

OJIBWE LANGUAGE REVITALIZATION, MULTIMEDIA TECHNOLOGY, AND FAMILY LANGUAGE LEARNING

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Although Indigenous language loss and revitalization are not new topics of academic work nor new areas of community activism (e.g., King, 2001; Grenoble & Whaley, 2006), increased attention has been paid in recent years to the ways that new technology can support efforts to teach and renew endangered languages such as Ojibwe. However, much of the work with Indigenous languages and technology thus far has been aimed at adults rather than children or families (e.g., Coronel-Molina, 2005). Addressing this gap, the current project examined how urban Ojibwe participants utilized computer-based language learning technology with their families at home. Specifically, we investigated how a particular multimedia tool might jumpstart communication in the Ojibwe language at home. During the two-month study, families were regularly video-taped using the software and participated in weekly audio-video recorded interviews regarding their language use and learning. Presented here is a fine-grained, qualitative analysis of two families' language and technology use. Findings suggest that technology-based language learning was incorporated into existing family dynamics and was helpful in providing a starting point for learning and language use within established extended networks.

Key words: Ojibwe, Language Revitalization, Multimedia Technology, Indigenous, Native American, Language Renewal

INTRODUCTION

In the United States, there are estimated to be fewer than 1,000 living speakers of Ojibwe, a Native American Indigenous language, and most of these speakers are elderly (Treuer & Paap, 2011.) If the language is not transmitted to younger generations within the next decade, Ojibwe, like hundreds of other Native American languages before it (Krauss, 1992), could cease to be a living language. Although Indigenous language loss and revitalization are not new topics of academic work nor are they new topics in the field of community activism (e.g., King, 2001; Grenoble & Whaley, 2006), increased attention has been paid in recent years to the ways that new technology can support efforts to teach and renew endangered languages such as Ojibwe. However, much of the work with Indigenous or less-commonly taught languages and technology thus far has been aimed at adults, often in contexts of higher education (Coronel-Molina, 2005) or the workplace (Nielson, 2011). Little is known about how technology might be useful to Indigenous language learning among children and families in informal contexts. Addressing this gap, this research project examined how a recently developed multimedia software program, *Ojibwemodaa*, was used by families at home. Below, we provide an overview of the role of technology in Indigenous language revitalization generally, of the Ojibwe language, and of *Ojibwemodaa* software. We then move to a description of our research methods and analysis of how *Ojibwemodaa* was used by these families, and lastly we consider the potential of *Ojibwemodaa* for jumpstarting communication in the Ojibwe language in the home.

Technology and Indigenous Language Revitalization

Research on Indigenous language revitalization points to the importance of local control and community decision-making (Eisenlohr, 2004). Indeed, decades of evidence from around the globe indicates that successful language revitalization efforts are rooted in community initiative, investment, and commitment (Fishman, 2001). From this vantage point, the crucial question concerning the appropriate role of technology in Indigenous language revitalization is, "How can community members effectively use

technology in their efforts to revitalize a language?”

With respect to this question, research to date suggests three possible routes for effective use of technology by communities: (a) communicative use, (b) materials production, and (c) documentation. To the first point, McHenry (2002) suggests that the internet might represent “a new context of usefulness” for communication in Indigenous languages (p. 102). Such communication can subvert the pervasive stereotypical distinction of Native languages as traditional and English as modern. Second, others have identified technologies as potentially both the means and modes of production; that is, technology allows communities to rapidly create and distribute language materials and resources (e.g., Hermes, Bang, & Marin, 2012; Kroskrity & Reynolds, 2001). Importantly, as design, distribution, and knowledge production surrounding Indigenous languages moves towards community or local control, opportunities are created for local decision-making and representation. A third area for use of technology in revitalization efforts is the adaptation of technology for documentation and archival efforts (Francis & Navarrete, 2009; Grenoble & Whaley, 1998; Jancewicz & MacKenzie, 2002). The present investigation of *Ojibwemodaa* use within families extends these lines of work by examining how technology might promote Indigenous language use beyond the domain of the technology. That is, what are the ways in which families use a particular language learning technology in their homes and how might this eventually promote face-to-face communication for an endangered and less commonly taught language such as Ojibwe?

Context and theoretical framework

Ojibwe is an Algonquian language, and belongs to one of the largest Indigenous language groups within North America. Ojibwe (or Chippewa or Anishinaabem) has an estimated 50,000 speakers across the United States and Canada (see Figure 1). With an estimated 500–700 first speakers¹ of Southwestern Ojibwe, the most endangered dialect of Ojibwe, currently there is a strong grass-roots push for revitalization. Encouraged by language tables,² language immersion camps, wide-spread second language or heritage Ojibwe classes, and recently, Ojibwe immersion schools, second language learners of Ojibwe



Figure 1. Map of current Ojibwe- (Anishinaabe-) speaking communities. (Lippert, 2007).

are struggling to find effective ways to learn a language that they rarely, if ever, hear spoken in everyday conversations. Since 1850, however, there has been good documentation of this language (Baraga, 1850). With the recent addition of a searchable on-line dictionary ([Ojibwe People's Dictionary](#), 2012), these resources play an important role in formal and informal instruction.

As is evident from [Figure 1](#), Ojibwe speakers are geographically dispersed across more than eight U.S. states and four Canadian provinces. In Minnesota alone, Ojibwe speakers are spread across the northern half of the state, residing in seven different reservations, but also in small towns or urban centers such as Minneapolis/St. Paul and Duluth. In part due to the Indian Affairs' Relocation policy (1953–1960), many Ojibwe have grown up in urban areas. Of the estimated 84,000 Indigenous people in the state of Minnesota, 42,000 reside in the urban areas of St. Paul/Minneapolis (National Urban Indian Family Coalition, 2008).

In light of these demographic factors, urban homes are a crucial context of Indigenous language learning. Although urban Native populations largely have been ignored by researchers and funders (often in favor of what are perceived to be more “authentic” reservation sites), there is active demand for and interest in language revitalization support by urban residents. Further, although scholars and supporters of language revitalization have long pointed to the home as a critical domain for language transmission (Fishman, 1991), most advocacy efforts, including those focused on Ojibwe, have emphasized formal, school contexts of learning (Fishman, 2001). In fact, a major line of Ojibwe language revitalization work in Northern Minnesota and Wisconsin has been the development of Ojibwe immersion schools. Following the Waadookodaading Ojibwe Language Immersion School at Lac Courte Oreilles, Wisconsin, in 2001 (Hermes, 2004, 2007), three additional elementary/preschool immersion programs are currently in operation, and at least four more pre-schools are in the planning stages.

Despite these efforts, to date few adults have learned Ojibwe to a high proficiency level as a second language (John Nichols, 2008, personal communication). Those who have acquired such proficiency learned through a combination of ad-hoc master-apprentice methods (Hinton, Vera, & Steele, 2002); classes and teaching when available; and by participation in Ojibwe-language interactional opportunities (e.g., ceremonies). With only a handful of young proficient speakers, there is an urgent need to capitalize upon the alleged 5–8 years it takes a heritage language learner to become highly proficient (Brendan Fairbanks, 2012, personal communication). Indeed, the shortage of fluent teachers is a major challenge for the growing number of immersion schools.

Also problematic is that fact that while school efforts can provide much needed support and status for Indigenous languages (Hornberger & King, 1996), they also tend to transform that language, both in form and in function, into an academic, frozen, and culturally disconnected register. Decades of research have indicated that school-based efforts—while effective in teaching some vocabulary and grammatical structures alone—tend not to promote use and transmission of the language outside of school (e.g., Hornberger, 1997; 2008; King, Schilling-Estes, Fogle, Lou, & Soukup, 2008). Children learn any language most effectively when surrounded by, and engaged in, meaningful conversations with those close to them in the target language. Optimally, these conversations, which provide rich incentives and opportunities for language learning and use, take place at home with family (Philp, Oliver, & Mackey, 2008). This intergenerational, family-based activity is not easily replicated in classrooms, which typically are teacher-fronted and age-segregated, tending to focus on reading, writing, and academic skills. For language revitalization efforts to be successful, they need not just to instruct the language in formal or school domains, but to promote its use and transmission across generations in informal contexts such as the home and family.

Emphasizing this essential point, Joshua Fishman's pioneering work (1991, 2001) in reversing language shift introduced a theoretical framework for both evaluating and planning language revitalization efforts. This model emphasizes the importance of re-establishing intergenerational transmission of the

endangered minority language. While there is broad consensus that intergenerational transmission is crucial to safe-guarding a threatened language, much less is known about how this is best accomplished. Research on family language policy (FLP) has attempted to shed light on this by bringing together studies of child language acquisition and bilingualism on the one hand, with those of language policy on the other (King, Fogle, & Logan-Terry, 2008). This line of inquiry differs from more psycholinguistically oriented investigations of bilingualism in that rather than targeting the child in isolation, the emphasis of FLP is on the balance and use of languages within the family unit. Thus, FLP addresses child language learning and use as functions of parents' ideologies, decisions, and strategies concerning languages, as well as the broader social and cultural context of family life.

While FLP has greatly enhanced our understanding of how families make and implement decisions about language learning and resulting impacts on child language development, the bulk of this work to date has focused on families with very young children (King & Fogle, 2013). Much less is known about how this process of establishing intergenerational transmission potentially takes place in homes in which children are beyond infancy, and even less still about contexts in which both children and parents are attempting to learn the language. Of particular importance for these families is both support for, and insight into, how less commonly taught language such as Ojibwe might make the transition from a language of formal instruction, to part of the communicative repertoire of the home.

In light of these demands, *Ojibwemodaa* multimedia software was created to provide users with a naturalistic, simulated language-immersion experience, which could be easily accessed in homes. *Ojibwemodaa* was designed to be used in a self-guided multimedia environment. Yet very little is known about how learners engage with such software, or the potential impact on Ojibwe language use in the home. The aim of this project, then, was to explore how this new multimedia software is used by families at home, and how might it promote language learning and use in every day contexts.

Ojibwemodaa software³

Ojibwemodaa provides a simulated-immersion experience for Ojibwe language learners. Through a participatory process, community members worked with a non-profit organization (Grassroots Indigenous Multimedia) to create original, improvised language content based on everyday conversations. Supported by a federal grant, and collaborating with a for-profit company (Transparent Language), *Ojibwemodaa* was created with both community input and a software company's expertise (Hermes et al., 2012). Although the software engine itself is not an innovative design, the content based on conversation with speakers of the endangered language is unique. Nineteen original short movies depicting the conversations of native Ojibwe speakers (of different Ojibwe dialects) provide the content for the main software and a secondary computer-based flashcard list called *Before You Know It (BYKI)*. These two pieces together allow learners to move between the context of the conversation and the more isolated practice of the flashcards (see Figure 2). The content of the movies was semi-scripted by community members present at the time of recording, resulting in semi-staged conversational use of Ojibwe. The aim was to create the language content for the software from conversational use of the language.

This content is the basis for the flashcards, as well as games, self-paced scoring, progress tracking, and contextualized pronunciation practice. *Ojibwemodaa*'s movie clips generate more than 2,500 unique lexical items, and more than 3,500 flashcards. Interactive games, grammar on demand quizzes, pronunciation practice with voice recognition software, and recorded conversation practice are included. Organized into five areas (theater, reading, activities, pronunciation, and conversation), the software provides opportunities for listening, written practice, and quasi-interactive speaking practice.⁴ (See Cotter, 2002, for a review of similar software for the Irish language.) In short, *Ojibwemodaa* aims to provide an engaging Ojibwe language learning experience, with some simulated, immersion-like components. This is particularly crucial given the limitations of formal instructional programs and that most learners do not live in Ojibwe-speaking homes or communities.



Figure 2. Screen shot from *Ojibwemodaa!*

RESEARCH DESIGN

In order to investigate how learners would make use of such software at home, eight metro-area families—all with school-age children and all interested in promoting Ojibwe language use—were recruited to participate in an eight-week study. The present analysis focuses on just two families who fully completed the study. Participating families were given a copy of *Ojibwemodaa*, encouraged to try to use the software each day, and asked to keep a daily log of their *Ojibwemodaa* activities. Researchers explained that the broad aim of the research was to see how families used the software to learn Ojibwe.

Data Collection and Analysis

Participating families were visited weekly by one of three researchers (Hermes, King, or a paid research assistant, who was also an Ojibwe learner). During these visits, families were interviewed (on video-tape) regarding their language use, learning, and *Ojibwemodaa* activities, and then video-taped using the software. As the focus here was not on acquisition of Ojibwe, but on patterns of software and language use, participants' proficiency levels were not formally tested. Each of these interview and observation sessions were 20–30 minutes in length, and home visits generally lasted 60–90 minutes. During the final

weeks of the study, families were asked to self-record everyday family talk (without researchers' presence), and also to complete a survey designed to investigate their networks of Ojibwe language users, and opportunities to use the language with others. Families who completed the study were given a \$100 gift card to a major chain store.

Recordings were then reviewed jointly by the two lead researchers (Hermes and King), and excerpts were transcribed and analyzed using standard discourse analysis techniques (De Fina, 2003) with an eye to understanding varied patterns in using *Ojibwemodaa* software within the family context. Using qualitative discourse analysis techniques standard within research on family language policy (King & Fogle, 2013), the focus was on the range of ways in which parents and children used the software. Interviews were analyzed to gain an understanding of family members' perspectives on language learning; the role of *Ojibwemodaa* in promoting learning; and their perceived challenges, concerns, and successes with using it. Both data sources were also analyzed with an eye to understand how software use might lead to face-to-face (that is, off-line) communication in the language.

Participants

Below we provide a comparative case study analysis of two families from the larger study which considered eight. The first family consisted of Eileen and her two boys, Trevor, 10, and Thomas, 8. Eileen and her family lived in a city apartment on a busy road in an area with a high concentration of Native residents. Both boys were enrolled in a local public school with a Native American language and culture emphasis, and also participated in numerous enrichment activities, many with a Native American focus. Nevertheless, the main language of the home was English (by all accounts and in all our observations), and the boys' proficiency level was informally assessed to be beginner-level. Eileen grew up in a large family in which English was the main language of communication, but Ojibwe was taught and used occasionally by her mother and father. Eileen's parents were native and fluent speakers of Ojibwe as children, but shifted to English dominance after their boarding school experiences. Her parents were part of the U.S. government policy of relocation in the 1950s, moving tribal members to urban centers, in this case, from the Red Lake Reservation to Minneapolis, and Eileen was raised in the Twin Cities. Eileen did not work outside the home and had not participated in formal education beyond high school. She had close relationships with her extended family, many of whom were latent or proficient speakers of Ojibwe, and spent much time each week supporting them (e.g., running errands, taking them to appointments). She described herself as having some passive, receptive skills, but lacking confidence in pronunciation.

The second family consisted of Melinda and her teenage son, Mic. Melinda and Mic lived in a suburban home on a quiet street 15 miles south of a large city. Mic was entering ninth grade in the area high school and also training for the football team over the summer (which coincided with study participation). Melinda had chosen this suburb because of the strong public school system, but was well aware that this choice came at the cost of fewer connections with other Native families. She grew up living in similar tensions in an English-speaking home in Chicago and with a father who had stressed education. Melinda's parents are deceased; they "knew words" of Ojibwe, but did not speak it themselves. Melinda, who described herself as a beginning language learner, held a Ph.D. in education and worked in educational evaluation and administration. Melinda and Mic had very limited or no opportunities to use Ojibwe in their local suburban community, and none within her extended family. Mic knew no more than a handful of Ojibwe words at the start of the project.

While there were substantial differences between the families in terms of age of children, parental levels of education, and proximity to other Ojibwe speakers, both mothers were committed to promoting Ojibwe learning and use in the home. As discussed below, both families incorporated *Ojibwemodaa* into family routines and dynamics in different ways while attempting to find a place for learning and using Ojibwe in the broader contexts of their lives.

Study Motivation and Participant Retention

All of the study participants were motivated by deeply felt connections to the Ojibwe language and culture. Indeed, we were overwhelmed by the enthusiastic response to the study's recruitment flyers. Within hours of posting announcements on a handful of list-servs for Native Minnesotans, we were inundated with more than 100 phone calls and emails from interested potential participants. Many messages included impassioned pleas to be accepted for the project, noting, for instance, that they "had been waiting a lifetime for the chance to learn the language."

Families were selected based on child age, location, and computer access. Parents in each of the eight selected families noted that they felt it was their duty and desire to learn the language of their ancestors, and to help to transmit it to their children. As is well documented in other contexts (Fishman, 1991), motivation for heritage language learning is in part about the desire to reinforce a personal, intimate connection to one's culture, heritage, and ancestors. For instance, Eileen commented (Week 8): "I'm doing it because there is a big need for it. It's very important because [otherwise] we are going to have a lost language. As a Native American, as an Ojibwe person, it's part of them [referring to her boys]."

This sort of motivation is powerful and important, and indeed, arguably differentiates heritage language learning from traditional foreign language study or from the study of other less commonly taught languages (Valdés, 2001). While all of our participating families spoke passionately about the importance of Ojibwe, many did not continue for the entire period of the study, with many citing lack of time and scheduling conflicts. As has been found in other recent investigations of self-study with language learning software (e.g., only 21% of Nielson's learners completed the first 10 hours of work with *Rosetta Stone*, 2011), participant attrition rates were high among our participants. The two focal families for the present paper, in contrast, were able to translate this deeply held personal motivation into a regular routine. Our analysis below highlights the variation in practices as well as shared dynamics across these two families.

FINDINGS

Below we describe how *Ojibwemodaa* was used by these families and consider the potential (and the limitations) of *Ojibwemodaa* for jumpstarting communication in Ojibwe language in the home. After reviewing and analyzing the video-taped interviews and transcripts as well as participants' interactions with the software, we identified several themes, which emerged inductively. Here we focus on the following themes: (a) how *Ojibwemodaa* fit within already established family dynamics; (b) how language learning was managed as a specific, task-oriented activity; and (c) how language learning entailed inversion of established parent-child roles. In the discussion, we extrapolate on these findings to consider the language use opportunities provided by the software, especially how *Ojibwemodaa* might help shift from learning Ojibwe as a school-like activity towards using the Ojibwe language for communication in the home.

***Ojibwemodaa* within Family Dynamics**

There is the oft-cited refrain that technology is eroding community and family relationships. As we all, and youth in particular, spend increasing numbers of hours engaged with screens (Common Sense Media, 2011), some fear that less time will be devoted to maintenance of interpersonal relationships. In fact, some Ojibwe leaders have suggested that technology is at odds with "traditional culture," and relationship building (see Foushee & Gurneau, 2010). This is particularly worrisome for language revitalization advocates as language is learned, used, and maintained precisely through such relationships and the interaction they entail.

Our analysis of families using *Ojibwemodaa*, in contrast, points to how the software has the potential to promote face-to-face, interpersonal interactions within the family. Indeed, we found that *Ojibwemodaa* was incorporated into already-established family dynamics although these dynamics differed sharply

across the two homes. For instance, Melinda and Mic's relationship was characterized by friendly rivalry and teasing as evident in their interviews and in observations. All of the interviews contained playful jibes or quips between mother and son, and even criticisms were delivered in a joking, light-hearted way. This is apparent in Excerpt 1, an early interview with the family, in which the researcher was asking them about their experiences with the software the previous week (translation conventions are found in [Appendix A.](#))

Excerpt 1 (Week 1)

Melinda: Yea, I really liked the software. It was really +/... it was kind of fun.

Researcher: Yea?

Melinda: Yea.

Researcher: That's good. What was fun about it?

Mic: Don't know.

Melinda: What he said about trying to match it up. You know trying to match up your pronunciation with [the]

Mic: +/... Sometimes we'd mess around.

Melinda: Sometimes *HE'D* mess around.

Mic: It was still pretty fun.

Researcher: How did you do with it too?

Mic: I did good.

Melinda: He does better than I do. Most of the time. When he's [doing it.]

Mic: [Trying]

Melinda: +/... When he's trying. It seems like it comes a lot easier to him.

This friendly competition and rivalry was motivational for both Melinda and Mic and made language learning engaging and collaborative. They noted multiple times in their interviews that it was more fun to work with *Ojibwemodaa* when they could do it as a game. This is illustrated in Excerpt 2 below. Here Melinda and Mic were playing a game using the *Ojibwemodaa* BYKI flashcards. They were taking turns providing the English or Ojibwe. Each person continued until three mistakes were made, what they called "three strikes," and then the other person got a turn. During Excerpt 2, Melinda was seated in front of the desktop computer and Mic slightly over to the side. Persia, the researcher was standing behind them with video-recorder. At the start of the excerpt, the computer flashcard showed the Ojibwe phrase: "*Gibii-onji-izhaa*" [You are coming for a certain reason] and Melinda was trying to think of what this meant in English. Mic became impatient and started to count down her remaining time.

Excerpt 2 (Week 5)

Mic: Good luck!

Melinda: I can't remember these!

Mic: I can't! I can't! I can't! ((mocking Melinda)) ((grabs the mouse))

Melinda: NO! ((loudly, in response to mouse grab))

Mic: Ten-twenty-nineteen-eighteen-seventeen->

Melinda: 'You are coming for some reason.' ((Her guess of the translation))

((Melinda flips card on software, which reads ‘You are coming for a certain reason.’))

Melinda: Ah! Oh!

Mic: That’s good. That’s right.

((Melinda moves to next card.))

Mic: ‘I wonder what she wants to ask me.’

Melinda: That’s so wrong!

((Melinda flips card, which reads *Awegonen waa-kagwejimigwen?*))

Mic: You are so wrong.

((Melinda flips card, which reads *Gibi-onji-izhaa*))

Melinda: ‘You are coming for a certain reason’

@@@@

Melinda: Oh @@@

Mic: Stupid stupid stupid ((hits head))

Melinda: I have strike one right?

Mic: hmmm

Mic: Give me a hint please.

Melinda: No hints.

Melinda: You’ve got one strike.

Computer: *Awegonen waa-kagwejimigwen*

Melinda: ‘You are coming for a certain reason.’

Mic: Oh strike two! @@@

Mic: I wonder what she wants to ask you.

Melinda: I got to remember that.

Mic: Nope nope it’s my turn! I’m not saying anything! I’m not going to help you. You didn’t help me yet.

In Excerpt 2 we see how the friendly rivalry between Mic and Melinda kept the relatively dull task of reviewing flashcards lively and engaging. Mic seemed to relish egging Melinda on, for instance, by counting down, and shouting “Strike three. You are out!” But he also commended and complimented her when she got one correct, saying “That’s good. That’s right.” This sort of competition transformed what was a potentially dry, solitary task into one that was richly interactive and interpersonal. In this way, the software provided another venue for spirited interaction and for mother-son connection.

Eileen’s relationship with her two sons, in contrast, was characterized by a greater emphasis on maintenance of hierarchical parent-child relationships. In part because of the younger age of her boys, but also because of Eileen’s belief that they benefited from a highly structured environment, Eileen closely monitored and managed their activities. Throughout the summer (which coincided with the family’s participation in the study), Eileen kept her boys enrolled in many structured activities including summer school and other enrichment classes and clubs. She also tightly managed their time at home with her.

Eileen's close monitoring of the boys' activities was also evident in the ways in which they used *Ojibwemodaa*. Thus, the software fit into already established interactional patterns in the home in which Eileen closely controlled the boys' activities. As evident in Excerpt 3, Eileen micro-managed the work of Thomas (age 8). In this excerpt, they were working on a pronunciation exercise; the software allows users to record themselves and then provides feedback on pronunciation accuracy. Learners can choose to hear the speaker say the word or phrase in the original video clip, or as an isolated re-dictated recording. The learner then records his or her voice and can compare the sound to the native speaker. Here Eileen was seated to the side of the laptop but had her fingers on the mouse; Thomas was in front of and closely leaned over the screen.

Excerpt 3 (Week 2)

Eileen clicks mouse to move to next item for pronunciation practice. On the screen is the Ojibwe word/phrase and English translation.

Computer: *mii sa iw* [[that's all]]

Eileen: Ready? You do this one. ((she clicks computer again))

Computer: *mii sa iw*

Thomas: *mii sa iw*

Eileen: Ready? Go. ((clicks record button on software))

Thomas: *mii sa iw*

Eileen: Listen. ((clicks play button on software))

Computer: *mii sa iw* ((plays Thomas's recording of this word))

Eileen: Listen. ((clicks play button on software again))

Computer: *mii sa iw* ((plays Thomas's recording of this word again))

Eileen: Little off ((referring to his pronunciation)) ((click ahead to next word/phrase))

Computer: *ahaw miizh asemaa*. [[Ok give her tobacco]]

Eileen: Ready?

Thomas: *ahaw miizh asemaa*

((Eileen clicks to play Thomas's recording))

Computer: *ahaw miizh asemaa*

((Eileen clicks to play Thomas's recording again))

Computer: *ahaw miizh asemaa*

((Eileen click ahead to next word/phrase))

Computer: *gidaa-odaapinaamin ina?* [[Shall we take it?]]

Eileen: You got it? Wanna listen again?

((Eileen clicks to play phrase again.))

Computer: *gidaa-odaapinaamin ina?* [[Shall we take it?]]

Eileen: *Gidaa*

Thomas: *Gidaa*

Eileen: *Gidaa-odaapinaamin*

Thomas: *Gidaa-odaapinaamin*

Eileen: *Ina*

Thomas: *Ina*

Eileen: Ready to say it now?

Eileen: Come on. We'll say it together then. How's that?

Eileen: *Gidaa-odaapinaamin ina?*

Eileen: 'Should we take him?'

Eileen: Listen. Here we go.

((Eileen clicks software to play her recording of this phrase.))

Computer: *Gidaa-odaapinaamin ina?* ((playing Eileen's voice))

((Eileen smiles and looks at Thomas, and then clicks to new one.))

Eileen: Whoops. We got to go to the next one. Why don't you do this?

Computer: *Howa! Naganiinaa!* [[Wow! Incredible!]]

Thomas: mmm-nn

((Eileen clicks so that computer replays phrase, they do one more in similar fashion, then Eileen clicks ahead to next one.))

Computer: *Onow wiisagi-jiinsan gii-gitigaadamang bijiinaago.*

Thomas: [hmnn] ((short whine, and points to his mother))

Eileen: [Too much]? Do you want to do another one?

Thomas: mnn

Eileen: Which one do you want to do then? ((moves mouse to options screen)) Now you pick it.

((Thomas puts hand on mouse for first time.))

Eileen: You go to any::: one. ((points to menu bar and runs finger along top))

((Thomas moves cursor around screen, about 5 seconds))

Eileen: How about 'Unscramble'? 'Graffiti'? ((Thomas tries to click.))

Eileen: Go to 'start'. ((points to start button)) There you go. You got to list them...

As evident in Excerpt 3, and indeed, across many of the observations with this family, Eileen tightly monitored and inserted herself into the activity. In this excerpt, we see that she kept control of the timing of the activity through prompts such as "ready?" and through physical control of the mouse. She also mediated the native speaker input, playing the Ojibwe word/phrase via the computer, and then pronouncing and modeling this again for Thomas.

It is also notable that Eileen was highly responsive to subtle, often non-verbal signals from Thomas. For instance, towards the end of Excerpt 3, Thomas made a quick hand gesture and near inaudible whine; Eileen immediately suggested shifting to another activity. This sensitivity fits with what we understood

about the everyday rhythm of Eileen's family life. She noted multiple times across the study that she believed in working closely with her boys, on having family time, and in keeping them busy and engaged. And as she herself noted, she was always on the lookout for learning opportunities and activities that would capture their attention, which she believed to be limited.

Yet while the software fit into already established dynamics; it did not—at least during the period of the study—appear to directly impact language use patterns with their children. As evident in [Excerpt 3](#) above, with just two exceptions (e.g., *howa* or “good”), all of the interaction around the software was in English. In interviews, both families noted that they used just a few words of Ojibwe. For Melinda and Mic, this was mostly for occasional small jokes or word play. For Eileen's boys, Ojibwe was used to tell them to “come to eat” (*wiisinin*) and for table talk. Because Eileen noted she tried to do this during her first interview, these specific practices cannot be attributed to engagement with the software.

Nevertheless, introduction of *Ojibwemodaa* into these homes seemed to prompt broader family discussions about the language. For instance, the software reportedly provided a means for Eileen to begin to talk about Ojibwe more frequently with her mother, providing much appreciated moral support for her family's efforts to learn.

Excerpt 4 (Week 7)

Eileen: It's something that I want to do now and something that I don't have to force myself or say “Hey come on you got to do it you know.” Nobody wants to do homework or whatever. But once you get into it and understand it um things change and your outlook on it changes. So mine has changed besides hearing my mom asking me not to give up. She said, “It's hard. It may be hard. You might have challenges.” She said, “don't give up. You'll get there.” She said, “you'll have different levels even me it just all starting to come back to me. There's a lot of stuff like you try to talk to me or say some of those words I have to sit with it for a minute or so to figure out what you are saying and then I know what you are saying or trying to say and then I can help you.” She said, “I was a little girl when I was forced to quit speaking my language so that's very difficult for me to uh come back to and it's a struggle for me as well.” So I said, “oh OK.” You know it kind of helps hearing that you know it is a struggle and that you will have different levels but just like anything if you um are working on something you don't know um is it's going to have bits of struggle, levels of struggle but she said, “once you get over its just like anything else that keep working on it. Keep working on it. You'll get there.” That's really encouraging you know.

As Excerpt 4 suggests, this family link and moral support are powerful motivators for Eileen. *Ojibwemodaa* provided an opportunity to talk about language learning as well as starting to promote Ojibwe language use in the informal family context. Thus, although while the software did not directly impact language use patterns with their children, it did seem to have supported family interactions and connections around the Ojibwe language, in sharp contrast to the reported fears about technology.

Language Learning as Managed Task

As suggested above, for both families language learning and *Ojibwemodaa* time was a highly managed task. While the families had different systems for monitoring and incentivizing work time, in both homes, *Ojibwemodaa* was treated in many ways like homework, piano practice, or any other enforced, structured enrichment activity common in many U.S. homes (Rosenfield & Wise, 2000). This highly structured approach stood in contrast with the emotional or spiritual associations with the language mentioned by many participants as important motivating factors. Nevertheless, this structured approach appeared to be effective in keeping families on task. For instance, Mic was required to do 20–30 minutes of work with the software each weekday; sometimes this was done alone, and other times competitively or

collaboratively with Melinda. For Mic, the retail store gift card was an important incentive although he still needed reminders from Melinda.

Similarly, Eileen also established very clear guidelines about *Ojibwemodaa* work time. This fit into her beliefs about the importance of family-together time. It also corresponded to her limits on screen time for both boys. Both boys were allowed to play 20 minutes of video games daily, but only after their *Ojibwemodaa* work. This structure was also very sensitive to the perceived needs of the children; for instance, she felt that they were only capable of paying close attention for about 20 minutes each session; thus, she limited work time to that length. In addition, she believed language learning would be facilitated by flash cards they could physically manipulate in a game. She printed out cards from the software to make these for them, and for several weeks, this was their main *Ojibwemodaa* activity.

Inversion of Parent-Child Roles

Despite the high level of control exercised by both mothers, in some instances, using the software and the language entailed an inversion of established parent and child roles. That is, in both homes, engaging with the language software meant that parents were no longer the experts with the language, with the computer, or with the software. For the children, their relative strengths in these areas were self-evident and obvious (and not worth comment); for the mothers, in turn, this (perceived) inequity drew frequent comment.

For Melinda, this meant very frequent teasing by Mic about her language and computer skills. For instance, in [Excerpt 2](#), above, we see how Mic taunts Melinda repeatedly about her lack of Ojibwe knowledge. And during a Week 3 observation, for instance, Mic gets frustrated with what he perceives to be Melinda's slowness on the computer, and says, "Why did you do that? I'm going to get a lemonade. I can't watch this," walking out. This tendency extended to teasing Melinda during interviews about her work habits, saying "practice makes perfect," in a sing-song voice when she was reporting her weekly activities to researchers. In all cases, Mic seemed to enjoy being the expert and playing up his role as the knowledgeable one. Further, as evident in [Excerpt 1](#) above, even though Melinda engaged with the software in a wider range of ways (and arguably more meaningfully ways, as discussed below), Mic was positioned within the family as the expert learner, who was faster and better at flashcard memorization. (Mic was accustomed to using flashcards as part of his Spanish language classes at school and felt most comfortable with this strategy.)

For Eileen, the loss of expert status was most evident in interactions with her oldest son, Trevor. Trevor was better at manipulating some aspects of the computer; he also had attended Ojibwe enrichment programs and had received instruction and practice in writing Ojibwe. As a result, he often seemed more comfortable with spelling than his mother. He was also more confident with his computer and keyboarding skills than the rest of his family. Eileen reported multiple times that Trevor was a better speller than her, and that he helped her with the computer. For instance, she noted during her initial interview, "I'm a little bit illiterate. My oldest boy, he knows more than I do on the computer."

Language Learning and Use Around the Software

Overall, many observations of families using the software revealed a strong tendency to engage in drill-like practice of vocabulary and pronunciation, and to use English to facilitate this. This is apparent in both [Excerpts 2](#) and [3](#), in which there is a focused effort not on communication but on eliciting a correct response. In both cases, practice of these words and phrases are decontextualized, with little emphasis on meaning or meaningful use. Mic, who had two years of Spanish instruction at school (which included some computer practice of vocabulary), was so comfortable with this mode of learning that he spent nearly all of his software time just using the flashcards. He was prompted by his mother and the researchers to try other software activities, but continued to return to flashcard mode.

Likewise, Eileen printed the flashcards, and especially during the first three weeks of the study, relied

heavily, if not exclusively, on flashcard practice as a way of learning. Further, as evident in [Excerpt 2](#), she mediates the flashcards with lots of English commentary, correction, and re-direction. Similarly, Mic and Melinda's good-hearted jousting keeps them exclusively communicating in English, positioning Ojibwe as content (rather than a means of communication). It is possible that the heavy emphasis on flashcards by participants is a reflection of their past experiences with language learning, or perhaps, their perceptions and beliefs of what language learning looks like as flashcards have long been a staple of U.S. foreign language instruction. It is also possible, however, that this flashcard practice is the most accessible task within the software, especially for low-level proficiency learners.

However, we also saw evidence that Eileen was attempting to move beyond the decontextualized flashcard practice towards authentic communication with her parents. Similarly, Melinda talks about initially being intimidated by the long words in Ojibwe, but then moving to a place where she feels familiar with them (Week 4). And also she talks about remembering random words just "because they are fun to say," by Week 8. One of Melinda's learning strategies is to watch the software-based movies and then do drill practice with the flashcards. As she is trying to recall specific phrases on the flashcards, she uses the sequence of events in the movies to spark her memory of meaning (Weeks 2, 4, 5). Later in the study, she also reports using Ojibwe words at a cabin with friends, at home with family, and with her dog (Week 6.) In these ways, both of the adults used experience, networks, and communication strategies to move toward authentic communicative uses of language outside of using the software.

DISCUSSION

Through these two family case studies, we examined how *Ojibwemodaa* might begin to bridge the gap between learning Ojibwe as a formal, de-contextualized school-like activity, on the one hand, and using Ojibwe as part of family home-based learning and communication activities on the other. Asking in short, is there potential for this technological tool to help learners make the leap from learning language as an isolated, academic task to actually using the language for everyday communication?

We found child and adult participants brought to their *Ojibwemodaa* work pre-established concepts of learning language (that is, as a highly structured activity). Parents also brought their own hopes to move the language into more familiar, family-based, and intimate interactions. For both families, we saw evidence of parents and their children using *Ojibwemodaa* in a structured, in-the-box way, as well as parental attempts to pull it into communication in the home.

For instance, Mic clearly drew on his previous years of Spanish high school learning, and applied some of these strategies to his *Ojibwemodaa* work. He relied almost exclusively on drilling flashcards when left to his own devices. His mother, in contrast, continually looked for connections between using the Ojibwe language and life, often prompting Mic to learn to say things by convincing him there was a use for Ojibwe beyond the software. For example, she says, "You are going to need to know how to say this, Mic" and "You could say this to your friends, Mic, when they come to play video games." As noted above, as Melinda grew more comfortable with the language, she began to expand domains of use to those outside of the software practice to use Ojibwe with her extended networks.

In turn, Eileen was given a camera the last two weeks and asked to use the camera (her or the boys) to capture times when they were just trying to use the Ojibwe language. In each of the ten short clips, the boys mainly re-produced memorized lines from the movies. This is despite the fact that they had acquired some very basic productive abilities during study period. Although the only instructions by the researchers were to videotape the family "using Ojibwe at home," nearly all of these clips represented the boys engaging with the software, not using the language to communicate. While this might well be indicative of Eileen's interpretation of the researchers' expectations surrounding the task, it also is suggestive of her conceptions of the ways in which Ojibwe can and should be used. Further, while Eileen seemed to have substantial latent receptive Ojibwe skills, Trevor was positioned as the expert learner

because of his experience writing the language.

This approach to language learning and use stands in contrast to the fact that both Eileen's mother and father both reportedly speak some Ojibwe, and she herself and her boys, reportedly started to use more Ojibwe with the grandparents. The technology did seem to create a bridge, that is, a means for Eileen to learn reportedly enough language to respond to her parents occasionally in Ojibwe. However, she did not choose these as examples to videotape, suggesting that her idea of learning and what counts is still tied somewhat to the academic content of the software (e.g., spelling ability), rather than to the every day, home communicative use.

In other ways, however, Eileen's case suggested ways in which *Ojibwemodaa* might jumpstart authentic language use, and might help shift language learning from a chore to something she considers part of her personal time. As Eileen gained a foothold into the language learning—independently starting to put together all the bits of words, phrases, uses of Ojibwe she has heard over the years—she then moved from a learner to someone who can meaningfully use the language. These moments represent a shift that is perhaps the most valuable use of this technological tool: It can act to provide just enough scaffolding—a place to start to understand—that affords Eileen a way of being able to re-connect with family language learning. This sort of jumpstart is highlighted in Excerpt 5.

Excerpt 5 (Week 8)

Eileen: She ((referring to her mother)) supports me in all different kinds of ways just because her and I are +/-... have a close relationship. And so for her to use the +/-... when we come over +/-... for her to use the Ojibwe when we come over (.) um the boys are knowing what she is saying and the commands. They are able maybe to say a couple words back with her but they have taken that step forward now. So that +/-... I am really impressed with that, that they are able to start using some Ojibwe back with her to ah:: (.) converse with her.

Kendall: yeah that's amazing

Eileen: Yeah

Kendall: And so what sorts of things will they say to her?

Eileen: Well like, she'll say come on in and eat. Are you hungry? And they'll say *eya* or *gaawiin* or you know (.) aa (.) I was gonna say *gisinaamagad* but that's 'cold'@@@

Eileen: And we been working on (.) (inaudible) (.) So they'll say that a lot. What is that other word (.) I am trying to remember (.) I just can't pull it up right now @@@

Eileen: They'll answer her back or she'll ask them to bring something or she'll she'll ask them to come here or ask them if they want a drink of water, or they'll ask her, cause they know how to say that now in Ojibwe so (.) they'll ask her "*nibi*" "*aaniibiish*," or you know (.) I said it's black coffee or black medicine and he says "black coffee" and I said no no just cause it says *makade*, no no (smiles, as if telling a joke). But they call that black medicine so.

Here Eileen emphasizes both that the boys are able to respond verbally to simple commands and questions, and that they occasionally initiate Ojibwe dialogue. Although it is not clear what exactly can be attributed to the software use, Eileen described a step forward that happened after their involvement began in the study. She emphasized that the boys went from passively understanding to initiating questions. Her reporting of this in our weekly interview also points to her own meta-awareness of language learning, and her ability to get herself and her boys into real communicative situations. Although she liked the practice time, "her Ojibwe time," at the computer, she also understood that the

final objective, of becoming a speaker, required a shift out of a purely school learning mind set, as she stresses in Excerpt 6.

Excerpt 6 (Week 8)

Eileen: And they like this new game I taught them. So I think that +/... so as we go along I'll be working on (.) how am I going to incorporate that Ojibwe into a game? Another game so my mind is always thinking about that ((motions her hand going around in circles by her ear)) how can I incorporate Ojibwe into our lives so we can you know become fluent (.) speakers (.) some day.

CONCLUSION

Promoting Ojibwe in the home is both a time-intensive learning task, and for these families, part of a cultural revitalization and identity building. This case study of two families provides insight into how they were able to continue to use the software consistently over an eight-week period, as well as how this might jumpstart communication and authentic use of Ojibwe in the home. Whereas all of our initial participating families were enthusiastic, and even passionate, translating this passion into a regular, daily routine was challenging for all families. We profiled here two of the families who were most successful at sticking with it.

We should note that in some ways the research study itself provided a measure of structure and support for learning at home. Participants knew in advance that a researcher was coming, video-camera in hand, once a week. Logs were collected that documented software use during the week, and a gift-card was promised upon completion. Nevertheless, the great majority of enrolled participants did not complete the study. We should first ask why Melinda and Eileen were successful in doing so. While obvious answers might be maternal income or educational levels, we did not find that for these families these were driving factors. Indeed, the two families had strikingly different socio-economic backgrounds.

What these two families had in common was their willingness to commit to daily language work, and acceptance that language learning, at least in the early stages, would entail some difficult and at times rather dry and dull work. This sort of language learning drudgery stands in sharp contrast with the emotional, personal, intimate motivations people cited as initial reasons for enrolling in the study. Both families were to stick with it in part because they were able to put up with this disjuncture. Further, both families were successful in incorporating *Ojibwemodaa* into their existing family dynamics in a ways that were engaging and familiar. And both mothers were able to direct, implement, and enforce a family activity in which they were also novices (both in terms of language and computer knowledge).

From one perspective, this study points to the importance of discipline, repetition, and consistency, even when progress is slow. For most participants (including those who did not complete the study) the ultimate goal was to be able to use the language meaningfully and authentically in real conversations. We saw how, for Eileen, her work with the software eventually began to pay off, as it became part of her meaningful personal time and something she could use with her parents. With Melinda, we saw through more exposure to the language through the software, she became more comfortable and less intimidated by the idea of learning the language. She talked on several occasions about moving from feeling like it was an obligation to enjoying the time she spent trying to learn. Both adults in this study seemed aware of this larger goal (meaningful use of language) and tried to get their children also to make this shift; however, we saw no evidence of this in practice with the children, who tended to view the software work as a chore.

Related to this, we found the tension between ideas of learning language—influenced by ideas of school-based learning and what counts as learning—were prevalent even as our learners attempted to bring learning back into informal settings and family communications. If pathways like immersion schools or

instructional materials are to aid in the revitalization of Ojibwe (or other Indigenous languages), they must support the creation of a community of speakers who can thrive and interact outside of formal institutions (Fishman, 1991). Findings here suggest that these tools have the potential to jumpstart offline language use or even provide an occasion for latent speakers to rally around. However, more work needs to be done to understand specifically what kinds of tools or activities could motivate youth to embrace learning their heritage language.

Additionally, these findings suggest ways in which the software might be redesigned to help support such a shift. For instance, as we noted above, learners tended to gravitate towards flashcards, but all of the language surrounding their use by learners was in English. One relatively straight-forward design change would be for the computer feedback on this task (e.g., “you are correct!,” “wrong answer,” “try again”), to be supplied in Ojibwe. This would provide an immediate model for learners to use Ojibwe as meaningful communication.

Finally, this case study also suggests it might be useful for language revitalization efforts to invest in validation and development of informal learning networks. Multimedia tools could be developed for or by these learning communities, helping to bridge isolated, drill-oriented language learning on the one hand, and meaningful language use on the other. These networks have the advantage of stressing and promoting language as communication (as opposed to language as a content or language learning as an individual task, as often is the case in school contexts). While the advantages and limitations of school-based Indigenous language revitalization efforts have been well documented (Hornberger, 2008), the present research suggests that informal learning networks and the language learning technology needed to get them started, merit greater attention and investment.

APPENDIX A. Transcription conventions

CAPS	spoken with emphasis (minimum unit is morpheme)
.	falling intonation at the end of words
,	rising intonation at the end of words
?	rising intonation in clause
->	continuing or flat intonation (as in lists)
!	animated tone, not necessarily an exclamation
(.)	micro-pause
[overlapping speech
+/. . .	interruption (self or other)
@	laughter
::	elongated sound
“ ”	reported speech
‘ ’	stated translation
[[]]	translation
(())	transcriber’s comment
<i>Italics</i>	Ojibwe

NOTES

1. “First speakers” is used here to differentiate between those who have learned Ojibwe as a first language and those who have learned it as a second language although there are many who fall somewhere in between this dichotomy, including those with passive or receptive skills only, latent speakers, and those who learned as a first language but have had to re-learn it as adults.
 2. An informal, community-based learning effort, *language tables* are a recent phenomenon in which people come together for a potluck and try to learn Ojibwe, or use Ojibwe to communicate at the event.
 3. One of the authors, Mary Hermes, was centrally involved in the production of the software *Ojibwemodaa*.
 4. A free demonstration can be downloaded at www.GrassrootsIndigenousMultimedia.org.
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REFERENCES

- Baraga, F. (1850). *A theoretical and practical grammar of the Otchipwe language for the use of missionaries and other persons living among the Indians*. Detroit, MI: Jabez Fox.
- Cotter, C. (2002). Review of “IrishNow!” *Language Learning and Technology*, 6(2), 34–40. Retrieved from <http://llt.msu.edu/vol6num2/review4/default.html>
- Common Sense Media. (2011). *Zero to eight: Children’s media use in America*. Retrieved from <http://cdn2www.ec.common sense media.org/sites/default/files/research/zerotoeightfinal2011.pdf>
- Coronel-Molina, S.M. (2005). *Runasimi Kuchu*. Retrieved from <http://runasimi-kuchu.com/>
- De Fina, A. (2003). *Identity in narrative. A study of immigrant discourse*. Amsterdam, NL: John Benjamins.
- Eisenlohr, P. (2004). Language revitalization and new technologies: Cultures of Electronic Mediation and the Refiguring of Communities. *Annual Review of Anthropology*, 33(1), 21–45.
- Fishman, J. (1991). *Reversing language shift*. Clevedon, UK: Multilingual Matters.
- Fishman, J. (2001). *Can threatened languages be saved?* Clevedon, UK: Multilingual Matters.
- Foushee, L., & Burneau, R. (2010). *Sacred water: Water for life*. Lake Elmo, MN: North American Water Office.
- Francis, N., & Navarrete, G. (2009). Documentation and language learning: Separate agendas of complementary tasks? *Language Documentation and Conservation*, 3(2), 176–199.
- Grenoble, L. A., & Whaley, L. J. (1998). *Endangered languages: Current issues and future prospects*. Cambridge, UK: Cambridge University Press.

- Grenoble, L. A., & Whaley, L. J. (2006). *Saving languages: An introduction to language revitalization*. Cambridge, UK: Cambridge University Press.
- Hinton, L, Vera, M. & Steele, N. (2002). *How to keep your language alive*. Berkeley, CA: HeyDay Books.
- Hermes, M., Bang, M. & Marin, A (2012). Designing Indigenous language revitalization pedagogy. *Harvard Educational Review* 82 (3), 381–402.
- Hermes, M. (2007). Moving towards the language: Reflections on language as culture in Native American education. *Journal of American Indian Education*, 46(3), 54–71.
- Hermes, M. (2004). Waadookodaading Indigenous Language Immersion: Personal Reflections on the Gut-Wrenching Start-Up Years. In J.F. Ibáñez-Carrasco & E.R. Meiners (Eds.) *Public acts: Disruptive readings on making knowledge public*. (57–72). New York, NY: Routledge.
- Hornberger, N.H. (Ed) (1997). *Indigenous literacies in the Americas: Language planning from the bottom up*. Berlin, DE: Mouton de Gruyter.
- Hornberger, N.H. (Ed) (2008). *Can schools save indigenous languages? Policy and practice on four continents*. Hampshire, UK: Palgrave Macmillan.
- Hornberger, N.H. & King, K.A. (1996). Language revitalization in the Andes: Can the schools reverse language shift? *Journal of Multilingual and Multicultural Development*, 17(6), 427–441.
- Jancewicz, B., & MicKenzie, M. (2002). Applied computer technology in Cree and Naskapi language programs. *Language Learning & Technology*, 6(2), 83–91. Downloaded from <http://llt.msu.edu/vol6num2/jancewicz/default.html>
- King, K.A. (2001). *Language revitalization processes and prospects: Quichua in the Ecuadorian Andes*. Clevedon, UK: Multilingual Matters Press.
- King, K.A. & Fogle, L. (2013). Family language policy and bilingual parenting. *Language Teaching*, 46(2).
- King, K.A., Fogle, L., & Logan-Terry, A. (2008). Family language policy. *Language and Linguistics Compass*, 2, 1–16.
- King, K.A., Schilling-Estes, N., Fogle, L., Lou, J. & Soukup, B. (Eds.) (2008). *Sustaining linguistic diversity: Endangered and minority languages and language varieties*. Washington, DC: Georgetown University Press.
- Krauss, M. E. (1992). The world's languages in Crisis. *Language* 68(1), 4–10.
- Kroskrity, P. and Reynolds, J. (2001). On using multimedia in language renewal: observations from making the CD-ROM Taitaduhaan. The green book of language revitalization in practice, ed. by L. Hinton and K. Hale. San Diego, CA: Academic Press.
- Lippert, C. (2007). Location of all Anishinaabe Reservations/Reserves in North America, with diffusion rings about communities speaking an Anishinaabe language. Cities with Anishinaabe population also shown. Retrieved from <http://en.wikipedia.org/wiki/File:Anishinaabewaki.jpg>
- McHenry, T. (2002). Words as big as the screen: Native American languages and the Internet. *Language, Learning & Technology*, 6(2), 102. Retrieved from <http://llt.msu.edu/vol6num2/mchenry/default.html>
- National Urban American Indian Coalition. (2008). *A report to the Annie E. Casey Foundation. Urban Indian America: The Status of American Indian and Alaska Native Children and Families Today*. Retrieved from <http://www.aecf.org/KnowledgeCenter/Publications.aspx?pubguid={CCB6DEB2-007E-416A-A0B2-D15954B48600}>

Nielson, K.B. (2011). Self-study with language learning software in the workplace. *Language Learning & Technology*, 15(3), 110–129. Retrieved from <http://llt.msu.edu/issues/october2011/nielson.pdf>

Ojibwe People's Dictionary. (2012). *Ojibwe people's dictionary online*. Retrieved from <http://ojibwe.lib.umn.edu/>

Philp, J., Oliver, R. & Mackey, A. (Eds.) (2008). *Second language acquisition and the young child*. Amsterdam, NL: John Benjamins.

Rosenfield, A., & Wise, N. (2000). *The over-scheduled child*. New York, NY: St. Martins.

Treuer, A., Jones, N., & Paap, K. (Eds.) (2011). *Ezhichigeyang: Ojibwe word list*. Hayward, WI: Waadookodaading Ojibwe Immersion School.

Valdés, G. (2001). Heritage languages students: Profiles and possibilities. In J. K. Peyton, D. A. Ranard, & S. McGinnis (Eds.), *Heritage languages in America: Preserving a national resource* (pp. 37–77). Washington, DC: CAL.