

# LEARNING AT PLAY

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## Synonyms

ludology; play; games; education

## Definition

This section on 'learning at play' will discuss the importance of play in the process of learning and education. 'Play' can be described as a wide range of activities defined by the engagement of the subject in procedural, semi-structured and/or unbounded activities. Examples of play include role-play (e.g. 'make-believe,' theatre) and the creative restructuring of existing physical or conceptual spaces (e.g. design, puzzles). People also "play" with ideas, reconfiguring knowledge to alter experiences and perceptions of the world. Children, in particular, engage in playful activities to familiarize themselves with the rules and regulations of their local and global environments. Though often associated with leisure and amusement, play can be serious, competitive, and creative and has an important role in the development of society and culture (Caillois, 1961; Huizinga, 1960). All play (for children and adults) is metaphor: competitive sports, children's games, ceremonial and religious ritual, videogames, and playful engagements with art, scholarship and design reflect complex socio-cultural significance beyond the acts of play themselves (Huizinga, 1960). Learning at play occurs as a result of players' interactions with activities or tasks during which time knowledge, identity, community and skill are developed along side the rules of engagement.

## Theoretical Background

Research in the field of videogames for education offers a clear, accessible way to understand the relationship between learning and play. "Learning through play can be a meaningful experience for players because they can subjectively interpret the multimodal procedures that create a game as they relate specifically to the player's pre-existing 'real-world' knowledge" (Crawford, 1982). Games and play provide safe ways to experience, to some extent, something that might otherwise not be experienced in the physical world.

There is a close relationship between play and games. All games are 'closed formal systems' with 'two-sided representational relations' (Crawford, 1982). The structure of the game world does not change because it is pre-programmed into the game's design. At the same time, the relationship between the player and what is represented in the game is subjective. Although other forms of play may be less structured than most games, the relationship of representation between subject and any form of play is similar to what occurs in games: the player's experience is based on a combination of the decisions the player makes and her pre-existing knowledge; human imagination works with playful choices to mix the representational lines between the "real" and imaginary. As a result of the player's engagement with the play-system, the experience of play is meaningful even if the game/play world is make-believe. It is precisely because play is make-believe that it provides "safe" spaces in which the player can make (right or wrong) choices and experience the consequences of those decisions without permanency (though not without affect). In most forms of play,

players can *try* over and over again until they get it right. The same cannot be said for actions in the real world, despite a common understanding that as humans, we so often learn from our mistakes.

The value of learning at play is recognized by contemporary game theorists who assert that it is possible to tell stories through the virtual worlds of videogames with real effects on game players, to explore and develop identities through avatars, to read cultural rhetoric through games, and to use videogames for the purpose of education in formal and informal settings. Various forms of literacy are explored by game-players as they read instructions, communicate with other players and discover new ways of engaging with game/play worlds. These assertions all point to one important element of learning at play referred to as ‘situated meaning,’ ‘situated cognition,’ ‘situated learning,’ or meaningful play: immersed in virtual or physical play environments, the player makes choices related to her own experience and pre-existing knowledge, implicitly (if not explicitly) finding meaning and relevance to her own life and interests. Learning can occur through experience, interaction, game design and/or playful engagement, and may be more contextualized in play compared to the so often de-contextualized “fact” based structure of prescribed education. Rather than learning information mandated by an educator, play creates space for learning to occur organically and interactively; players’ master one level or mode which contributes to the desire to play more and, as a consequence, to learn more. Even in unstructured play settings, the learner is practicing a skill or engaging with knowledge towards the goal of mastering how to enact that role. During the play experience, the player is autonomous in her role enactment and learns through the direct consequences of her actions in the game.

Discussions around meaningful learning in situated contexts are not new. In the early 20<sup>th</sup> century, Jean Piaget explored how play contributed to children’s ability to make sense of the world around them, concluding that children develop an understanding of the world through active engagement (by *doing*). Piaget diverged from the idea that learning only occurs in formal educational settings and instead questioned how meaningful experiences contribute to personal and intellectual growth. Around the same time, Lev Vygotsky also explored the question of how children learn. For Vygotsky, personal and social experiences could not be separated and the experience of living was shaped by family, community, class, education, culture, etc., with playful interaction acting as a major component of knowledge construction across these socio-cultural spaces. Piaget and Vygotsky’s ideas are foundational to the development of contemporary theories of learning at play.

## Important Scientific Research and Open Questions

Contemporary videogame and educational scholars are exploring how games and play, particularly in their electronic and online varieties, are and can be used for education. In many cases, existing games and game world communities are being studied to better understand how and why they are such popular play spaces and what kinds of social and cognitive learning is underway during the play process. Massive multiplayer online games (MMOGs) such as *EverQuest* exemplify how situated learning can extend beyond the game world into a culturally relevant social practice with a community of learners/players (Steinkuehler, 2004). Studies of MMOGs demonstrate how game players, who are often seemingly uninterested in formal “learning,” engage in reading, writing, and various game-related challenges of their own accord. In addition, socialization and critical discussion about game worlds are abundant in online MMOG communities (Steinkuehler, 2004). The role enacted by players online is complex and closely related to their engagement with other people, popular culture and other physical-world realities in which learning takes place.

Another example of current uses of games/play for learning includes the use of strategy games in formal education. One example is the game *Civilization*, which gives players the opportunity to develop their own civilizations through diplomacy, discovery, development, war and colonization. This game replicates historical patterns and by playing *Civilization* students experience history instead of memorizing de-contextualized and often limited curricula (Squire & Jenkins, 2003). Although a game such as *Civilization* may not “teach” students about “the history” of the world (as though there were only one), gameplay allows players to learn about the progress of civilization over time through their own construction of a make-believe environment (Squire & Jenkins, 2003). MMOGs and games such as *Civilization* demonstrate how games are inherently

educational and engage students in playful roles for the purpose of education. As this reality about the educational value of games becomes more widely accepted, designers, researchers and educators are working to develop games for education that meet curricular requirements.

To approach learning at play more broadly, other recent studies have exposed important identity and gender inequities surrounding technology and education. One study suggests that the seemingly gendered divisions in the “boy-culture” of the videogame world are very much the result of girls not having access to game consoles (Jenson & de Castell, 2008). In this case, access to play impacts student engagement with technology, in a world where access to technology is an indicator to students’ choice to pursue information and communications technologies and science-based professions. Interestingly, given the opportunity, the differences in children’s desire to play that are frequently (still) attributed to gender emerged in this study as differences related to novice versus expert skill levels. Differences in play styles and time-spent at play was largely attributed to accessibility to consoles and free-time for children to play at home, where girls were still expected to do more housework and were generally only given chances to play videogames when their male siblings and other male family members were not playing. Given the chance to play console-based videogames in an after-school club, girls developed an interest in gameplay and demonstrated attributes typically associated with their male peers, such as competitive play (Jenson & de Castell, 2008). “Learning” here goes beyond curriculum and addresses on a broader scope the social and gender relations shaping the lives of children and the future career options they have, paved in many ways from the social roles children play starting in childhood.

As this interest in the educational function of games and play grows, there are a multitude of questions researchers are looking to answer: How do we harness the power of play for education? What are the implications of learning in virtual environments and through online role-play games? How do we understand questions of individual identity as they are portrayed and experienced at play in the digital and physical world? What are the learning outcomes of game production versus consumption? To what extent can role-play and gameplay engage players/learners in “serious” experiences and with social and political content? How much does play need to be scaffolded to be effective and how should this scaffolding occur (i.e. within game design, by teachers/educators or parents)? What is the evaluation process for understanding the impact of play (and do we need one)? These are but a few of the questions under consideration in the area of learning at play.

## Cross-References

- Actor network theory and learning
- Constructivist learning
- Learning technology
- Learning with games
- Participatory learning
- Piaget’s learning theory
- Serious games
- Vygotsky’s philosophy of learning

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## Links & Definitions

ludology: a field of study looking at games and play and their role in culture and society, focused on gameplay systems (design) before other elements such as narrative or representation

play: subject engagement in structured or unstructured, procedural or unbounded activities

games: organized, structured, rule-based activities with an end-goal

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