

Multiuser Digital Games as Sites for Research and Practice

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Abstract

Digital games are significant for language learning not only as potentially useful new tools within the confines of traditional foreign language contexts, but more importantly, as *new* semiotic and cultural environments that construct, and are constructed by, social practices. In this chapter, we explore multiuser games as ontologically new social practices that warrant attention within the scope of language learning. In doing so, we specifically address two types of multiuser digital games – multiplayer online games (MMOGs) and synthetic immersive environments (SIEs) – and their role in research and practice. In terms of research, we suggest goal orientation and social consequence as two especially meaningful elements of multiuser digital games for language learning. We then highlight ways multiuser digital games might be meaningfully considered in educational practice. This includes a discussion of task-based approaches as well as literacy development.

7.1 Introduction

Over the past decade, digital games have proliferated in number of titles and diversity of type, offering choices in regard to different styles of play. While stereotypical 'shooter' games remain prevalent, other genres are growing in popularity. *The Sims 2*, called a 'digital dollhouse' by its creator Will Wright, is the best selling PC game in history, while Wright's alien-evolution simulation game *Spore* sold over one million copies in the first three weeks of its release in September of 2008 (Terdiman 2008). Distinct digital game genres are emerging, and include shooter (e.g., *Halo 3*), action (e.g., *Grand Theft Auto*), strategy (e.g., *World of Goo*), role playing (e.g., *Fallout 3*), adventure (e.g., *World of Warcraft*), simulation (e.g., *The SIMS*), and sports genres (e.g., *Madden Football*), with most games combining elements of several genres.¹ Digital games may combine traditional game, contest, puzzle, and story elements (Murray 2004), and can be designed for progression-style gameplay, where player options are pre-determined by designers, or emergent gameplay, where designers create rule-bound conditions from which play emerges organically and, sometimes, unpredictably (Juul 2005). Games can be played by single players, multiple players, or massive numbers of players who may, or may not, know one another outside of the game space. Each of these features present distinct possibilities for second language (L2) research and practice.

Concurrent with the explosion in diversity and quantity of commercial games, we have witnessed a profound interest in the use of games in a variety of

¹ Game examples are taken from the top rated games by users in each category. These are dynamic results that change based on new releases, platforms, and the communities of use surrounding them. For real time rankings, see <http://www.gamespot.com/games.html>.

professional contexts. For example, in 2005, the first National Summit on Educational Games was held to “accelerate the development, commercialization, and deployment of new generation games for learning” (NSEG Summit 2005). Educational or ‘serious’ games² have been developed to explore history, aid in military organization and training, 3-dimensional CAD training, therapy, pedagogy and identity formation, business practices, and medical training (e.g., Aldrich 2005; Barab, Arisi, and Jackson 2005; Beck and Wade 2004; Prensky 2001, 2005). Language learning is one arena within which digital games can have an especially noteworthy impact. Digital games are significant for language learning, not only as potentially useful new tools within the confines of traditional foreign language contexts, but more importantly, as *new* semiotic and cultural environments which construct, and are constructed by, ontologically new social practices (Lankshear and Knobel 2006).

In a recent review addressing the role of new media in language learning, Thorne, Black, and Sykes (2009) highlight the importance of understanding the complexity and inherent social activity associated with commercial and educationally focused game spaces.³ They note:

The remix, plurilingual, and emergent nature of many L2 [second language] digital vernacular communities and VE [virtual environment] contexts highlights the centrality of meaning, the use of (sometimes multiple) languages for the performance of desired identities and aesthetic expression, and at a metalinguistic level, the development of repertoires and strategies that serve as tools to negotiate social actions within novel and fluid communicative events.

² We would like to caution against positioning ‘serious’ games as more valuable than ‘entertainment’ games since both can have a profound impact on learning in different areas.

³ Thorne et al. (forthcoming) also discusses language socialization and second language use and development in online spaces (e.g., fan fiction, diaspora communities; see also Thorne 2009).

From this perspective, digital games offer a great deal more than just engagement and motivation. As prominent sites of digitally-mediated activity, they represent high-stakes digital spaces that are often intimately linked to other communicative contexts and social networks in both on- and offline contexts.

This chapter addresses the use of digital games as a site for both research and practice within the scope of educational linguistics. We first contextualize our discussion through an exploration of games as *new* ontological social practices, that is, semiotic social-material conditions that are new to the human experience. From this perspective, we then present various definitions of games and their unique relationship to learning activity as a whole. For this discussion, we specifically address two types of multiuser digital games – multiplayer online games (MMOGs) and synthetic immersive environments (SIEs); the analysis of which, we propose, provides additional groundwork for framing our understanding of multiuser digital games in terms of language learning. In the remainder of the chapter we first suggest goal orientation and social consequence as two especially meaningful components of multiuser digital games for language learning and, based on current research, relate these two areas to future investigation. We then highlight ways multiuser digital games might be meaningfully considered in educational practice, both in and out of the formalized foreign language classroom.⁴

⁴ Due to the scarcity of direct empirical research in the area of digital games and language learning, we suggest this chapter be viewed as a ‘call to arms’ – a starting point for researchers and practitioners in this area.

7.2 The Unique Social Practice of Digital Games

Prior to our examination of multiuser digital games in the context of language learning research, it is critical to briefly situate their existence within the larger scope of mediated interaction and social activity. In a recent volume, the literacy theorists Lankshear and Knobel (2006) set out to parse the “new” in literacy studies (and by extension -- communicative activity involving new media and Web 2.0 tools and practices) by differentiating between paradigmatic and ontological novelty in literacy research and practice.

Paradigmatically "new" approaches to literacy are meant to describe the research perspectives of the analyst, with the emphasis on moving away from psycholinguistic frameworks and toward those which are situated and more broadly construed as sociocultural; this often includes the work being done under the rubric of *educational linguistics*. What we are looking at in this chapter – multiplayer game engagement wherein avatar-embodied participants roam 3-D graphically rendered virtual worlds – involves what Lankshear and Knobel (2006) describe as ontologically new literacy practices themselves.

The concept of ontological newness encompasses literacies and communicative genres associated with technological mediation, but it also emphasizes how such mediation impacts language and literacy-related social practices along other fronts, including, but not limited to, scale (e.g., volume of interaction potential), space (e.g., conflation of geographic distance), and aesthetic and communicative sensibility (e.g., emergence of collaborative and remixed forms of knowledge construction). From this perspective, our treatment of

multiplayer digital games aims to understand not only the linear practice of a user's gameplay experience, but also the contextual surroundings which contribute to, and are ultimately shaped by, the gameplay.

Due to both their economic⁵ and social impact, multiplayer digital games arguably comprise the most socially and cognitively complex forms of interactive media currently available. Participation in these online spaces constitutes a set of global cultural practices that have contributed to an overall shift in the perception and construction of reality, including the political, economic, educational, and social choices people make in the 'real' world (e.g., Castronova 2001, 2007; Lenhart et al. 2008; Squire and Steinkuehler 2006; Thorne 2008). It can be argued that multiplayer online games are not only constructed *by* social activity, but are active agents in the construction *of* social activity. Shaffer and Clinton (2006) describe the dialectical and co-constitutive relationship between tools and the cognitive-communicative activities they mediate as "the reciprocal relation between tools and thought...every tool contains thoughts and every thought contains tools" (p. 290). In this stronger view of mediation, computer-generated tools and environments, like people, are actants and as such, they influence human agents based on their material and ideal properties, histories of use, and roles in ongoing activity (Thorne and Black, forthcoming). While not the focus of this chapter, this critical relationship between tools and their associated practices emphasizes our understanding of games as new ontological social practices. This is directly related to the potentially profound learning experiences made possible in both formal and informal learning contexts.

⁵ See Castronova (2001, 2007) and Steinkuehler (2008) for discussion.

7.2.1 *What is a Game?*

It is useful to examine the notion of *game* in conjunction with the concepts of *play* and *engagement*. This aids in our intention to stress digital games as a unique social practice, while also highlighting the especially notable features of games for language learning.

The notion of ‘rule-governed’ is central to most definitions of ‘game’, since it is rules that give a game its structure. Juul (2005) makes a distinction between games of emergence, where a limited number of rules combine to afford a much greater number of possible outcomes and play trajectories, and games of progression, like adventure games, where all possible outcomes have been pre-determined by the designers. While game designers purposefully create the rules of a game,⁶ unpredictability, or at least the illusion of it, is also key to game design, as it provides the players with a sense of agency.

Key to a definition of game, and alluded to above, is the concept of *play*, which has been discussed in relation to language and language learning (e.g. Cook 2000; Crystal 2001; Lantolf 1997; Tarone 2000). *Paedia* refers to carefree, improvised, and open-ended play, as opposed to *ludus*, meaning rule-bound play, and *agon*, or competition. It is the job of the game designer to balance player experience of *paedia*, *ludus*, and *agon* to create an engaging experience.

Other scholars have investigated the notion of engagement and its relationship to the goal-driven nature of play. Aldrich (2005) and Prensky (2001) explain that goals can be game-driven, context-driven, or user-driven. Game-

⁶ Although, sometimes, the rules are flaunted.

driven goals refer to those explicitly built into the game as central benchmarks players need to accomplish to be successful in the game whereas user-driven goals are those created by the players themselves to personalize their gameplay experience. Contextual goals refer to the objectives that emerge during gameplay. By and large all three motivations serve to create an engaging gameplay experience.

An additional framework that might be applied to language learning research is Salen and Zimmerman's (2005) explanation of how interactive design leads to engaging and meaningful play. Game interactivity occurs on multiple levels: at the interpretive or emotional level, at the functional level through the game interface, at the participatory level through gameplay itself, and at the 'beyond-the-object' or cultural level through participation in attendant discourses. Good design integrates choice at all levels of interactivity, which afford "contextual potentials" that are "encountered by a participant, from which meaning emerges" (p. 62). In this sense, game spaces are analogous to L2 learning spaces, where language learning involves similar systemic and scalable potentials.

Player motivation is also related to engagement. Because the commercial digital game industry is dependent on players as customers, it has paid close attention to those aspects of game design which allow players to customize their experiences, gain frequent rewards, and otherwise stay motivated to keep playing. Arnseth (2006) notes that designers of learning environments might learn from these game designers. For example, he asserts that digital games situate learning

in meaningful contexts, they scaffold play by storing skills, knowledge, and objects for continual development, they alternate between isolated and complex tasks rather than progressing from isolation to complexity, and they adapt to, and customize feedback for, individual players at just the level needed for the next activity. In other words, a well-designed game targets a player's zone of proximal development (Vygotsky 1978; see also Lantolf and Thorne 2006; Nardi, Ly, and Harris 2007) just as a well-designed learning environment targets that of a learner.

7.2.2 *Multiplayer Digital Games*

An understanding of the key defining concepts of digital games as related to their existence within emerging social practices can inform educational and applied linguistics research. In practice, there are dozens of established, growing, and diversifying digital game types. While other game types have significant potential for language teaching (e.g., Purushotma 2005; Miller and Hegelheimer 2006; Ranalli 2008), we limit our discussion here to digital games in which human-human interaction occurs in the game itself.⁷ We focus on massively multiplayer online games (MMOGs) and synthetic immersive environments (SIEs) because they are first and foremost multiplayer,⁸ which means that players can, and in many cases are required to, interact and collaborate through the game interface in real-time,⁹ resulting in the emergence of new social practices.

⁷ For a summary of the various types of game and simulation possibilities, see Aldrich (2005), Prensky (2001), and Sawyer and Smith (2008).

⁸ Sawyer and Smith (2008) further classify multiplayer games into four categories: (1) multiplayer games (1-4 players), (2) multiplayer tournament (8-64 players), (3) massive multiplayer shared (1000-10,000), and massive multiplayer grid (everyone) (p.26).

⁹ It is important to note that the technical capability of synchronous communication does not automatically guarantee the existence of collaboration and interaction between users.

MMOGs are commercially designed and avatar-based multiplayer virtual worlds within which thousands of people simultaneously interact, compete, and collaborate with one another (Steinkuehler 2008). In an MMOG like *World of Warcraft (WoW)*,¹⁰ players create characters with which they explore fictional worlds, assist one another, battle monsters and other players, and craft and exchange goods and services, all of which is done in an effort to “level-up” (i.e., gain experience and skills that allow for more complex and intricate gameplay). For regular and experienced players, MMOGs form meaningful systems of culturally organized activity that contain and promote a wide range of domain (game)-specific and social-interactive language use. In-game language may sometimes be very specific to game tactics (e.g., “heal!,” “buff plz” or “stand back”) or ‘game culture’ (e.g., gamer specific language, see Steinkuehler 2006). Nevertheless, the sheer volume of people with whom players can interact in online games, as well as the global diversity of the in-game population, allow for potentially numerous intercultural interactions in a variety of languages (e.g., Thorne 2008).

While the potential for applying commercial MMOGs like *WoW* to language learning and pedagogy is important and just beginning to be explored, another reason to examine multiplayer game design and player behavior is to inform the development of games that are specifically created for learning purposes, what we are calling synthetic immersive environments (SIEs). Drawing on the complex, goal-directed, collaborative gameplay behavior inherent in

¹⁰ *WoW* is currently the most popular MMOG, which topped 18 million worldwide subscriptions in 2008 (mmogchart.com).

MMOGs, SIEs are engineered spaces which “integrate the many benefits of online gaming to produce explicit, educationally related outcomes in simulated, relevant *interactional* contexts” (Sykes 2008, p. 10-11, emphasis ours). In this sense, SIEs are designed to target specific learning outcomes through the creation of a multiuser game space in which the participants are directly engaged in activity relating to specific domains of knowledge.¹¹

If we view SIEs within the educational, or serious, games context, they are oriented toward multiplayer experiences and the utilization of immersive interaction for the facilitation, and enhancement, of learning. SIE designers are free to incorporate level- and need-appropriate language in their games with the objective that during gameplay, users will gain language skills, as well as sensitivity to strategic and pragmatically appropriate language use needed for participation.

Both types of multiuser digital games discussed here offer a number of potential benefits for language learning (García-Carbonnell, et al. 2001; Sykes 2008, 2009; Sykes, Oskoz, and Thorne 2008; Thorne 2008; Thorne & Black 2007; Thorne, et al. 2009). In the sections that follow, we highlight potential benefits and suggest ways in which they might be conceptualized for both research and practice.

7.3 Multiplayer Games in Research

¹¹ While there are numerous games that have been created for learning purposes in a variety of fields (see Sawyer and Smith, 2008 for a complete categorization), there are only three that have been designed specifically for language learning – *Croquelandia*, *Zon*, and *Tactical Iraqi/Pashtu/French*.

Scholars in the relatively young field of games studies are developing heuristics for the analysis of digital games and play, several of which might be adapted to analysis of language learning in digital game spaces. Drawing on the interdisciplinary origins of the field, Aarseth (2003) proposes three broad dimensions to the analysis of games: gameplay (i.e., player actions, strategies and motives), structure (i.e., rules), and game world (i.e., fictional content and topology of gaming). Aarseth advocates several methods: 1) studying the design, rules, and mechanics of a game, 2) observing and conducting ethnographic research on players, and 3) playing the game for both research and pleasure, and ultimately attempting mastery.¹²

In consideration of these three dimensions presented by Aarseth (2003), as well as current studies relevant for language learning, we highlight two components of digital games that are especially relevant for our understanding of multiplayer digital games in language learning – goal directed activity and social activity. Empirical examples are included where available and each section concludes with suggestions for future research.

7.3.1 *Goal-Directed Activity*

A fundamental game structure common to both MMOGs and SIEs is the *quest*. Quests are goal-oriented activities (open-ended or highly structured) that, when completed, provide rewards and experience points, which are necessary to 'level up' and gain access to more skills and resources. Especially relevant to language learning is the task-based approach to quest completion, the orthogonal

¹² We agree with Aarseth's assertion that playing the game of study is critical for educational and applied linguists wishing to do research in this area or implement digital games in the classroom.

distribution of resources to facilitate player-to-player interaction, and the importance of failure-states in providing meaningful, relevant feedback.

Quests have a parallel in task-based and goal-oriented activity (Ellis 2003; Richards and Rodgers 2001; Salmani-Nodoushan 2007). Players focus on meaning to arrive at an end goal through a series of micro-tasks. Purushotma, Thorne, and Wheatley (2008) highlight the ways in which tasks in video games are especially suited for language learning within a task-based model. They suggest that gaming environments emphasize goal-directed activity and establish language as a resource that is critical to successful gameplay

MMOG players have the option of completing any number of hundreds of different quests based on their level and geographical location in the game. As mentioned previously, many quests and activities in MMOGs are easier, and often more interesting, when completed in multiplayer groups (e.g., one member may be good at long distance protection and healing while another is good at close range combat). For dungeons or ‘instances’ (i.e., specialized play areas where tasks are more complex and group play is critical) and especially difficult quests, players are implicitly encouraged to create a heterogeneous group with complementary skills.¹³

The game interface not only supports, but intentionally encourages, collaborative group play by affording party-specific communication channels and semi-permanent guilds (i.e., groups of players who routinely work together as a team) which are formed to share resources among players who want to trade and

¹³ In most cases, these quests are designed to be impossible without the support of a well-balanced group that requires ongoing negotiation of roles and gameplay practices by both experienced and new players.

group frequently (see Ducheneaut et al. 2007; Juul 2005). Interaction around a common goal or cultural endeavor is a critical component of MMOGs and serves as a valuable context for language learning. Drawing on Peña and Hancock (2006), Thorne et al. (2009) suggest that as players reach higher ranks in MMOGs, they undergo a process of language socialization in which their role becomes increasingly complex, dynamic, and intimate. This includes the generation of relevant attendant discourses and social relationships ranging from random interactions to serious relationships. In many cases, these relationships are transcultural and multilingual.

Intercultural communication, the importance of which has been explored thoroughly in the L2 literature (c.f., Belz and Thorne 2006; Furstenberg et al. 2001; Kramsch and McConnell-Ginnett 1992; Thorne 2003) is further evidenced in Thorne's (2008) unique case study¹⁴ of two gamers in *World of Warcraft* – an English speaker in the United States (Meme) and a Russian speaking player located in the Ukraine (Zomn). The two players met through a questing experience in which Meme was hunting dragons as part of a quest and Zomn was pursuing the same creatures for leather, seemingly competing against one another for the same restricted resource. Instead of competition, however, the two players agreed to collaborate for mutual benefit and played together for some time. As they played, they interacted primarily in English, but also used Russian and discussed popular cultural, home and school lives while concurrently coordinating

¹⁴ See Bryant (2006) for the only other empirical work examining L2 learning in MMOG contexts.

their gameplay. As Thorne notes, many of the exchanges exhibited similar strategies often encouraged in the L2 language classroom. These included:

- Negotiation of meaning: throughout the interaction each player confirmed understanding and clarified meaning.
- Drawing on external resources: during the interaction Meme instant messaged another Ukrainian friend for help with Russian phrases he wanted to use when talking to Zomn.
- Explicit feedback: In one turn, Zomn explicitly asked if the word he is using, “interpritir,” is spelled correctly and Meme responds, “it's actually interpreter, but that was close.”
- Translation: Zomn helped translate one of Meme’s slang phrases from Russian
- Reciprocal alterations between expert and novice: Both Meme and Zomn acted as learners and experts at different times in the interaction.

While this single case study cannot be generalized to all MMOG environments, those who play MMOGs regularly comment on similar multilingual exchanges in which they engage in intercultural communication with players from around the world. For individuals with specific language interests or for MMOG use as a part of instructed L2 settings, it is noteworthy that MMOGs are often played by speakers of a variety of European and Asian languages.

The complex feedback mechanism of MMOGs is a critical component of gameplay experiences. Feedback is most often realized through explicitly designed failure states, the most common of which is the temporary death of one’s character. Players can attempt a task as many times as necessary in order to successfully reach their goal, a design element which sends the message that failed attempts are necessary for learning and skill-building. This feature is especially relevant to language learning in that it not only focuses on the skill

being learned, but also affective factors, such as anxiety, that often inhibit language learners (Purushotma et al. 2008).

MMOGs provide effective, multi-level feedback delivered through a variety of mechanisms (e.g., the loss/gain of assets, the ability to do certain things, additional help from the avatars in the space) in order to help players improve while attempting tasks. As noted by Gee (2003), “each level dances around the outer limits of the player's abilities, seeking at every point to be hard enough to be just doable” (p. 1). In this way, MMOGs require players to remain in the areas suited to their levels and to complete specific quests targeted at what they need to learn. Two things happen as a result. One, the discourse between players in different areas of play are distinctly different in complexity and social affordances (Peña and Hancock 2006), with higher level areas being more complex and intricate. Two, players who venture out of their level zone must either collaborate with more advanced players or stay in their own zone until they are ready move to the next level. Feedback is delivered implicitly through the game as needed and also explicitly as in the aforementioned failure states.

In addition to the lure of ascending levels and earning assets, as is the case in purely game-based MMOG environments, quests in educationally focused SIEs need to be focused toward inculcating content that corresponds to curricular objectives. As players advance in their language skills, the SIE quests would become more complex and targeted at more advanced skills. It should be noted that the specificity of quests likely increases the efficiency of language learning in SIEs, but there is also the danger of detracting from the gameplay experience and

potentially discouraging risk taking in the digital space (as is indicated by the student comments excerpted and discussed below). General game design principles can form the base-level knowledge informing SIE research and development. Future language-based SIE development should keep in focus the relevant features of immersive spaces that carry the most significant opportunities for making salient the content to be learned.

The key to SIEs is the creation of similar goal-oriented activity and feedback to that found in MMOGs, which is specifically focused on the learning objective and tasks, in addition to the interaction, relevant for language learning. For example, in *Croquelandia*, an SIE created explicitly for pragmatic development, each quest is directly targeted at a specific language function (e.g., apologizing to a friend for being late, asking to borrow a book from one's host sister). Successful completion of the quest indicates control of an interaction.

As opposed to the temporary death of one's avatar, failure states in SIEs can be explicitly designed to emulate genuine consequences of language failure (e.g., gain/loss of invitations, heightened/lessened homesickness, more/less friendships). As noted by Purushotma et al. (2008), "we should engineer the game to cater primarily to failure and partial success" because these failure states are vital to language learning. The importance of failure states is confirmed by the first empirical analysis of an SIE for language learning (Sykes 2008). Although students were given the opportunity to experiment and "fail," half of the twenty-five learners interviewed noted that quest restarts signaled a failure to learn the material; therefore, they did not experiment or attempt tasks in numerous ways.

Instead of the “humorous and playful” fail states proposed by Purushotma et al. (2008), more typical classroom feedback mechanisms (e.g., right or wrong) seemed to have been perceived. In-game behaviors were not sufficient to have a positive impact on the players’ experience.

Research on the design and creation of quests should be a critical research question for those wishing to investigate the development and use of SIEs in language learning. This includes the examination of how content and resources can be distributed to make the best use of the questing structure and analysis of the definition of roles, distribution of resources, and the creation of failure states. Furthermore, investigation in this area requires much more than just comparing how specific types of feedback might contribute to learning “from” the game. We encourage investigation into delivery mechanisms (i.e., rewards for completed quests vs. in-task formative feedback), long-term vs. short-term rewards and incentives, and experimentation with various types of feedback (e.g., implicit vs. explicit), all of which will aid in the development of game worlds that present more productive environments for language learning.

7.3.2 Social Activity

While many describe games as “low risk” environments (c.f., Gee 2003), we propose that they can also be high-stakes, meaningful spaces with substantial social consequences for the players. Research has shown that interactions in multiuser virtual environments exhibit numerous features of emergent social behavior (e.g., gesture, romantic encounters, political action, commerce, and caretaking). In this sense, online games are valid, real-world communication tools fully integrated (although often stigmatized) in modern society (Gee 2005; Thorne

2006) and as such should be considered viable, relevant cultural artifacts. These are critical pieces in helping language learners build a communicative repertoire that enables them to successfully interact in a variety of on- and offline contexts.

Through their *Bridging Activities* model, Thorne and Reinhardt (2008; see also below) highlight the importance of making use of consequential online social practices in instructed advanced language learning settings. MMOGs represent one set of digital vernaculars that may hold intrinsic value for a large number of learners. The authenticity and social consequences presented in these spaces can be quite profound (Steinkuehler 2006).

MMOGs are massive, involving thousands of players physically dispersed across continents, age groups, and backgrounds. Players can interact in groups as small as two to five or as large as two hundred to complete various game activities like questing and trading. Players can command their characters to joke, laugh, cry, cheer, dance, or otherwise 'emote', which the other players in the vicinity are able to see and hear. The fact that a player may communicate with other players while presenting a designed behavior allows for identity play and anonymous risk-taking, although the fact that the other players are human means that the stakes for play and risk-taking are high, in that anti-social behavior may lead to negative social consequences and a lasting poor reputation for one's character.

Taylor (2006) describes a profoundly different play experience based on her character selection in an ethnographic study of *Everquest*. She first illustrates a relatively independent play experience process as a Gnome Necromancer (a

specific race and class in *Everquest*). However, with the second character she created (a Barbarian Warrior), she needed to collaborate very early on and, as a result, participated in a different gaming experience. Her switch in character also required a shift in linguistic, cultural, and emotive behavior. Since one's character is one representation of the human player, the social consequences of miscommunication in MMOGs are real. Furthermore, as evidenced in Thorne's (2008) case study of Meme and Zomn, the interactions occurring independent of one's in-game character are also meaningful and have the potential to contribute to the development of a language learner's multilingual identity outside of the game. Although the specific social practices learned in MMOGs may not always transfer to non-digitally mediated contexts, the skills and strategies learned through these spaces can have an important role in the overall language socialization of learners (Thorne and Reinhardt 2008; Thorne et al. 2009).

SIEs also offer benefits related to authenticity and social consequence through their potential to simulate versions of the target language and culture while also encouraging organic social interaction among players. While in no way a replacement for study abroad, through specific design elements, participation in an SIE has significant potential to emulate non-mediated contexts learners may encounter. In this way, SIEs can aid, for example, in pre-departure preparation for study abroad. As in MMOGs, the digital context allows for language experimentation on the part of the learner through character development and personality selection. If they so choose, learners can create two or three distinct characters to explore various versions of their own multicultural

identity (e.g., Lee and Hoadley 2007). With regard to language learning, seeing a world through another's eyes and developing meta-awareness of language as a tool for the presentation of a self is a fundamental aspect of intercultural competence (Kramsch 1993). This is something often encouraged in the language classroom, yet rarely achieved since learners do not typically emotionally engage with simulated roles.

It is important to point out that gameplay alone does not always facilitate identity and role experimentation (Sykes 2008). As is the case with MMOGs, where the distribution of resources provides benefits for the development of different characters, SIEs should also include different experiences for distinct character creation. In her research investigating the use of *Croquelandia*, Sykes (2008) confirms the existence of 'real world' emotion and consequence related to the SIE experience. To take one case, a non-player character, who was a critical part of a quest disappeared from the SIE due to a technical glitch. The community of learners involved in the game (four classes of an advanced Spanish course) was searching for her and spent a great deal of time debating and discussing her location. One of the students interviewed made the following comment about finding Ana:

Sample (2)

"...last Thursday, I think, I came home and my friends were going out and I said I'm going home and play the video game for awhile, I want to see what happens, like if I can find Ana..." Lisa, Interview 1, S2

For this student, the fact that she cared enough about finding Ana to use her free time to continue playing the game (without any impact on her class grade) indicates there is an important connection with the characters, scenarios, and

content from the SIE. The digital space allowed for the maintenance of a level of emotional authenticity related to that experience that does not typically occur in other simulated classroom contexts.

Related to the concept of game design, task creation, and the use of digital games for language learning, is research that compares use of spaces that have already been built (e.g., MMOGs) versus the construction of new SIEs (e.g., *Croquelandia*). When we consider that the cost of commercial gaming spaces falls in the multi-million dollar range¹⁵ creating ways for developing less costly resources or leveraging spaces that have already been built is critical. Even the creation and development of smaller game spaces for educational purposes are quite expensive and time consuming. Therefore, future research should consider how to leverage the products already in existence to enhance the spaces already being built as well as make best use of created SIEs in the areas they are most relevant. Moreover, in developing SIEs, sacrificing state-of-the-art graphics or additional control and design of the game space might be a valuable trade-off. In all cases, the social practices and behaviors associated with multiplayer game spaces should be a central focus of the investigation.

Research in the area of multiplayer online games should address the critical social and interactional components that contribute to our understanding of games as emerging social practices relevant to language learning. This includes addressing in-game play and interaction through tasks and goal orientation as well as the associated social activity surrounding gameplay. This

¹⁵ The cost of *World of Warcraft*, the most popular MMOG, is estimated at 65 million dollars.

comprehensive picture aids in gaining a complex understanding of how and why multiplayer games are relevant in the language learning context.

7.4 Multiplayer Games in Practice

We maintain that good game design, whether an SIE or MMOG, reflects Arnseth's (2006) notion of 'learning to play', rather than playing to learn. In the first approach, game activity is understood as a form of socially situated practice, and the focus is not on the learner-player 'reading' or 'watching' the game, but 'doing' and 'participating' in systems of social semiosis. In contrast, Arnseth argues that viewing the game as a text from which content is learned, or playing to learn, without consideration of the context of play, reflects a learning-as-transmission model where the game is seen to leave "cognitive residues" that may influence future behavior (e.g., violence). This approach can be understood as 'playing to learn', where learning is 'disguised' as a game, and cognition is separate from context. We concur with Arnseth that 'learning to play' is a more useful notion, and we feel that in language teaching, 'learning the language to play the game' is a more useful approach to practice than 'playing the game to learn the language'. With this in mind, both task-based and literacy-based approaches are commensurable with multiplayer games.

7.4.1 Task-Based Approaches

Multiplayer digital games are suitable for an in-class task-based approach (Ellis 2003), if the quests and various activities in the game are presented in a structure that focuses primarily on meaning exchange, and meets an instructional objective. A MMOG quest is structured like a task, in that the meaning of the

quest must be comprehended in order to complete it. The text and narrative of a particular quest or line of quests can be broken down and discussed in class, and students can report on the quests and activities they completed. From a task-based perspective, the parameters for meaning exchange in game interactions are already set-up, because resources and abilities are distributed among players unequally, and so all may potentially contribute to group activity. In both language learning task design and game design, this distribution is intentional—in learning tasks as jigsaw or information gap design (Blake 2000; Smith 2004; Pica, Kanagy, and Falodun 1993), and in multiplayer gameplay as orthogonal unit design (Smith 2003; Juul 2005).

It would be difficult and counterproductive, however, to attempt to break all in-game activities into discrete tasks, because much of the enjoyment of gameplay arises from the unpredictable quality of interactions. Juul (2005) explains that the principle of emergent game design relies on the random interaction of rules and system complexity, and may involve variation of states, irreducible patterns of play, and novelty or surprise in the form of emergent gameplay. Interaction and meaningful communication among players to strategize and achieve common goals arises from this emergence, and it is this sense of infinite-seeming ‘interesting choices’ (Meier, in Juul 2005, p. 75) that provides a player with a sense of fun and meaningfulness.

7.4.2 *Game-Mediated Literacy Development*

A literacy-based framework for using digital games in the L2 classroom may be found in *Bridging Activities* (Thorne and Reinhardt 2008; Reinhardt and

Thorne forthcoming), a pedagogical approach designed to bring everyday digital practices into the L2 classroom for the purpose of developing critical language awareness. Grounded in principles of language awareness and the concept of multiliteracies (New London Group 1996), new media literacies (Kress 2003; Lankshear and Knobel 2007), and identities in language learning (Gee 2007; Block 2007), the *Bridging Activities* model centers on guided exploration and analysis of student selected or created digital vernacular texts originating in digital practices like chatting, blogging, surfing, and gaming, with the goal of fostering critical awareness of those practices and the language used for them. Application of the model involves an iterative implementation cycle of observation and collection of technology-mediated texts and practices, which leads to exploration and analysis of those texts, and ultimately participation in practices and creation of new texts. While facilitation is necessary at all levels, the collection, analysis, and creation aspects involve explicit guidance on the part of the instructor, to bring linguistic form, function, and relationship to social context to the active awareness of the learner, and if possible, to the level of critical awareness.

For gaming, observation and collection would involve playing the game, observing the designed narratives (Calleja 2007) of quests and in-game story lines, and producing personal narratives of strategizing and playing. Guided exploration and analysis would involve an embedded cycle of description, analysis, and interpretation—description would involve situating the narratives, analysis would involve relating them to the rule-based structure of the game, and

interpretation would involve critically framing the narratives and relating them to broader socio-cultural discourses, including attendant discourses of gaming culture. Creation and participation would involve informed and transformed play, developing both L2 literacy and game literacy (Gee 2007).

The potential for multiplayer games in language learning might be seen in their capacities to transform literacies, both through the experiencing of designed narratives that are socio-cultural texts and practices, and the production of personal narratives (Calleja 2007) that recount play or practice. In other words, a designed narrative in a game can be understood as a story to which the player is audience, and as such may be described, analyzed, and interpreted by the player as it unfolds to her. Simultaneously, the player can describe, analyze, and interpret his or her own personal narrative while playing the game. Crucially, these narratives can be constructed through social interaction within and around the game, both in-game and out-of-game.

7.5 Conclusion

The dynamic nature of emerging ontological practices as related to digital games necessitates a multi-dimensional perspective for research and practice. This allows for the analysis of, not only mediated activity, but also the scope, scale, and communities of practice that construct, and are constructed by, the use of emerging technological tools. In this chapter, we have identified areas for research and practice that are especially relevant for those interested in digital games and language learning. In doing so, we suggest multiplayer digital games

as new contexts for language development, and not only practice spaces that are useful for the recreation of traditional pedagogical practices.

To quote Marc Prensky (2001), there is no doubt that “learning is a big job. No one method works alone for everything. Digital game-based learning is great in that it motivates and teaches in ways that other methods seldom do. But it is neither the unique solution to all training [learning] problems nor a panacea” (p. 7). Through this discussion, we hope to begin answering the many questions raised in this area and gain systematic understanding of how and when multiuser digital games are most effective. As always, the ultimate goal is to grant learners access to second language skills that are essential to the creation and maintenance of ongoing, meaningful relationships with speakers of languages other than their own. With continued research and development, multiplayer digital games are an innovative area that has the potential to transform language learning.

References

- Aarseth, Espen. 1997. *Cybertext: Perspectives on ergodic literature*. Baltimore: John Hopkins University Press.
- Aarseth, Espen. 2003. Playing research: Methodological approaches to game analysis. *DAC 2003*. Melbourne.
<http://www.spilforskning.dk/gameapproaches/GameApproaches2.pdf>.
 Accessed 17 March 2009.
- Aarseth, Espen. 2008. A hollow world: *World of Warcraft* as a spatial practice. In *Digital Culture, Play, and Identity: A World of Warcraft Reader*, eds. Hilde Corneliussen and Jill Rettberg, 111-122. Cambridge, MA: MIT Press.
- Aldrich, Clark. 2005. *Learning by doing*. San Francisco: John Wiley & Sons, Inc.
- Arnseth, Hans Christian. 2006. Learning to play or playing to learn - A critical account of the models of communication informing educational research on computer gameplay. *Game Studies*, 6(1).
<http://gamestudies.org/0601/articles/arnseth> Accessed 18 February 2009.

- Barab, Sasha, Arisi, Anne, and Jackson, Craig. 2005. Eat your vegetables and do your homework: A design-based investigation of enjoyment and meaning in learning. *Educational Technology*, 65:15-21.
- Beck, John and Wade, Mitchell. 2004. *Got game: How the gamer generation is reshaping business forever*. Boston: Harvard Business School Press.
- Belz, Julie, and Thorne, Steven L. (eds.). 2006. *Internet-mediated intercultural foreign language education*. Boston, MA: Thomson Heinle.
- Blake, Robert. 2000. Computer mediated communication: A window on L2 Spanish interlanguage. *Language Learning and Technology* 4(1): 120-136.
- Block, David. 2007. *Second language identities*. London: Continuum.
- Bryant, Todd. 2006. Using *Word of Warcraft* and other MMORPGs to foster a targeted, social, and cooperative approach toward language learning. *Academic Commons, The Library*.
<http://www.academiccommons.org/commons/essay/bryant-MMORPGs-for-SLA> accessed 16 February 2008.
- Calleja, Gordon. 2007. Digital game involvement: A conceptual model. *Games and Culture* 2(3): 236-260.
- Castronova, Edward. 2001. Virtual worlds: A first-hand account of market and society on the cyberian frontier. *CESifo Working Paper Series No. 618*.
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=294828. Accessed 18 October 2008.
- Castronova, Edward. 2007. *Exodus to the virtual world*. New York, NY: Palgrave MacMillan.
- Cook, Guy. 2000. *Language play, language learning*. Oxford: Oxford University Press.
- Crystal, David. 2001. *Language play*. Chicago: University of Chicago Press.
- Czikszentmihalyi, Mihaly. 1990. *Flow: The psychology of optimal experience*. New York: Harper.
- deFreitas, Sara. 2006. Learning in immersive worlds: A review of game-based learning. *JISC E-Learning Programme*.
http://www.jisc.ac.uk/media/documents/programmes/elearninginnovation/gamingreport_v3.pdf. Accessed 15 January 2008.
- deMaria, Rusel. 2007. *Reset: Changing the way we look at video games*. San Francisco: Berrett-Koehler.
- Ducheneaut, Nicolas, Yee, Nicolas, Nickell, Eric, and Moore, Robert. 2007. The life and death of online gaming communities: A look at guilds in World of Warcraft. *CHI 2007 Proceedings*, San Jose, CA.
- Ellis, Rod. 2003. *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Furstenberg, Gilbert, Levelt, Sabine, English, Kathryn, and Maillet, Katherine. 2001. Giving a virtual voice to the silent language of culture: The *CULTURA* Project. *Language Learning and Technology*, 5: 55-102.
- García-Carbonnell, Amparo, Rising, Beverly, Montero, Begoña, and Watts, Frances. 2001. Simulations/gaming and the acquisition of communicative competence in another language. *Simulation & Gaming*, 32: 481-491.

- Gee, James P. 2003. *What video games have to teach us about learning and literacy*. New York, NY: Palgrave Macmillan.
- Gee, James P. 2005. *Why video games are good for your soul*. Sydney, Australia: Common Ground.
- Gee, James P. 2007. *What Video Games Have to Teach Us About Learning and Literacy*. 2nd ed. New York: Palgrave Macmillan.
- Juul, Jesper. 2005. *Half-real: Video games between real rules and fictional worlds*. Cambridge, MA: MIT Press.
- Kramsch, Claire. 1993. *Context and culture in language teaching*. Oxford: Oxford University Press.
- Kramsch, Claire and McConnell-Ginet, Sally. 1992. *Text and context: Cross-disciplinary perspectives on language study*. Canada: Heath and Company.
- Kress, Gunter. 2003. *Literacy in the new media age*. London: Routledge/Falmer.
- Lankshear, Colin and Knobel, Michele. 2006. *New literacies: Changing knowledge and classroom learning (second ed.)*. Philadelphia: Open University Press.
- Lankshear, Colin and Knobel, Michele. 2007. Sampling “the new” in new literacies. In *A New Literacies Sampler*, eds. Colin Lankshear and Michele Knobel, 1-24. New York: Peter Lang.
- Lantolf, James. 1997. Language play and the acquisition of L2 Spanish. In *Contemporary Perspectives on the Acquisition of Spanish. Volume 2: Production, Processing and Comprehension*, eds. William Glass. and Ana Teresa Perez-Leroux., 3-24. Somerville, Mass.: Cascadilla Press.
- Lantolf, James, & Thorne, Steven L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press.
- Lee, Joey, & Hoadley, Chris. 2007. Leveraging identity to make learning fun: Possible selves and experiential learning in massively multiplayer online games (MMOGs). *Innovate*, 3(6).
<http://innovateonline.info/index.php?view=article%id=348>.
- Lenhart, Amanda., Kahne, Joseph., Middaugh, Ellen, Macgill, Alexandra, Evans, Chris, & Vitak, Jessica. (2008). Teens, video games, and civics. *Pew Internet & American Life Project*, Washington, D.C.
<http://www.pewinternet.org>. Accessed 14 October 2008.
- Miller, Megan and Hegelheimer, Volker. 2006. The SIMS meet ESL: Incorporating authentic computer simulation games into the language classroom. *Interactive Technology & Smart Education*, 4: 311-328.
- Murray, Janet. 2004. From game-story to cyberdrama. In *First Person: New Media as Story, Performance, and Game*, eds. Noah Wardrip-Fruin and Pat Harrigan, 2-11. Cambridge, MA: MIT Press.
- Nardi, Bonnie, Ly, Stella, and Harris, Justin. 2007. Learning conversations in World of Warcraft. The proceedings of the *2007 Hawaii International Conference on Systems Science*. New York: IEEE Press.
- National Summit on Educational Gaming. 2005. National Summit on Educational Games Fact Sheet.

- www.fas.org/gamesummit/Resources/Fact%20Sheet.pdf. Accessed 15 March 2008.
- New London Group. 1996. A pedagogy of multiliteracies. *Harvard Educational Review*, 66(1): 60–92.
- Peña, Jorge and Hancock, Jeffrey. 2006. An analysis of socioemotional and task communication in online multiplayer video games. *Communication Research*, 33(1): 92–109.
- Pica, Teresa, Kanagy, Ruth and Falodun, Joseph. 1993. Choosing and using communication tasks for second language instruction. In *Tasks and Language Learning: Integrating Theory and Practice. Vol 1*, eds. Graham Crookes & Susan Gass, 9-34. Clevedon, England: Multilingual Matters.
- Prensky, Mark. 2001. *Digital game-based learning*. St. Paul, MN: Paragon House.
- Prensky, Mark. 2005. Computer games and learning: Digital game-based learning. In *Handbook of Computer Game Studies*, eds. Joost Raessens and Jeffrey Goldstein, 97-122. Cambridge, MA: MIT Press.
- Purushotma, Ravi. 2005. You're not studying, you're just... *Language Learning and Technology*, 9(1): 80-96.
- Purushotma, Ravi, Thorne, Steven L., and Wheatley, Julien. (2008). Language learning and video games. Paper produced for the *Open Language & Learning Games Project, Massachusetts Institute of Technology*, funded by the William and Flora Hewlett Foundation.
<http://knol.google.com/k/ravi-purushotma/10-key-principles-for-designing-video/27mkxqba7b13d/2>. Accessed 10 May 2009.
- Ranalli, Jim. 2008. Learning English with *The Sims*: exploiting authentic computer simulation games for L2 learning. *Computer Assisted Language Learning*, (5): 441 – 455.
- Reinhardt, Jonathon & Thorne, Steven L. (forthcoming in 2009). Technology-mediated language awareness and bridging activities. University Park, PA: CALPER.
- Richards, Jack and Rodgers, Theodore 2001. *Approaches and methods in language teaching*. Cambridge University Press.
- Salen, Katie and Zimmerman, Eric. 2005. Game Design and Meaningful Play. In *Handbook of Computer Game Studies*, eds. Joost Raessens and Jeffrey Goldstein, 59-80. MIT Press.
- Salmani-Nodoushan, Mohammad Ali. 2007. Greeting forms in English and Persian: A socio-pragmatic perspective. *Pakistan Journal of Social Sciences*, 4(3): 355-2007.
- Sawyer, Ben. and Smith, Peter. (2008). Serious games taxonomy. *Serious Games Initiative*. <http://www.dmill.com/presentations/serious-games-taxonomy-2008.pdf>. Accessed 15 March 2008.
- Shaffer, David and Clinton, Katherine. 2006. Toolsforthoughts: Reexamining thinking in the digital age. *Mind, Culture, and Activity*, 13,4: 283–300.
- Squire, Kurt. D. and Steinkuehler, Constance. 2006. Generating CyberCulture/s: The case of Star Wars Galaxies. In *Cyberlines 2.0 languages and cultures*

- of the internet*, eds. Donna Gibbs & Kerri-Lee Krause, 177-198. Albert Park, Australia: James Nicholas Publishers.
- Smith, Harvey. 2003. Orthogonal Unit Differentiation. Presentation at Game Developers Conference, 2003.
- Smith, Bryan. 2004. Computer-mediated negotiated interaction and lexical acquisition. *SSLA*, 26, 365-98.
- Steinkuehler, Constance. 2006. Massively multiplayer online videogaming as participation in a Discourse. *Mind, Culture, & Activity*, 13(1): 38–52.
- Steinkuehler, Constance. 2007. Massively multiplayer online gaming as a constellation of literacy practices. *eLearning*, 4: 297–318.
- Steinkuehler, Constance. 2008. Massively multiplayer online games as an educational technology: An outline for research. *Educational Technology*, 48(1): 10–21.
- Sykes, Julie. 2008. A dynamic approach to social interaction: Synthetic immersive environments and Spanish pragmatics. Unpublished Doctoral Dissertation, Department of Spanish and Portuguese, University of Minnesota, Minneapolis, MN.
- Sykes, Julie. 2009. Learner Requests in Spanish: Examining the Potential of Multiuser Virtual Environments for L2 Pragmatic Acquisition. In *The Second Generation: Online collaboration and social networking in CALL*, eds. Lara Lomika and Gillian Lord. CALICO Monograph.
- Sykes, Julie, Oskoz, Ana, and Thorne, Steven L. 2008. Web 2.0, synthetic immersive environments, and the future of language education. *CALICO*, 25(3): 528–46.
- Tarone, Elaine. (2000). Getting serious about language play: language play, interlanguage variation and second language acquisition. In *Social and Cognitive Factors in Second Language Acquisition. Selected Proceedings of the 1999 SLRF*. eds. Bonnie Swierzbis, F. Morris, M. E. Anderson, C. A. Klee and Elaine Tarone, 31-54. Somerville, Mass.: Cascadilla Press.
- Taylor, T.L. 2006. *Play between worlds: Exploring online game culture*. Cambridge: The MIT Press.
- Terdiman, Daniel. 2008. 'Spore' hits a million copies sold since launch'. Cnet News. September 24, 2008. http://news.cnet.com/8301-13772_3-10050147-52.html
- Thorne, Steven L. 2003. Artifacts and cultures-of-use in intercultural communication. *Language Learning & Technology*, 7(2): 38–67.
- Thorne, Steven L. 2006. Pedagogical and praxiological lessons from internet-mediated intercultural foreign language education research. In *Internet-mediated intercultural foreign language education*, eds. Julie Belz and Steven L. Thorne, 2-30. Boston, MA: Thomson and Heinle.
- Thorne, Steven L. 2008. Transcultural communication in open internet environments and massively multiplayer online games. In *Mediating discourse online*, ed. Sally Magnan, 305-327. Amsterdam: John Benjamins.
- Thorne, Steven L. 2009. 'Community', semiotic flows, and mediated contribution to activity. *Language Teaching*, 42(1): 81–94.

- Thorne, Steven L., and Black, Rebecca. 2007. Language and Literacy Development in Computer-mediated Contexts and Communities. *Annual Review of Applied Linguistics*, 27: 133-160.
- Thorne, Steven L., and Black, Rebecca W. Forthcoming. Identity and interaction in Internet-mediated contexts. In *Negotiating the Self in a Second Language: Identity Formation and Cross-cultural Adaptation in a Globalizing World*, ed. Christina Higgins. New York: Mouton de Gruyter.
- Thorne, Steven L., Black, Rebecca. W., and Sykes, Julie. (accepted, forthcoming in 2009). Second Language Use, Socialization, and Learning in Internet Internet Communities and Online Games. *Modern Language Journal*, 93.
- Thorne, Steven L. and Reinhardt, Jonathon. 2008. Bridging activities, new media literacies, and advanced foreign language proficiency. *CALICO Journal*, 25(3): 558-572
- Vygotsky, Lev S. 1978. *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.