

AFFORDANCES FOR HOME LANGUAGE MAINTENANCE CREATED BY MULTIMODAL WEB 2.0 AND MOBILE TECHNOLOGIES.

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Abstract

This paper examines the impact of Web 2.0 technologies on the maintenance of home languages in Australia. It reports on findings from two major studies that investigated the language practices and attitudes of school students across mainstream schools, community schools and the government Saturday Schools of Community Languages in Sydney and Wollongong, Australia. The findings reveal complex patterns of language use in families and communities and firmly establishes that Internet-based applications and travel are factors having major impacts on the language practices of families who speak a language additional to English in the home.

Introduction

The research presented in this paper sought to develop a deeper understanding of the impact of Web 2.0 technologies on the maintenance of home languages and on the efforts of families to ensure that their children develop age-appropriate knowledge and skills in their home language and culture. The data presented here are drawn from two major funded research projects that investigated the availabilities and uptake of languages at a local level in Sydney and Wollongong, Australia. This research closely investigated the language practices and attitudes of school students across mainstream schools, community schools and the government Saturday Schools of Community Languages. Both studies identified complex patterns of language use in families and communities and firmly established that internet-based applications and travel are factors having major impacts on the language practices of families who speak a language additional to English in the home. This paper reports on those findings relating to the use of technology by these students in formal and informal situations as a part of their home language practices.

Even a cursory survey of current mobile and web-based applications would make very clear that the Internet is providing discursive spaces (Mitra & Watts, 2002) where young people can use their home language and interact with older family members in ways that were not possible only a relatively short time ago and in ways that challenge and advance their language abilities. As such, these *discursive spaces* align very much with the conception of *domains of language use* as developed by Fishman (1972). Fishman's domains were originally conceived of as physical spaces that not only provide opportunities for people to use their language but also directly influenced the ways in which the language is used. There is little doubt that over recent years the Internet has provided new

and *virtual* domains where intergenerational synchronous and asynchronous communication is facilitated, and where self-representation and the working through of issues around identity and desire can and does take place. This is having a huge impact on the ways in which second- and third-generation speakers of community languages are relating to their home languages and to grandparents and overseas friends and relatives. This paper discusses the family-based interactions around technologies such as Skype, blogs and messaging apps and the profound influence these technologies had on the perceptions of school-age children about their home language. The relationship between Web 2.0 technologies and the ethno-linguistic vitality of the languages that formed the focus of this research are also examined.

Why is Language Maintenance Important?

Research into the exact nature of work done by families to maintain their home languages through generations and their motivations for attempting this has important outcomes for individuals and communities. The issue of maintaining and developing community languages as important resources for families, individuals and societies has received a lot of attention over recent years, from researchers in linguistically diverse social contexts in countries such as Australia and the United Kingdom. The cognitive and affective benefits accruing to individuals who maintain and develop their home language have been well presented by a number of authors (e.g., Adesope, Lavin, Thompson, & Ungerleider, 2010) and the importance of family, particularly mothers, in this process has also been well explained (DeCapua & Wintergerst, 2009; Pauwels, 2005; Tannenbaum, 2003). Researchers have highlighted the fact that families who are keen to maintain their home language see communication with older members of the extended family as a prime motivation. “Being able to speak to grandparents” is one of the most common reasons given for parents wanting their children to keep up their home language (Rubino, 2009; Clyne & Kipp, 1997, 2006).

Individual Factors Affecting Loss and Retention

According to the most recent census figures for Australia, 29% of Australians aged five years and over spoke a language additional to English at home (ABS 2014). The most common languages spoken at home (other than English) were Mandarin (1.7%), Italian (1.5%), Arabic (1.4%), Cantonese (1.3%), and Greek (1.3%) (ABS, 2014). Each of these languages has a strong community presence in the linguascape (Pennycook, 2003) of the major Australian cities, and in terms of the construct of ethnolinguistic vitality, as refined by Extra and Yagmur (2008), they can be considered to be *strong*. In terms of their presence in the senior years of schools, however, languages in general are in a parlous state. In 2013, less than 10% of candidates for the final secondary school exam in the largest Australian state, New South Wales, were studying a language additional to English (NSW Board of Studies, 2013). It is one of the great paradoxes of the Australian context that increasing linguistic diversity has been accompanied by a significantly reduced uptake of languages in schools, particularly senior schools.

Apart from the support of schools, there is a wide range of physical, cognitive and affective variables that have an impact on a child's ability to maintain a home language. Age is obviously an important individual characteristic that affects language retention. Clyne and Kipp (1997) found that younger children of school age living in the family home have a stronger chance of maintaining their home language than those who are older and living outside the home. Their work reported that language shift rates are highest for individuals in the 25–35 age range (Clyne, 2003, p.30). In addition, the identity struggles of adolescence often result in older children refusing to use their home language even though their understanding and ability to use the language is present. The role of the family and that of the extended family is crucial to the age-appropriate development of the home language. One of the key aspects of this focus has been the benefit of communication within families and extended families, and this has been researched extensively. Communication and interaction within family has been considered crucial for the development of identity as well as for success at school (DeCapua & Wintergerst, 2009; Pauwels, 2005; Tannenbaum, 2003).

An accumulating body of research has examined multilingual literacy practices in different linguistic minority communities and focused on the effectiveness of technology as an important support for language maintenance (Cruickshank, 2004; Fitzgerald & Debski, 2006; Pauwels, 2005; Walker, 2009; Warschauer & De Florio-Hansen, 2003). The potential of web-based technologies in terms of the development of children's language, the knowledge of their heritage culture and the building of relationships with older relatives, has also been highlighted by research conducted by Szécsi and Szilágyi (2012). This ethnographic study focussed on a range of literacy activities in Hungarian using web-based technologies: reading and writing e-mails, playing online games, Skype chat, messaging, texting and listening to songs. Importantly, this study also highlighted the role of parents in selecting appropriate media and being available to support their children's *use of media technology*.

The Changing Technoscape

In 2006, a survey of computer usage in Australia showed that 41% of 5- to 8-year-olds in Australia used a computer from two to six days a week. Access figures for very young children in Australia are also very high, with 87% of homes with children aged 4 to 5 years reporting their access to computers (Zevernbergen & Logan, 2008). These authors pointed out that this has led to a *digital divide* between the learning experiences encountered in a child's home environment and those experienced in early childhood educational settings. According to the Australian Communication and Media Authority (ACMA, 2010), in 2007, one in six children (17%) in both the 8–11 year and 12–14 year age groups had a computer in their bedroom. One in ten children had Internet access in their bedroom (9% for 8–11 year olds and 11% for 12–14 year olds). Increasingly, the uses of communication platforms such as Skype are becoming commonplace among Australian families of all language backgrounds, particularly in terms of communication with extended family. Kelly's (2013) study into internet-based

communication between young children and their grandparents in Australia highlighted the effectiveness of this mode of communication. Participants in her study used “the affordances of the computer and remote software to co-construct a mutual environment and social relations at a distance” (Kelly, 2013, p.15)

Some years ago, there was a focus in the research on the disjunction between young people’s use of technology in schools and in their homes or private practices. Researchers such as Selwyn (2006) and Luckin et al. (2009), for example, have explored the increased use of social networking and Web 2.0 tools by school children and their non-application for educational purposes. These researchers identified disconnectedness between what was happening at school and the use of technologies by students beyond the classroom. Since that time, the trend towards bring your own technologies and other developments in the functionalities of web 2.0 tools have created what Luckin et al. (2009) identified as a *blurring of the boundaries*. Schuck and Aubusson (2010) have highlighted the technology practices of students in formal and informal spaces. These authors described the ways in which the learners in their study were found to be creating their own spaces within the formal demarcations of the school setting. Although BYOD (Bring Your Own Device) is resulting in some creative and unexpected uses of new technologies by students and their teachers (Light & Polin, 2010; Bereti & Song, 2012), it is not clear what impact this is having on the teaching and learning of languages at home and in the school. Much more work needs to be done to establish *best uses* of mobile and web-based technologies and the relationship between home and school use.

The C.O.D. Construct

The C.O.D. construct was originally developed by Grin (1990; 2003) and further explored by Grin and Vaillancourt (1998), and Lo Bianco (2008a; 2008b). It provides a useful lens for understanding why some languages survive and others do not. The letters C.O.D. stand for Capacity Development, Opportunity Creation, and Desire. Capacity development describes the development of language proficiency through both formal and informal means; opportunity creation is the development of domains in which individuals are encouraged to use the language in meaningful ways; desire involves the motivation to learn the language (Lo Bianco & Kreeft Peyton, 2013). The *desire* component is particularly important since, as Loader and Keeble (2004) have established, it is human agency that makes technology “work” in any given context, and in order for new mobile and web-based technologies to realise their potential in terms of children, work has to be done by adults and time has to be set aside. The C.O.D. construct is applied in this paper as a means of investigating the role of technology in terms of language maintenance and development in the lives of young people who come from backgrounds where a language additional to English is spoken. It provides a multidimensional view of the potential of Web 2.0 technologies within the field of home language maintenance and provides for a deeper understanding of the relationship between home and school uses of technology.

Method

The data that forms the basis of this article was drawn from two large and complementary research projects funded to investigate the availability and uptake of languages across 11 different local government areas in NSW, Australia. Both projects were aimed at investigating the practices and attitudes of young people in relation to their language learning. These projects were undertaken through a partnership that involved three universities and all school systems and sectors in NSW. While these projects differed in terms of scale, both had the same broad objectives relating to gaining a better understanding of young people's experiences with and attitudes to language maintenance and study. The work for the second of these projects is ongoing and is due to be completed by mid-2015.

Participants

Data for this article were drawn from two sources. The first source was a written survey conducted with 125 students of Chinese and Turkish background from 11 schools in two local government areas of Sydney. These surveys asked about language practices in general and the use of web-based technologies and other technologies at school and in the home. The second and larger data set was drawn from a series of focus groups that involved 120 students from 12 different schools. All participants were aged between 11 and 16 years old. These focus groups form one data set within an ongoing funded project that involves students from a range of different language backgrounds. Each focus group consisted of four or five students of mixed language backgrounds. Semi-structured interviews were also conducted in schools and recordings of these interviews were transcribed and analysed. The interviews ranged fairly widely over the language practices of the students. Each interview included a specific component on the use of technologies. This included aspects such as communication, entertainment, research and social networking. The schools in both projects included government and private mainstream schools, community schools operating on the weekend or after school hours, and the government-organised Saturday Schools of Community Languages. In the surveys and interviews, students were asked about the ways in which technology was used in their school classrooms and at home as a means of affording the use of the language additional to English they were learning or maintaining. This was in the context of a broader conversation around practices and attitudes relating to language maintenance. Although English-speaking background students were included in aspects of both projects, the current paper draws on the focus group data relating only to those students whose families spoke a language additional to English.

Analysis and Findings

The surveys were conducted online and analysed using Google Survey. The transcriptions of the interviews were analysed using thematic and key-word analysis facilitated by the use of NVivo. Initially, four main themes emerged from the first layer of analysis, and these were subsequently elaborated into sub-themes. The findings are set out below under these four main themes.

Technology as a domain of language use – main technologies mentioned. The majority (67%) of young people interviewed reported some use of Web 2.0 technologies in a language additional to English. The most frequently mentioned were the communication-based applications such as Skype and, to a lesser extent, texting and Facebook-type applications. It is important to note that applications such as YouTube were also mentioned by a significant number of students – most frequently in terms of joint viewing with parents and other family members. Of the children surveyed, about 40% reported using Facebook in their home language, 56% used their mobile phone to text or send images with messages in the home language, and about 60% reported using the Internet to find out about the countries where their home language is spoken. The use of iPad, iPhone or tablet apps in a language additional to English was mentioned by a minority of students, mostly in the context of using the app with a parent. Several of the schools visited used iPads throughout the school, but the students did not report systematic use of these in classes. Nearly all the schools had access to interactive whiteboards, although the main interactive uses of these were for games.

Role of mother as interlocutor. The mother's role as a person introducing technologies and language apps, etc., to the students emerged as a significant factor, with about 56% of the children (across all languages) saying their mother mainly spoke to them in their home language. Although 65% of the children reported some joint use of Web 2.0 technologies, it was often the mother who directed students to specific sites or resources such as YouTube with appropriate language content. The following quotes from primary school student interviews are typical of a significant number of responses around technology in the home:

Female: My parents have a few apps and sometimes when I sit down with them and they show me things... my mum downloaded this app where there's a lot of videos in Chinese. Then sometimes she just chooses a few that I might understand and then after it she tries to do her best to tell me what it means because it all comes in Mandarin and I'm not very familiar with Mandarin.

Male: On my iPad I usually use it for studying or watching YouTube or playing games. My mum has this app - like most of the time she reads something and when she doesn't understand she goes on the app and then she tries to type it up and find what it was. Even though I actually translate it for her she still wants to try.
(PS Interview_Year 5–6 students)

Connection with older members of extended family as motivation for using technology to communicate in the home language. The use of web-based technologies to connect with older relatives emerged as a very strong theme among all the groups interviewed. Maintaining such connections also emerged as a prime reason for wanting to use the language; with 67 % of the students saying they use the home language when visiting relatives, and 81% saying they use their home language to communicate with their grandparents. For technology use, Skype was the dominant platform. E-mailing and blogging were also significant.

Disconnect between school and home use of technologies. The teaching and learning of languages in schools is not keeping pace with the ways in which children are deploying Web 2.0 technologies. The interviews with children participating in this study underlined the creative uses they were making of technologies in the home and in their private spheres. Around 40% of the students interviewed reported using the Internet or a mobile phone to communicate in their home language using multimodal means. The literacies they had developed as primary school-aged children around Web 2.0 technologies were certainly impressive. A significant number were also using the Internet to research information in English about their parents' or grandparents' countries of origin. Only 33% of students reported that they used the Internet in their language learning at school. When this issue was explored, it emerged that, overwhelmingly, the emphasis was on passive consumption of information on the Web, rather than active creation of material via wikis or web pages, even though the vast majority of students had used these skills at home and other subject areas. About 15% of those interviewed reported that they used tablet devices in the home, but the overwhelming majority indicated that tablet devices were not used by their language teachers. The following quotes demonstrate this disjunction:

Interviewee 4: We've got school iPads, but we have lots of educational things, but not different kinds of languages...Me and my cousin, we're both young; we don't know Arabic but we just like practicing to each other and try to read each other's writing in Arabic, like on messages and yeah, with that I have lots of and lots; a folder of apps [to download], like it reads you the alphabet and sounds and your vowels and like, yeah different kinds of things.

Interviewee 3: And like it helps when you're sending messages to overseas; like if you do the different nationalities on the keyboard; like so they understand it more.

Facilitator 1: Is there any program that you use to help you to learn Arabic?

Interviewee 3: My mum.

Facilitator: Software.

Interviewee 3: Oh no.

Facilitator 1: I mean an app on the iPad.

Interviewee 3: No we don't use them for LOTE; we use them mainly for like reading. (PS Year 6 Arabic Students)

Discussion

The impact of global changes in technology and the use of community languages emerged as a key factor with students who speak a language additional to English at home. Young people are reporting the use of their home language on mobile phones, and they are starting to use it in social media such as Facebook and Twitter. Their families are also using various media at home. It is significant that the increased availability of cable or satellite TV has led to families watching

Soapies, Drama, News, and Sports in their home language and speaking about these among themselves. In terms of the C.O.D construct, this study demonstrates that Web 2.0 technologies have an important role to play in terms of capacity development, the provision of opportunities to use the language, and fostering the desire of young people to use their home language through establishing meaningful connections with relatives and friends who encourage it. One of the key points to emerge from this study relates to the differences that exist between the use of Web 2.0 technologies in the home and in school. It appears that teachers are not adequately exploiting their students' skills and knowledge of the newest generation of technologies. The use of interactive whiteboards was found to be widespread but deployed mostly in teacher-centred ways.

Conclusion

The maintenance of home language is an important issue for individuals and for society as a whole. The rapid development of new media technologies has created rich opportunities to use language to communicate with distant friends and relatives and to multi-modally represent and record activities. This study sheds some light on the perceptions of school students around their uses of technology at school and in the home. While it is clear that web-based technologies are providing both opportunities to make meaningful use of the language and enhancing the desire to do so through joint use with parents and feelings of success around these communications, it is also clear that the capacity-building aspect is not being exploited as well as it could be. The role of schools in this is critical, but languages teachers, in particular, need to move away from teacher-controlled uses of technology and towards more student centred, constructivist models. Future research will need to examine the constraints on teachers that are preventing them from doing so.

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