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Connecting the Literature on Girls and the Internet to Evaluation Ideas for My Pop Studio

Kelly Mendoza

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Connecting the Literature on Girls and the Internet to Evaluation Ideas for My Pop Studio

Kelly Mendoza

Abstract

Nearly one year ago, My Pop Studio, a website to teach tween girls media literacy and heath skills, was launched from Temple University's Media Education Lab. The website is now moving into an evaluation phase, and this review of literature on girls and the Internet can provide a foundation for the research ahead. A review of literature on girls and the Internet is provided, including what girls do online, the digital gender divide, online spaces for girls, and computer-mediated communication. Key themes from this literature are used to connect to research questions for evaluation, providing potential avenues of research.

Key words: girls, Internet, online, My Pop Studio

Nearly one year ago, a website designed specifically for tween girls was launched online from Temple University's Media Education Lab—My Pop Studio (MPS). MPS (www.mypopstudio.com) was designed by a team of researchers in the Media Education Lab to teach girls media literacy skills through an online gaming format. Since the website launch, MPS has received attention from news agencies and experienced ebbs and flows in traffic. Eight months after the launch, several unforeseen incidents in the chat rooms led to a closing of these rooms and an implementation of a strictly moderated, delayed chat experience. Since the launch there has been no formal evaluation of the website, and no evidence as to how often girls use the site, whether they enjoy using the site, what their experience is in the moderated chat rooms, and whether girls learn health and media literacy analysis and production skills—in short, whether the educational goals of the site are working.

Currently, MPS is facing several avenues for evaluation. A new phase of evaluation and implementation in the next year will bring a large-scale marketing of the site to girls, and an implementation of partnerships and outreach. During this time, evaluation of girls' experiences using the site will be underway. In preparation for this phase, it is important to visit the literature on girls and the Internet in order to provide a solid foundation for the research ahead. Therefore, this literature review will provide an analysis of the major issues regarding girls and the Internet in preparation for these upcoming evaluation of MPS. The literature will focus specifically on how girls are using the Internet and computer-mediated technologies, how Internet use impacts girls' emotional and social lives, positive and negative results of using the Internet, and trends and changes in the research over the past few years. Some of this research examined girls specifically, and some draws on gender differences from studies of girls and boys.

The majority of the paper will review major themes of the literature on girls and the Internet. First, a definition of terms used in the review is provided. Then, four major themes are covered: Girls online (millennial generation, internet in the home, time spent online, what girls do online, multitasking); the gender divide (girls and boys online, girls and games); online spaces for girls (websites for girls, girl-produced media), and online communication and CMC (being in constant contact, online relationships and cyber-romance, online harassment, and managing online privacy and safety). Then,

these themes will be synthesized to form research questions for the evaluation of MPS. These questions will serve the purpose of generating ideas about the many possible foci that researchers doing evaluation may want to pursue.

Definition of Terms

To begin, it is necessary to lay out a definition of technology terms and acronyms that will be used throughout this literature review.

- The *Internet* is an umbrella term that covers any activity—from Web browsing to emailing—that is performed *online*, that is, connected to the World Wide Web. One can go online through a desktop or laptop computer, cellular phone, through a personal digital assistant (PDA) with wireless service, or through a Blackberry.
- *E-mail* (electronic mail) consists of "notes and letters sent electronically from one user to one or more others" and it can include text, pictures, sound files, and other multimedia documents (Subrahmanyam, Kraut, Greenfield, & Gross, 2000, p. 134).
- A *chat room* is a way for people online to communicate, or "chat" with each other in real time, and it usually is organized around certain topics, interests, or commonalities. Chat messages can either be public for all to see, or private with restricted access (Subrahmanyam et al., 2000).
- A *multiuser domain* (MUD) is a live communication system organized around a role-playing game, such as *Second Life* (Subrahmanyam et al., 2000).
- *Instant messaging* (IM) is software that can be online, on cell phones, PDAs, or Blackberries that "informs the user when friends or colleagues are online and enables private, one-to-one, text-based conversations (Subrahmanyam et al., 2000, p. 134).
- *Text messaging* (TM) allows people with cell phones or PDAs to send messages to others; similar to e-mail.
- A *blog*, or "web log," is a site created by a user (oftentimes through a server such as Live Journal) where entries are made chronologically, as in a journal or a diary.
- *Computer-mediated communication* (CMC) includes any communication, whether email, chat, TM, IM, or MUDs, or blogs, that allows people to communicate with each other in a variety of ways.

- *Netspeak* includes a variety of acronyms and slang that is used in CMC to shorten messages (BRB = be right back), communicate more quickly and informally (Gratz = congratulations), and to communicate emotion (LOL = laughing out loud). Netspeak does not follow the grammar, punctuation, and spelling rules of proper English.
- Finally, the term g*ames* or *gaming* in this document refer predominantly to interactive games that can be played online, although some of the research includes games that are on a CD-Rom or separate console system attached to a television.

Most of these terms are activities that fall under Internet use on a computer, however, mobile technology such as cell phones and Blackberries can connect to the Internet and accommodate these activities.

Girls Online

Research shows that today's youth are growing up in a media-saturated environment—spending increasing amounts of time online, in homes with that are gradually having more computers and Internet access, using the Internet in very social ways, and multitasking while on the Internet.

Millenial Genration

The current generation of teens is labeled the "Millenial Generation" (Howe & Strauss, 2000). According to Howe & Strauss, this generation has the highest number of teens America has ever seen, and they are more affluent, better educated, and ethnically diverse. They are also the most media and technology-saturated culture of youth ever in existence; in which cell phones, the Internet, email, instant messaging, text messaging, Ipods, electronic games, and user-generated content such as MySpace pages and YouTube videos are integral parts of their lives. Eisenstock (2007) notes that youth of this digital generation are content consumers, content creators, media-morphers, multitaskers, and have a mobile lifestyle. Moreover, millenials "find empowerment in a fragmented media landscape that confused and overwhelms adults" (Harris Interactive, 2003a, p. 11).

Internet in the Home

Studies on the amount of time spent online and about the Internet in the household show trends towards higher computer and Internet usage and an increasing amount of

computers—many with Internet access—in children's bedrooms. Due to the higher turnover rate of computers versus television or other fairly stable media technologies, older computers are placed in children's bedrooms. Livingstone and Bovill (2001) found this hand-me-down effect to be true with television and other media technologies in the home that are upgraded. The new technology usually goes in a shared family space, whereas the old technology goes into children's bedrooms, providing for increasingly media-rich bedrooms for kids and making kids' media use more individualized and private rather than a social activity.

The 1997-1998 U.S. Census reported that 57% of homes with children and adolescents had a computer, and that 60% of children used the computer at least three days per week. At this time, 34% reported having Internet access (Becker, 2000). In 2000, a survey of 1,235 parents of 2-17 year-olds by the Annenberg Public Policy Center found that 70% of households had a computer and 52% of computers had online access. Among 8-16 year-olds, 20% had a computer in their bedroom and 54% of these computers had Internet access (Woodland & Gridina, 2000). Seventy percent of computers were located in an open space, while 30% were located in a child's bedroom or private area (Lenhart, Rainie, and Lewis, 2001). According to the Kaiser Family Foundation, of kids aged 8-18, 86% had computers in the home, with 74% having Internet access (Rideout, Roberts, & Foehr, 2005). Furthermore, thirty-one percent of kids have a computer in their bedrooms, with 20% of these kids having Internet access in the bedroom. Boys (35%) are more likely to have a computer in their bedroom than girls (26%) (Rideout et al., 2005).

Time Spent Online

Studies vary in their results of how many kids go online and how much time they spend on the Internet, although most agree that television is still the most consumed medium in children's media diets. The Pew Internet and American Life Project in late 2000 examined how 754 teens aged 12-17 use the Internet (Lenhart et al., 2001). According to this study, 17 million youth (73%) use the Internet, and a lesser amount of 29% of children under age 11 use the Internet. The heaviest internet users are teens aged 15-17 (Lenhart et al., 2001).

The Kaiser Family's Foundation landmark *Generation M: Media in the Lives of*

8-18 Year Olds study drew from a large national sample of 8-18 year-olds, consisting of questionnaires on media use and 700 seven-day media use diaries (Rideout et al., 2005). This study concluded that, in a typical day, young people spend nearly 6.5 hours per day with media (often using more than one medium at a time). Television (81%) and music (74%) were used most, whereas the computer (54%) and being online (45%) were used less. Nearly all young people have used a computer (98%) and have gone online (96%), spending on average approximately one hour per day using the computer outside of school (half of that time they are online). When a computer is in the bedroom a child spends on average 1 ½ hours online per day versus 47 minutes per day in another part of the home. Similar to Lenhart et al. (2001), older kids aged 15-18 spend more time with computers per day (1:22 minutes) than younger kids aged 11-14 (1:02 minutes), and 8-10 (37 minutes). This study also found that 16% of kids were heavy media users who had an high amount in overall media consumption, with daily consumption of more than two hours spent online, over one hour watching TV, and over one hour listening to music (Rideout et al., 2005).

In a marketing study, Harris Interactive (2003b), surveyed 2,618 respondents aged 13-24 online. This study found that the time spent on the Internet is now exceeding time spent with other media. On average, 16.7 hours per week are spent online (not including email), 12 listening to the radio, 13.6 watching television, 7.7 talking on the phone, and 6 reading books or magazines (not for school). The Internet was used most by teens aged 13-15 (17.4%), slightly lesser by 16-18 year olds (17.3%), and even less by ages 19-20 (16.2%) or 21-24 (15.5%). The Internet has not increased young people's total time spent with media, but these findings are novel because they indicate youth are using the Internet more, and using other media less. The Internet is donned the "hub," or central medium, while other media are in the background or used to direct a child's online experience (Harris Interactive, 2003a). The Internet, because it provides young people with choice, control, and individual direction, is an active medium: "teens and young adults are searching for independence and control, and the internet gives it to them like no other media" (Harris Interactive, 2003a, p. 2).

What Girls do Online

It is clear that the majority of youth are spending a significant amount of time on

the Internet, but boys and girls may use that time in different ways. Subrahmanyam, Greenfield, Kraut, and Gross (2001) used data from the HomeNet study to explore the impact of computer use at home on the development of children and adolescents aged 10-19. The HomeNet study included 93 families in the Pittsburgh area with computer and internet access to examine the impact of computer use on families and kids. Ninety-three families with computers and Internet access in the Pittsburgh area were followed using interviews and questionnaires from 1995 through 1998. HomeNet showed that as the novelty wore off, feelings of loneliness and isolation dissipated, and people used the internet in more ways that reflected their interests. From this data, the authors found that teens were more likely to use the Internet for social purposes, such as communicating with friends, meeting new people, getting personal help, and joining groups. Teens were heavier users of MUDs and chat rooms and more likely than adults to report meeting new people online. Teens were also more likely than adults to listen to music, play games, and download software (Subrahmanyam et al., 2001).

The U.S. Census from 1997-1998 found that teens report going online to play games and for help with school assignments, but searching for information on the Web went down from 1997 to 1998, while email use increased (Becker, 2000).

The Kaiser Family Foundation report on the percentage of 8-18 year olds who have ever used the Internet for the following: used to IM (66%), download music (64%), search for health information (50%), listen to the radio through the Internet (48%), buy something online (38%), and create a personal Web site (32%). They also found that the most minutes per day were spent playing games (19), IMing (17), visiting Web sites (14), using e-mail (5), chatting (4) and using graphic programs (4). Half of kids report they have searched for health information online (Rideout et al., 2005).

A different study of 15-17 year olds by the Kaiser Family Foundation found that popular online activities include sending email (94%); researching for schoolwork (94%); searching for information on music, movies, and TV (85%); playing games (81%); downloading music (80%); getting news (78%); participating in chat rooms (71%); checking sports scores (50%); and buying something (36%) (Rideout, 2001).

Borzekowski & Rikert (2001) found that nearly half (49%) of 412 socioeconomically and ethnically diverse 10th graders use the internet to get health

information about topics such as sexually transmitted diseases; diet and exercise, and sexual behaviors. Girls found looked up health information about birth control, diet/nutrition and exercise; and different forms of abuse (physical, sexual, and dating violence).

Harris Interactive (2003a) found that, among 13-24 year olds, the most common things to do online were:

- Search engine: used as a first stop when searching for information
- E-mail: used when showing off something (photographs) or exchanging information (party locations)
- IM: used for conversations with close friends, and common for several IM conversations to take place at once
- Games: used for amusement and escapism
- Browsing: used to search for new trends and the latest products
- Bookmarks: used as "signposts" to find out about news and investigate purchases as an easier way to cut through the clutter of the Web

Interestingly, it was found that youth do not aimlessly "surf" the Web, but that they focus on key search terms and use search engines to navigate the content, with some mild wandering in the search process.

In regards to why young people make the media choices they do, Harris Interactive (2003b) claims that it begins with an activity or need for the media, and then the most effective media that can deliver that need is chosen—increasingly it is online media. The Internet was chosen "to meet someone new" or to "meet someone really different from me;" to "be sure I have accurate info about something" and to do "research for school;" or to "find out where I can buy something" or "comparison shop" (p. 2) The Internet is used when the preferred activity has an information seeking component.

Multitasking

While kids are using the Internet, they most often are doing other activities at the same time, also known as multitasking. Among 8-18 year olds, about 26% of the time young people are multitasking—using two or more media at the same time (Rideout et al., 2005). In 798 media diaries and survey responses of 3-12 graders who were asked to keep track of multitasking use, young people were more likely to use multiple media

together when IMing (74%), surfing the Internet (74%), and playing computer games (67%) (Foehr, 2006). Only 17% multitask while watching television. Girls were more likely to be multitaskers than boys (Foehr, 2006).

In a study of 13-24 year-olds, multitasking was found to be very common. When on the Internet, 68% of young people in this age group are listening to CDs or MP3s, 67% are eating, 50% are watching TV, 45% are talking on the phone, 45% are listening to the radio, 44% are doing homework, 21% reading, and 5% doing nothing else (Harris Interactive, 2003b). Thus, multitasking does not only mean using other media, but also doing other things such as eating or doing homework. Multitasking is seen as a potential problem because it may leave little time for reflection and thought, creativity, and divided attention, and may have a more profound effect on children who have attention-deficit and learning disorders (Foehr, 2006).

Now that a grounding has been provided on issues of Internet in the home, time spent online, what youth do when on the Internet, and the issue of multitasking, the stage is set to examine gender differences regarding how girls experience the Internet differently than boys.

The Gender Divide

Scholars have noted a “gendered divide” in how boys and girls use the internet, finding that boys are heavier and more technically skilled computer and Internet users than girls. This gendered divide has been an issue historically for women and girls the fields of math, science, and technology (American Association of University Women, 2000).

Girls and Boys Online

Most of the research shows that boys are more likely to use the computer and Internet to play games, whereas girls are more likely to use it for social purposes and CMC. During an average week, teen boys spend slightly more time online than girls—7.6 hours versus 6.9 hours (Kaiser Family Foundation, 1999). Fifty-eight percent of boys used the Internet compared to 44% of girls, even though they had equal access. Computer games were more popular with boys, however, 56% of girls spend more time sending and receiving email than 43% of boys. (Subrahmanyam et al., 2001). Boys have been shown to be heavier Internet and game users than girls. Seventy-five percent

of 12-17 year-old boys play online games compared to 57% of girls (Lenhart, et al., 2001). Girls and boys also look for different information online. A survey of teens 14-19 showed that boys use the Internet for fun, games, to find out about music, whereas girls used the Internet to find information about fashion and to search on colleges and universities (La Ferle, Edwards, & Lee, 2000). Moreover, girls preferred the communication uses of web, using it for email and IM more than boys, and boys preferred downloading games and music, trading and selling things, and creating Web pages more than girls (Lenhart, et al., 2001).

Roban's (2002) study of 1,246 girls 13-18 including focus groups, journal research, written and online surveys found that online, girls spend most of the time socializing, searching for information (song lyrics and school research), and using it when they are bored. When girls are socializing online, they discuss boys and romance, school and friends, social plans, personal problems (family fights or depression), or "socially relevant topics" (drugs or current events). Girls also used the Internet to search for information on topics they know little or nothing about, or those topics they are embarrassed to talk about in person.

In an study on computer use, experience, attitudes, and preferences of 11-12 year olds (144 girls, 220 boys) and 15-16 year olds (273 girls, 302 boys), Colley and Comber (2003) found that in both age groups, boys liked computers more, they were more confident in their use, and used computers more frequently out of school to play games. Older girls had the least positive attitudes toward computers, which the authors hypothesize is due to gender stereotyping and socializing. Their findings conclude with slight evidence in change of the gender divide, but regardless to their increased exposure to computers, girls use them less, like them less, and evaluate their own abilities less favorably than boys, who are self-confident with computers and use them more. Boys were found to prefer computer games most, whereas girls preferred using e-mail. Girls also viewed computers as a tool to complete a task, whereas boys see computers as a means for play and mastery.

A most interesting finding in light of evidence on the gender divide is that 58% of "girls tend to see themselves as the most computer-savvy members of their households" reporting mothers as the next "savviest" computer user in the household (14%), brother

(12%), father (11%) and sister (5%). (Roban, 2002, p. 10).

Girls and Games

As mentioned in the research on the gender divide, boys prefer playing computer and online games much more than girls. Most researchers agree that boys are more likely than girls to choose to play computer and online games, even though they both may have the same access and skill level with computers (Agosto, 2004). Boys spend an average of 64 minutes per day playing games, whereas girls it's only 30 minutes per day (computer and console) (Woodland & Gridina, 2000). Girls are more likely to consider the computer and computer games as "boys toys" (Agosto, 2004).

Agosto's literature review on computer games and the gender divide (2004) organized the main findings of the research on gender and games into five themes. Agosto's first theme, "the computer gaming gender rift," confirms that there is indeed a gender divide with girls and games. As girls mature, their interests in computer games decline. The exact cause of this decline is uncertain. It may be that games are designed and marketed to boys, or girls feel less comfortable or have less experience with computers, or that technology plays a lesser role overall in girls' lives. A second theme is of "negative representations of females in computer games." Agosto cites the Children Now (2001) study of gender portrayal in video games, which found only 16% of characters in the top console video games were female, and when female characters were present, they were often portrayed as a bystander or victims. Characters were also highly stereotypical, with large breasts, unusually thin, and scantily dressed. These kinds of representations can influence both boys and girls to internalize stereotypes about women. Agosto's third theme "gaming and academic achievement" finds young people who play games are more likely to go into computer careers. Playing computer games can lead to an increase in computer literacy and interest in computer careers. Fourth, "the negative effects of violent video games" found that heavy video game playing may be associated with lower self esteem and negative behavior, and that violent games can be damaging to girls' self esteem. The fifth theme is "girls' preferences in computer game content," in which boys prefer themes of good and evil, action, and competition, whereas girls prefer storylines, character development, non-competition, real life locations (home and neighborhoods), strong female characters that make decisions and take actions,

ability to play the main character, focus on human relationships, and educational value. The final theme, "girls' preferences in computer game design" discusses girls preference of collaboration while gaming (such as playing with another girl or small group), their inclination towards a high quality of visual design, and their liking of games where they can communicate with other people.

One reason for the decreased in interest in girls and games is the lack of games that are designed for, appeal to, and that are marketed toward girls. Boys have been found to prefer themes of violence, control, competition, action, and sport, whereas girls preferred puzzles, spatial relation, and educational games (Woodland & Gridina, 2000). Children Now (2001) looked at 70 of the top-selling computer and console video games, finding that most appeal to and are marketed towards boys. Based on their typology of "girl friendly games," only 8.5% of the 70 games were deemed girl-friendly, and half of these games were for the PC. Most of the games—61%--included fewer than half of features that girls enjoy. Included in the girl friendly games' 13-point typology was: creative component; puzzle elements; cooperative play; available; solicited help; female player-controlled characters; realistic setting; positive, unsolicited feedback; slow or variable pace; predictable rules; clear explanation of rules; absence of violence; absence of killing; and absence of evil characters.

In the early 1990's, girls were seen as a market for video games, and feminist scholars worked with video game designers to try to produce games that appealed to girls to urge girls to become more involved with computers and gaming (Wartella, Lee, & Caplovitz, 2002). However, several years later in 1998, the top selling computer game was *Barbie Fashion Designer*, which was "the first piece of entertainment software to garner a mass market with girls" (Subrahmanyam & Greenfield, 1998, p. 46). Although the Barbie game appealed to girls because it included nonviolent action, allowed for role-playing in a real-world setting, and appealed to girls' play preferences, it can be seen as reinforcing female stereotypes (Subrahmanyam & Greenfield).

The gender divide in gaming may be closing, as Gross (2004) found no differences between boys and girls' time spent online or gaming differences in a sample of 261 7^{th} and 10^{th} grade adolescents. Although Gross found a small group of heavy gamers (who were mostly boys), it was not significant within the sample. Yet, there are

still barriers of support for women and technology. Denner, Werner, Bean, and Cample (2005) discuss three kinds of barriers: personal, social, and structural. Personal barriers include a lack of skills; lack of positive experiences with computers; and a misconception that working with computers is only a solitary activity. Social barriers include a lack of social support or encouragement from family, friends, peers, or teachers; stereotypes and role expectations about girls and technology; a lack of women role models; and lack of access due to boys dominating resources. Structural barriers include girls' dislike of technically-focused programming in classes, program manuals that are written by men for men; instructional methods that exclude girls; and girls' feelings that the field lacks social relevance (Denner et al.). Making the right kinds of games that appeal to girls is just part of the solution—solutions must come from a variety of angles: "there is no reason to expect an interest in interactive games to directly translate to an interest in technology and science, for their boys *or* girls. Rather, an interest in these areas are cultivated through multiple avenues (e.g., parental encouragement), not only through interactive games" (Wartella et al., 2002, p. 9).

Online Spaces for Girls

Girls can participate in the online landscape is by participating on sites that are empowering or safe and also by voicing their own identity and creating their own spaces.

Websites for Girls

In a textual analysis of the most popular teen magazine websites for girls, messages to girls were found to be market-driven and appearance-focused (Lambre & Walsh-Childers, 2003). The magazines were framed as giving "friendly advice" rather than as marketing products. Three major messages include: 1) beauty is a requirement; 2) beauty can be achieved by purchasing products; and 3) the magazine can help you find the right products. Authors found that online teen magazines mimic the norms of print teen magazines.

Online spaces, especially if they allow unmonitored live chat may not always send empowering messages or be safe (see Tynes, Reynolds, & Greenfield, 2004), but there are places girls can go that are girl-centered and that deal with girls' issues. There are sites where girls are participating and their voices are heard by redefining the cultural construction of girlhood to include confident, independent girls who celebrate diversity

(Takayoshi, Huot, & Huot, 1999). Walsh (2005) examines Blue Jean Online as a space that challenges traditional magazines that reinforce stereotypical meanings about girlhood and construct femininity as attractiveness and consumerism. Using qualitative interpretive analysis of magazine content and girls' postings in three separate intervals over a one-year period, Blue Jean Online was identified as challenging the norms of gender and sexuality by emphasizing political activism and urging collective social change. (Unfortunately, just two years later, Blue Jean Online is no longer in existence.)

Merskin (2005) studied content from user contributions on About-Face (www.about-face.org), a web site for girls and parents for media education and activism. Merskin claims that girls have the option of either "good girl" or "bad girl," but that About-Face disrupts this dichotomy with a third identity of "Jammer Girl," who rejects the either/or of good/bad girl. The Jammer Girl creates a third space for girls by emphasizing informed inquiry and the tenets of media literacy.

Girl-ProducedMedia

One way that girls can participate in the online landscape is by creating their own media. Girls may do this by participating in chat rooms and MUDs, creating their own Web page, MySpace page, or blogs. Stern (2002) claims there are four reasons that the Internet is an appealing place for girls to express themselves: 1) the public nature of the Internet allows girls to address a larger number of people than they have access to in their offline lives; 2) girls have the ability to interact online with more people like themselves; 3) girls can control their self-image they project on their Web pages and decide how much personal information they want to reveal; and 4) girls can more freely disclose information, explore taboo topics, or experiment with self-presentation anonymously to others who are anonymous.

Scoudari (2005) explored how teen girl fans of television shows (*The X-Files, E.R.*, soap operas) negotiated subjectivity and identity in Usenet newsgroup archives. Girls' postings included themes of character identification or dis-identification; attitudes toward the producers, creators, and actors; a defense of teens as a group, and comments about related interests and everyday life. Girls could adopt a variety of positions in regards to the same media text, and there were identity negotiations of gender and age.

However, Angela McRobbie's popular teen codes of romance, fashion and beauty, emotions, pop stars and music, and romantic individualism were upheld in the data, showing that in negotiating identity, girls may be demonstrating gender stereotypes.

Another textual analysis by Gregson (2005) examined girl-created Web Sites and posts on bulletin board posts of girls who participate in online *shoujou* anime fan culture, (*shoujou* is animation created by women for a female audience, with strong female lead characters). In this data, it was found that girls were more interested in discussing and devoting Web Pages to the *bishonen* (beautiful boy) anime characters rather than discussing the girl characters. This is similar to what Angela McRobbie ahs found with girls identifying with male heroes in romantic stories. Girls demonstrated knowledge of technical ability with producing online content and shared knowledge of anime and Japanese culture. Although girls were active in online anime fan culture (a stereotypically young male realm), they were more concerned with romance and *bishonen* characters.

Mazzarella (2005b) explored nine girl fan Web sites celebrating teen idol Chad Michael Murray. Girl producers were found to actively create media content, but the underlying messages in their sites reproduced tropes of teen idol celebrity magazines. A connection of girls' knowledge of this celebrity was made to Fiske's notion of "capital accumulation" and helped girls discriminate a community of "true fans," along with constructing Murray as the ideal romantic hero. Mazzarella speculates that the adoration of male celebrities represents a way for teen girls to cope with new feelings about the transition to sexuality.

Two studies by Stern (1999, 2002) examined the adolescent girls' self-expression on their Web pages. Stern (1999) used qualitative, descriptive analysis to identify themes in style, content, and self-disclosure of ten Web pages authored by girls aged 12-17. Three tones of web pages were identified: spirited, somber, and self-conscious. Spirited Web pages were cheerful with girls constructing their personal as "self-confident and generally pleased with life" (p. 26). Sombre pages "presented an on-line self that appeared disillusioned with life, angry with friend and family, and gravely introspective" (p. 26). Lastly, pages that were self-conscious in tone were a mix of spirited and sombre, where girls "combined happy images and thoughts on the same page as depressing

pictures and writings, qualifying their words and discrediting themselves repeatedly" (p. 26). These findings indicate teen girls are using Web pages as forms of self-expression in different ways and in varying degrees of self-disclosure and introspection.

Stern's (2002) continuation of the previous study used ethnographic content analysis to examine the self-disclosure of ten Web pages of girls aged 14-17, from various parts of the United States. The self-disclosure on these pages were examined through the lenses self-clarification and self-expression. Self-clarification is when girls share thoughts, beliefs, attitudes, and values as a way to think through those thoughts and explore their views. Self-expression is any expression that helps release emotions in a cathartic way, enabling girls to explore feelings. The analysis resulted in three categories of self-disclosure: *self-descriptions*, which included both perfect and imperfect representations of girls' selves; *self-perceptions*, which included girls' views on topics such as politics, school, careers, health, religion, and sex (the latter two were most prominent); and *self-representations*, in which girls included photographs (including photos of themselves), drawings, and artifacts from popular culture and the mass media. Stern concludes that girls home pages serve a performance of public and private self in a diary-like format.

Another study looked at teen girls' blogs to examine the ways girls use blogging as a tool for self-expression for an interpersonal and mass audience (Bortree, 2005). Although blogs are a form of CMC, they are considered "primarily a monologue" rather than two-way communication (Bortree, p. 37). Bortree conducted an ethnographic study of 40 blogs, an in-depth analysis of six blogs, and 13 in-depth interviews with girls aged 16-18. Blogs were used in interpersonal ways by providing a means to share with other friends who had blogs, and also by allowing girls to communicate what they might not in person, which can build intimacy among friends. Girls used blogs as mass communication by negotiating their presentation of self to a wider audience, and in this case, were more careful about what they decided to disclose, or framed their "mass audience" disclosures in a way that addressed the wider audience. Overall, Bortree found that girls overwhelmingly use the self-presentation strategy of ingratiation; "to win the affection and approval of others," presenting themselves as accepted and socially competent (p. 35). This way, girls could be a part of the mass audience and also

maintain their position in their intimate group of friends.

Based on these examples, girls may produce online content for several reasons: to negotiate identity and self-expression, participate in fan culture, and to explore issues emerging from their developing sexual identities, and to communicate to dually communicate to an intimate and mass audience.

Online Communication and CMC

As mentioned earlier, girls are more likely to use the Internet as a tool of communication and social networking. Teen girls aged 13-18 were more likely than boys to use the communication tools of email, cell phone, landline phone, IM, social networking Websites, and TM (Martin & Crane, 2007). As children grow into teens, the use of the Internet for this purpose appears to increase. A large jump between 11 year-old tweens and 14 year-olds teens report that the older age group reported higher usage of email (94% older versus 66% younger), IM (77% versus 34%), and social networking Web Sites (68% versus 19%). Thus, tweens are less likely to have used social networking sites than teens (Martin & Crane, p. 1). Gross (2004) found little difference in gender differences online in 7th and 10th graders, and found CMC occurred in private settings like email and IM (rather than public chat rooms, blogs, or bulletin boards), communication was with friends who were part of their offline lives (rather than strangers), and the nature of the communication was about topics such as friends and gossip. Seventy percent of youth IM at least twice a week, and 45% use IM every time they go online, mainly to stay in touch with friends and relatives (Lenhart et al., 2001).

Constant Contact

Several studies have explored how girls use IM and chat rooms. Themes of these studies include negotiating and exploring sexuality and relationships in an unsupervised and parent-free realm, keeping in constant contact with friends, and communicating in a more "authentic" way than in face-to-face contact.

Grisso and Weiss (2005) examined a one-month period of postings of girls' discourse about sex on two bulletin boards of gURL.com. They found that gURL.com had a safe, supportive environment for girls to discover and assert agency and talk openly about sexual issues and concerns. However, it was also found that in their discourse, girls appropriated sexual "scripts" (from the media) and used language that showed

concern with themselves as subject to men's pleasure rather than discussing their own pleasure. Girls sometimes policed against lesbian or bi-sexual comments, making fun of these posts and affirming heterosexuality. Although girls had a space where they were free to talk about sex, their comments may reinforce gender and sexual stereotypes.

Theil (2005) offers an understanding of how adolescent girls, through IM, negotiate and articulate their identities. Using in–depth interviews with 12 diverse girls and narrative analysis of their IM conversations, IM was found to provide girls with a sense of freedom without the presence of parents. Due to this unsupervised space, girls were more likely to use profanity, aggression, and meanness. Girls felt more comfortable conversing with boys using IM rather than face-to-face or phone because they had time to think about what they wanted to say, and they did not have to worry about appearance or losing face, is in real-life conversation. In addition to these functions, IM also operated as a diary function, where girls would reflect on their innermost feelings and thoughts with friends.

Clark (2005) examined how girls use online chat and cell phones through in-depth interviews with 44 teen and 12 tween boys and girls, as well as conversations with their circles of family and friends. She claims these technologies provide a means to be in *constant contact* with peers and exercise control over relationships with parents. Being in constant contact was more important to girls, who believed they could express themselves better through writing and chat, and control their emotions and self-presentation to others. However, constant contact also 1) increased possibilities for miscommunication; 2) was used to discuss gossip and rumors; 3) was used to maintain social hierarchy—how many people kids have on their "buddy lists;" and 4) was used to discuss popular culture as a segue into conversations about personal experience, beliefs, and morality. Thus, constant contact can both reduce uncertainties in self-presentation, but also pose new social risks of miscommunication, gossip, and social hierarchy.

A qualitative study of a small social network of six teen girlfriends between the ages of 14-16 in the United Kingdom examined the social and linguistic interaction in chat behavior (Merchant, 2001). Using interviews, observation, and analysis of chat transcripts of Yahoo's "The Bored Room: 1(Nothin' to do, nothin' to say)," girls were found to engage in a new range of literacy skills, from chatting, adding files, changing

easily among different formats, and using a new language. Girls did not express any interest in cyber-romance, but more so used chat to meet with offline friends in an online setting, which they scheduled by phone, TM, or in person. Any offline friends were viewed as somewhat fictitious, or "not really real." Merchant claims girls are using a new kind of communication that is more in sync with spoken conversation (although Merchant does not label this new language, others have deemed it *netspeak*).

The Roban's (2002) study of girls 18-18 (n = 1,246) found that most girls spend their time online socializing. Perhaps this is because 52% of "frequent users feel more comfortable expressing emotions online than in person or other means of communication" (p. 18). It is common for girls to use Internet communication to fight with friends or discuss emotional topics, although girls see online gossip or meanness as "less real" than these types of communication face-to-face. Some girls reported that when they were angry, they have sent "evil e-mails" where they were meaner in the e-mail than they would be in person (p. 18). Gossip about them at school is worse than gossip written online, girls claim, and they also prefer to receive mean comments online so they can react to them privately and think over their responses before reacting. Perhaps online communication gives girls more "breathing time" than in face-to-face communication where a conflict might escalate quickly. Girls in focus groups reported that they worry about online communication, such as how to act online, and that online communication may be ineffective compared to face-to-face communication.

Willet and Sefton-Green (2003) investigated how girls learn online through play by observing a group of girls aged 10-13 in a community arts center. Researchers observed girls chatting online at Habbohotel (www.habbohotel.com). Within Habbohotel, a virtual environment where one can create an avatar and move to different rooms to play games or chat with others, boys prefer to play games and girls prefer to chat (this is in line with the research mentioned earlier). Researchers found that girls would coach each other on this MUD by working on the same computer together, which is in line with Agosto's (2004) findings about girls and games—girls prefer to work collaboratively. Researchers also found that chat allowed girls to learn about sexuality and play through experiment by using new forms of language and netspeak (similar to findings of Merchant, 2001). Girls also played with identity by using risk-taking and

experimentation techniques regarding sexuality. For instance, sexualized discourse was used, and "girls in chatrooms carve out a particular way of 'doing girl', and more specifically doing 'pre-adolescent girl', not only through flirtatious behavior but also through a way of talking, expressing their opinions, and to some extent establishing a particular power relationship with boys" (Willet & Sefton-Green, p. 12). Other ways girls played with identity were by assuming a false age (usually 15-19), and choosing different gender and sexual preferences of their avatars. The authors claim that girls are experiencing learning in a new form. Online learning provides a type of learning that is multi-modal; non-homogeneous; allows for flexibility, experimentation, and risk-taking in discourse content and style; uses a variety of problem solving approaches; and allows learners to move ahead at their own speed.

Another study explored 84 fifth and sixth grade children's interaction in an MUD created by Georgetown University, where "players create personas—avatars—in which they construct names, genders, and self-descriptions" (Calvert, Mahler, Zehnder, Jenkins, & Lee, 2003, p. 628). Avatars could talk to each other, show facial expressions, and transport to different scenes. Participants participated in two sessions where they were randomly paired with a same sex and opposite-sex child from another school. Using a camera that recorded computer and screen activity, files were coded for self-presentation, movement, dialogue, emotional representation, scene changes, role play, and game play. Researchers found that children created avatars that stayed fairly true to their identities (gender, interests, names, popular culture references). Boy-boy interactions were found to be playful and exploratory, including action, rapid scene changes, playful exchanges, and the use of emoticons. Girl-girl pairs interacted more through written dialogue. In mixed pairs, however, boys wrote more and had less playful exchanges, whereas girls wrote less and increased their action by moving their avatars more. The authors conclude that boys and girls have unique online communication styles, but during chat with the opposite sex, boys and girls accommodate to the other sex's style.

To sum up, girls' use of CMC allows them to communicate with both friends and strangers in a space free of parental supervision, being in constant contact with online and offline friends. Girls are using netspeak and new forms of language and social interaction. There is a tension in the research findings between girls *playing with*

aspects of their identity and girls feeling as if they can *express authentic identity*, especially through writing. The anonymity and lack of face-to-face contact engendered by CMC provides girls with more freedom to gossip, fight, and say mean things, but it also allows them to think about what they want to say more carefully and express themselves more openly. Girls are also talking about sex and experimenting with sexual discourse—most of this discourse upholds heterosexism. The unsupervised nature of chat combined with the interest in sexual topics may be empowering for girls to explore issues they might never get to elsewhere, but it is also unsafe for girls, leaving them vulnerable to sexual predators, cyber-bullying, and cyber-harassment. The next section will explore cyber-relationships and who girls are talking to online.

Online Relationships and Cyber-Romance

Most adolescents use CMC to keep in contact with their existing network of friends (Gross, 2004), but some adolescents go online to meet new people (Wolak, et al., 2003). However, teens report not being worried about strangers online (Lenhart et al., 2001; Roban, 2002). To make matters more complicated, 31% of teens have pretended to be older in order to get into a website, and teens may also pretend to be older when chatting (Gross, 2004; Rideout et al., 2005).

In seventh and tenth graders, online social interaction was occurring in private contexts such as email and IM; with friends who are part of their lives offline; discussing topics such as friends and gossip (Gross, 2004). Teens infrequently communicated with strangers, rather, 84% of IM (which teens reported spending most time doing) was with offline friends from a close social network. Teens also used IM to talk about friends, relieve boredom, or to hang out with offline friends online. Gross concludes that Internet use did not involve much interaction with strangers, but serves a social function similar to the telephone. Nearly half of teens—49 percent—said they never pretended to be someone else, and 41% said they pretended a couple times, but it was usually to be older. An insignificant amount pretended to be another gender, celebrity, or sibling. Teens who would play or pretend with different aspects with identity online reported doing it more to play a joke on friends than to explore identity. Of those that had pretended, 57% did so while another friend was there.

A national Youth Internet Safety Survey of 1501 youth (190 boys, 708 girls) aged

10-17 in the United States found that 25% of Internet users had formed casual online friendships in the year prior to the survey, and 14% had formed close online relationships or online romances (Wolak et al., 2002). An extension of this study explored the characteristics of youth who formed relationships online (Wolak, et al., 2003). Sixteen percent of girls versus 12% of boys reported close online relationships. Girls who had a higher level of conflict with parents or were more troubled were more likely to have online relationships. Older girls, those with home Internet access, and those who reported higher Internet use were more likely to have a close online relationship. The authors conclude that, although online relationships can have helpful aspects for youth, such as a sense of friendship and someone to talk to, these youth may be vulnerable to online exploitation, especially if they do not tell parents about the relationship, or if they decide to meet the person face-to-face (Wolak et al., 2003).

Through a developmental lens, a study of 794 tweens and teens aged 10-16 in the Netherlands looked at how online communication is related to closeness of existing, offline relationships (Valkenburg & Peter, 2007). Online communication was positively correlated to closeness of friendships for those youth who talked with existing, offline friends—not strangers. Online communication and closeness increased with age, with 15-year old girls being the most likely to use online-self disclosure. Two opposing hypotheses were tested: the rich-get richer hypothesis and the social compensation hypothesis. Social compensation hypothesis predicts lonely or socially anxious who have difficulty making friends face-to-face are predicted to turn to online communication. The rich-get-richer hypothesis means that extraverted and non-lonely adolescents are more likely to turn to online communication because they already have strong social skills. The rich-get-richer hypothesis was supported, as socially anxious communicated less online than non-socially anxious adolescents. The socially anxious adolescents saw the Internet as a means for intimate self-disclosure, which led to more online communication, which was consistent with the social compensation hypothesis. In contrast to other findings, more boys than girls (93% vs. 85%) used the Internet “often” or “almost always” for online communication with pre-existing friends. Thirty percent saw online communication as more effective than offline communication when disclosing intimate information.

A study of Singapore youth aged 12-17 (*n*=1124) investigated risky Internet behavior of meeting someone face-to-face that teens initially met online (Liau, Khoo, & Ang, 2005). Of this group, 827 (74%) had chatted online, and those who have chatted were older than those who had not chatted. This study found that 16% of Internet users have had a face-to-face meeting with someone they met online, and of this group, 22% went alone for the meeting. Older adolescents were more likely to meet someone face-to-face, but there were no gender differences. To compare, a survey in the U.S. showed that only 7% of youth had a face-to-face meeting with someone they met online, and 23% of this group went alone for the meeting (Wolak et al., 2002).

Roban (2002) examined girls' behaviors and perceptions of CMC, meeting strangers, and cyber-romance. Seventy-one percent of girls said it is wrong to meet people they met online in person, and only two of the 75 girls in focus groups report meeting an online friend in person. Forty-two percent of girls expect that people in chat rooms may lie, however, the researchers note "they [girls] appear to have difficulty accepting that someone they bond with emotionally could be lying to them" (p. 12-13). Moreover, girls report making good friends online and feeling that if they were to tell their parents, their parents would not understand. When asked if they would consider a cyber-romance for someone they met online, 36% said an in-person romance is always better than an Internet one; 29% say no, that is creepy; 13% said maybe, if they had the opportunity for a real romance; 12% said maybe, but they'd have to get to know the other person well; 9% said yes, if the person wasn't a pervert; and 1% said yes, they would want to but would afraid friends would make fun. Girls report more self-confidence when interacting with boys online versus face-to-face, and one reason they note is less focus on their appearance. Some girls lie online about what they look like. Girls report their male friends are more open online and express themselves in "sweet" ways. However, when asked for advice about cyber-romance, frequent tips girls give are to be careful not to give out any identifying information, don't meet strangers face to face, don't get too carried away, and know who you're talking to (p. 12).

Online Harassment

The Pew Internet and American Life Project found that 60% of teens between 12-17 have received IM or email from a stranger, and 50% reported emailing or IMing someone they had not met before (Lenhart et al., 2001). In addition to dealing with managing online relationships and cyber-romance, girls are facing issues of cyber-sex requests, sexual harassment, and porn harassment (Eisenstock, 2007). Some online communication with online or offline contacts may turn into cyber-harassment. Cyber-harassment includes unwanted sexual solicitations, unwanted pornographic content sent by others directly to the child by email, chat, or IM, mean and threatening comments, bullying, and stalking. Girls are navigating issues of how to act online, how to communicate, negotiating identity and sexuality, and they also have to negotiate dealing with harassment.

One telephone survey of Internet users 10-17 (*n*=1500) compared sexual solicitations, harassment, and unwanted exposure to pornography between 2000 and 2005. Fortunately, this type of harassment overall has decreased since 2000, however, researchers found an increase in unwanted exposure to pornography among 10-12 and 16-17 year olds, boys, and White (non-hispanic) youth. The overall decrease may be due to an increase in law enforcement, but new portable digital technologies and storage devices may make it more difficult to track online harassers and predators (Mitchell, Wolak, & Finkelhor, 2007).

Thirty percent of girls say they've been sexually harassed in a chatroom. When asked what girls did, 30% just got out of the chat room and told no one, 28% wrote a nasty note back to the harasser, and 21% did nothing. Only 7% of girls told parents, and the researchers hypothesize this low percentage is because girls did not want their parents to take away Internet privileges (Roban, 2002). When asked how they know what kinds of behavior online are safe or unsafe, 84% of girls said they use common sense, 51% reported they learn from parents, 46% said they learn from television and the media, 29% teachers, and 4% said "nothing is that bad online because it is not really real" (Roban, p. 10).

Managing Online Privacy and Safety

Although teens may experience online harassment, research shows they seem to be careful about online safety practices and social networking. A recent study by the

Pew Internet and American Life examined how teens understand online privacy and how they managed personal information on their online social networks, such as MySpace or Facebook (Lenhart & Madden, 2007). The study draws on telephone surveys of 935 teens aged 12-17 and their parent or guardian, six live focus groups, and one online focus group of middle and high school students. Findings indicate that 32% of teenagers online (and 43% of teens on social networks) have been contacted by strangers and 17% of teens online (31% of teens on social networks) have "friends" on their network profile who they have never met offline. Fifty-five percent of teens have online profiles. Among teens with online profiles, key findings include: 66% report their profile is not visible to everyone on the Internet (it has limited access); 82% included their first name in their profiles; 79% include pictures of themselves; 61% listed the name of their city or town; 49% showed the name of their school; 40% included their IM screen name; 29% include a link to their email address; 29% include their last names; and 2% list their cell phone numbers. Forty-six percent give a little or a lot of false information on their profiles, however, its purpose was not just to protect themselves, but to be "playful or silly" (p. ii). Most teens managed their profiles to keep their private information inaccessible to strangers, parents, or other adults. However, 53% of teens with online profiles thought that, based in the information they provide public in their profile, a person could probably identify who they are if they wanted to. The authors conclude that while teens may be posting first names and photos of themselves on their social networking profiles, they less often post information on public profiles such as their full name, home phone number, or cell phone number.

Lenhart and Madden (2007) also found differences in boys' and girls' attitudes and behaviors about privacy. Girls are more likely than boys to have posted photos of themselves and their friends on their online profile, whereas boys are more likely than girls to say their home city or town, their last name, and their cell phone number. Younger teens and boys are more likely to have posted false information on their profiles—64% of boys post false information compared with 50% of girls; and 69% of younger teens post false information versus 48% of older teens. A majority of teens report that all personal information is different, so it depends on the context whether they will share information or not.

Similarly, girls reported withholding information that is “too personal” online, however, they were willing to give out their first name, age, and state they live in, but not last name, city, or phone number. They reported giving their email address to boys they met online, but not their home phone or cell phone number (Roban, 2002).

Studies on parental mediation and rules for the Internet show mixed results. One study found most young people say their parents do not enforce rules regarding computers regarding content or time spent online—only 23% have content restrictions on the computer, and 25% of parents use Internet filters (Rideout et al., 2005). Another study found that 75% of girls’ parents have rules about the Internet, including time limits, no online chatting, no shopping online, and no cyber-romances or in-person meetings. However, 43% of these girls report breaking the rules at least once (Roban, 2002). Moreover, some girls report lying to parents because they feel they worry too much about girls’ online safety. Parental advice tended to be restriction—prohibitive statements—rather than “proactive advice about real-life situations that occur for them online” (Roban, 2002, p. 11).

On the other hand, a recent study of the Pew Internet and American Life Project found that parents are using several means to protect their children online (Lenhart & Madden, 2007). Fifty-three percent of parents report having filtering software on the child’s computer; 45% of parents use monitoring software that records what users do online; and 65% of parents say they check up on their teens after they go online. Furthermore, despite Livingstone and Bovill’s (2001) research trend of media-rich bedrooms, 74% of teens report the computer they use is in a public place in the home. Finally, households have more rules about Internet use than any other media. Sixty-nine percent of parents have restrictions on how long a teen can be online, compared to 57% who have TV time restrictions or 58% who have video game time limitations. Eighty-five percent of parents of teens report they have rules about what Web sites their child can or cannot visit (versus 75% who have rules about what TV shows their child can watch), and 85% of parents say they have rules about what kinds of personal information their child is allowed to share online.

Thus, the research on CMC and online communication illustrates that girls enjoy going online to communicate mainly with their group of offline friends, but some girls

may be open to meet new people online. In these encounters, there is a tension between some girls desiring authentic dialogue with others and trusting strangers online and a disinterest or distrust of others online. There is also a possibility that troubled girls or socially anxious girls may turn to online communication, and may practice intimate self-disclosure. In addition, girls are navigating cyber-harassment and privacy, and they are selective in giving out information about themselves depending on the context.

Avenues of Research for My Pop Studio

Based on this literature, some trends in the research may be troubling. Girls chatting online with strangers, talking about sexual issues, and experiencing harassment are worrisome issues. Researchers may like to believe that all online activity for girls is empowering and educational, but much of girls online experience, according to Stern (2006), plays into girls' negotiation of identity as "girl," and if girls are drawing on socialization from parents and family, peer groups, popular culture and the media, and their own interests and preferences. Stern (2006) responds to this issue of how girls create identity online:

> It is easier to deride girls for being superficial and imprudent than to recognize that, online, girls are practicing how to be a part of our culture. Rather than chastising girls' online expression, we might instead consider how normal it is for them to reproduce the images they see reinforced throughout our culture as desirable. Why should we expect girls to safeguard their personal and private selves when they are continuously reminded how wonderful it is to be on public display? (p. 1).

Stern claims that we should see girls online as trying out a variety identity constructs in adolescence, and identity play is a normal, healthy part of adolescent development. Stern's comments should be kept in mind in the evaluation phase, for already, the incidents that led to the movement of MPS's live, open chat rooms to delayed, monitored chat rooms revealed girls were using MPS in ways that the creators did not imagine. It is possible that girls may be using MPS in ways that at first, seem disheartening and disempowering. However, beneath the surface there may be learning going on through play and transgressive behavior.

Keeping Stern's comments in mind, and returning to the aim of this paper to

connect to the evaluation needs of MPS, there are several key themes that emerge in the research on girls and the Internet that point to research questions that the evaluation stage may want to address. Renee Hobbs (2007, personal communication), Principal Investigator of the MPS project, identified three main goals for evaluation:

> (1) better understand what users like and dislike about the site and how they perceive the play and learning goals;
>
> (2) test an evaluation model that includes measures of play/engagement, metacognition, media literacy skills & knowledge, competence/mastery, transfer of learning, and awareness of media influence on health; and
>
> (3) understand how MPS is implemented in various school and nonformal educational settings and determine the overall effectiveness of curriculum materials.

The avenues for future research will tie in with all goals, but particularly number one and two, where researchers will be focusing exclusively on girls' experience with MPS. Some of these research questions will address the chat room "incident," in asking how MPS can include new ways girls can communicate and share a sense of community. The key themes, theme summaries, and research questions are listed below in Table 1.

Table 1
Key Themes and RQs for My Pop Studio

	Key Theme	Theme Summary	Research Questions
1	*Girls may be closing the gender divide for Internet use and gaming, but they have certain needs and preferences in online form and content.*	The literature on girls and games illustrated that girls are less interested in playing games online, on the computer, or on console game systems, and this interest decreases as the girl ages. The online game options available for girls have increased, but the trend does not show that girls have significantly increased their game-playing behavior.	What aspects of MPS games and activities do girls like, and why? What games and activities to girls dislike, and why? How is the site appealing, or not appealing, to girls' play preferences? How do girls' play preferences connect to learning outcomes, specifically with the metacognitive skills required for media literacy? Do girls experience the "flow" of playing MPS and critical thinking involved in media literacy?
2	*Girls online are exploring many issues that they may not discuss or explore offline, including religion, health, popular culture, relationships, and sexuality.*	Although girls may use the Internet to search for health information, find information about music, movies, television, and celebrity, and participate in fandom culture, much of the themes surrounding this participation has to do with girls' playing with their emerging sexual identities.	What are the health learning outcomes girls learn from playing MPS? Do these health outcomes match the learning goals of the site? Should MPS include rotating new content to keep users coming back and to keep up with popular culture? How do girls' creations on MPS reflect issues of relationships and sexuality and transgression?
3	*Girls use the Internet more for CMC than for any other purpose, and are often in constant contact—primarily with offline friends (those they know in person), and secondarily with online*	The research indicates girls are using the Internet mainly for social networking and communication with friends. Girls also prefer games and Web sites that involve communication with others. Girls use CMC primarily to keep in touch with their offline friends, yet they also use CMC to meet new people.	If girls desire communication with others in games, and use the internet primarily to communicate, how does MPS fulfill this need? How can MPS create a safe space where girls can talk with their offline friends in ways that facilitate conversation about MPS-related

	friends (those they have never met in person).		issues and learning outcomes? What is the nature of conversations in the moderated chat rooms? Do these conversations address learning goals for MPS or discourse related to media literacy?
4	*There are tensions among girls feeling they can be more open and "authentic" online than in face-to-face interaction, pretending and playing with identity online, and trusting or distrusting others online*.	Although many girls feel they can better communicate online in authentic ways, they may also play with identity and encounter others who are authentic and/or play with identity. Some girls may understand the dangers of online privacy, while others may share personal information. Girls are experiencing mixed goals between wanting to have authentic dialogue with others, and not really knowing who others are.	How can MPS balance the sense of community with the goal of safety? What are the implications of re-opening the live chat rooms? How can live chat be re-opened in a way that allows for safety and freedom of participants? In what ways do girls play with identity on MPS, and does their communication and creations reflect their real selves?

To conclude, this review of literature of how girls use the Internet reveals that the Internet is a major communication tool for girls. The future of MPS requires that research moves forward in direction that will allow the website to evolve in the most effective direction for girls, which points to involving communication with others. The website must also keep meeting the learning outcomes and research goals of the MPS team, with the overarching goal of media literacy. Researchers must look at the current role the Internet plays in girls' lives and think ahead to the future of how girls might continue using the Internet and MPS in the next few years. The research questions offered provide some options for a roadmap in the evaluation phase of MPS, which will surely be an exciting journey.

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