Pervasive Games and Mobile Technologies for Embodied Language Learning

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ABSTRACT

Thanks to the rapidly increasing adoption of mobile communications and wireless technologies, language educators are now empowered to sculpt interactions and design learning experiences using the real world as their canvas. City streets, shopping centres, cafés, and cemeteries can be augmented with new layers of meaning and narrative as learner-players use their language skills to navigate the chaotic and unpredictable environment of everyday life and achieve their objectives. Spatially expanded games provide a natural way to situate language production in context-rich, authentic settings, in contrast to the comparatively sterile confines of the traditional classroom. They are multimodal, multi-sensory, and highly personal immersive experiences. This paper explores the potential of technology-enhanced pervasive urban games for language learning and the pedagogic and philosophical foundations upon which these ideas are based. Examples are provided from an ongoing location-based research project.

Keywords: Embodied Interaction, Game Design, Language Learning, Mobile Technologies, Pervasive Games

INTRODUCTION

Embodiment, Space, and Meaning

Across the Cartesian divide, movement prefigures the lines of intentionality, gesture formulates the contours of social cognition, and, in both the most general and most specific ways, embodiment shapes the mind. (Gallagher, 2005)

In How the Body Shapes the Mind (2005, p. 206) philosopher and cognitive scientist Shaun Gallagher argues for the centrality of the body in how we perceive the world and interact with others. He rejects the idea that we understand others predominantly on a conceptual level, either by employing theoretical models, “... postulating the existence of mental states in others and using such postulations to explain and predict another person’s behavior.” or through the use of mental simulations to “emulate what must be going through the other person’s mind” as a form of “imaginary rehearsal.” Instead, Gallagher takes a more pragmatic stance based on the phenomenological viewpoint that our “... primary and usual way of being in the world is pragmatic interaction (characterized by action, involvement, and interaction based on environmental and contextual factors), rather than mentalistic or conceptual contemplation...”
(Gallagher, 2005, p. 212) and suggesting that we “…think of communicative interaction as being accomplished in the very action of communication, in the expressive movement of speech, gesture, and the interaction itself…” (Gallagher, 2005, p. 212).

Typically, classroom language pedagogy and teaching materials also implicitly define the process of second language acquisition as an internal, cerebral process. This is largely the legacy of nineteenth century industrial schooling and is expressed in both the design and affordances (Gibson, 1986) of physical learning spaces and the sociocultural conventions that guide behaviour within them. Language is commonly treated as particulate and this is commonly articulated through the dissection and analysis of the second language (L2) and its component parts. The course materials come pre-packaged and represent knowledge in discrete, rational and usually linear chunks. This pedagogic tradition, stemming from the application of Cartesian and Enlightenment principles, has survived through the mangle of Taylorism and Fordism to reach the classrooms of the 21st century as a stubborn anachronism.

Charts and tables containing prescriptive grammar rules and lists of non-transitive phrasal verbs are a staple of L2 course books, together with drilling exercises, vocabulary lists, sanitised role-play and linguistically sterile listening comprehension tests. The experience of classroom language learning is all too often cognitively rather than contextually weighted, and might be compared to attempting to learn to drive by studying car mechanics. The goal is complex, nuanced, socially embedded and physically embodied and yet the process is streamlined, sequential and dissociated from everyday settings. Context and communicative authenticity become peripheral considerations as learning is mediated through the reductive filter of metalinguistic grammatical rules and learners struggle to reconstruct meaning from component parts. This is also a consequence of both the inherent and perceived affordances of the learning spaces in which language is commonly taught, i.e., classrooms. According to James Gee,

Learning does not work well when learners are forced to check their bodies at the schoolroom door like guns in the old West. School learning is often about disembodied minds learning outside any context of decisions and actions. When people learn something as a cultural process their bodies are involved because cultural learning always involves having specific experiences that facilitate learning, not just memorizing words. (Gee, 2004, p. 39)

In recent years, however, there has been increased interest in more phenomenological approaches to learning which traverse the Cartesian boundary by shifting focus to the lived experience of language learning as it is embedded in the life-world (Husserl, 1936) of the learner. This has led to a shift towards theoretical frameworks which emphasise the importance of the sociocultural aspects of learning (situated cognition, social constructivism, cognitive linguistics, connectivism and embodied cognition to name but a few). This has resulted in what is now a broad multi-disciplinary awareness of the importance of context, intentionality, emergence and embodiment in understanding how we learn and the nature of human experience. There is also a growing body of evidence to support the “situatedness” of human behaviour from the overlapping fields of ecological and environmental psychology (Gibson, 1977; Barker, 1969) and human-computer interaction (HCI) (Dourish, 2001) in the context of learning environments.

Although these shifts have been somewhat slow to transfer to the practice of everyday classroom language teaching there is now, generally, an increased focus on less prescribed instruction and more interactive heuristic approaches such as Content-based Instruction (CBI), (Brinton, Snow, & Wesche, 2003) Content and Language Integrated Learning (CLIL) (Mehisto, Marsh, & Frigos, 2008), Task-based Language Learning (TBLL) (Prahbu, 1987), and the Dogme English Language Teaching (Dogme ELT) movement and methodology (Meddings & Thornbury, 2009). However, while these approaches de-emphasise the structural accuracy of L2 in favour
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