Translated application interfaces – issues of engagement

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ABSTRACT

In New Zealand, English is the language that dominates contemporary technologies. Usability testing was completed on a range of applications, available with a Māori-language interface, to gauge levels of awareness, engagement and perception. Nearly all of the respondents were unaware of the availability of these interfaces but most indicated they would prefer to use the Māori-language versions. In terms of engagement and usability, users initially engaged using Māori but switched to English when they wanted to quickly complete the task at hand. Few remained fully engaged with the Māori-language interfaces. High levels of language switching were reported and some frustration as the participants encountered new and unfamiliar uses of words. At face value the feedback suggests the translated interfaces contained unnecessary complications and that better design and content might have enhanced the user experience. However, there is evidence that extended use would enable users to become more familiar with the interfaces alluding to initial barriers created by a previous competence in another language – in this case English. With this previous competence in mind it might be more useful to employ design concepts that would alleviate initial difficulties and serve to keep the user engaged in the target language for longer periods of time.

Author Keywords

Māori language, translated technology, Māori-language interfaces

ACM Classification Keywords

Māori-language interfaces

General Terms

Design, Languages, Human Factors

INTRODUCTION

Language loss is not a new phenomenon. Over the last 500 years it is thought that over half of the world's languages have ceased to be spoken, been absorbed by other languages and/or been somehow altered as the social conditions of the community are changed [1][9]. Of the 6,500 – 7,000 languages spoken in the world at the moment approximately half are expected to be lost by the turn of the century [2][4][6][7]. Although language shift and language loss is an ongoing occurrence, the event itself is normally gradual and one of attrition [5]. However, sudden (or abrupt) language loss could occur as a result of disease, natural disaster or warfare [5][10]. Such instances, where languages are suddenly lost, usually arise when the speaking population or language community is also lost suddenly, or vanquished as in the case of warfare. This type of rapid loss is relatively uncommon – languages are more likely to be lost over a number of generations as speakers of a language choose to not speak their language to each other and/or to not speak it to their children [2][10].

With the advent of mass communication the number of endangered languages, under threat of extinction, has escalated. This modern communication upsurge is placing minority language speakers under increasing pressure to shift to a language that is more dominant, more prestigious and more widely known [8]. That pressure is causing the disappearance of languages in increasing numbers – the rate of which is recognized as a worldwide crisis and serious cause for alarm [3][10]. Of relevance to this research is the technology-based reaction of minority language communities to the potential loss of their language. In particular, the use of translated application interfaces in an effort to promote language use and visibility in popular, well-used mediums. The focus thus far has been on interfaces that have been translated into te reo Māori (the Māori language - indigenous to Aotearoa/New Zealand).

Te reo Māori is undergoing a renaissance of sorts as language activists seek to restore language vibrancy and vigour. Language regeneration efforts, especially over the past half century, have produced a variety of initiatives seeking to halt the declining health of te reo Māori and increase the number of fluent speakers. Early language initiatives were created that focused on education and community language development. More recently, the use of contemporary technologies is making significant inroads into the areas of acquisition and use of minority languages especially through wider communication and networking. The development of small online language communities, encouraging language use, and the advent of translated application interfaces is slowly embedding a Māori-language profile in various forms of new media. Recent technologies have included translated interfaces for a selection of computer applications, mobile technology, physical self-service machines and social media.

The effect of these tailored resources would be enhanced by strategies that promote awareness and encourage their extended use in the target language.

Translated application interfaces aim to enhance the likelihood that an endangered language will survive through its increased use and the increased availability of ways in which the language can be used. The impact of information technology and computer applications with interfaces that have been made available in an endangered language is significant in that they are able to be widely broadcast and continuously available. There may also be benefits to the language through association with technology and modernity.

This paper reflects the findings from a number of usability tests on a range of application interfaces that have been translated into te reo Māori. The feedback has shown that, in general, users of the translated interfaces experience a sense of pride when they encounter their language in new technology-based mediums. However, the majority of responses cite difficulties with new words, unfamiliar words and words used in unfamiliar contexts as the main reasons for switching the interface back to the English language. Although the participants experience some frustration initially, they say that the Māori-language interface would be their first preference when interacting with the interface.

INTERFACE TESTING
The four studies outlined in this paper include:

1. Māori-medium schools (Hamilton)

2. Māori-medium schools (New Zealand)

3. Library Self-issuing machines, and,

4. Smartphone.

MĀORI-MEDIUM SCHOOLS (HAMILTON)
A preliminary survey was conducted to gain a quick snapshot in terms of awareness and use of translated application interfaces. The applications included Windows, Microsoft Office, the Google Web Search interface and Moodle. Six Māori-medium schools were selected based on their Hamilton location and levels of familiarity between the teaching staff and the research team. The six Māori-medium schools included 2 each of Wharekura (Secondary Schools), Kura Kaupapa (Primary Schools), and Kōhanga Reo (Pre-schools). The teachers and students of each of these schools were fluent in te reo Māori. Teacher representatives from each of the schools were asked questions about standard school metrics, computer use and awareness and use of the selected localised interfaces. They were also asked their views regarding possible future use of the interfaces.

Results
When questioned about the possible use of these interfaces in the future and how they would implement this software the following are examples of the comments received:

- Definitely! Anything that enhances the use and propagation of te reo Māori.
- The children would be given no option (their computers would be set to te reo Māori)
- Would be awesome for our tamariki (*children*).
- It would be nice to have something with a Māori interface for the 2-5 year olds.
- Time vs. integrity. We are more used to English so it is faster, but we should use the Māori interfaces because we are a Māori-medium school.
- Any type of Māori resources would be gratefully appreciated because we are ignorant of things to do with computers.

The translated interfaces were installed at one school. These software interfaces have now become a normal feature.

- It's just normal, relieving teachers are surprised by this capability.
- The children have cited a preference for Māori rather than English on the computer.

Summary
Aside from one case where the software was installed for one school, none of the schools were aware of the availability of the translated interfaces. All the schools were keen to acquire and use the software and prepared to force its use on the students. Concerns that were raised included issues of:

- Cost (a misconception given the software is free)
- Understanding the new vocabulary
- Time required for installation and learning to use the software

Although the sample size was quite small, this survey has been useful for informing a subsequent survey that has used a much larger sample.

MĀORI-MEDIUM SCHOOLS (NEW ZEALAND)
A larger study of the use of translated interfaces targeted the Principals of Māori-medium schools in New Zealand. Due to the nature of their role within the school, Principals are likely to affect both policy and attitude. The selection of Māori-medium schools also provided us with participants who could be considered to have some vested interest in the health of the Māori language and would provide a reasonable representation of awareness, engagement and perception both regionally and nationally. The survey used a small questionnaire that aimed to recover as much information as possible in the shortest amount of time.

Results

The response rate overall was quite low, however, replies were received from 43% of the Immersion Schools. Of these respondents, 42% were unaware that the translated interfaces were available. The most used interface by the respondents who were aware that these interfaces were available was Google web search (37.2%) with only one school using the translated interface for Moodle. Feedback cites new words and unfamiliar uses of words as the main barrier to extended use. Respondents would revert to English to quickly complete the task at hand. All of the respondents believe the localised interfaces should be used within the schools as a pertinent resource for Māori-medium schools with some cautioning the need to focus on the learning rather than the learning tools.

Summary

The number of Māori-medium schools that are aware that there are software interfaces available in te reo Māori is low. Of the schools that are aware of these interfaces, they cite the terminology used in the interfaces as a major barrier to extended use. Respondents say they struggle with the 'new words' and that trying to come to grips with reo rorohiko (*computer language)* takes time, patience and some commitment. Most quickly revert to the English-language interfaces to save time and to reduce frustration. Suggestions that the interfaces should be acquired with some priority for all schools were accompanied by the belief that adequate staff development should also occur.

Amongst schools that are aware of the localised interfaces, the uptake and usage could be seen as ad hoc and school-specific. The interfaces themselves are regarded as having a useful role to play, especially in the promotion and acquisition of te reo Māori, and especially in immersion schools. However, it would seem that the difficulties associated with acquiring and using these types of software currently outweigh the potential benefits.

LIBRARY SELF-ISSUING MACHINES

3M New Zealand manage a collection of library SelfCheck machines that are available in approximately seventy locations in New Zealand. Library patrons wishing to borrow items from a library are able to self-issue the items using these machines. This investigation focused on the four machines at the Hamilton campus of the University of Waikato. A small test was conducted on the SelfCheck machines to gain a preliminary impression of how users would react in terms of engagement and perception when using the te reo Māori interface. The testing group comprised of six students from the Te Tohu Paetahi Māori language immersion program at the University of Waikato.

Results

From the machine data English was the most preferred language - used approximately 97% of the time. The percentage uses in Māori and Chinese fluctuated between machines with some clear spikes depending on machine location. For instance, the machines located in the main foyer of the library were used far more often in Chinese than the other two machines. A separate study is underway to identify why this is so.

The study participants found the interfaces barely understandable. They generally agreed that a fluent speaker of te reo would understand the interfaces but it would be very likely that learners or those less fluent would struggle. One cited that kupu hou *(new words)* made the instruction screens more difficult to follow. There was a general feeling that some of the words were not in common use and extra time was needed to determine the meaning of the word. Comment was also passed regarding the whakatakototanga, 'the layout of the phrase', saying the structure of the kōrero *(what is written)* is different. Feedback indicated however, that the video directions definitely helped. Overall, the general consensus was that the interfaces might not be understandable to new learners.

Summary

Almost all of the testing group were unaware of the te reo Māori option on the Library SelfCheck machines. They were quite excited to see the language used in this way and very proud to see te reo Māori in a technological environment. All of them struggled to come to grips with unfamiliar words but they were adamant that they would use the te reo Māori screens and recommend their use to others, both Māori and non-Māori, even though they reported having to take extra time to determine what the on-screen instructions meant. The general consensus, however, indicates that the English language version would be used when the users were in an extreme hurry.

SMARTPHONE

A smartphone, launched by Two Degrees Mobile New Zealand in 2011, provides a Māori-language interface option. Early informal findings indicate users will engage using this interface but will switch to English when they want to quickly complete the task at hand. These users report high levels of language-switching and some frustration as they encounter new and often unfamiliar words, with few preferring to remain fully engaged with the Māori-language interface.

A more formal usability study was conducted with twelve participants who were fluent Māori-language speakers with an understanding of smartphone technology. The participants were asked to rate their experience and share their perceptions regarding the effectiveness and usefulness of a Māori-language interface on a smartphone and how it might impact on language use and ongoing language health. We were also interested in how well the interface provided for intuitive use – were users able to find their way around the menus and icons relatively easily and quickly?

Results

Most of the feedback indicated pleasure and pride in seeing the Māori language used in this manner and in this type of environment. A quarter of the responses suggested this and other similar interfaces would promote the learning and use of the language. Another quarter reported levels of discomfort with the way some words were used out of context, the existence of some English words on the Māori-language interface, poor use of transliterations and the abbreviating of some words.

In terms of the original objectives of this study, it is evident that the set tasks were able to be completed using the Māori-language interface. It is also clear that users experienced difficulty with some translations and unfamiliar words. The majority of the responses indicated that although the participants were fluent language speakers, they struggled to understand some instructions and descriptions and some discomfort was reported with the quality of the translation. The difficulties were such that respondents would switch to the English-language interface if tasks needed to be completed easily or with some urgency. The main barriers to users preferring to use the Māori-language interface were cited as new words, unfamiliar use of words, poor translation and arbitrary truncation of longer words. There were indications that use of the interface would be greatly assisted by suitable, perhaps more familiar icons. Participants reported levels of intuitive navigation using icons that were already known to them. There was also comment that familiarity would be obtained from prolonged use of the translated interface.

CONCLUSION

A large proportion of non-engagement with Māori-language application interfaces stems from a general lack of awareness that the interfaces exist. This could be remedied by promotion, advertising or some similar campaign seeking to increase awareness and engagement. Once the translated interfaces are in use, the main obstacle to prolonged engagement is cited as an unfamiliarity with the interface terminology and presentation. One might conclude that there might be something wrong with the translation or that te reo Māori does not sit well in a technological environment. Given that the assigned tasks were generally completed and that those who experienced prolonged use of the interfaces began to gain some proficiency in a very short time, it would seem that the difficulties reported arise from previous competence in using the technology in another language – in this case English. It is normal to revert to processes and methods that have already produced desired results in an expedient and efficient manner. Language switching within technology appears to be no different. In terms of extended engagement with translated interfaces, it might be more beneficial to highlight and understand the reported difficulties – aiming instead for a commitment to familiarity and ease of use through extended engagement rather than direct comparisons where the minority language is already in a deficit position. Furthermore, there may also be a design case where interface structure and presentation is able to alleviate the reported difficulties, encouraging users to remain engaged with the translated interface and becoming more proficient with prolonged use.

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