

# Immersion

## TL;DR

**Immersion** is not a single thing the hardware does to you. It's a the shift in attention that dissociates you from your immediate surrounding, a **three-part phenomenon** that arises when (1) the **system** surrounds and affords action, (2) **narrative** gives meaning and coherence, and (3) participants exert **agency** that matters (from immediate operations to strategic choices). **Presence** (the feeling of "being there") is related but **not the same construct**. The shift in attention, immersion, can take place regardless or not of that feeling.

## Why the term is slippery

Different traditions load "immersion" with different meanings. Technical accounts often treat it as a property of devices and affordances (e.g., FOV, tracking, spatial audio, haptics). Psychological work has at times equated immersion with the feeling of "being there,"<sup>1</sup> now discussed more precisely as **Presence**<sup>2, 3</sup>. Literary and game studies emphasize how storyworlds and player agency shape whether experiences become engrossing<sup>4, 5</sup>. Even within technically rich virtual reality, *plausibility* (the credibility of circumstances and one's ability to act) strongly conditions responses<sup>6</sup>.

Bottom line: immersion is multifaceted; reducing it to optics, latency, or any single factor misses what drives learning relevance and engagement<sup>3, 7</sup>.

## A three-dimensional framework

Treat immersion as emerging from **three interlocking conceptual dimensions**<sup>3, 7</sup>:

1. **System (technological environment)**. The substrate that surrounds the learner and affords perception and action: rendering, interaction fidelity, tracking, input, etc. System qualities enable possibilities; they do not guarantee immersion on their own.<sup>3</sup>
2. **Narrative (meaning and coherence)**. The diegetic/task framing that makes activity matter: roles, goals, stakes, and internal logic, be it literary or instrumental (mission brief, clinical case). Narrative organizes attention and expectations.<sup>4</sup> Notice that symbolic meanings, even cultural meanings such as colors and other non-verbal cues such as positioning of people, convey meaning, which is part of this dimension.<sup>13</sup>
3. **Agency (doing and deciding)**. What the learner can actually do when committed to be meaningful: moment-to-moment operations, tactical choices, higher-order strategy, and

how the environment responds with consequences.[5](#), [10](#), [11](#), [12](#)

*Terminology note.* Earlier work labeled this third axis “challenge”; subsequent work prefers “agency” as a label, because the word expresses more clearly the wide range of operational interventions and tactical/strategic decision-making.[10](#), [11](#), [12](#)

## Immersion vs Presence

- Abstract tasks or observer roles can yield strong cognitive immersion without a strong place-illusion.[3](#)
- A technically convincing place-illusion can still be non-immersive if narrative motivation or meaningful agency is weak.[6](#)

Designers and evaluators should therefore **analyze immersion and presence separately** and select measures appropriate to each.[8](#)

## What counts as an “immersive environment”?

An **immersive environment** is the full surround in which immersion can occur: the **virtual setting** (rendered spaces, objects, agents), the **physical setting** (room, equipment, safety), and the **contextual conditions** (cultural, organizational, social, logistical, historical). Within this whole, **system** properties are enacted, **narrative** reaches the learner, and **agency** is afforded and constrained.[9](#)

## Practical implications for standards

- **Design:** Treat system, narrative, and agency as **co-requirements**: plan S, N, and A together.[3](#), [7](#)
  - **Evaluation:** Avoid single-metric shortcuts. Use distinct instruments for presence and for immersion-relevant factors (agency affordances, narrative coherence, system fidelity).[8](#)
  - **Reporting:** When documenting experiences, explicitly describe S–N–A components and how they interrelate (e.g., strategic options, motivational framing, indispensable system features).[10](#), [11](#), [12](#)
  - **Plausibility matters:** Favor credible circumstances and consequential action over photorealism alone.[6](#)
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# Attribution

This synthesis is adapted from: [Morgado, Beck & O'Shea \(2025\)](#), with additional references to works cited therein.

Synthesis drafted by [Leonel Morgado](#) on Nov 12, 2025, with editorial assistance of ChatGPT-5 Thinking.

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