Chapter IX
Digital Natives, Learner Perceptions and the Use of ICT

George R. MacLean
Tsukuba University, Japan

James A. Elwood
Tsukuba University, Japan

ABSTRACT
Prensky (2001) posited the emergence of a new generation of “digital natives” fluent in the language of cyberspace and familiar with the tools of user-generated content. If correct, the existence of this group would necessitate a thorough reconsideration of pedagogy to meet their radically different learning needs, which dovetail with the nascent Web 2.0 and its communities of users. The study examined in this chapter addressed a series of questions about the implications of digital natives in Japan, and found contemporary users of technology to be in firm control of only a limited number of skills. Learner use and perception of technology appeared to be mediated by several variables: technological proficiency or the lack thereof, tradition, willingness to use technology (WUT), and gender. The research instruments utilized in this chapter were analyzed and found to be psychometrically adequate. It is argued that these categories and scales will provide a useful resource for further attempts to understand the potential of Web 2.0 and the concept of the digital native in other educational traditions and contexts.

INTRODUCTION
In a sequence familiar to millions of readers of Dr. Seuss, a nameless, behatted gentlemen is persuaded over the course of a book to answer that timeless question: Would you eat green eggs and ham? Sam, a most persistent sort, pursues our nameless hero through thick and thin, finally achieving his goal after a spectacular train crash that leaves the crew and passengers soaking wet. As many 5-year-olds (and, of course, adults) can attest, the green eggs and ham are a smashing
success. Central to this study was a similar question, specifically about learners’ use and perceptions of technology in classrooms. Computers have now been a part of many people’s lives for a full generation, leading to what Prensky (2001) termed “digital natives” and “digital immigrants.” In Prensky’s formulation — analogous to what happens in language acquisition — natives grow up immersed in and thereby acquire their first language (L1) and culture (C1), which in Prensky’s paradigm are digital language and culture. Those not fortunate enough to have that immersion experience can never completely acquire that L1 and C1, retaining instead a “digital accent” much as geographical immigrants do when learning a second language (L2) and culture (C2).

Moreover, Prensky points to the problems inherent in having non-native instructors in charge of education in the digital language. He suggests that digital-native students are fundamentally different to traditional (i.e., non-digital-native) students and thus require a new pedagogy. As an example, Prensky suggests that digital natives are used to receiving information quickly, multi-tasking, and parallel processing. Immigrants, however, are used to slower information, uni-tasking, and linear processing, and digital-immigrant teachers thus expect students to deal with tasks in a more traditional fashion that does not suit many of them well.

In the sphere of second language learning, this hypothesis appears at least superficially true. Even today, in many pedagogical situations learners and teachers alike fail to utilize technology effectively, if at all, in spite of its immense promise. Web 2.0, for example, moves beyond the static delivery of information or tasks such as publishing in a traditional sense, which is simply the public presentation of one’s work. While presenting a work is an important pedagogical step (Bruner, 1986) and underpinned Web 1.0, it pales in comparison to the possibilities offered by Web 2.0. The nascent Internet or Web 1.0 was and remains similar to a textbook in being an inert object devoid of meaning until acted upon or engaged with, whereas the interaction of a person or people with that book (Web 2.0) yields something far from inert or meaningless. That basic premise, what O’Reilly (2005) termed the creation of a community, finds an appropriate equivalent in L2 acquisition theory in Holliday’s (1999) “small cultures,” which refer to groups of individuals with shared interests. In O’Reilly’s (2005) delightful words, “a conversational mess of overlapping communities” emerges, illustrating the basic, interactive premise of Web 2.0.

Against this tapestry of immense albeit nascent potential, the question persists of how educators are progressing in fulfilling that vast promise. With Internet access, digital natives as students, and beleaguered digital immigrants as instructors, why is technology used sparingly, inefficiently, or ineffectively? Answers may lie with instructors that simply do not speak the language of digital natives as Prensky suggested, or those answers might lie elsewhere. Limited availability of and proficiency with technological media may inhibit tapping the potential of the Internet and its Web 2.0 components. Moreover, recent research suggests that the much-heralded generation of digital natives may in fact be very minimally proficient speakers of this new web language (e.g., Bennett, Maton, & Kervin, in press; Kennedy, Krause, Judd, Churchward & Gray, 2006; Kvavik, 2005; Kvavik, Caruso & Morgan, 2004). In short, contemporary students may lack skills with technology or the propensity toward using it.

This situation stems at least in part from the fact that current understanding falls short of fully explaining how learners (including education students) experience technology, as well as how they perceive it when it is presented to them in pedagogical situations. The current study looks at one pillar of this dynamic, namely, the learner. These learners of English as a Foreign Language (EFL) were in Japan, and replications of this study, both in Japan and abroad, would be prudent steps. Furthermore, the second important pillar of