**Introduction**

- Massively Multiplayer Online Role Playing Games (MMORPGs) are immersive and interactive virtual (often 3-dimensional) environments through which players navigate and fulfill a chosen role while also competing against, or cooperating with, other players and the artificial intelligence of the game to achieve goals, explore game content, collect materials, and myriad other activities.

- Success in MMORPGs depends, in part, on creating, managing, seeking, communicating and using information.

- The skills required for success in these activities parallel the competencies and information behaviors associated with information, media, and information communication technology literacies (IMCT literacies; Partnership for 21st Century Skills, 2011).

- Due to the large scale and emphasis on multiplayer interaction, communication, and gameplay in MMORPGs, information and its use should be understood within the social contexts and cultures of the virtual gaming environment.

**Overarching Research Questions**

1. Do MMORPG players demonstrate the use of IMCT literacy skills?
2. Do players learn IMCT literacy skills from playing MMORPGs?
3. Does the theory of information worlds serve as a useful framework for understanding the social information behaviors of MMORPG players?
4. Do the major concepts of information worlds (social norms, social types, information behaviors, information value, boundaries) influence the use or learning of IMCT literacy skills in the information worlds of MMORPG players both in and outside of the virtual world?

**Proposed Method**

<table>
<thead>
<tr>
<th>Purpose: Description and Exploration</th>
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<tr>
<td>Cognitive Ethnography, 1 year (Steinkuehler, 2004 &amp; 2007)</td>
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<tr>
<td>Field notes, text chat logs, screenshots, audio &amp; video recordings (with consent), external game artifacts (community sites, forums, etc.)</td>
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<td>Content Analysis</td>
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<td>Participant observation within the MMORPG</td>
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<td>Interviews, Monthly (Oliver &amp; Carr, 2009)</td>
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<td>Semi-structured interviews with community gatekeepers via text chat, phone or VOIP</td>
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<td>Transcripts and audio recordings (with consent)</td>
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**Codification Frameworks**

**The Theory of Information Worlds** (Jaeger & Burnett, 2010) will be applied to social information behaviors.

- **Social norms**: the agreed upon, but not necessarily articulated, acceptable forms of observable behavior.
- **Social types**: “ways in which individuals are perceived and socially defined with the context of their small world” (p. 22).
- **Information behavior**: all potential normative behaviors regarding the use or nonuse of observable behavior that an information world member might exhibit.
- **Information value**: “a world’s shared sense of a scale of the importance of information” (p.8).
- **Boundaries**: “the places at which information worlds come into contact with each other and across which communication and information exchange can - but may or may not - take place” (p. 8).


- **Information literacy** – ability to access, evaluate, use and manage information as well as understand the ethical and legal issues pertaining to these activities.
- **Media literacy** – ability to analyze media for its actual purpose and meaning, to effectively create suitable media products, and understand the ethical and legal issues related to the use and access of media.
- **Information Communication Technology literacy** – the ability to effectively use technology to research, organize, evaluate, create, and communicate information as well as understand the ethical and legal issues related to the use and access of such technologies.

**Significance & Implications**

- Gee (2009) argues that play in good games can help develop “embodied empathy for complex systems, ‘grit’ (passion + persistence); playfulness that leads to innovation; design thinking; collaborations in which groups are smarter than the smartest person in the group; and real understanding that leads to problem solving and not just test passing” (p. 4).
- The above qualities and the IMCT literacy skills help individuals and groups succeed in the 21st century.
- A more in-depth understanding of how individuals and groups interact and use information, media, and technology as well as learn through play in MMORPGs may give insights and lead to improvements in a variety of areas, such as IMCT literacy instruction, online education, usability and information architecture, game design and development.