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Learning Technologies and Status: The Case of Minority Languages in Europe

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Learning Technologies and Status: The Case of Minority Languages in Europe

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SUMMARY
This paper explores the ways in which learning technologies are helping to improve the status of minority languages in Europe and draws on the findings of three research projects – the Multilingual Resources for Children Project, *the* Multilingual Word Processing in the Primary School Project *and* Fabula: Bilingual Multimedia Storybooks for Children. *It is argued that the new technologies have a modernising effect on languages that are sometimes perceived as old-fashioned and unglamorous by younger learners. Equally important, they permit solutions to a range of problems associated with print media, which help perpetuate the lower status of minority languages.*

KEYWORDS: *Minority languages, Language learning, Multimedia, Primary education, Word processing*

INTRODUCTION

This paper will explore issues concerning status, the learning of minority languages in Europe and the contribution which learning technologies are making to this area. It is based on my involvement in three different research projects – the *Multilingual Resources for Children Project,* the *Multilingual Word Processing Project in the Primary School Project* and *Fabula: Bilingual Multimedia Storybooks for Children,* an EC-funded project. The languages in question include a range of south Asian languages in common use in the UK as well as lesser-used indigenous languages, such as Irish, Welsh and Basque.

Why linguistic diversity is important

Linguistic diversity has always been a feature of life in Europe. In many ways, the current twelve official languages of the European Union (EU) represent just the tip of the iceberg. The nineteenth century movement towards nation states conveniently overlooked the linguistic 'fuzziness' of the newly drawn frontiers (May, 2001); in many cases, the national language was ruthlessly imposed at the expense of the languages spoken by minorities. More recently, attitudes towards regional and minority languages have undergone an important shift. The need to safeguard the interests of the national languages of the various member states has led – very logically – to a greater sensitivity towards the rights of minorities within these states. The Educational Council of the EU (2002), for instance, emphasizes that 'all European languages are equal in value and dignity from the cultural point of view and form an integral part of European culture and civilisation'. 'All European languages' refers, of course, not simply to official languages such as English, French and Greek, but also to minority languages such as Frisian, Welsh and Basque.

It is estimated that some 40 million citizens speak 60 different regional and minority European languages. However, these are by no means the only linguistic minorities within Europe. The second half of the twentieth century has witnessed large-scale population movement. The reasons for these demographic changes are varied: the need to fuel economic expansion in the receiving countries; the desire for a higher standard of living; the urgency to escape from war-torn regions. The scale of the resulting multilingualism is impressive: a recent survey showed, for instance, that over 300 languages are spoken by more than 850,000 school children in London (Baker & Eversley, 2000).

An already complex linguistic situation is complicated still further by the fact that certain languages are categorized differently in different countries. Thus Albanian is the official language of Albania, but a minority language in Greece. Similarly, Greek is an official language of the EU and the dominant, majority language in Greece. However, the Greek-speaking Cypriot population of the UK constitute a (relatively) recently arrived linguistic minority. Irrespective of the provenance of the language minority (established or immigrant), education systems have needed to respond to the challenges of linguistic diversity, as demonstrated, for instance, by the greater possibilities for schooling through the medium of minority languages (Cenoz & Genessee, 1998) and by in curriculum innovation which overtly acknowledges other languages (Edwards, 1998).

THREE PROJECTS ON MINORITY LANGUAGES

Learning technologies have been applied unevenly across languages. The emergence of English as a global language is, of course, closely related to the economic dominance of the USA, which has also led the way in learning technologies. Europe has followed rapidly in its wake. However, many other countries – particularly those that don't use an alphabetic script – have faced additional challenges.

Take, for instance, languages like Arabic and Urdu where each letter differs according to its position in the word: standing alone, initial, medial or final. In order to cope with the large number of variant forms, software engineers have needed to develop a process called 'contextual analysis' to ensure that the correct variant for any given position appears automatically. The operator types the base form; the cursor then moves forwards and backwards along the line inserting, deleting and altering characters according to their position. Contextual analysis requires far more memory than was found in the early personal computers, delaying the widespread availability of word processing in these languages for some time.

Minority languages have less economic clout than those with larger numbers of speakers; the range of software applications, for instance, is much smaller. However, the high status associated with new technologies should not be underestimated. For this reason, when new applications become available in minority languages it is not surprising that the kudos associated with the technologies transfers to the languages in question. Teachers have been quick to realise the learning potential of this association for their students.

The three research projects that form the focus for this paper have raised some interesting questions concerning the status of minority languages. The first of these – the *Multilingual Resources for Children Project* – was undertaken by a multi-disciplinary team of educators, translators and designers at the University of Reading (MRC, 1995). This project did not involve the use of learning technologies. It did, however, allow us to establish many of the status issues for which rapidly evolving learning technologies would provide solutions. For this reason, it forms an important point of reference for the present discussion.

The second project charted the issues which emerged when an Urdu word processing program was introduced into a primary school in south east England where the children spoke, between them, some 28 different languages, but where Pakistani speakers of Urdu formed the largest minority.

Fabula, the final project, was another collaborative venture involving teachers and children, software engineers, translators and researchers from across Europe in various fields, including language and literacy, human computer interface, and typography and graphic communication. The aim of the project was to stimulate the production of innovative bilingual multimedia resources for language learning (Edwards et al., 2000; 2002). Research efforts focused initially on five language pairs: Basque and French, Catalan and Spanish, Frisian and Dutch, Irish and English, and Welsh and English.

Multilingual Resources for Children Project

An early response to diversity in the UK was to introduce dual language books and the first examples of this new genre appeared in the late 1970s. Educators identified two potential benefits. The first is that the presence of this kind of book in classrooms shows children who speak minority languages that the school values diversity; the second is that they raise the awareness of monolingual children of other languages and scripts. Both are essentially status issues.

Dual language books were very popular with mainstream teachers who wanted to promote other languages, but lacked the confidence to give children materials in languages and scripts that they didn't understand themselves. The presence of English alongside the other language thus acted as a kind of security blanket. Teachers liked them for other reasons, too. For instance, books in other languages can be a very valuable bridge between home and school – parents, grandparents, aunts, uncles, older siblings literate in the second language can read with the children at home.

From the outset, one of the main motives for producing dual language books was to increase the status of minority languages. Ironically, inadequate attention to design sometimes had the opposite effect. In the very early days, for instance, access to typesetting in other scripts was very problematic. In some cases, the solution was to typeset the English text, and to handwrite the other script, as in Figure 1 below from a Gujarati English dual language book. When we showed examples of this kind to children as part of the fieldwork for the project, they were often critical of the differences and made comments such as: 'Better to make them the same. If you're going to make one wibbly wobbly, you might as well make all of them'.

The ways in which books are produced also raises status issues. Because print runs for books in minority languages are small, the unit price is necessarily high and, as a result, the range and quality of material are far more limited than for languages with larger numbers of speakers. One solution is to add the second language to the English text of an existing picture book. However, this approach can be problematic. The English text can look more important than the other language text in several different ways. In books that were originally designed as single language picture books, the English text often takes precedence and relates more clearly to the illustrations; and the second language is sometimes obscured by a coloured background or illustration. This is what is happening, for instance, in Figure 2 below, where the first line of the Panjabi text is very difficult to read. The implicit message for the reader is that the English text is more important than the Panjabi.

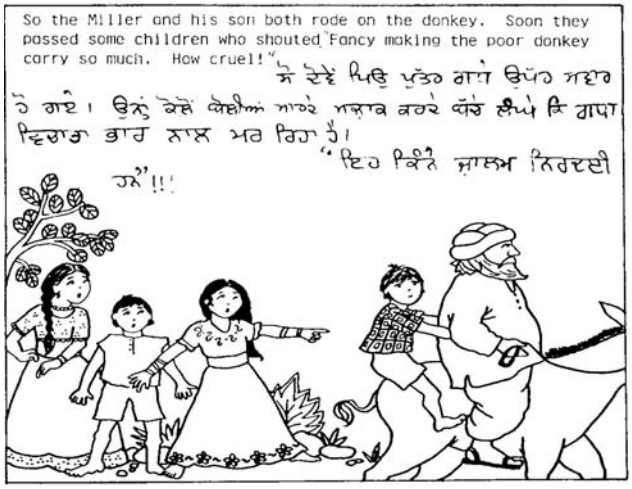

Figure 1: Page from Newham Women's Community Writing Group (1983) where the Panjabi text is handwritten

Languages like Urdu or Arabic which run from right to left raise different problems. In most cases, dual language books retain the conventions of left-right reading languages, irrespective of the directionality of the other language. Of course, this in itself sends important messages about which language is more important.

Typography and design clearly have important implications for any discussion of status in multilingual classrooms. But so, too, do sociolinguistic considerations. Most British Bangladeshi children, for instance, speak Sylheti rather than Bengali, the official language of Bangladesh. Many Pakistani children speak Panjabi at home but use Urdu in writing. Greek Cypriot children speak a highly conservative dialect of Greek at home quite different from Modern Standard Greek. And so forth. In the home country, where education takes place through the medium of the official or standard language, the choice of language is less problematic. However, in an overseas setting where children's main exposure to the standard or official language is through voluntary classes outside school hours, there is an inevitable tension between the pedagogical imperative to build on what children know already and the sociocultural imperative to use the language variety with highest status in the home country.

All too often, the English in dual language books has been translated into the literary standard language, and erudite vocabulary and complex structures make the other language text far more difficult for children than the corresponding English text. In books for beginners, an occasional word from the literary standard is unlikely to interfere with understanding. But, in books for more experienced readers, words and structures outside children's experience can interrupt the flow and make the translation much more difficult to read than the English (Edwards & Walker, 1998).

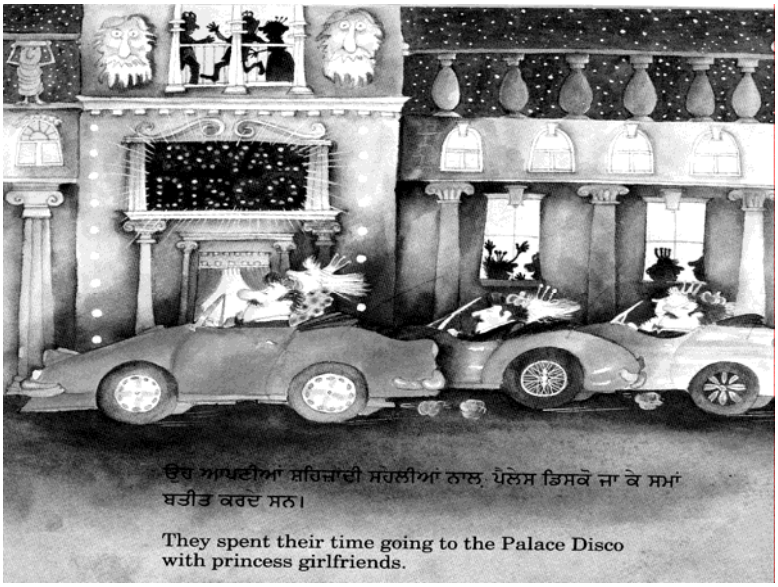

Figure 2: Page from English-Panjabi version of *Prince Cinders* (Cole,1993)

In theory, then, dual language books are a very valuable addition to classroom resources with the potential to raise the status of minority languages. In practice, a poor understanding of the issues – design and sociolinguistic – may produce the opposite effect.

Multilingual word processing in the primary school

By the time the second project was starting in 1997, new technologies were already providing potential solutions for some of the problems identified in our earlier research. Although word-processing was at this point a regular part of the English writing curriculum, similar opportunities were not available for speakers of languages that used non-alphabetic scripts.

As computer memory increased, the price of word-processing packages in languages like Urdu and Hindi began to be affordable for the school market. The availability of multilingual word processing made it possible for schools, teachers and parents to collaborate in the production of their own learning materials, thus helping to increase both the number and range of learning materials in other languages. For the first time, it became possible to produce good quality materials without needing to think about the financial implications of small print runs.

The educational and social benefits of such developments are clear to see. Chana et al (1998), for instance, report teacher concerns that Pakistani mothers were likely to be intimidated by the new technology. In actual fact, the women in question showed considerable excitement on seeing the word 'Welcome' in Urdu on the computer screen at a school meeting to introduce the software; all wanted to key in and print out their names in Perso-Arabic script and some went on to produce learning materials which were greeted enthusiastically by their children. Chana et al. (1998) also describe how attendance at the weekly Urdu club increased from 6 to 22 (including six monolingual English speakers) following the introduction of the Urdu program. This was a clear example of how the high status associated with the new technologies is transferred to the minority language.

Fabula

The findings of the *Fabula* project overlapped to some extent with those of the *Multilingual Word Processing in the Primary School Project.* In both cases, electronic media allowed teachers to enhance the status of minority languages by increasing the visibility and range of other languages in the classroom. And in both cases, participants responded to the high status of technology with enthusiasm. Children in Wales, Friesland and the Basque Country, for instance, were clearly excited when they saw the computer interface in their own languages. However, multimedia provides many more exciting opportunities and challenges than both print and word processing (Cummins and Sayers, 1995). The advantages were particularly marked in the areas of choice of language, the use of sound, directionality and screen display.

Choice of language

A recurrent problem in the production of paper dual texts is the choice of language. Dual texts are usually aimed at speakers of minority languages living overseas. As we have seen, in many cases, the language selected by publishers is not the home language of the target readership. Thus, UK children whose families come from Cyprus will speak the Cypriot dialect rather than Standard Modern Greek. In the context of a paper book, the 'high' variety is almost invariably selected. In a multimedia setting, however, it is possible to use either or both.

Use of sound

Bilingual story-cassette packs consisting of dual language picture books and tape cassettes are also a feature of many British classrooms and offer similar challenges. The tape invariably follows the 'script' provided by the book: a Greek text, for instance, will be read in Modern Standard Greek rather than the Cypriot dialect. In contrast, the huge storage potential of CD-ROM makes it possible to tailor materials more closely to the needs of learners by using as many versions of the text and sound track as are deemed necessary.

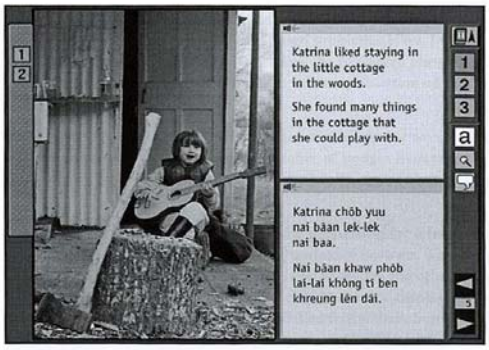

Figure 3*: portrait option*

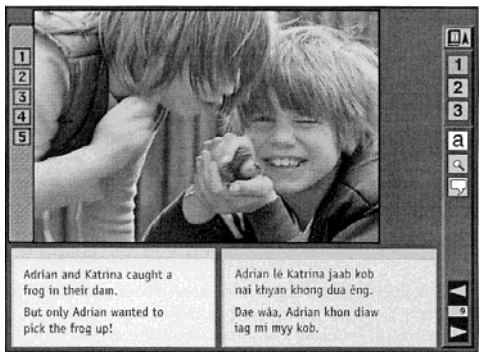

Figure 4*: landscape option*

Directionality

The languages that formed the focus for the *Fabula* project were written from left to right. It is none the less clear that the flexible page layouts of the program bypass problems associated with the directionality of scripts. Both of the options set out in Figures 3 and 4 make it possible to

display left-right and right left languages together without implying that one language is more important than the other.
The solution in Figure 4 is particularly successful, since it allows for display of the each language in its 'natural position': the left-right language in the left hand textbox and the right-left language in the right hand text box. In both cases, the multimedia solution bypasses the problems associated with where the books starts and ends.

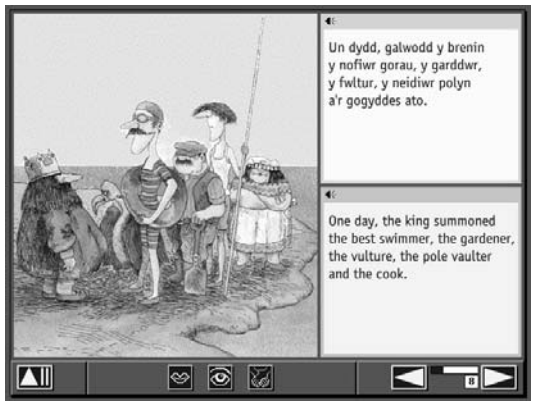

Figure 5: An original illustration from Reader (1989) with part of the text

Visual questions

The limitations of paper bilingual books have already been outlined. Because the market is limited, print runs are small and the unit price is high, publishers often choose, for obvious economic reasons, to adapt existing books rather than originating new titles. However, the number of books with the potential to be used as dual language books is very limited. The need to display two languages on the page automatically excludes many if not most books; it also often results in a finished product, which is cramped or difficult to read.

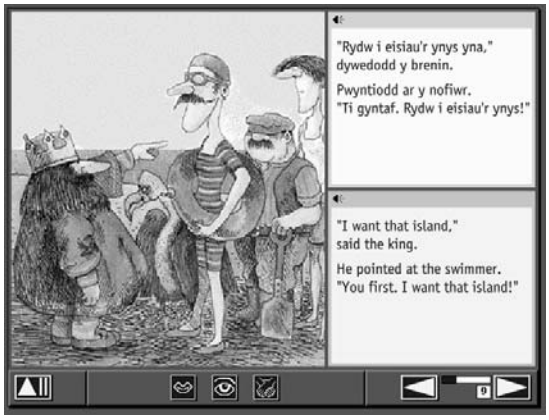

Figure 6: An enlargement of a section of this illustration with the remaining text

Although the amount of text on the screen is also an important consideration for electronic stories, multimedia solutions are more flexible. There is considerable commercial potential, for instance, for taking existing paper picture books and repurposing them as bilingual multimedia stories. In bilingual multimedia stories, it is possible to divide the text from the paper page into two. The first part of the text is accompanied by the original illustration (see Figure 5 below), while zooming in on an aspect of the original creates the illustration for the second part (see Figure 6).

CONCLUSION

New technologies enhance the status of minority languages in two main ways. First, they have the effect of adding glamour or modernising languages that are often perceived as old-fashioned and unglamorous by younger learners. New technologies have very positive associations. The availability of new software applications for minority languages thus elevates their status.

Equally important, new technologies permit solutions to problems associated with print media, which help perpetuate the lower status of minority languages. Electronic media are able to bypass the challenges, for instance, of small print runs; they are also better able to ensure that different languages are given equal prominence. They also empower minority language speakers to produce their own materials, thus greatly increasing the range of learning resources available. Teachers sensitive to these status issues are, in turn, better prepared to harness technology to motivate their students' learning, often with very pleasing results.

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