Designing with Teens at the Center

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DESIGNING FOR TEENS

The *Journal of Games, Self, & Society* features scholarship on the power of game design and play to support, accompany, and ignite connections, explorations, and transformations in understanding the self, others, and society. We are particularly interested in what this means with regard to adolescents.

Why is the developmental period of adolescence of particular interest?

Because of its magnificence. And because of the design opportunity and challenge it poses.

Adolescence is the last significant period of brain growth. Changes in the adolescent brain power the remarkable transformations that are characteristic of this developmental moment. The teenage years are a rich time for learning, taking risks, pushing boundaries, and exploring identity within and outside of the immediate context of home, school, and neighborhood.

Designing and using games for teen audiences requires that we understand the unique needs and capabilities of the teen brain and that we tailor play experiences to meet this special developmental moment. Nearly two decades of neuroscientific research reveals that childhood is not the only critical period for learning. The teen brain undergoes its last major restructuring starting in puberty, pruning synaptic connections that

are used rarely, strengthening those that are used often, and increasing connectivity across regions via increases in white matter volume (Lenroot & Giedd, 2006; Lenroot et al., 2007). The great plasticity—i.e., remodeling and growth—of the brain in the teen years make it a period when individuals are exceptionally susceptible to external influences (Jensen & Nutt, 2015; Steinberg, 2014). This is a time when teens can "make enormous strides in thinking and socialization" as well as "judgment, getting along with others and long-range planning" (Giedd, 2015, pp. 34 and 35, respectively).

The heightened susceptibility of the teen brain to the environments and experiences it encounters creates a critical window of opportunity in which to offer transformative or "peak" experiences. These are experiences that fully engage teens' thoughts, feelings, and behaviors, and that also challenge how they think about and understand the world, inviting them to reconsider their assumptions and take on new understandings of how the world is and their own place in it. Peak experiences are especially critical for teenage learners, for whom emotion circuits in the brain are particularly sensitive and a key pathway for engaging their attention, motivation, use of learning strategies, self-regulation of learning, and achievement (Pekrun, 2017).

Teens have incredible learning potential and faster learning curves than adults (Jensen & Nutt, 2015). Given this enhanced learning potential, what teens spend their time learning matters. In more technical terms, "Repeated activation of a specific collection of neurons as a result of engaging in a particular behavior will actually result in structural changes that strengthen the connections among those neurons, which in turn will make them function more efficiently" (Steinberg, 2014, p. 72). The bottom line from this research is that habits, experiences, knowledge, and impressions developed in teen years have the potential to influence an individual for a lifetime. The environments and interactions teens encounter—good and bad alike—leave a deeper mark on the brain than they will in later years.

Teens' unique developmental characteristics are a clear call to action to provide transformative experiences that open up their thinking about themselves, each other, and the world. Transformative learning

experiences are instrumental for developing 21st-century skills. As one researcher writes,

> "the skill of the future will not be to remember facts but to critically evaluate a vast expanse of data, to discern signal from noise, to synthesize content and to apply that synthesis to real-world problem solving. Educators should challenge the adolescent brain with these tasks, to train its plasticity on the demands of the digital age" (Giedd, 2015, p. 37).

Game designers can accept Giedd's challenge too. Teens play, learn, and connect with others in virtual spaces as much as in physical ones. Game-based learning refers, broadly, to an approach for using games to teach and learn. Games can be designed to support social and emotional competencies related to problem-solving, interaction, connectedness, cooperation, and collaboration (Hromek & Roffey, 2009). Games reflect—and allow us to reflect upon—real-world sociopolitical systems. At their core and no matter how fantastical, games are systems that reflect and expand on truths about the lives we lead: they have rules, win/lose states, rewards, consequences, and many roles for players and other characters to step into. As players interact with game systems, they can learn and then manipulate and act within them in ways that comply with ("win states") or reject ("lose states") its rules and norms (Gee, 2003). Game-based learning has shown promise for positively impacting learners' engagement, attitudes, self-perception, and self-efficacy, and can support the development of 21st-century skills (Hung, Huang, & Hwang, 2014; Miller & Robertson, 2010; Qian & Clark, 2016; Wrzesien & Raya, 2010).

How can we, in our game designs and in game-based learning experiences, offer teens rigorous and transformational opportunities to see possibilities they never before imagined, build essential skills, and flesh out their understanding of the world and their potential and responsibilities as members of local, national, and global communities? How can we design games that are compelling and playful, and that tap into and recruit emotions to fuel and supercharge learning and connection?

INTRODUCTION TO VOLUME 3

The previous volume of the *Journal of Games, Self, & Society* was published

mere weeks into the COVID-19 global pandemic. I wrote in the Introduction to that volume, "I wonder what novel games and design approaches will emerge both from the scholarship published here and in the coming days of unprecedented social isolation." This volume features some of the scholarship emerging from this time.

The theme of this volume of the *Journal of Games, Self, & Society* is ***games as fuel for connection and transformation for teens*.** Two novel articles address this theme.

In *Building Resilience: Multidisciplinary Research, Iterative Processes, and Serious Game Design,* the design team of Lauben, Roszko, Gallegos, and Perry presents a post mortem on their game, *Resilience*. *Resilience* is a student-led project that paired deep research and game design to foster understanding of the global refugee crisis. What we learn in their article is the depths and limitations of research needed to design a game on a topic that is prevalent and pervasive, while at the same time not the designers' own lived experience. They raise the question: how can designers dig into an understanding of lived experiences that are not one's own? In their post mortem, the design team grapples with the tension of how much and what type of research is sufficient for a serious game? And, how do you balance access to first-person, lived experience accounts with both the design integrity of a piece of work and very real deadlines? Their reflections on the choices they made in creating *Resilience* are poignant, and offer a useful and actionable case study for the serious games they will design over the course of their careers, as well as for other game designers.

The *Resilience* team also offers insight into the design choices they made to support the transformation they envisioned for players. In their words, "Our game intends to build compassion for refugees and their stories, as well as promote a greater awareness of the real-world situations that refugees endure" (Lauben et al., 2022, p. 9). Engendering empathy for the experiences of refugees was primary for them. Their explorations around how to represent those stories and who is telling those stories in what context is both interesting and provocative. How do we support perspective-taking and feeling empathy for others when we may have world views, stereotypes, and other prejudices that can create interference?

Digital Biedermeier: (Self-)care in Animal Crossing: New Horizons by Walsdorff, Clüver, and Kanderske homes in on how gameplay is meeting player needs during the COVID-19 pandemic which required us to be socially distanced from others for extended periods of time. The authors unpack aspects of the digital gameplay that emerged during the pandemic and propose that gameplay might be considered a 'crisis hobby.' They explore how games like *Animal Crossing: New Horizons* offer both distraction and comfort. They focus on three kinds of human activity this game affords: labor, work, and action. They state that the game "heavily features domestic practices like furnishing and decorating" and that such practices "can temporarily increase a person's well-being simply by acting as a distraction from their stress and worries" (Walsdorff et al., 2022, pp. 44 and 45, respectively). More specifically they offer analysis, drawing on data derived from written player narratives and gameplay footage, to support the thesis, that *Animal Crossing: New Horizons* can be understood through "the lens of the historic Biedermeier epoch, a time marked by practices of home-making and domestic decoration carried out in an effort to distract from and compensate for feelings of uncertainty and loss of control" (p. 46). Their article not only provides a fascinating analysis of human needs and behaviors that can be met, in part, through gameplay, but also a possible strategy for meeting our needs when other options (being in the physical presence of others) are not available.

In addition to these two novel articles, Volume 3 of *Journal of Games, Self, & Society* features two book excerpts from some of the most recent scholarship on game-based learning.

Matthew Farber, EdD, Assistant Professor of Technology, Innovation and Pedagogy at the University of Northern Colorado, is the author of *Gaming SEL*. *Gaming SEL* is a very readable cornucopia of topics that span first-person accounts of gameplay and thought-provoking explorations of the neuroscience of games to comparing social and emotional learning models and contending with how games do or don't teach compassion, empathy, and mindfulness. The excerpt we've chosen from his book centers on how games evoke emotion, and the way educators can use the emotion that comes up in service of growth and connection.

Karen Schrier, EdD, Associate Professor, Founding Director of the Games

& Emerging Media program, and the director of the Play Innovation Lab at Marist College, is the author of *We the Gamers*. Written during the pandemic, *We the Gamers* begins by exploring the many ways games were of great support to humanity during the stay-at-home orders and beyond. Schrier takes a balanced approach by questioning when and how best to use games alongside learning, while acknowledging the limitations of games. The excerpt explores how games can encourage and support teens' civic participation and ethical decision-making.

Also included at the end of this volume is an announcement about the return of the Games+Learning+Society (GLS) Conference. This journal grew from inspiration sparked at GLS. Its return in 2022 is very much awaited and most welcome

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