



What approaches have been proven effective for managing the use of two or more languages in a bilingual/multilingual curriculum?

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1 Introduction

Children learn best when they understand what the teacher is saying, so it is not surprising that students who attend schools where the medium of instruction (MoI) is unfamiliar to them often struggle to succeed academically. Often those who do not drop out are required to repeat grades and frequently do not pass the exams necessary to continue studying in secondary school (Dutcher 2004, Heugh 2006, Pinnock and Vijayakumar 2009). Government leaders and educators desire to help language minority (LM) students succeed, but question the most effective means to do so. A solution shown to be successful in many countries is Mother Tongue Based Multilingual Education (MTB-MLE), in which the students' mother tongue (MT) is the MoI for reading, writing, and other subjects, while at the same time the majority language is taught gradually (Thomas and Collier 2002, UNESCO 2012, World Bank 2005).

2 Context

MTB-MLE programs use the MT and other languages as they are acquired, to form a base of understanding that the students can use to increase their knowledge. This base of knowledge, referred to as the Common Underlying Proficiency of Language Competence is an important tenet upon which MTB-MLE is established; knowledge is accessible through all languages a person understands. While the knowledge is shared, access to it in another language is dependent on the individual's proficiency in that language. Educators commonly focus on two proficiency levels: Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP). BICS describes proficiency in basic conversational skills used for informal communication, which can be acquired in two to four years. CALP refers to academic language ability used for communicating abstract ideas, which takes five to eight years to acquire. The distinction between BICS and CALP indicates a person may have fluent basic communication skills adequate for informal language situations without having developed the language skills necessary to process abstract academic subjects. Optimal cognitive development is possible only when students sufficiently develop the language in which a subject is taught.

The goal, therefore, is to implement MTB-MLE programs where the students' cognitive development is fostered resulting in better academic achievement. Wayne Thomas and Virginia Collier (2002) researched a variety of educational programs for LM students to determine which promoted the highest levels of achievement. Their findings revealed three predictors for academic success:

- Development of cognitive academic proficiency in the MT for as long as possible (at least through grade six) and development of cognitive academic proficiency in the subsequent languages of instruction.

- Promotion of socio-culturally supportive environments where the languages and cultures of minority children are respected and valued.
- Implementation of effective instructional materials and methodologies to teach academic curricula through two or more languages.

The following section describes some approaches to meet these predictive factors of success in countries where resources are limited.

3 Recommendations: Some ideas to try

The first predictor of success is the on-going development of CALP in the MT for as long as possible and development of CALP in subsequent languages of instruction. Strong MTB-MLE programs include five or more years of instruction in the students' home language and culture, and a gradual introduction of other languages as classroom subjects with the ultimate goal of achieving CALP in each language. Often, language and education policies do not allow for the minority languages to be studied in intermediate and secondary grades, but rather discontinue MT instruction in the early grades, often after only one or two years. Research has demonstrated such practices do not provide sufficient time for the development of CALP skills in either the MT or the national language(s), and lead to limited student achievement (Heugh 2006; Thomas and Collier 2002; Walter and Trammell 2010). Implementing this crucial factor requires careful planning.

Susan Malone (2010) suggests an eight-step progression to foster CALP in two languages throughout the first eight years of school (table 1 in appendix A). In this model, the home language is used initially for two years as the MoI for all reading and writing and other subject areas, while the second language (L2) is taught orally. After two and a half years, literacy classes in the L2 are begun; however, academic content and on-going literacy skills continue to be taught in the first language even as students begin learning to read and write in the second. Throughout the remaining years of schooling, both languages are used as MoI. In this way the students become both bilingual and biliterate. Malone has designed similar progression plans for the instruction of three and four languages (tables 2 and 3 respectively in Appendix A).

The second predictor of success is the promotion of socio-culturally supportive environments where the languages and cultures of minority children are respected and valued. The use of the MT and provision of contextualized materials are means to provide socio-cultural support.

Translanguaging is one strategy to promote a supportive environment. Ofelia Garcia defines translanguaging as "multiple discursive practices in which bilinguals engage in order to make sense of their bilingual worlds" (2009:45). It occurs when multilingual speakers alternate between two or more languages in the context of a single conversation. In the multilingual classroom translanguaging enriches oral and written communication between teachers and students as well as increases understanding of academic content by promoting authentic interaction (Hornberger and Link 2012).

In addition to translanguaging, Echevarria (2004:107) notes that use of the students' MT to clarify concepts provides support for the academic learning of bilingual students. The preview-review method provides this support by introducing new vocabulary and concepts in one language and then reviewing them in another. In this way, the students develop background knowledge necessary to understand new information in the L2 and gain CALP in both languages.

The third predictor of success is the implementation of effective instructional materials and methodologies to teach academic curricula through two or more languages. In order to develop materials of this caliber, there must be collaboration with the Ministry of Education, local education officials, and native-language speakers. The first requirement is to establish an official orthography. Once the orthography is approved, then any MT literature already available can be revised and more materials created. Some necessary resources include:

- A transfer primer for learners who already know how to read in one language and want to learn to read in another language they already know. A transfer primer teaches the sounds and symbols which differ between the two languages.
- Literacy teachers' guides and instructional resources to teach basic reading and writing skills. Discrete instruction in phonological awareness and phonics is vital for learners to decode multisyllabic words.
- Leveled reading books and accompanying teachers' guides to develop reading fluency and comprehension using whole language approaches such as cooperative learning strategies, problem solving, thematic content, and writing in a variety of genre.

4 Literature in a variety of genres

Creation of scholastic materials reflective of the language, culture, and context of the students can be accomplished by bringing together native speakers, teachers, and education officials for writers' workshops. Mother tongue materials have been developed in many countries. In Papua New Guinea, where MTB-MLE programs have been implemented since the mid-1990's, writers' workshops were held to produce materials that were accepted by the minority communities and that were useful in the schools. "The local stories, legends, songs, and poems produced by the writers made it possible for the local culture to be reflected in the formal curriculum" (Weber, Wroge, and Yoder 2007:89). In 2000, the Secretary of Public Education in Mexico reported textbooks in indigenous languages had been written by bilingual teachers with the support of local communities. All together they produced more than a million books in 33 languages and 52 dialects (Dutcher 2004:90). In addition to books for teaching reading, culturally appropriate materials need to be created for other curricular areas.

In the Kom Education Pilot (KEP) MTB-MLE project in Cameroon, a series of leveled reading anthologies were designed that integrated the science and citizenship objectives of the national syllabus (Walter and Trammell 2010). This integrated curriculum consisted of a series of leveled anthologies with stories appropriate for each grade level. To ensure cultural relevance and linguistic accuracy, the team crafted story ideas and a native speaker composed the stories. Once completed, they were reviewed by the language committee members and then revised based on their feedback. A local artist was given the text and the team's recommendations for drawing culturally appropriate illustrations. If the first rendering deviated from cultural realities, the artist would make adjustments to the illustration.

These examples demonstrate it is possible to implement strong models of MTB-MLE programs that provide sufficient time for cognitive, academic language development in both languages and have contextualized education curriculum. Yet, the best program plan and materials cannot lead to improved achievement unless the teachers are able to implement effective teaching methodologies in the classroom.

For this reason, teacher training is a vital component of any MTB-MLE program.

The first step in training mother tongue teachers is to enable them to read and write in the MT. This is often done by means of a transfer primer that teaches the new letters, diacritics, and other features that differ from the national language the teachers already know how to read. Once the teachers are able to read and write in both languages they are ready to learn to teach children in the mother tongue.

In some developing countries teachers have not received quality education themselves and tend to teach by the rote methods they experienced, rather than more effective strategies. This insufficiency can be improved by quality training in best teaching practices. However, learning the best practices of literacy instruction is only as good as the quality of the teacher training. Jane Vella (2008:1) notes that adults learn best through dialogue education and the use of praxis to reflect on their learning and make changes as necessary.

The use of dialogue and praxis were employed in training seminars for the KEP project by following a four-step method, which proved to be quite effective in transforming classroom practices. The steps were:

- The new teaching strategy was explained.
- The strategy was modeled in the language.
- Teachers practiced the strategy in small groups with observation by a literacy supervisor. Each teacher taught a lesson using the strategy to the others. They helped one another by reminding each other of the steps in the process or the correct language to be employed.
- After practicing, the teachers gathered together to reflect on the experience and make suggestions to contextualize the strategy to their classroom situations.

5 Conclusion

It is possible to implement strong MTB-MLE programs to improve the achievement of LM students. The most successful models promote at least six years of instruction in the school languages, develop contextualized curricula, and effectively train teachers in the use of best instructional practices.

Unfortunately, many MTB-MLE programs do not include the three key factors for LM students to succeed. The foundation of a quality program is the provision of sufficient time for the development of CALP skills in the mother tongue and the national languages. In order to truly improve the achievement of LM students, national language policies must be established to not only allow MTB-MLE programs to continue through all six years of primary school, but to oblige implementation in the schools. Once the length of the program is established, then materials for each grade and teacher training may commence. As strong programs are implemented, it will be important to conduct research to monitor student progress in both primary and secondary schools.

Appendix A: Language Progression Plans

Table 1. Example of a 2-language progression plan*

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Build fluency in oral L1	Continue oral L1	Build oral & written L1	Build oral & written L1, oral L2	Build oral & written L1 & L2	Build oral & written L1 & L2	Build oral & written L1 & L2	Build oral & written L1 & L2
Pre-reading and pre-writing in L1	Build fluency in written L1	Build oral L2	L1 for teaching				
Introduce written L1	Continue building oral L2	Begin Oral L3 (Total Physical Response in second semester)					
Begin oral L2 (Total Physical Response in second semester)	Bridge to written L2 (second semester)						
L1 for teaching	L1 for teaching	L1-oral L2-L1 for teaching	L1-L2-L1 for teaching	L1-L2-L1 for teaching	L1-L2-L1 for teaching		
	Begin introducing L2 “Word Bank”						

*Source: S. Malone 2010:16

Table 2. Example of a 3-language progression plan*

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Oral L1 Begin written L1 (2nd semester)	Oral & written L1 Begin oral L2	Oral & written L1 Oral L2 Begin written L2	Oral & written L1 & L2	Oral & written L1 & L2 Begin oral L3	Oral & written L1 & L2 Oral L3 Begin writ- ten L3	Oral & written L1, L2, L3	Oral & written L1, L2, L3 (reduced time for L1, increase for L2, L3)
L1 as LOI	L1 as LOI	L1 as LOI	L1-L2-L1 as LOI	L1-L2-L1 as LOI	L1-L2-L1 as LOI	L2-L1-L2 as LOI	L2-L1-L2 as LOI

*Source: S. Malone, pers. comm. Jan. 22, 2016

Table 3. Example of a 4-language progression plan*

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Oral L1 L1 pre- reading and writ- ing → L1 literacy (2nd semester)	Oral & written L1 Begin Oral L2	Oral & written L1 & oral L2 Begin writ- ten L2 (2nd se- mester)	Oral & written L1 & L2 Begin oral L3	Oral & written L1 & L2 & Oral L3 Begin L3 Literacy	Oral & written L1 & L2 & L3 Begin oral L4 (2nd semester)	Oral & writ- ten L1 & L2 & L3 Begin L4 literacy	Oral & writ- ten L1 & L2 & L3 & L4 (Reduced time for L1 and L4)
L1 as LOI	L1 as LOI	L1 as LOI	L1-L2-L1 as LOI	L1-L2-L1 as LOI	L1-L2-L1 as LOI	L2-L1-L2 as LOI	L2-L1-L2 as LOI

*Source: S. Malone, pers. comm. Jan. 22, 2016

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