

## Chapter 44

# Contextualizing Language Learning With Street View Panoramas

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### ABSTRACT

*The latest street view technology enables language learners to look around and navigate interactively from remote worldwide locations via the internet. In addition to the enhanced feeling of immersion, the realistic scenes in a street view panorama help to represent the real world and make language learning more engaging and meaningful. This chapter explores the potential for extending a virtual English as a foreign language classroom with online street view panoramas. The program aims to create an immersive environment within which students complete a task-based learning activity; the task design is based on Schank's (1996) goal-based scenarios. The results reveal that street view technologies hold great potential to enhance language learners' communicative competence. Future research is needed to look into learners' experience in this new learning environment and to examine the use of street view panoramas in other disciplines.*

### INTRODUCTION

Contextualizing learning reflects the belief that allowing language learners to use language appropriately in context is the best practice to engage language learners. It has been suggested that “appropriate language use is learned through context” (Opp-Beckman & Klinghammer, 2006a, p. 8). Language is best learned in an authentic context since learning is situated in the context, activities and culture (Lave, 1988). Additionally, Brown, Collins and Duguid (1989) argued that “situated cognition,” a theory that suggests that knowledge construction, which is situated in context, is critical for learning. They also emphasized one important constituent aspect, “cognitive apprenticeship,” whereby learners are stimulated and guided to acquire and employ cognitive tools and participate actively in authentic activities and situations bound

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to sociocultural and physical contexts. The role of situated cognition has been applied and emphasized in the context of language and learning. For instance, Gee (2004) indicates researchers involved with situated cognition research generally hold the view that “language is tied to *people’s experiences of situated action in the material and social world*” (p. 44). Accordingly, learning in context makes language learning and use more “situated” by linking language activities and instruction to authentic material and social contexts. This helps activate students’ prior knowledge and experiences, and strengthens their ability to use language appropriately, according to the context.

Success in learning English as a foreign language (EFL) seems to be closely connected with authentic and practical use of English in real-life contexts. The lack of real-life contexts of using the target language leads to less situated and meaningful language learning in many EFL settings. Contexts provided by virtual environments create wide-ranging possibilities for both situated and meaningful language learning. Meaningful learning has five defining characteristics: *active, constructive, intentional, authentic, and cooperative* (Howland, Jonassen, & Marra, 2011; Jonassen, 1995). The contextual affordances of new technologies, e.g., avatar-based virtual worlds, give learners opportunities “to engage in goal-driven activity, authentic interactions, and collaborative problem-solving” (“Situated Cognition,” 2015, “Perceiving and acting in avatar-based virtual worlds,” para. 2). The context of virtual environments holds tremendous promise in terms of engaging learners in contextualized and meaningful language learning.

The incorporation of Google Street View (Google, 2007; Microsoft, 2009), which provides numerous vivid street-level panoramic views on a global scale into virtual environments, may be regarded as a response to the need for real-life contexts for meaningful language learning. Street View therefore supports the potential of educational technology to facilitate language learning and instruction in the context of situated recognition, and is particularly useful for providing language learners with authentic contexts and real-life situations within which language learning and use can take place. Furthermore, to maximize active, intentional and cooperative construction of knowledge and authenticity in language learning, we adopted the latest street view panorama technology with 3D avatars, which enables language learners to be immersed in a virtual environment comprised of realistic street views. Learners have the freedom to navigate this virtual environment by controlling their animated avatars. At the same time, they interact authentically and accomplish goal-oriented tasks collaboratively with other learners by employing text/voice chat. Both Street View technology, incorporating a large number of 360° street-level images, and panorama technology that allows users to view a given scene from arbitrary viewing angles, provide considerable potential for contextualizing meaningful language learning.

Despite the considerable potential, the incorporation of street view panorama technologies is only a preliminary step toward making language learning contextualized and meaningful. Researchers (e.g., Montoro & Hampel, 2011) also emphasize the paramount importance of task design. Therefore, we designed goal-based activities to engage learners in meaningful language learning. These activities encourage them to discover new ideas and solve problems, as well as interact and cooperate with their partners as they navigate the street view panoramas. This allows language learners to be exposed to and participate in situated real world landscapes representing the physical architecture, as well as the intangible atmosphere, of the target language and culture. The incorporation of street view panoramas, virtual environments, 3D avatars and goal-based tasks was intended to engage learners in the meaningful practice of language learning in contexts. While street view panorama technologies and goal-based learning tasks hold great potential to help achieve contextualized and meaningful language learning in theory, it is still unclear how this combination of technologies and pedagogical models would serve to

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