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More Than Making Games

Exploring the Professional Pathways of Women in the Game Industry

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Abstract

Many educators, researchers, and industry stakeholders share the common goals of fostering inclusivity in game communities and seeking ways to support young women in games and technology. This paper reports findings of a qualitative research study investigating the learning pathways, experiences, and expectations of women who work in the game industry. Interview data reveals that women in games share a common interest in making game communities and workspaces better for the next generation of game designers. Overall, participants' contributions to these efforts fall into four primary roles: educators, advocates, role models, and leaders. Findings offer insights about how game industry professionals understand their personal and professional pathways, and reveal how participants approach solutions for common barriers. This research hints at a number of possible research directions for researchers and educators looking to design better programs, curricula, and interventions that support young women along their learning pathways in games.

Girls in Games and Women in Tech

Topics such as the marginalization of women in technology and problematic representations of female characters in games have become part of the mainstream discourse. To people who work in and research the game industry, these issues are not new: the number of women graduating with degrees in computer science has been going down for decades (Hayes, 2010); female characters have long been underrepresented in games (Williams, 2009); and girls and women who play games at public events and online have been constant targets for harassment. Controversies such as the Gamergate movement—in which a hostile subset of gamers used Twitter and other media platforms to harass and threaten women who work in games—have been widely covered in the mainstream media. Academics and game industry leaders alike are motivated to improve conditions for women in games and technology. This momentum creates opportunities to design and research strategies that will empower girls with the tools and skills they need to be confident programmers, designers, and creators of games. As more scholars and educators pursue these goals, it is important that they draw from the expertise of women in the industry. What could be learned from the experiences of women who currently work in games to inform the design of better programs, more effective curricula, and ultimately, to support women on a pathway to successful careers in games and technology?

In this paper, I report on findings from a qualitative research study investigating the learning pathways, contemporary experiences, and expectations of women who work in the game industry. Findings

are based in in-depth interviews with 20 women, and one gender queer participant, who identify as game industry professionals. Questions to participants addressed, what has defined and influenced their learning pathways? What does it mean to the participants to be a woman working in the game industry? How did they come to a professional career in games and what were defining points along that pathway? Knowing more about the pathways that women take to game careers and the experiences they have in those roles may provide insights about what kinds of resources, support structures, and learning environments can be put into place to support more women in pathways to game design. I discovered that each of the women she interviewed contributes to efforts to achieve these very same goals. Findings revealed not just insights about participants' trajectories, but also brought to light their work as educators, advocates, role models, and leaders. Each of the participants in this study plays their own part in fostering diversity and inclusivity in the industry they love.

Getting Girls Into the Game

Over the past few decades, a variety of research-based programs and interventions have sought to engage girls in game design. Kafai (1996) evaluated the differences between games made by boys and girls, finding more variability in games made by boys compared to girls, suggesting that boys had more commercial game influences to draw from. Game designer Brenda Laurel (1998) has made a similar argument, explaining that video games give boys an edge in becoming comfortable with computers. Hayes and King's TechSavvy Girl's Club (2009) sought to help girls develop tech fluency by playing and modding *The Sims 2*. The program supported girls in leveraging their existing play practices to develop tech fluencies and challenged traditional paradigms of technology by re-envisioning them to incorporate values traditionally aligned with feminine frameworks. Game developer Mary Flanagan and colleagues designed a game called *RAPUNSEL* to teach programming to middle school girls. The work was motivated by a desire to address prior failures to attract women to careers in IT fields and the team prioritized including girls' perspectives in their design (Flanagan & Niseenbaum, 2008). A program called Girls Creating Games paired middle school girls together to collaborate on designing a game with the goal of increasing their interest and confidence in becoming producers of technology (Denner, 2007; Denner, Bean, & Martinez, 2009).

A theme that spans across these game-based programs and interventions is a struggle over values. The designers and academics who develop these programs want to respect girls' interests and preferences. Kafai wondered, what kinds of worlds and characters do girls design into their games? Hayes and King took *The Sims 2*, a game immensely popular with female audiences, as their starting point for exploring, how could we get girls engaged in trajectories of IT fluency? The *RAPUNSEL* team put the question, 'what do girls value?' at the center of their design. Finally, Denner and the Girls Creating Games team conducted extensive research asking, what kinds of experiences did the girls have in pursuit of their goal of increasing girls' confidence as producers of technology. Each of these projects encountered struggles—whether technical constraints, ideological tensions, or otherwise—in their efforts value what girls care about. These kinds of issues come up across all kinds of learning interventions, but can require a special sensitivity when developers want to take care not to reject or ghettoize the things their participants care about. All of these programs and interventions were designed with change in mind. These efforts were meant to challenge the status quo and to bring more girls to the playing fields of technology and media. Much can be learned from the struggles that these scholars and designers faced, and from the choices they made when faced with them.

Supporting Positive Learning Pathways

Learning from the collective wisdom of the educators and scholars who have created programs to engage girls in game design is a critical component in understanding how we can help level the playing field for girls in games and technology. But learning such complex skills and developing identities as technologically competent and capable designers is a longitudinal process, spanning over many years and many learning contexts. Even with a vibrant history of great programs and research studies, scholars of games, technology, and learning still struggle to fully understand the complexities of the learning ecologies (Barron, 2004; 2006) that girls and women encounter throughout their educational trajectories. To identify what kinds of experiences will support girls in developing identities as capable producers of technology or games, additional research is needed on the paths of development undertaken by women who came before them. Barron (2006) describes a "multiplicity of pathways among learning contexts that learners might take" (p. 200) depending on the learner's unique configuration of interests, which are determined by the combination of ideational, social, material, and identity resources that the learner has access to. Her research shows that learning involves a process whereby learners appraise the fit of a potential learning direction by examining it against their sense of self and perception of their values. This study applies the learning ecologies framework to examine the pathways of women who work in games. By understanding how female game professionals have navigated this process for themselves, researchers and educators can better understand how to foster positive pathways for future cohorts of women in games.

Methods

Methodological Rationale

The interviewing strategy for this study was based on the open interview used in person-centered ethnographies (Levy and Wellenkamp, 1989; Hollan & Wellenkamp, 1994) and Seidman's three-part interview series. Levy and Wellenkamp argue that person-centered research methods are ideal for enabling participants to share "rich material bearing on feelings and understandings about feelings and their transformations throughout various stages of life, on learning…on self-concept and on other such personally centered dimensions of experience" (p. 224). Sediman's (2013) interviewing technique emphasizes understanding "lived experience of other people and the meaning they make out of that experience" (p. 9), prompting participants to talk about how they make meaning of their past, present, and future selves.

Participants

This research is based on interviews with 21 participants—20 women and one participant who identifies as gender queer. Based on my previous role as a game journalist and editor, I reached out to my personal network of game industry contacts to recruit an initial group of participants and then identified additional participants through snowball sampling. Rather than focusing on only designers, producers, or programmers, I opted to speak with women who work in various roles across the industry. As part of the selection criteria, participants had to self-identify as a game industry professional and have worked in games as their primary professional affiliation for at least a period of two years. The demographics

of the participants in this study align closely with the overall race and age demographics of the game industry (Westar & Legault, 2015). To best understand the diverse trajectories of women in games, I purposively recruited participants with diverse histories, experiences, and values.

Interviews & Data Collection

The data for this study was collected over a period of six months, in four different states, including two game events—one academic conference and one industry focused conference. The majority of the interviews were conducted in-person, though a few were conducted online over Skype. Interviews ranged from 40 minutes to nearly 4 hours in length. I recorded and transcribed each interview personally, ultimately generating nearly 500 pages of transcripts for analysis. All participants have been assigned a pseudonym and all identifying information such as company names and locations has been removed.

Analysis Procedure

For analysis, I first completed one round of descriptive coding (Saldaña, 2013) on each interview before generating a more focused coding scheme in a second round of coding and memo writing. I utilized the qualitative research software MAXQDA for the coding and analysis process. The final coding scheme consisted of two different types of codes—pathway codes about participants' personal and professional pathways, and value codes (Saldaña, 2013), for sections where participants talk about things and people they value. By coding for major themes in participants' pathways and by identifying similarities and differences in the values of participants, I was able to identify shared themes and threads in women's trajectories and experiences in the game industry.

Data & Findings

In exploring the learning pathways, experiences, and expectations of women in games, one of the predominant themes that came up consistently is that each participant engages in some kind of effort to promote better conditions and pathways for women in games. When talking with participants about their strategies as leaders, their values as developers, and the ways they spend their time, there is a common theme of wanting to leave a lasting positive impact on the game industry, particularly when it comes to making things better for underrepresented groups of designers, particularly women. While there are a variety of other threads and themes across the interviews, in this paper I focus on the ways in which participants are work to contribute to a better industry for women and other minorities in games. This theme aligns with the study's goal of identifying how we can re-design education spaces to better engage young women in technology and game design.

Just as the participants in this research have diverse pathways to games and diverse roles in games, so too are their contributions to making game-based play and work environments better for women. Some women care about creating educational opportunities, introducing girls to games and promoting professional development opportunities for students. Others have chosen to take on advocacy roles, speaking out publicly about issues around women in games or working behind the scenes on resources for people experiencing online harassment. Some contribute by persistently pursing the work they love and serving as role models for girls who strive to do the same. Finally, some women are taking leadership

roles in their companies—raising their financial and social capital to make games featuring powerful female characters and changing how they recruit and hire new employees in ways that are more inclusive and welcoming to women. I break these different types of efforts and activity into four primary roles: educators, advocates, role models, and leaders. See Table 1 below for an overview of participants, their industry jobs, and their primary role(s) in supporting other women in games.

Participant Name	Primary Industry Job	Role in Supporting Women
Andrea	Director of Programming	Role Model
Annabelle	Quality Assurance Lead	Advocate
Bethany	Chief Executive Officer	Advocate & Leader
Casey	Programmer	Role Model
Cassie	Game Designer	Role Model
Debbie	Artist	Role Model
Erin	Director of a Non-Profit Org	Educator & Leader
Eva	Game Designer	Educator
Grace	Game Designer	Role Model
Josephine	Indie Game Designer	Educator
Kate	Game Journalist	Role Model
Kim	Director of a Non-Profit Org	Advocate & Leader
Maggie	Chief Executive Officer	Advocate & Leader
Margaret	Game Developer	Advocate
Marie	Industry Recruiter	Educator
Mia	Chief Executive Officer	Leader
Natalie	Artist	Role Model
Naomi	Game Designer	Role Model
Savannah	Producer & Localization	Role Model
Sera	Quality Assurance	Advocate & Educator
Teagan	Game Designer	Advocate

Table 1. Interview participants, their primary industry jobs, and their roles to support women in games.

Creating Educational Opportunities

Several participants emphasized the need to create safe, inclusive, and supportive environments for girls that span from middle school to up through their first years in the game industry. One person who was particularly articulate about this was Sera, who volunteers several out-of-school youth programs. She explained, "the key is reaching the girls when they're in middle school and junior high to combat the

culture that says the engineering and math stuff is for boys." She described what happens when young girls go through the process of making their own game:

> It opens them up to, 'If I'm gonna do a class project, I could do a poster. I could do a website. Or I could make a game.' And when that's a part of their possibility space, the change is big.

Josephine, an indie game developer who did not grow up playing, also believes that early exposure to games as a possibility space is a critical component to recruiting more girls. "I never thought that I could make games," she said. "I didn't grow up with a console and I didn't have a personal computer until I was 17." She was diagnosed with a learning disability early on and was assigned to classes that only covered basic word processing skills. She explained, "A lot of the tech stuff was for the gifted kids. I was shut out of a lot of that. I thought, I can't do that because they have the gifted kids doing that." Because of her own late start with technology, Josephine cares deeply about creating opportunities for young girls. When showing off their games at games festivals, Josephine and her husband make sure girls get equal play time.

Erin is the executive director of a group that organizes professional development events and early career opportunities for students at a university in the Midwest. She feels strongly about creating opportunities for students in her home state, where there are not many jobs in game development. By bringing together people with different backgrounds, her group is able to foster diversity and help students gain confidence. She described, "For students, and for female students especially, finding a space where they feel like they have a support system and a safe space is tough." Though it has not been easy, Erin's organization has aimed to provide that space and that support network, and she hopes the students will continue to embody those values in the future. Erin summarized, "This is how we feel like we can impact the industry, through students and student development."

Advocating for Women & Diversity in Games

Kim works as an advocate for women and other under-represented groups in the industry by serving as the executive director a game industry advocacy group. "I want to see change happen," she described. "That's my thing. I think we're change agents. Every single one of us. That's what we're here for. And that's what I'm trying to do." Kim has been working on several new diversity initiatives, building new partnerships for her organization to advocate for greater diversity in games and the industry.

Teagan is a gender queer indie game developer and advocate for marginalized game players and developers. Observing that gaming communities tend to marginalize the types of players they care about, Tegan spoke about the "death of a thousand paper cuts and micro-aggressions" that has become a part of the rhetoric around women in technology. Teagan's approach is to empower people to tell their own stories through interactive narrative. They explained:

> Part of building a community is to empower, to create the community that you want to see. So if I empower the voices I want to see more of in my community, then educating them and giving them the tools to learn this stuff is really important.

For Teagan, learning about game developers who grew up in poverty has been a powerful experience and they encourage others to educate themselves too. "Being a good ally takes a lot of work," Teagan said. "It's a process. I don't believe in the idea of a good person or a bad person. But I believe that making

the world a better place for everyone takes work." Teagan believes games can be a powerful medium for people to tell their stories and for privileged individuals to learn about the struggles and experiences of those who are marginalized.

Growing up in a household that valued involvement with non-profit organizations and giving back, Sera says she never learned how to say no to volunteering. Currently, she is involved with anti-harassment campaigns, training for speakers, mentoring for girls, and what she calls general advocacy work for women in games. Many of Sera's efforts involve behind the scenes work with organizations, campaigns, and special interests groups, but she said she also continues to speak out and "give voices for those who are voiceless." Sera thinks that many women would benefit from joining sponsorship programs with groups like the International Game Developers Association's Women in Games Special Interest Group.

"It's a million little messages," said game developer and industry advocate Margaret as she spoke about her frustration with how women in technology fields are treated. In a recent meeting, a company leader ended a meeting by laughing at her work for women in technology. "It was just a small moment for him," Margaret explained. "Just something that felt like a joke to him. But it hurt me so deeply. And our careers have a thousand moments like that." Margaret's style of advocacy involves speaking out publicly in the press and social media. Her advocacy work has made her a target of Gamergate and she has received numerous threats to her safety and her life. This is worth risking your life for," she explained. "I feel like the question of if women can work in games is a question of if we can work in technology. This is where the human race is going. And if we don't get this problem under control now, it's going to really be bad in the future for women." Margaret believes it is imperative that women stick together. She expressed that one of the ways that feminism fails is when people start to believe that their version of reality is the only reality. "We need to be ruthless about promoting each other. I feel so strongly about that."

Being a Role Model

Kate is an avid game player and a game journalist. Her love for games is a core part of her personal and professional identities. Because she is also a woman and a lesbian, Kate feels that sometimes she is pressured into taking on advocacy roles that she sees as distracting from her professional goals. She explained:

> I get pigeon holed into the advocacy track and I'm like, okay, yes, I can bring an interesting perspective from being a woman and a lesbian in this field. But I'm going to be perfectly honest, being a lesbian is very personal to me. I get a little self conscious and embarrassed when I'm asked to write about it. I don't want to write about it. I got into the industry because I like writing about video games from an artistic perspective, from a critical perspective. I like games. Please don't define me by my gender.

Though many participants in this study opted not to take on groups like Gamergate directly, neither are they passive about the future for women in games. Kate and many others have found other ways to have a positive impact without the same risks to their physical, mental, and emotional health. Casey makes games with her little sister, showing her how she can use her passion for art to create interactive stories and games. Savannah mentors a young woman in high school who is interested in pursuing a career in games. Andrea is involved with technology-based programs at her son's school and visits local schools to give talks about being a game developer. Kate takes solace in the fact that her role as a successful female game journalist makes her a role model to girls who want to pursue a similar trajectory. She said:

> If I can be a role model for other girls who want to get into the industry, who don't want to be judged on their gender, who want to be taken seriously, I hope that I can be that person. I like to hope that girls can look at me and go, 'Kate is awesome and I want to be just like her.'

Kate and some of the other women in this study are contributing to the future for women in games simply by being in games. Through their continued commitment to doing the work they love, these women act as role models to other young women who aspire to a career in games too.

Women as Game Industry Leaders

Of the twenty-one women interviewed for this research, three are current or former CEOs of their own game companies. While their experience and their leadership strategies differ, each of these three women had one thing in common—they are committed to having their companies make games that empower girls and women. Maggie is the former CEO of one of the first companies to market games to girls. Explaining her exasperation with the fact that most games at the time were made by men and for men, Maggie and her team aimed to "tell stories about girls and women that shatter the stereotypes of being one-dimensional."

Mia is the CEO of a start-up game company making free-to-play games that feature empowered female characters. Unlike many companies that target women for a quick and easy profit, Mia describes wanting to release free-to-play games to make them more accessible to the audience she wants to reach and empower. Her company's games reverse many of the common tropes and stereotypes of female characters in games.

Indie studio CEO and game developer Bethany is bored with the game industry. In her interview, she made an observation identical to something that Maggie said—that the industry is "made by men for men." She described the norm where "violence is the primary mechanic and games cater to adolescent fantasies about empowerment." Craving something different, Bethany is interested in stories and in games that connect emotionally with characters. She explained, "I wanted to do a game that showed women being awesome and it's not questioned that they can be competent. They're not put into a girlfriend role or anything like that. They're out there and they're awesome." In her game, women fill a variety of roles. A woman is a commander. A woman is the techie. A woman is the villain. A woman is the hero. For her, it is important that her games "let women be a range of things rather than girl being a personality." Bethany said she despises media that feature girl as a personality type.

Maggie, Mia, and Bethany are all committed to making games that place girls and women in powerful roles and that combat stereotypes about them being damsels or one-dimensional. However, each of these women has a unique strategy and set of goals around running their companies. Maggie works to foster collaboration and collective creativity among the people who work for her company. Mia is passionate about supporting venture capital funding for female-led companies. Bethany is also seeking venture capital funds for her company, but she is more focused on her acquisition strategy of recruiting and retaining employees who are otherwise under-appreciated by the game industry. In many ways, the myriad strategies that each of these women employ to make game industry spaces more diverse and inclusive are about investing in people. Whether it showing girls that games can be a part of their possibility space, empowering marginalized groups, or one of the many other strategies, an overarching theme is investing in people to invest in positive change.

Conclusions

This study investigating the trajectories and experiences of women in game design reveals that many women in games dedicate a significant amount of time and effort to making the game industry better, for themselves, their colleagues and employees, and the next generation of game developers. For some, being successful in their careers, and therefore being a role model to girls in the future, is a way to contribute. Others commit further time and resources to empowering women in additional ways, such as advocating for those whose voices often go unheard, helping marginalized groups share their stories, or empowering girls and women with professional development tools and funding to build companies. Each of these efforts contributes to making women visible in games and empowering them to share their stories, create inspiring content, and develop as successful professionals and leaders.

These women's stories serve as a starting place for exploring their efforts in greater detail. Many of the efforts raised in this article deserve greater attention from scholars in games and digital media. For example, what are the specific challenges to women-led companies looking to raise venture capital funds to build their companies? What professional development opportunities are most needed in game design programs? What kinds of early exposure to game design and programming are most effective in engaging girls' interests over an extended period of time? What we need from future studies is investigations of the specific contexts, spaces, and strategies outlined by the women in this research. Exploring how the participants of this research are doing their part reveals a lot about what educators, researchers, and industry leaders can do to bolster their own contributions toward fostering diversity and inclusivity, but there is certainly more work to be done.

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