



# Immersive Learning Experience

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## PARTICIPANTS HAND-OUT

### 0 Introduction

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Numerous studies have shown the same results: Virtual practice is often as effective—or more so—as real-life practice. Why is this? Immediacy of feedback—corrective feedback at the time of error—plus the ability to control the training environments to ensure the most common or most difficult scenarios are experienced and navigated by learners. The most useful training allows learners to actually practice skills in a safe environment.

This session is about understanding the different elements composing Immersive Learning Experience and using a framework that will allow trainers to design similar learning architectures.





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## 2 Learning objectives

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The goals of this training were to:

- Share immersive learning experience from previous events
- Outline a process of designing for immersion
- Create immersive learning experiences

## 3 Immersive Architecture

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In an immersive architecture, also known as a whole-task design, the instructor releases a lot of control and allows learners much more freedom. The goal of an immersive architecture is to teach content in the context of authentic work tasks. By learning the topics in the context of the whole task, training relevance is more salient and transfer to the job may be more direct.

However, learning the content while simultaneously performing even a simple job task runs the risk of imposing too much mental load. The learner is required to orchestrate several things at once. Therefore, the immersive architectural plan may be best suited to learners with some relevant background knowledge and must incorporate ample support and guidance.





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## 4 Immersive Learning Experience

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### 4.1 *Definition*

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**Immersive Learning Experience** is a compressed experience involving its participants in an unfamiliar problem or challenging situation that creates the need for learning, in the context of authentic work tasks.

In immersive learning, you can control what experiences learners have, the feedback they receive, and the opportunities they have to see both short-term and long-term consequences.

### 4.2 *Components*

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There are four essential elements of an effective immersive lesson: 1) an authentic problem or task assignment that serves as a context for learning, 2) guidance in solving the problem, 3) feedback on problem solutions and/or debriefing of problem-solving processes, and 4) explicit opportunities to reflect on problem solutions.

#### **4.2.1 *Authentic Problem***

Designing an effective problem or scenario is one of your biggest challenges. First, your problem must incorporate the key skills needed to resolve it.

As you plan your problem, define the desired outcome and the criteria for success. These elements correspond to the action and criterion of a traditional lesson objective. Your outcome may involve a decision, actions, and rationale for actions, a problem-solving path, or a product. Your criteria may be a correct answer, an answer that matches rationale, a decision path that is efficient and effective, solution time, or specified features of a product deliverable to name a few. Many problems will require the learner to access-related problem data.

This part of your design will correspond to the “givens” in your learning objective. When you do your job analysis, note the common sources of data that experts use to solve problems and incorporate them into your lesson, any resources that would be normally used on the job to gather data about the problem.



#### **4.2.2 Guidance**

One of the potential minefields in immersive learning is mental overload and learner confusion leading to frustration and drop out. Give a lot of thought to the type and placement of guidance in the scenarios. Instructional psychologists call this type of guidance *scaffolding*. For the initial problems in your immersive environment, provide a lot of guidance and gradually remove the level of support as learning progresses. The most common types of guidance that I'll review include: 1) problem sequencing, 2) learner control, 3) demonstrations, and 4) knowledge resources such as experts, stair-step tutorials, and/or references.

**Sequence Problems from Easy to Hard.** The initial problem or task assignment should be the simplest instance you can develop of an authentic job problem. Easy problems will have fewer variables, relaxed constraints, straightforward solutions, and limited amounts of data to consider.

**Constrain Learner Control.** Learner options are limited in a more structured immersive design called a *branched scenario*. These types of immersive designs are especially effective for problems in which one choice leads to another and then another in a linear timeline sequence. You can design immersive training to offer higher or lower degrees of freedom for learners to access program elements.

**Alternate Problem Demonstrations with Assignments.** Start with a demonstration of how to solve a problem. Next ask learners to perform a similar task using different data. A more sophisticated technique is to start with a full demonstration and then move to a partial demonstration in which the instruction completes the first solution steps and the learner finishes it. End with a full problem assignment that the learner solves on their own.

**Offer Knowledge Resources: Experts, Peer Collaboration, Tutorials, and References.** Some problems can benefit from a variety of perspectives. In addition, learners can work on problems collaboratively. Discussion of alternatives in a group setting encourages deeper processing of information. Working with a partner in a virtual world immersive science lesson lead to better problem-solving learning than working alone (Barab et al. 2009).

In situations that involve unfamiliar procedural knowledge, a virtual manual could offer access to a tutorial. The tutorial might teach a procedure or explain company policy, for example.

#### **4.2.3 Debriefing**

The purpose of practical applications in a session is to create for participants a framework for experiential learning. Each experience you create must end with a debriefing process, so that the learning cycle is followed through and for the learning to occur. Therefore, the debriefing step is the essence of the practical activity and that is why it often requires more time than the activity itself.



During the debriefing you are supposed to discuss/analyse the specific experience the participants went through during the practical activity. It can take place individually, in small groups or in the big group. The participants exchange affective and cognitive reactions in response to the practical activity they were engaged in and connect these thoughts and feelings in order to learn from the experience.

In order to correctly process a learning activity, you have to analyse the experience from all aspects. Roger Greenaway developed a Reviewing process that supports reflection, communication, analysis, feedback and feed-forward to strengthen learning. This process tackles 4 main aspects you need to consider in order to fully understand what is going on: **Facts, Feelings, Findings and Future.**

#### **4.2.4 Reflection**

One of the big differences between immersive and other lessons' structure is the instructional attitude toward learner errors. Immersive course designs see mistakes as an opportunity for learning. Feedback may not come until several actions have been taken or even at the end of the scenario. To learn from mistakes, it's critical to reflect on what you did and alternative actions you might take. One powerful form of feedback that encourages reflection is an expert comparison. Another approach is to let the learner experience intrinsic feedback and give them an opportunity to reconsider and replay their choices.



### 4.3 *Level of immersion*

#### 4.3.1 *Case Study*

In academics case studies can be used to:

- Allow the application of theoretical concepts to be demonstrated, thus bridging the gap between theory and practice.
- Encourage active learning.
- Provide an opportunity for the development of key skills such as communication, group working and problem solving.
- Increase the students' enjoyment of the topic and hence their desire to learn.

In a case study, the roles and the context are defined in an applied setting.



#### 4.3.2 *Role Play*

In a role play, participants received instruction related to the character are defined and some element of background are presented. They have to solve the challenge as the character they are impersonating would.







### **4.3.3 Simulation**

Simulation is a technique for practice and learning that can be applied to many different disciplines and trainees. It is a technique (not a technology) to replace and amplify real experiences with guided ones, often “immersive” in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion. Simulation-based learning can be the way to develop professionals’ knowledge, skills, and attitudes.



The realistic scenarios and equipment allows for retraining and practice till one can master the procedure or skill. Teamwork training conducted in the simulated environment may offer an additive benefit to the traditional didactic instruction, enhance performance, and possibly also help reduce errors.

### **4.3.4 Immersive Experience**

Immersion is used as a deeply absorbing experience-based situations. Immersive experience contexts are much richer in the potential to engage learners in finding things out and making sense for themselves.

Being immersed in a rich, challenging experience is particularly favourable for learning and the development of insights, dispositions and capabilities for working with complexity.

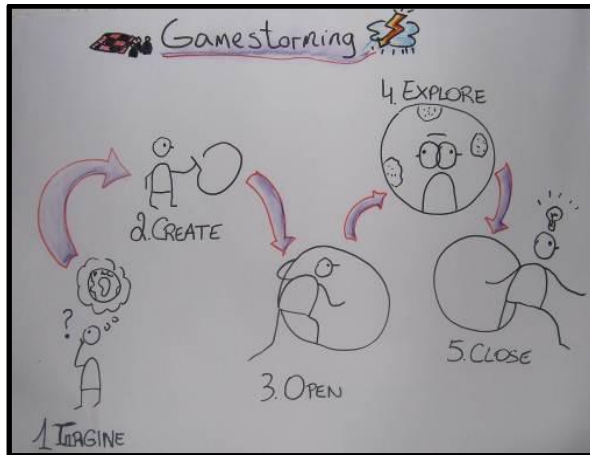
Immersive experience can stimulate and perhaps necessitate creativity and there seem to be strong links with Cszenzmihayli’s (1997 p110) concept of ‘Flow’ at the higher levels of immersion.





## 4.4 **Gamestorming**

The term **Gamestorming** refers to creating game worlds specifically to explore and examine business challenges, to improve collaboration, and to generate novel insights about the way the world works and what kinds of possibilities we might find there. Every game is a world which evolves in stages, as follows: imagine the world, create the world, open the world, explore the world, and close the world.



### 1 **Imagine the world**

Before the game can begin you must imagine a possible world; a temporary space, within which players can explore any set of ideas or possibilities.

### 2 **Create the world**

A game world is formed by giving it boundaries, rules, and artifacts. Boundaries are the spatial and temporal boundaries of the world; its beginning and end, and its edges. Rules are the laws that govern the world; artifacts are the things that populate it.

### 3 **Open the world**

A game world can only be entered by agreement among the players. To agree, they must understand the game's boundaries, rules, artifacts; what they represent, how they operate, and so on.

### 4 **Explore the world**

Goals are the animating force that drives exploration; they provide a necessary tension between the initial condition of the world and some desired state. Goals can be defined in advance or by the players within the context of the game. Once players have entered the world they try to realize their goals within the constraints of the game world's system. They interact with artifacts, test ideas, try out various strategies, and adapt to changing conditions as the game progresses, in their drive to achieve their goals.



## 5 Close the world

A game is finished when the game's goals have been met. Although achieving a goal gives the players a sense of gratification and accomplishment, the goal is not really the point of the game so much as a kind of marker to ceremonially close the game space. The point of the game is the play itself, the exploration of an imaginary space that happens during the play, and the insights that come from that exploration.

Game worlds are alternative realities—parallel universes that we can create and explore, limited only by our imagination. A game can be carefully designed in advance or put together in an instant, with found materials. A game can take 15 minutes or several days to complete. The number of possible games, like the number of possible worlds, is infinite. By imagining, creating, and exploring possible worlds, you will open the door to breakthrough thinking and real innovation.

## 5 Further readings

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If you want to develop your knowledge from this document, here are some references that were used when designing this training session:

### 5.1 Books

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- Evidence-Based Training Method, **Ruth Colvin Clarck**
- Design for how people learn, **Julie Dirksen**
- Immersive Learning, **Koreen Pagano**
- Gamestorming, **Sunni Brown**

### 5.2 Videos

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- [Ideo shopping Cart Project](#)
- [How immersive learning can help us all](#)

### 5.3 Articles

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- [Immersive learning vs experiential learning](#)