Chapter XXI
Modification of Learning Objects for NESB Students

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ABSTRACT

Due to the increasingly diverse student population in multicultural nations such as Australia, the U.S., Canada, and the UK, educators are faced with the challenge of how to best meet the needs of students with limited English proficiency without ‘watering down’ the curriculum. The use of educational digital resources is one way of enhancing non-English speaking background (NESB) students’ academic skills and understandings, but without explicit English as a second language (ESL) support integrated into these resources, the benefits for NESB students are limited. This chapter documents a study of the content and format of a number of learning objects designed by The Le@rning Federation in an attempt to explore how specific learning objects can be modified to address the language needs of NESB students and unlock the value of their content. Design guidelines for ESL adaptation of digital learning content are provided based on current research and second language acquisition (SLA) principles.

NESB STUDENTS IN THE MAINSTREAM CLASSROOM

Australia is a multicultural nation with a large migrant population. In 2005–2006 alone, there were over 111,000 permanent arrivals, of which 68% came from a non-English speaking country (DIMIA, Immigration Update, 2005–2006). Over 20% of immigrants are school aged children and young adults. Upon arrival to Australia, NESB immigrant and refugee students receive an intensive English course for a few weeks, and then they are placed in mainstream classrooms where they have to attend regular classes alongside their Australian peers. Immigrant students, indigenous Australian students, and second phase NESB students comprise 25% of the total P–12 student population in Australia. This large-scale presence...
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of ESL students in mainstream schools is the result of the world ‘demographic explosion’ and has been experienced in all the developed English-speaking countries (i.e., the USA, Canada, and the UK) along with the challenges it brings (for a discussion on mainstreaming ESL students in Australia, the UK, and Canada, see Mohan, Leung, & Davison, 2001).

In general, NESB students are taught and assessed the same way as native Australian students. Thus, in the mainstream classroom, NESB students face a tripartite task of tremendous difficulty: they have to learn English in order to communicate and interact with others, they have to learn subject content (e.g., Math, Science, SOSE, etc.) in English, and they have to develop metalinguistic knowledge about English (e.g., how the English language system works, how to use it appropriately, etc.). Most NESB students find themselves overwhelmed by the amount of technical vocabulary and the complexity of grammatical structures that appear in their textbooks, while their inability to fully understand spoken English in a natural speed, leads to partial, if any, understanding of spoken instructions by their teachers. As a result of their low proficiency level, NESB students find themselves unable to participate in class, share ideas or opinions, or demonstrate knowledge (Miller, 2000). Along with diminished learning outcomes, NESB students show lack of motivation for learning which often leads to behavioural problems and maladjustment.

Undoubtedly, NESB students’ general academic success at school is incumbent upon the development of their linguistic skills. For example, in mathematics, it was found that students with limited English proficiency were more likely to fail finding a solution to problems stated in English, their second language, despite the fact that English was the language used for instruction and for all the textbooks, readings, and word problems (Bernardo & Calleja, 2005). In science education, all students have to master the specific academic language to discuss predictions, observations, hypotheses, natural phenomena, and so forth (Laplante, 1997). Mastering the language of science is even more difficult for NESB students. Even if they understand the scientific concepts and are able to express them in their first language (L1), they will still struggle to express their understanding in their second language (L2) for at least 5–8 years after immersion in an English education program (Case, 2002). The challenges NESB students face are compounded by mainstream teachers’ practices, many of whom were found to engage in ‘benevolent conspiracy’ in which they avoid asking NESB students higher level questions in order to save them from embarrassment, but consequently they deprive them of real learning opportunities and allow them to engage only in lower order thinking (Verplaetse, 1998), thus creating in many cases a ‘two-tiered’ system of education with ‘challenging curriculum’ for native speakers and ‘mediocrity for the rest’ (August, Hakuta, & Pompa, 1994).

Given the increasingly diverse student population in Australian schools and other equally multicultural ‘melting pots’ (e.g., the U.S., Canada, and the UK), the challenge faced by educators is how to best meet the needs of students with limited English proficiency without ‘watering down’ the curriculum. Having to teach a group of students at different reading and writing levels, and from different language backgrounds, can be an overwhelming task for the mainstream classroom teacher. Computer technology is one ally teachers can enlist to help NESB learners succeed in the mainstream classroom as it provides an excellent selection of learning tools that are ‘highly adaptable to the individual needs of both ESL students and teachers’ and meet the special pedagogical needs of new English speakers (Kurshan, Isler, & Blackburn, 1997).

While there is a plethora of CALL (computer assisted language learning) software specifically designed to teach English language skills (grammar, vocabulary, reading comprehension, pronunciation, listening, etc.) to ESL students, these
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