defined as games in which entertainment plays a significant role but is not the primary goal. Entertainment is merely the means to achieve a serious end. It is an accessible and convincing way to transfer knowledge and teach practical skills. Increasingly, studies are providing concrete evidence that Serious Gaming enhances learning. [2] For example, Serious Game elements have proven to increase self-efficacy and self-directed attitudes, as well as motivation. Compared to the traditional way of learning, Serious Games make it much more comfortable.

A new skill or behavior is usually challenging to understand if you have never experienced the new way before. For example, to independently sail on a sailboat or fly an airbus 380, just reading the instruction guide usually does not help when you start to fly or sail.

One of the most effective ways to learn is by simulating reality. [3] [4] A business simulation is a powerful tool for organizational learning and development. Business simulations are interactive learning experiences that allow participants to immerse themselves in the subject matter. Moreover, they are a safe environment to learn and to experience situations that usually only occur occasionally. What's more, they provide an opportunity to freeze-frame and allow for discussion of what happened.



Furthermore, this information can be used to adjust game features such as the difficulty of the challenges.

This maximizes the flow[6]—not too hard and not too easy—and growth, and make Serious Games a powerful learning experience.

To get to a flow and to ensure growth, **Serious Games require a few key components:**

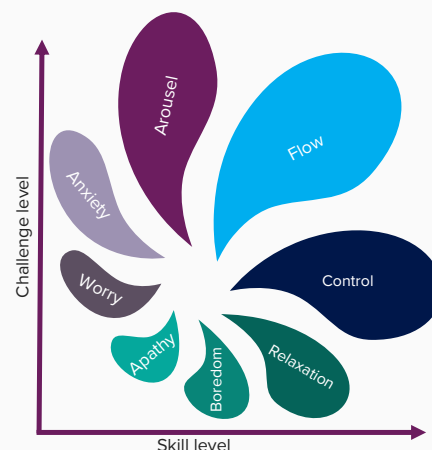
- 1. Interactive problem solving:**
Continuous interaction between the game and the player while solving a problem.
- 2. Specific goals/rules:**
Good rules to follow, and goals that are implicit or explicit.
- 3. Adaptive challenges:**
Ability to alternate between different levels to match the player's capabilities.
- 4. Control:**
Measuring impact of learning and growth.
- 5. Ongoing feedback (explicit or implicit):**
Give insights on the player's performance.
- 6. Uncertainty:**
Engagement of the player is higher when the outcome can't be predicted.
- 7. Sensory stimuli (the mix):**
The mixture of visuals, sounds, storylines, etc., enhances the experience.

The power of Serious Games is mainly on the social and interactive side. Combining the seven key components enables everyone to grow and be effective.

The Power of Serious Games in Complex and Dynamic Environments

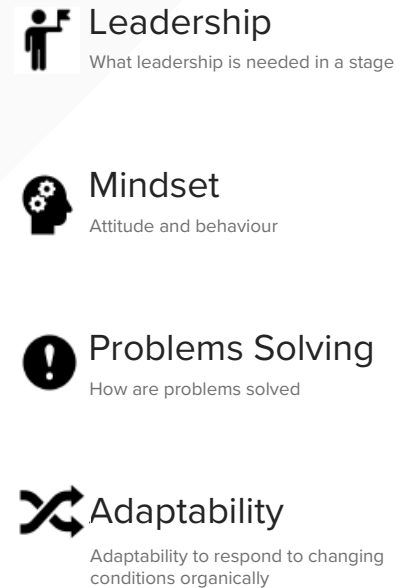
Serious Games make it possible to learn complicated things in a safe environment. Especially soft skills and team dynamics you can usually only learn and practice in the real world. The power of Serious Games is that they provide an adaptable environment in terms of possibilities and difficulty and yet offer safety where necessary. If it goes awry, the game provides guiding structures, and if you fail, you can just start over!

The art of good Serious Games is to let the players become one with the virtual environment. This environment must provide several things for it to work. A clear goal, a suitable context, rules, uncertainty, and continuous feedback are essential. [5] Embedding assessments within such immersive games allows a player to see their current level of valued competencies.





Dynamics



Dynamics and Dysfunctions of Teams

One of the biggest challenges for organizations is working in teams. Different personalities, interests, and challenges are combined in a team that must work together to achieve a goal. Sometimes they don't even want to work together or know each other's strengths and skills. It results in a dysfunctional team that seems to work fine on the surface, but they are not powerful enough to solve a complex problem when it comes down to it.

Serious Games can offer a way to break through patterns. We often see that the cause is twofold, namely unclear roles/structure and unconsciousness of the effect of their behavior.

We have seen exciting dynamics during the simulations so far. Much more than we would expect. Group and individual behavior, personalities, group maturity, decision making, and who is the real leader.

Three stood out: communication, decision-making, and adaptability.

> Communication:

You would expect communication to come naturally. However, it wasn't very clear for the participants. How should we communicate with each other and what is and is not allowed? The freedom was apparently too much at the time. The great thing about a Serious Game is that you can offer more structure if necessary. Furthermore, there was little or no communication with each other in some teams. We saw that this led to problems later in the simulation.

> Decision-making:

In a team without a manager, how do you make choices? Who is the leader, or do we make decisions together? Organizations often already offer a solution here, but this is not necessarily the most effective. In the decision-making process, we often see old behavior or habits emerging that do not suit the new organization.

> Adaptability:

Responding to change is difficult, especially if you are doing this in a very short time with a new team. Can you work together effectively, listen and decide together and then take action? In some cases, we have seen that individuals take the initiative to respond directly to the change or an event and leave the rest of the team confused. Results in dysfunctional behavior of the team while the intention was good. It would be fantastic to put all these dynamic elements in a Serious Game and so realistically resemble the desired organization.

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Firsthand Experiences So Far

The proof of the pudding is in the eating. When we faced a challenge to teach a large organization's department to work together, we created a serious game called Accelerate [7] that addresses some of the dynamics mentioned above. Testing is crucial when developing a Serious Game. Are the ingredients correct, and is the magic there? The mechanics have to be simple, it has to solve the problem, and the players have to get into a flow. The effects were certainly noticeable! Participants could not let go of the game, even during the mandatory breaks. It had a magical attraction that kept them working together and working toward the goal. It was striking to see that the management team found it challenging to adapt to the environment. They tried traditional ways to influence the system, but the game did not respond, resulting in a team that did not perform well. Their attitude and behavior were striking. It immediately became clear why it didn't work. Afterward, the players had not only experienced what was possible but actually always wanted to work together in this way. And most important of all, it was fun working together.

It tasted like more! We added even more features such as gamification, feedback, uncertainty, minigames, etc. We became aware of the impact the game had on the players. For example, the roles and structure offered so much clarity in the collaboration that people wanted to work like that in the real world. This made us realize that customization is necessary to have a smooth transition to the real world.

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