INTERNET USE OF POLISH BY POLISH MELBURNIANS: IMPLICATIONS FOR MAINTENANCE AND TEACHING

Michael Fitzgerald
University of Melbourne
Robert Debski
University of Melbourne

ABSTRACT

The Internet has become an important communication medium and it is having a significant impact on language use. The present study takes a "snapshot" of how the Polish language is currently used with modern communications technologies by Polish-Australians living in Melbourne. Through a questionnaire, it surveys which communications technologies Polish-Melburnians are familiar with, how and when Polish and English are used for online communication, and which language they prefer to use in various circumstances. The study is based on the belief that investigations of the natural patterns of new technology use by ethnic communities will help us understand how technology could be involved in initiatives aimed at increasing the levels of language transmission and maintenance. The present study identifies several factors interacting with Internet use in the community language and makes recommendations for applications of modern technology in ethnic language schools and for home language maintenance.

BACKGROUND

As a factor mediating human communication and relationships, the Internet is having a significant impact on language use in the world, affecting the prospects for and status of languages. Information technologies grant languages allied with technologically-advanced countries, such as English, new powers of influence (Kibbee, 2003). On the other hand, it is obvious that the same technologies create new domains in which minority languages can be employed, support the development of inexpensive and widely available language maintenance and learning resources, and extend the global reach of languages hitherto confined to local speech communities (Mackey, 2003).

This two-pronged influence of the Internet, both promoting and endangering languages, makes any prognoses difficult. Though most researchers consider computers as supporting the revitalisation of minority languages, the full extent of the impact of the Internet is still unclear and reports are contradictory. Villa (2002) and Valiquette (1998) see a role for new technologies in supporting existing pedagogies but warn against conceptualising technology as a surrogate for intergenerational transmission. Buszard-Welcher (2001) analyses a sample of sites developed by Native Americans and concludes that although the Web's potential is growing, its present usefulness for language maintenance is limited as the reviewed sites mostly used old methodologies dictated by technology. Nathan (2000) is optimistic about the uptake of modern technology by the indigenous peoples of Australia and connects it to traditional patterns of knowledge formation and communication. McHenry (2002), however, warns against the tendency of associating indigenous language use too strongly with tradition and holds that such association may affect language revitalisation negatively. This view is further developed by Warschauer (1998) who likewise advocates a harmony between technology and the culturally-conditioned patterns of

communication, but sees the major role of modern technology in promoting the status and relevance of minority languages to young people.

Existing research in the area of technology and language maintenance has mostly been conducted in the context of indigenous languages. Studies have noted the positive role of Internet resources in asserting ethnic identity (Almasude, 1999), connecting language communities (Benton, 1996), and facilitating language maintenance ventures such as development of literacy and implementation of new pedagogies (Haag, 2002). Ward and van Genebith (2003) further develop this theme and describe the constraints that prevail in the development and application of CALL (computer-assisted language learning) materials in the endangered language situation. In contrast, there are only a few studies analysing the significance of new technologies for "community languages" (Clyne, 1991), that is, the languages spoken by non-indigenous ethnic minorities. Borland (2001) describes ethnic cultural broadcasting as "one of the great achievements of Australian society" (p.6) and argues that the wide range of programming now available in various languages can be extended to include, for example, Web streaming and interactive Web sites. Debski (2004) reports on a qualitative analysis of the content of Web sites created by Poles living abroad. He reveals a variety of Web site features and online facilities either creating potential for or acting as barriers to language development. Borland and Sciriha (2003) consider the advantages of the Web for linking dispersed ethnic communities. Additionally, they develop plans for building a cyberspace community for people of Maltese heritage living outside Malta.

Languages are used in many interactional contexts known as domains. Clyne (1991) analyses several domains where community languages are used in Australia such as home, work, neighbourhood, school, and local religious community. He also reports on ethnic media such as press, radio, television, and video and their role for community languages. Over a decade later, the Internet is both a new arena where people work, study, and socialise as well as a medium reshaping those activities. The present paper makes the assumption that language use is the *sine qua non* of language survival. Increasing opportunities to use a minority language and available language resources may contribute to its maintenance.

This investigation takes a "snapshot" of how the Polish language is currently used with modern communications technologies by Polish-Melburnians. Through a questionnaire, it surveys which technologies, and applications of those technologies, Polish-Melburnians are familiar with, how and when Polish and English are used for online communication, and which language they prefer to use in various circumstances. It is believed that investigations of the natural patterns of the use of new technologies by ethnic communities will help us understand how these tools influence communication in ethnic groups and will lay a foundation for work involving technology aimed at increasing the levels of language transmission and maintenance. Drawing on the results of the present survey, the paper makes recommendations for applications of modern technology in community language education and ethnic homes.

POLISH LANGUAGE IN AUSTRALIA

Polish migration to Australia started in the early 19th century (Paszkowski, 1982). The first waves of Polish immigrants are difficult to document. Until 1921 Poles were not listed as a separate national category in Australian censuses due to the government's lack of recognition of Poland as an independent country when it was under foreign occupation and due to the small size of Polish immigration (Drozd, 2001). Today's Polish community in Australia is mainly composed of those who arrived during the two main waves of Polish immigration, the post World War II wave and the "Solidarity" wave in the 1980s, and their descendants. A small number of Poles settled in Australia during the communist period in Poland and in the 1990s.

In Australia, the Polish language is considered by immigrants an important part of Polish identity (Baker, 1989; Drozd, 2001) and a core cultural value (Smolicz, 1981; Smolicz, Hudson, & Secombe, 2001).

Despite this, Polish belongs to a group of languages with a medium to low maintenance rate. The 1996 Census revealed a decrease in the number of people speaking Polish at home and the decline of Polish in the ranking of most popular languages from ninth position to twelfth (Clyne & Kipp, 1997). The results of the 2001 Census further demonstrated the declining trend for Polish (Clyne & Kipp, 2002). If language maintenance initiatives are ineffective and there are no future waves of migration, Polish-speaking communities may soon cease to exist in Australia.

THE STUDY

Participants

The participants in the study were 56 Polish-Australians living in Melbourne, of whom 57.1% were female and 42.9% were male. They were affiliated with three Polish organisations in Melbourne or were friends or family members of those affiliated with these organisations. There were no specific age groups or generations targeted by the survey. Of the 56 respondents, 41 were born in Poland, 12 in Australia, two in New Zealand, and one in the United Kingdom. Of the 41 participants who were born in Poland, 22 (53.7%) lived through the critical period of language development – that is, at least until 12 years of age (Patkowski, 1980; Lighbown & Spada, 1999) – in Poland before emigrating. All the participants not born in Poland were the first generation born outside Poland. Participants ranged in age from 14 to 63 and over two-thirds of them were under 35 years old (Table 1).

Table 1. Age of Participants

Age	Number	Percentage
12 and under	0	0
13-24	27	48.3
25-34	11	19.8
35-44	8	14.3
45-54	6	10.7
55+	4	7.1
Total	**56**	**100**

They tended to be very well educated with 42 of the 56 respondents (75.1%) having attended some university (Table 2). The participants in this exploratory study do not form a representative sample of the Polish community in Melbourne. Questionnaires were gathered from a variety of organisations, such as a youth group, scouts, and a Polish church, in hope that the demographic of the members would vary in age and education. As there was little control over who responded to the questionnaire, it seems that the title of the questionnaire ("Survey of the Use of Networked Communication in the Polish Language by Polish-Australians in Melbourne") attracted younger respondents who were more familiar with technology or participants with higher education who were more interested in networked communication. This was anticipated, as the primary aim of the study was to capture the patterns and attitudes among those who used new technologies. Although the study also comments on the levels of uptake of modern communications technology and its use through Polish, these results are only representative of the non-random sample used in the present study.

In 1996, 44% of the Polish-born population in Australia were over sixty years of age. Aging population is in fact one of the main challenges for the Polish community in Australia (Jupp, 2003). In contrast, the

present sample is characterised by young age and a high level of education. Most of those who responded to the questionnaire belonged to the 1980s Solidarity wave of Polish immigration or more recent emigration, or were the children of those who had left Poland in those years. The high level of education amongst the Solidarity wave is well documented. For example, in the sample used in Drozd (2001), 40% of participants had at least some university education.

Table 2. Participants' Highest Level of Education

Level of education attained	Number of participants	Percentage
Doctoral studies	2	3.6
Masters	7	12.5
Postgraduate diploma	3	5.4
Postgraduate certificate	3	5.4
Bachelors/Graduate certificate	16	28.6
Some university (haven't completed)	11	19.6
Finished secondary school	4	7.1
Started but did not complete secondary school	8	14.3
Primary school	2	3.6
Total	**56**	**100.1**[1]

Data collection and analysis

The survey was conducted using a self-completion questionnaire containing six sections modeled on Davis (1994) (See Appendix). The first section asked participants for background demographic information. The second section was on language use and asked participants to give examples of which language they use with certain people and why they use that language. This section also was used to reveal the participants' motivations towards being able to speak Polish. The third section on the connections participants had with the Polish community helped determine their needs to communicate in Polish. In section four, participants were asked to assess their own Polish literacy and, in section five, their experience using technology. Section five also asked participants which applications of technology they use in Polish and which in English, as well as concerning their need to use technology to communicate in Polish. The final section asked participants to imagine which languages they would use in certain situations. It also asked their opinion on whether they saw the Internet as a motivator to speak English or Polish.

Two forms of the questionnaire were used: a paper version and an online version. The paper questionnaires were distributed in an informal atmosphere during meetings, such as the meeting of Polish scouts, after a Polish mass, or at the offices of Polish organisations. Participants completed the questionnaire in their own time and were encouraged to pass it on to their family members and friends. Of the 56 participants, 41 completed the online version. On the whole, responses received from the online questionnaire tended to be longer and more thoughtful.

All participants were given a plain language statement in both English and Polish explaining the research. They then read and signed a consent form, also available in English and Polish versions, or gave their consent to participate by clicking a box on the online version of the survey.

For analysis, quantitative data, such as age, place of birth, home language, frequency of computer use and experience with communicative technologies, were entered into SPSS 10 for statistical analysis.

Descriptive statistics on all variables were run in order to be able to describe the research participants and to see in which directions the data may be skewed. Correlations were also used, helping to establish whether a relationship existed between several of the measured variables and, if there was a relationship, to see if it was significant. Qualitative data from the survey were used in the study to illustrate and support quantitative trends.

RESULTS

Patterns of Polish language use and literacy

Of the 56 respondents, only two "never" spoke Polish at home. 76% of the respondents spoke Polish at home either "most of the time" or "all of the time." The majority of respondents indicated that they spoke Polish "most of the time" (Table 3).

Table 3. How often Polish is Spoken at Home

Frequency	Number of participants	Percentage
Never	2	3.6
Rarely	0	0.0
Sometimes	11	19.6
Most of the time	19	33.9
All of the time	24	42.9
Total	**56**	**100.0**

The majority of participants, over 69%, responded as speaking Polish "sometimes" when they were outside their home. Only one participant responded that she spoke Polish "all the time" outside the home due to her job; however, she spoke English occasionally at home with her children. The two participants who reported not speaking Polish at all at home noted that they were able to speak it "sometimes" at work with clients (Table 4).

 Table 4. How often Polish is Spoken Outside the Home

Frequency	Number of participants	Percentage
Never	0	0.0
Rarely	7	12.5
Sometimes	39	69.6
Most of the time	9	16.1
All of the time	1	1.8
Total	**56**	**100.0**

Participants who indicated that Polish was spoken "most of the time" often reported speaking to other family members in English or a mix of Polish and English. Most often, participants reported using English with their siblings because it was a more natural language to communicate in. Parents also responded that they spoke English occasionally to their children to make sure that what they said was understood. One parent for example said, "I often speak English to my son to avoid misunderstandings, especially if I am in a hurry or he finds it difficult to follow what I say in Polish. This applies to more complex issues." Several younger participants said that they could speak Polish but often answered their parents in English because it was easier. There were many responses from parents or their children that parents are making conscious choices to speak Polish at home in order that all their children will be able to speak the language.

Polish is often consciously chosen by the younger generation to communicate to older Polish-Australians. One teenager wrote, "I speak Polish only to older Polish people. When I talk to Polish people my age I speak in English." A 14 year-old male respondent born in Poland wrote, "I speak Polish to my parents, uncles, aunties, grandparents, all the older Polish people, mostly because they speak better Polish and it's easier for them and it just comes to me naturally." Some Polish-Australian youths did report using Polish to their peers, but English is more natural and Polish was used more for fun and not to be understood by others. A 39 year-old woman wrote about speaking to an Australian-born Polish-Australian friend saying, "We mostly use English spicing it with Polish words occasionally mostly for fun."

Almost three quarters of those completing the questionnaire reported having "good" to "very good" writing ability in Polish (Table 5).

Table 5. Self-assessed Writing Ability in Polish

Ability level	Number of participants	Percentage
Not at all	1	1.8
Poor	5	8.9
Fair	10	17.9
Good	13	23.2
Very good	26	46.4
Sum	**55**	**98.2**
No response	1	1.8

Some of the younger participants said however that they were not confident about writing in Polish. Indeed, when correlated, the relationship between the respondents' age and their self-reported writing ability was moderately significant (Table 6).

Table 6. Correlations

Variables	***Pearson r***	***df***	***p<***
Age and self-reported writing ability	0.465	52	.000
Education in Poland and writing ability	0.546	53	.000
Education in Poland and reading ability	0.224	54	0.1
Writing ability and reading ability in Polish	0.591	53	.000
Writing ability and age when leaving Poland	0.713	38	.000

A stronger correlation was found between having been educated in Poland until at least 12 years of age and writing ability ($r = .546^2$). The correlation between having been educated through this critical period and being able to read in Polish was not significant ($r = .224$, $p < 0.097$) (Table 6).

As might be expected, the correlation between reading in Polish and writing ability was moderately strong (Table 6). Of those surveyed, 14.3% answered that they could not read in Polish, corresponding closely to the 12.5% of those who said they wrote "poorly" or "not at all" in Polish. The greatest factor contributing to higher writing ability for those who immigrated to Australia is having left Poland at a later age. This correlation is convincingly strong ($r = .713$).

The younger participants, a mix of those born in Australia and those born in Poland and having moved when they were quite young, are mixed in their abilities and willingness to read and write in Polish. One respondent, a 15 year-old boy who arrived with his parents when he was 2 years old, said, "I know how to read in Polish, but I can't be bothered reading anything." Another respondent, a 20 year-old female, wrote that reading in Polish is "too hard and I am very lazy."

Internet access

The majority of participants taught themselves how to use the Internet and they use it for a wide variety of purposes. Several teens responded that they used the Internet in order to chat with their friends or play online multi-user games. Adults used the Internet as well for chatting and e-mail, but also for online banking. All generations used the Internet for learning or knowledge gathering, be it for a university course or research as part of a secondary school assignment. Both groups also learnt how to use the Internet because of the novelty of it several years ago.

Polish language use on the Internet

In all domains of Internet use, the Polish-Australians in the study reported using more of the features in English than in Polish (Table 7). Correlations between the use of one type of technology in English and in Polish were weak, aside from the use of chat ($r = .523$, $df = 54$, $p < .000$) and Internet radio ($r = .535$, $df = 54$, $p < .000$) in both languages. That is to say, writing e-mails or surfing the Internet in English, for example, is not an indicator of a particular participant's ability or willingness to do so in Polish.

Table 7. Comparison of English and Polish Language Use of the Internet

Purpose	English (percent)	Polish (percent)
E-mail	100.0	75.0
Surfing the Internet	96.4	75.0
Chat	64.3	39.3
E-greeting card	57.1	30.4
Internet radio	50.0	32.1
Online SMS	46.4	14.3
Newsgroups	41.1	30.4
Bulletin boards	25.0	8.9

Media used to communicate in Polish

In communicating with those living in Poland, telephone is still the preferred method (Table 8). Respondents cite being able to hear their loved ones' voices as a reason they like speaking on the telephone. Poland's lagging development of Internet infrastructure is another reason that using Internet tools can be frustrating, especially for relatives living in Poland. Participants regard telephoning as almost as good as face-to-face communication in situations when communication may be difficult or very important. With other technologies, it is difficult to know if the message was received or to judge the response of the recipient. Telephone offers a means for the messenger to tailor the delivery to the situation.

Table 8. Favourite Methods of Communicating in Polish (Multiple Answers Accepted)

Method of communication	Percentage of respondents
Telephone	94.6
E-mail	80.4
SMS	37.7
Chat	23.2
Microphone (computer with speakers)	12.5
Video (computer with webcam)	7.1

Opinions differed on whether e-mail was suitable for formal communication. Some said that it should be used for informal communication and it would never replace formal and traditional letter writing. Among survey participants, letter writing was a popular way to communicate to family in Poland. A respondent mentioned, "It makes people feel special if they receive mail." One participant took the aspect of formality of writing a step further and said that a telegram is a very special way to mark a formal event, such as by sending wedding greetings when unable to attend personally. One 53 year-old male said, "I consider telephone or letter more appropriate in emotional situations, and when politeness or formality are the issue." Another respondent, a 15 year-old female, said however that sending an e-mail as a greeting was as appropriate as sending a letter through the post except faster. Survey participants responded that e-mail was a convenient and cheap way to communicate to family members in Poland due to the either eight or ten hour time gap (depending on the time of year). Respondents tended to agree that, despite sometimes being impersonal as compared to a hand-written letter, e-mail is a preferred medium of communication because it is inexpensive and quick.

The study also noted a moderate statistical association between those who write e-mails in Polish and their ability to read in Polish ($r = .471$, $df = 54$, $p < .000$), similar to the correlation between reading and self-assessed writing ability mentioned above. The more one reads, the better that person's writing seems to be.

SMS, the sending of short text messages from one mobile telephone to another, in Polish is also popular among Polish-Australians. When reporting on hypothetical situations, several respondents said that when using SMS they would write in English even if it were to a Polish-Australian audience or mix the two languages. SMS name day greetings, however, would have to be given in Polish, as one survey participant wrote, as would messages sent to mobile phone users in Poland. A 21 year-old respondent made a comment about her favourite and least favourite facets of SMS: "Favourite: great when you can't be bothered talking, quick message, cheap for overseas communication, great for flirting! Least favourite: it gets addictive."

A cross-tabulation (Table 9) of the data on Polish technology usage enabled a distinction to be drawn between those raised in Poland through the critical period of language development (in this research, age 12) and those participants who were not -- either by leaving Poland before that age or by being born outside Poland and not having returned. This table shows that those living in Poland through the critical period were more likely to use technologies dependent on written Polish such as email, newsgroups, SMS, and e-greeting cards.

Table 9. Technology Usage by those Raised in Poland through Age 12 and those Who Were Not (*N*=56)

Technology used in the Polish language	Raised in Poland through age 12	Not raised in Poland through age 12
E-mail	90.9	64.7
Newsgroups	40.9	23.5
SMS	18.2	11.8
E-greeting	40.9	23.5
Internet surfing	63.6	82.4
Chat	22.7	50.0
Bulletin board	0.0	14.7
Internet radio	31.8	32.4

Factors interacting with Internet use of Polish

All but three respondents reported first learning to use the Internet in English. Participants were asked to comment on how the Internet either encourages or discourages the use of a particular language. Most survey participants said that the user could choose to view or use Polish Internet content over similar English sites. Some respondents said, however, that Polish was discouraged by the sheer number of English language sites. A respondent who emigrated from Poland in the early 1980s said that she preferred the English version of the Internet as she has not been developing her Polish language vocabulary in the last 20 years. On the other hand, she thought that the Polish version of the Internet was good "to become more familiar with the current Polish language." Another participant wrote that e-mail might discourage the use of Polish due to the English-language interfaces of e-mail providers in Australia or because participants are more comfortable using English when using computers. While other participants mentioned the lack of support for Polish characters, this participant said that e-mail was not a skill that she developed within the language and that many other Polish-Australians probably learnt to use e-mail in English.

A 16 year-old female Polish-language school student recognised the limitations of using Polish on the Web. As opposed to English, "you can only use Polish on the Internet if … you are in a Polish site looking for information in Polish. I find that the use of Polish on the Internet has helped me practice … reading and writing." Participants agree that the Internet does offer opportunities to become more literate in both Polish and English, but Polish content has less of a chance of being accessed than English-language content because of the large amount of English-language web sites. Polish-language content is available, including music and movies, but it is up to the user to take the initiative to access this information.

DISCUSSION

Language use is the *sine qua non* of language survival. Language maintenance initiatives are therefore focused on widening the use of an endangered language by, for example, improving its official status, strengthening its distinctive functions in society, increasing its presence in the mass media and education, or changing negative attitudes towards it. As a major force influencing both local and global communication, the Internet is having a significant impact on the access that emigrants have to their native languages and therefore on their use. Although overall they reported using more of the features of the Internet in English than in Polish, the Polish-Australians in the study reported using eight different domains of the Internet in Polish. The present study does not provide definitive results regarding the impact of new technologies on language maintenance. It demonstrates however that use of Polish with modern technologies (Internet, SMS) by the younger members of the Polish community in Melbourne seems to be a popular phenomenon and must be included in language maintenance research among the traditional communication channels used to maintain links with Polish culture and language such as letters, phone calls, travel to Poland, and inviting family from Poland (cf. Drozd, 2001).

It is important to investigate when people use modern communications technologies in their community languages and when in the dominant language and what the factors are affecting language choice. From the language maintenance perspective, use of modern technologies in the community language may be seen as contributing to language maintenance. External or personal barriers to such use should therefore be identified and described and must be taken into account by maintenance initiatives. This should include the development of language teaching materials and procedures for community language schools (cf. Ward & van Genebith, 2003).

The present survey has discovered several factors affecting language choice when using communications technologies. It noted many complaints concerning the lack of support for typing Polish characters in e-mails. Although the introduction of Macintosh OS X and Windows XP has improved the equal status of

languages on the Internet, the situation of Polish in emigrant contexts is still far from perfect. Technological solutions are now in place, but a lot can still be done to sensitise administrators and technical supervisors at all levels to the linguistic needs of minorities using computers. Another external factor affecting selection of Web sites in the community language noted by the survey was the overwhelming size of the English-language Internet so that English language sites have a much greater chance of being selected.

Were all external factors affecting the use of community languages on the Internet to be removed, emigrants would still have to make a personal choice which language to use each time they switch on their computers. The respondents in the present study often indicated the importance of personal choice and motivation. Although the aim of using communications technology would be a primary motivator of language choice, some respondents have indicated that the language of first/early exposure to the Internet may have an impact on future choice of language for Internet use. All but three respondents reported first learning to use the Internet in English, which may have influenced their overall preference for using English as evidenced in the survey. Also, respondents commented that e-mail skills were not something that they had developed in Polish and that was why they preferred to use English for electronic mail.

If indeed it is true that those who are introduced to Internet communication in the community language are more likely to select this language in the future, it is imperative for community language schools, as well as for parents at home, to introduce children early on to the use of the Internet in the community language. More research must be conducted on this issue; appropriate pedagogical Internet resources must be identified; and specific teaching methodologies and techniques must be developed for ethnic schools and for parents raising children in more than one language. Consultations with ethnic communities in Melbourne demonstrate that parents often do not know about the existence of Internet language learning resources for children and many are reluctant to encourage their children to use the Internet. It is important for parents and teachers to be familiar with the issues of safety on the Internet (e.g., "Child Safety on the Information Superhighway").

Ability to read and write in the community language is another personal factor affecting language choice on the Internet. The survey has discovered a correlation between use of e-mail in Polish and the ability to read in Polish. The Internet is and at least for some time will be a written medium. While people coming from bilingual backgrounds usually develop good oral/aural skills in the community language used at home, they rarely develop biliteracy. If children and youths from multilingual backgrounds are to be encouraged to use the Internet for social communication, school work, and research in the community language, it is necessary to strengthen the teaching of reading and writing in families and ethnic schools (cf. Nicholas, Debski & Lagerberg, 2004). Computer tutors, games, and computer-mediated communication are excellent tools for the teaching of writing skills and their use should be encouraged in ethnic schools and homes. Children could be assisted in finding key-pals (old "pen-pals") in the country of origin. Internet-based tandem learning, involving two learners who learn each other's first language, is a technique well developed in mainstream language teaching (Appel & Mullen, 2000). Its benefits for the development of cultural understanding (Meagher & Castanos, 1996) and learner autonomy (Schwienhorst, 2003; Ushioda, 2000) are also well described. Writing chain stories using e-mail is another example of a simple and effective technique that can be used with younger children by both parents and teachers, and so is creation of DVDs and Web diaries, blogs, from holidays and trips that can be viewed by family and friends in Poland.

Similarly, lack of up-to-date vocabulary was also perceived as a barrier to using the Polish Internet. Once the lexical barrier is overcome through provision of support at home and in ethnic schools, however, the Internet can in fact be seen as an important source of up-to-date "living" language for ethnic communities, and thus can work towards language maintenance.

Constraints determining the requirements of community language CALL may significantly differ from the constraints proposed by Ward & van Genebith (2003) for endangered languages and therefore need a separate treatment. The authors for example write that lack of computer literacy can be an important barrier, as often is the case with underprivileged minority groups. The present data demonstrated however that most of the respondents had good understanding of the potential of the computer, and many members of the community could be asked to both provide technical support to ethnic education and support their children in the home environment.

Not all technologies were equally popular among the respondents. Assessment of the match between *goal* and *medium* made by the user was an important factor affecting the choice of communication technologies by the Polish-Australians in the study. Hearing the voice of a loved member of the family seems very important for the participants and that is why, in the age of the Internet, the telephone still remains their favourite means of communication with family members. Interestingly, when emigrants choose communication technologies, they assess how a given technology mediates messages. As a medium, many respondents regarded e-mail as either too informal or impersonal in some situations in which the respondents would prefer to use the hand-written letter or even telegram. For others, the asynchronous character of e-mail would make it a convenient communication tool helping overcome the time difference between Australia and Poland. This result shows for example that e-mail is a more important means of communication for Polish emigrants in Australia than chat or other synchronous communication tools. This preference may be different for other communities, for example Korean or Japanese, where time difference is not an important factor.

Language contact and change in the virtual world cannot be considered in separation from real world factors because Internet use of community languages is affected by human attitudes, technical infrastructure, and educational practices. At the same time, the ways in which immigrant and ethnic communities use media can influence the status of community languages, human attitudes towards them, and the practices in their teaching and learning. While the survey shows that "cultural broadcasting" (Borland, 2001) through television and radio still plays an important role in the lives of Polish-Australians, so increasingly do interactive technologies such as e-mail, SMS and chat. The data clearly show that the Internet has increased the *quantity* of contacts with ethnic language material. How new interactive technologies change the *quality* of interaction between ethnic individuals and their home countries and between communities around the world speaking the same language is another interesting area of investigation. The present study confirms the results of Debski (2004) and shows that interactive technologies expose Polish emigrants to up-to-date language of their age or professional peers and increase opportunities for individuals to use community languages to accomplish social, educational, and professional goals. We need to know more about how associating Internet use of community languages with life objectives affects motivation to maintain, transfer, and learn community languages. Overall, we need to understand better the significance of the change of the role of technology in language maintenance from a tool of *cultural broadcasting* to an *environment for cultural participation*. Today, emigrants create their own Web sites where they publish poetry or accounts of emigration experiences. They participate in online events involving celebrities in the country of origin, and they can express their political or cultural views (Debski, 2004). Such new opportunities may generate the sense of increased participation in the culture of origin and a feeling of greater influence on social and cultural events in the country of origin. Virtual communication provides opportunities for goal-oriented, functional use of language, helping ethnic community members either develop (second generation) or maintain (first generation) "secondary discourse" (Fettes, 1997), needed to communicate with people outside the immediate circle of family and friends.

We need more research aimed at developing specific teaching methodologies and techniques utilising goal-oriented use of language on the Internet for community and ethnic schools and parents. Edwards, Pemberton, Knight, and Monoghan (2002) report on a European Union project called "Fabula" aimed at

building a tool allowing children from bilingual backgrounds to create bilingual books. They describe how creating such electronic books involves collaboration between students, teachers, and parents and offers opportunities to write for real audiences, which acts as a motivator for learners. Creating electronic projects with a real-life appeal is a well-explored area in language teaching and learning (Barson & Debski, 1996; Barson 1999; Debski, 2000). Project-oriented approaches seem particularly useful in minority language teaching (cf. Warschauer, 1998), where creative links can be developed between the language classroom and ethnic community groups or individual members acting as the audience and source of information for student projects. Electronic links can also be created between community language students abroad and institutions in the home country, such as schools or universities. Technology can act as an important tool inspiring the renovation of approaches and methods used in ethnic language teaching and contributing to increasing the status of learning a minority language. Employment of technology may contribute to developing in the minds of the Australian-born descendants a view of Poland as a modern country and to increasing their interest in the Polish language and culture.

The impact of new technologies on community language maintenance is an obvious gap in research, which has not had adequate treatment by either mainstream language maintenance research or research in CMC (computer-mediated communication). The first has not yet fully incorporated Internet communication into its frameworks and often treats the Internet as a single technology without considering the specific features of its media (e.g. e-mail, chat, virtual reality) and their ability to transform social relationships and communication. In CMC research, on the other hand, studies based on minority language data are still rare and little connection has to date been made with the current models of language maintenance in the "real" world (Danet and Herring, 2003).

CONCLUSION

In summary, the present study has found that nearly all the Polish-Melburnians in the study used the Internet daily for a variety of purposes. All the generations used the Internet for learning or knowledge gathering. Use of Polish on the Internet is a popular phenomenon among Polish-Melburnians in the study. The participants reported using eight different domains of the Internet in Polish. However, they used more of the features of the Internet in English than in Polish. Correlations between the use of one type of technology in English and use of that same technology in Polish were weak. Being able to use one type of technology in English therefore is not a strong indicator of a participant's ability to use the same technology in Polish.

Polish emigrants choose a communication medium that matches their communicative goals. In communicating with those living in Poland, the telephone is still the preferred method as a means allowing the messenger to hear the voice of loved ones and to tailor the delivery to the situation. E-mail is the second most popular technology used to communicate in Polish. The study has discovered several factors interacting with Internet use in the community language:

- Lack of support for typing special characters in e-mails
- Overwhelming size of the English-language Internet so that English language sites have a much greater chance of being selected
- Language of first/early exposure to the Internet and/or specific Internet channels
- Lack of ability to read and write
- Contemporary (unknown) lexical items

Finally, the study has found that interactive technologies expose Polish emigrants to up-to-date language of their age or professional peers.

Several recommendations for language maintenance and learning initiatives can be based on the results of the present study. It is important for individuals and organisations to influence administrators of computers located in various institutions (e.g. universities, schools, libraries) to make them capable in as

many languages as possible. Parents and ethnic schools must introduce children early on to the use of the Internet in the community language and increase the emphasis on developing biliteracy. Ethnic schools should use task-based and project-oriented CALL methodologies, recognizing that the Internet is an environment for cultural participation providing opportunities for goal-oriented, functional language use.

Ethnic school education should look for ways to use the technical expertise of the members of the community to support pedagogical initiatives. It seems that CALL could be utilised as a tool fueling the renovation of the ethnic school's language curricula.

The present study has investigated the use of Polish with Internet technologies by a sample of young and well-educated Polish-Melburnians. Similar studies must be conducted with different ethnic communities to allow comparisons. For example, it would be interesting to see how different emigrant cultures choose different online communication channels and use them to achieve their communicative goals and what are the constraints for different communities. It would also be interesting to see what different communities see as barriers to more popular use of modern technologies through the community language. Such investigations would not only contribute to research of language maintenance, but would enrich what we know about cross-cultural CMC in general. Such investigations are also necessary for the development of policies, approaches, and techniques suitable for Community Language CALL.

APPENDIX

Polonia Research Questionnaire
The University of Melbourne, Horwood Language Centre

Researchers: Dr. Robert Debski
    Mr. Michael Fitzgerald

Title: Survey of the Use of Networked Communication in the Polish Language by Polish-Australians in Melbourne

Background information

1. Age? _____ years old

2. Sex: ☐ Male ☐ Female

3. In which country were you born? _____

    * If born outside of Australia, how old were you when you came to Australia?
      Year: _____ Age: _____

4. In which suburb or area of Melbourne do you live? _____

5. What is your highest level of education?

☐ PhD   ☐ Master degree
☐ Postgraduate diploma   ☐ Postgraduate certificate
☐ Bachelor/Graduate certificate   ☐ Some university
☐ Finished secondary school   ☐ Started but did not complete secondary school
☐ Primary education
☐ Other (please specify) _____

6. How many years (approximately) have you studied or trained to obtain the above qualification?:

    In Poland? _____ years

In Australia?   _____ years
Other (specify: _____)?   _____ years

7. How often do you speak Polish at home?

☐ All of the time   ☐ Most of the time   ☐ Sometimes   ☐ Rarely   ☐ Never

Language Use

8. Please list the members of your family and/or Polish friends in the spaces below. Next to their relationship to you, please write the language you speak with them.

<u>Example</u>:

Family or friend (relationship to you)   **Language(s) spoken with them**

___friend from school_____   ___Polish and English_____

___oldest brother_____   ___Polish_____

Family or friend (relationship to you)   **Language(s) spoken with them**

_____   _____

_____   _____

_____   _____

_____   _____

9. Please explain why you choose to speak certain languages to certain family members.

For example: If you speak English to your brother *but* Polish and English to your sister, why?

_____

_____

_____

_____

10. How often do you speak Polish outside your home?

☐ All of the time   ☐ Most of the time   ☐ Sometimes   ☐ Rarely   ☐ Never

* If you speak Polish outside your home, where and with whom do you speak it?

_____

_____

11. Have you ever taken a Polish language class?   ☐ Yes   ☐ No

* If yes, please indicate the highest level you completed and for how long?

☐ Advanced   ☐ Intermediate   ☐ Beginner

* Number of years: _____

* Where was the class taught? _____

* Why did you study Polish?

_____

_____

12. How important is it to you to be able to speak Polish?

_____

_____

_____

Polish Community Connections

13. Are you a member of or do you participate occasionally in any Polish groups or organisations (i.e. community, youth, language, religious, etc.)?   ☐ Yes   ☐ No

    * **If yes**, of which groups are you a member or participant:

_____

    * **If yes**, in what sort of group activities do you participate?

_____

    * If you **do not** participate in Polish group activities, is there a reason?

_____

_____

14. Do you listen to radio broadcasts in the Polish language?   ☐ Yes   ☐ No

    * **If yes**, how often?

☐ daily   ☐ weekly   ☐ twice a month monthly   ☐ less than once a month

    * Which Polish radio stations do you listen to?

☐ SBS   ☐ 3ZZZ   ☐ Polish radio via Internet
☐ Other (specify): _____

    * What kinds of Polish radio programs do you like to listen to?

_____

_____

    * What kinds of Polish radio programs would you like to listen to?

_____

_____

15. Do you watch Polish TV programs/movies?   ☐ Yes   ☐ No

    * If yes, how often?

☐ daily   ☐ weekly   ☐ twice a month monthly   ☐ less than once a month

* **If yes**, What kinds of Polish programs or movies do you like to watch?

_____

_____

* **If yes**, what kinds of Polish programs or movies would you like to watch?

_____

_____

Polish Literacy

16. Do you read in Polish?   ☐ Yes ☐ No

   * **If yes**, what do you read? (examples: books, newspapers, magazines, online

newspapers, etc.)

_____

_____

   * If you **do not** read in Polish, please explain why you do not:

_____

_____

17. How often do you write letters or cards and send them by post (not emails)?

☐ Daily   ☐ Several times per week   ☐ Once a week ☐ Several times a month
☐ Once or twice a month ☐ A few times per year ☐ Once a year ☐ Less than once a year
☐ Never

18. How well do you write in Polish?

☐ Very well   ☐ Good   ☐ Fair   ☐ Poor   ☐ Not at all

19. In what situations do you write in Polish *or* when would you like to write in Polish if you were able to?

Example:

Situation or person you write to	**Reason for writing**
____babcia_____	_to send name day greetings and news about our family_

Situation or person you write to   **Reason for writing**

_____   _____

_____   _____

_____   _____

Computer experience

20. How often do you use a personal computer?

☐ Daily   ☐ Several times per week   ☐ Once a week   ☐ Several times a month
☐ Once or twice a month ☐ A few times per year   ☐ Once a year   ☐ Less than once a year
☐ Never

21. When did you first use a personal computer?

☐ Before beginning school   ☐ Elementary school   ☐ Secondary school
☐ After finishing secondary school

* How old were you when you first used a computer? _____

22. Do you use a mobile phone?   ☐ Yes   ☐ No

* **If yes,** do you use SMS (short messaging service)?   ☐ Yes   ☐ No

23. Do you have access to the Internet?   ☐ Yes   ☐ No

* **If yes,** where do you use the Internet? (i.e. home, office, school, etc.)

_____

_____

24. When did you first use the Internet? (please circle)

☐ Before beginning school   ☐ Elementary school   ☐ Secondary school
☐ After finishing secondary school

25. In which language did you first learn to use the Internet? (please circle)

☐ English   ☐ Polish   ☐ Other: _____

* Who taught you how to use the Internet? _____

* What was the reason that you started using the Internet?

_____

_____

26. Please check all of the features of the Internet have you have used **in English**:

☐ Surfing the web   ☐ Email   ☐ Newsgroups ☐ Chat   ☐ Bulletin board
☐ Online SMS   ☐ Multiplayer games   ☐ Music downloads
☐ Online radio   ☐ Online video ☐ Shopping   ☐ Greeting cards
☐ Webpage design   ☐ FTP   ☐ School research   ☐ Job hunting
☐ Online learning   ☐ Others (please specify) _____

27. Please check all of the features of the Internet have you have used **in Polish**:

☐ Surfing the web   ☐ Email   ☐ Newsgroups ☐ Chat   ☐ Bulletin board
☐ Online SMS   ☐ Multiplayer games   ☐ Music downloads

☐ Online radio   ☐ Online video ☐ Shopping   ☐ Greeting cards
☐ Webpage design ☐ FTP   ☐ School research
☐ Job hunting   ☐ Online learning   ☐ Others (please specify)_____

28. Do you have any friends and/or family living in Poland? ☐ Yes   ☐ No

* If yes, do you communicate with them by using any of the following technologies?

☐ Telephone   ☐ Email   ☐ Chat   ☐ SMS   ☐ Telegram
☐ Video conferencing with web camera (i.e. Netmeeting)   ☐ Computer chat with microphone
☐ Others (please specify): _____

* Which of the above technologies do you use most often and why?

_____

_____

29. List some of your friends, family members, or contacts in Poland (their relationship to you), the language(s) spoken with them, and the type of technology you use to communicate.

Example:

Family or friend (relationship to you)	**Language(s) spoken**	**Technology used**
younger female cousin	Polish	email
friend I met on holiday at the Baltic	English	SMS, chat

Family or friend (relationship to you)	**Language(s) spoken**	**Technology used**
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

30. What are your favourite and/or least favourite things about email?

_____

_____

31. What are your favourite and/or least favourite things about SMS?

_____

_____

32. Please tell of a time when you had a choice of telephoning, writing a letter, or using another traditional way of communicating and you chose to email instead. Why did you send an email?

_____

_____

_____

33. In what situations do you think it is inappropriate to use email to communicate a message? What would be a better way to communicate that specific message?

_____

_____

_____

34. When would email **<u>not</u>** replace traditional methods of communication (i.e. letter writing, telegrams…)? Please provide specific examples.

_____

_____

_____

35. Which methods of communication are your favourite when you can't meet face-to-face? (list top 3)

    1. _____ Why? _____

    _____

    2. _____ Why? _____

    _____

    3. _____ Why? _____

    _____

36. If you have friends and/or family in Poland, how often do you communicate with them?

☐ Daily   ☐ Several times per week   ☐ Once a week   ☐ Several times a month
☐ Once or twice a month ☐ A few times per year   ☐ Once a year   ☐ Less than once a year
☐ Never

Role Play

* Below is a list of events or situations.

Suppose you wanted to communicate to a member or your family or a Polish friend or group of friends also living in Melbourne in these following events or situations. Remember to think

about ways you communicate (email, telephone, SMS, chat, bulletin board, letter or card writing, etc.).

37. *Answer the following questions A ~H below.* Which method of communication would you choose and why? Which language would you use with your friend(s) and/or family?

A. To invite them to a Polish club activity:

B. To invite them a footy game:

C. To a Polish friend to your house for a meal with your family:

D. To ask them meet you in the city at the last minute:

E. To tell your family that you'll be home late:

F. To ask a friend or family member to pick you up at the train station:

G. To wish a happy name day:

H. To give holiday greetings:

38. How does the Internet encourage or discourage the use of Polish or English? Please provide examples:

_____

_____

Optional information

Supplying the information below is voluntary. All information provided will be kept confidential and will not be used to identify participants with their responses.

If you do supply the information below, you *may* be contacted and asked to participate in a discussion group based on this questionnaire. All people supplying the information below will be entered into a prize drawing to win cinema passes in appreciation of your willingness to participate.

Name: _____

Address (so we can send you the cinema passes if you win):

Street: _____

Suburb and Postcode: _____

Email address: _____

Phone number(s):   Home   _____

                         Mobile   _____

Thank you for your time!

NOTES

1. 0.1 percent higher due to rounding.

2. All correlations significant at the 0.01 level except where noted.

ABOUT THE AUTHORS

Michael Fitzgerald completed his MA in CALL at The University of Melbourne. Since 2003 he has been a senior lecturer at Kanda University of International Studies in Chiba, Japan. His current research interests are in minority and community languages and educational inequality in the United States, where he is currently pursuing a teaching position in high-need public schools.

E-mail: mafjrcall@yahoo.com

Robert Debski is Associate Professor at the University of Melbourne and Director of the Horwood Language Centre. His research interests are in the significance of digital technologies for minority languages, language socialization, project-oriented learning, and CALL as an academic discipline.

E-mail: rdebski@unimelb.edu.au

REFERENCES

Almasude, A. (1999). The new mass media and the shaping of Amazigh identity. In J. Reyhner, G. Cantoni, R. N. St. Clair and E. Parsons Yazzie (Eds.), *Revitalizing Indigenous Languages* (pp. 117-128). Flagstaff, AZ: Northern Arizona University.

Appel, C. and Mullen, T. (2000). Pedagogical considerations for a web-based tandem language learning environment. *Computers and Education*, 34(3-4), 291-308.

Baker, R.P. (1989). The adaptation of Polish immigrants to Toronto: the Solidarity wave. *Canadian Ethnic Studies*, 21(3), 74-90.

Barson, J. (1999). Dealing with double evolution: Action-based learning approaches and instrumental technology. In R. Debski and M. Levy (Eds.), *WorldCALL: Global Perspectives on Computer-Assisted Language Learning*. Lisse: Swets and Zeitlinger.

Barson, J. and Debski, R. (1996). Calling back CALL: Technology in the service of foreign language learning based on creativity, contingency, and goal-oriented activity. In M. Warschauer (Ed.), *Telecollaboration in Foreign Language Learning* (pp. 49-68). Honolulu, HI: Second Language Teaching and Curriculum Center, University of Hawai'i.

Benton, R. (1996). Making the medium the message: Using an electronic bulletin board system for promoting and revitalizing Maori. In M. Warschauer (Ed.), *Telecollaboration in Foreign Language Learning* (pp. 187-285). Honolulu, HI: Second Language Teaching and Curriculum Centre, University of Hawai'i.

Borland, H. (2001). Multilingualism, language policy and the role of ethnic community broadcasting. Retrieved April 13, 2005, from http://www.nembc.org.au/confold/hborland.pdf

Borland, H. and Sciriha, L. (2003, May). *Internationalising education through the Web: Virtual learning for diasporic communities*. Paper presented at the national conference Internationalising Education: Risks and Returns, Victoria University of Technology, Melbourne.

Buszard-Welcher, L. (2001). Can the web help save my language? In L. Hinton and K. Hale (Eds.), *The Green Book of Language Revitalization in Practice* (pp. 331-348). San Diego: Academic Press.

Clyne, M. (1991). Community Languages: The Australian Experience. Cambridge: Cambridge University Press.

Clyne, M. and Kipp, S. (1997). Trends and changes in home language use and shift in Australia, 1986-1996. *Journal of Multilingual and Multicultural Development,* 18(6), 451-473.

Clyne, M. and Kipp, S. (2002). Australia's changing language demography. *People and Place*, 10 (3), 29-35.

Danet, B. and Herring, S. (2003). Introduction: The multilingual internet, Journal of Computer-Mediated Communication, 9(1). Retrieved December 02, 2005, from http://jcmc.indiana.edu/vol9/issue1/intro.html.

Davis, K. A. (1994). *Language Planning in Multilingual Contexts: Policies, Communities, and Schools in Luxembourg*. Amsterdam: Benjamins.

Debski, R. (Ed.). (2000). Project-Oriented CALL: Implementation and Evaluation [Special Issue]. *Computer-Assisted Language Learning Journal*, 13(4-5).

Debski, R. (2004). The Internet in support of community languages: Web sites created by Poles living abroad. *Information Technology, Education and Society*, 5(1), 5-20.

Drozd, E. (2001). *They Have Come a Long Way: The Settlement of the 1980s Wave of Polish Immigrants in Melbourne*. Footscray, Vic.: Australian-Polish Community Services.

Edwards, V., Pemberton, L., Knight, J., and Monoghan, F. (2002). Fabula: A bilingual multimedia authoring environment for children exploring minority languages. *Language Learning and Technology*, 6(2), 59-69. Retrieved December 02, 2005, from http://llt.msu.edu/vol6num2/edwards/default.html.

Fettes, M. (1997). Stabilizing what? An ecological approach to language renewal. In J. Reyhner (Ed.), *Teaching Indigenous Languages* (pp. 301-318). Flagstaff, AZ: Northern Arizona University.

Haag, M. (2002). Early effects of technology on the Oklahoma Choctaw language community. *Language Learning and Technology*, 6(2), 70-82. Retrieved December 02, 2005, from http://llt.msu.edu/vol6num2/haag/default.html.

Jupp, J. (2003). The Polish impact on the Australian society. Retrieved April 13, 2005, from
http://www.apcs.org.au/attachments/JamesJupp.pdf.

Kibbee, D. A. (2003). Language policy and linguistic theory. In J. Maurais and M. Morris (Eds.),
Languages in the Globalising World (pp. 47-57). Cambridge: Cambridge University Press.

Lighbown, P. M. and Spada, N. (1999). *How Languages Are Learned*. Oxford: Oxford University Press.

Mackey, W. F. (2003). Forecasting the fate of languages. In J. Maurais and M. Morris (Eds.), *Languages
in the Globalising World* (pp. 64-83). Cambridge: Cambridge University Press.

McHenry, T. (2002). Words as big as the screen: Native American languages and the Internet. *Language
Learning and Technology*, 6(2), 102-115. Retrieved December 02, 2005, from
http://llt.msu.edu/vol6num2/mchenry/default.html.

Meagher, M.E. and Castanos, F. (1996). Perceptions of American culture: The impact of an
electronically-mediated cultural exchange program on Mexican high school students. In S.C. Herring
(Ed.), *Computer-Mediated Communication: Linguistic, Social and Cross-Cultural Perspectives* (pp. 187-
202). Amsterdam: John Benjamins.

Nathan, D. (2000). Plugging in indigenous knowledge – connections and innovations. *Australian
Aboriginal Studies,* 2, 39-47.

Nicholas, N., Debski, R., and Lagerberg, R. (2004). Skryba: An Online Orthography Teaching Tool for
Learners from Bilingual Backgrounds. *Computer Assisted Language Learning*, 17(3-4), 441-458.

Paszkowski, L. (1982). *Poles in Australia and Oceania 1790-1940*. Sydney: Australian National
University Press.

Patkowski, M. (1980). The sensitive period for the acquisition of syntax in a second language. *Language
Learning*, 30(2), 449-472.

Schwienhorst, K. (2003). Learner autonomy and tandem learning: Putting principles into practice in
synchronous and asynchronous telecommunications environments. *Computer-Assisted Language
Learning*, 16(5), 427-443.

Smolicz, J. (1981). Core values and cultural identity. *Ethnic and Racial Studies*, 4(1), 75-90.

Smolicz, J., Hudson, D., and Secombe, M.J. (2001). Family collectivism and minority languages as core
values of culture among ethic groups in Australia. *Journal of Multilingual and Multicultural
Development*, 22 (2), 152-172.

Ushioda, E. (2000). Tandem language learning via e-mail: From motivation to autonomy. *ReCALL*, 12(2),
121-128.

Valiquette, H. P. (1998). Community, professionals, and language preservation: First things first. In N.
Ostler (Ed.), *Endangered languages: What role for the specialist* (pp. 107-112). Bath, UK: Foundation for
Endangered Languages.

Villa, D. J. (2002). Integrating technology into minority language preservation and teaching efforts: An
inside job. *Language Learning and Technology*, 6(2), 92-101. Retrieved December 02, 2005, from
http://llt.msu.edu/vol6num2/villa/default.html.

Ward, M. and van Genebith, J. (2003). CALL for endangered languages: Challenges and rewards.
Computer-Assisted Language Learning, 16(2-3), 233-258.

Warschauer, M. (1998). Technology and indigenous language revitalization: Analysing the experience of
Hawai'i. *Canadian Modern Language Review*, 55 (1), 140-161.