The effectiveness of a mother tongue based education to improve learning outcomes and second language acquisition in public primary schools of Zone 3, Mauritius

Preeya Daby

University of Leicester

Abstract

If Blommaert (2012) enumerates the richness of multilingualism in a global economy, Brand (2006) emphasises the injustice and the discrimination occasioned upon imposition of dominant (European) languages in the education sector. Language can become paradoxically a barrier when students are not familiar with the school language and this impacts negatively on their studies (Malone, 2012); as well as a bridge through the mother tongue (MT) to facilitate learning. International organisations like UNESCO have always promoted mother tongue education which is a powerful way to fight discrimination. Education in a multilingual context such as that of Mauritius is a complex issue when English, the official language of instruction of all prescribed contents in the primary curriculum, is hardly spoken by most of the students while the MT: the Creole language is relegated to an inferior position. Reports from official bodies such as the Mauritius Examinations Syndicate, responsible for all examinations taking place in the country, continually account for the declining academic level of students.
The present paper focuses on the literature review as a fundamental part of a research project conducted in primary schools of Zone 3\(^1\) to be aware of current linguistic practices and choices in class between teachers and students during the process of learning and communication. In this context, 62 teachers participated in an online survey and their attitudes, beliefs and experiences were evaluated. Findings show that the school language represents a barrier to the academic achievements of students at primary level. English is foreign to most of them; they are least exposed to this language at home and even in the media where the preponderance of French is noted. Most learners usually communicate in the Mauritian Creole and this tendency seems to continue inside classrooms. Most teachers acknowledge lesser use of English while Creole alongside French are more present during teaching, explaining lessons and other classroom's activities. Moreover when English as the medium of instruction, limits the comprehension faculties of learners, Creole is often looked upon as the sole support.

Based on the experience of the surveyed teachers, the effectiveness of the MT in supporting meaningful learning and enhancing learning abilities is established. The MT factor is one among those variables, if given full recognition at academic level, may bring considerable change in the Mauritian education and in most developing countries.

**Keywords:** mother tongue; mother tongue based education; foreign language; language of instruction; attitudes; perceptions; effectiveness; learning abilities.

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\(^1\) It is to be noted that the Mauritian public educational landscape is divided into four Zones for better management of resources and for effective learning to take place; and taking the researcher's teaching experience into account, Zone 3 was specifically chosen.
Introduction

Language and education are such intertwined entities that no education related practices and activities can take place without the former. The prohibition and the use of mother tongue have come and gone throughout history. However Cook (2001) points out that most teaching methods since the 1880s have categorically avoided the integration of the first language in schooling. Walter and Dekker (2011) indicate that the prevailing educational models in developing countries mostly those that were former European colonies, rely on the use of 'exogenous' or inherited colonial languages such as English (Cameroon, Mauritius), French (Mali, Senegal) and Spanish (Guatemala) as the primary medium of instruction in the early years of formal schooling and it is also true that many young learners entering classrooms for the first time do not speak and understand those languages.

While examining the relevant literature linked to the study, the article starts by defining MT, a mother tongue based education (MTBE) and discusses the relations between MT, education and its impacts on students' academic achievement. Further to this, the effectiveness of a MT will be discussed in a formal setting and main aspects of education such as access, learning abilities and outcomes, pedagogy and second language acquisition will be highlighted. Based on international and national (though limited) researches and findings, the literature review will critically address these aspects and will try to explore how effective the use of MT is in improving learning outcomes and second language acquisition worldwide and in the Mauritian context.

Definition of mother tongue
According to UNESCO (2003), MT or first language (L1) is defined as the language that an individual uses for the very first time in life, that he/she uses the most in overall daily activities, in which he/she is well versed and identifies himself/herself as belonging to a specific linguistic community and then to the wider society. For Skutnabb-Kangas (1981: 18) it is "the language one thinks, dreams and counts in".

Likewise, Chumbow (1990) emphasises the psychological importance of the L1 as the language that is primarily learnt by a child and without which we cannot normally think and conceptualise things around us. The L1 also helps to develop and shape the thinking skills of young learners to become confident and competent enough to use it as a supportive medium to build up new languages and concepts at schools. Akinnaso (1993) and Salami (2008) are of the opinion that children need to learn in the MT until the age of 12 before switching to a second language (L2) education because at 12 they have sufficiently mastered concepts in the MT and acquired MT awareness and consciousness that make them apt enough to transfer knowledge into the L2.

**MT and education**

Habits, conducts, values, virtues, customs and beliefs are all encapsulated in the mother tongue and it also defines an individual's cultural identity. An individual can have one or several first languages. A MT is foremost considered by education experts like Malone (2012), Baker (2006), Benson (2004), Cummins (2001), Thomas and Collier (2002), as a crucial factor for developing the intellectual, physical and moral aspects of education in earlier years of schooling grounded on their previous researches, the above experts believe that if initial formal instruction is dispensed in the MT for at least five/six years or throughout the whole of primary level, a strong 'bridge' is thus laid for
students; firstly for successful transfer of literacy skills from the MT to the second language, secondly for second language acquisition and thirdly for successful achievements in further studies.

On the other hand, children who enter school and begin learning in a new language before they completely understand their first language, face much difficulty to tackle abstract ideas in the second tongue. Ultimately, it is difficult for a child to succeed as a language minority student without having a solid foundation in his/her first language (Pinnock, 2009).

According to a World Bank Report (2005), 50 % of the world’s school-age children who drop out of education systems, live in areas where the school language or the second language is not familiar. Due to insufficient exposure and use of this language at home and limited real-life interactions, their speech and comprehension faculties are compromised. As a direct consequence, they cannot perform to their full potential at early stages of schooling which ultimately leads to disengagement, lack of interest, loss of confidence and low achievements in learning, high drop-out rates, repetition of grades or exclusion from the system.

Use of MT and the Mauritian context

Mauritius is a multilingual and multicultural country where the inclusion of the MT as the medium of instruction in formal education is a politically controversial issue (Mahboob, 2011). The actual education policy in Mauritius excludes the Creole language which is spoken by 84 percent of the school population (General Population Census, 2011) and imposes English as the sole medium of instruction of all prescribed contents in the primary curriculum and it is also taught as a subject. Altogether French and Asian languages are also taught as subjects.
Every year there is a “relatively high percentage of students failing and/or repeating the Certificate of Primary Education (CPE) examinations (these examinations are carried out at the end of six years spent in primary schooling and the pass rate is around 68 percent which has remained stable during the past few years) and an alarming percentage of young children leaving (attrition rate) school, barely numerate and literate” (Education and HR Strategy Plan, 2009, p. 13). Around 30 per cent of students are marginalised and ejected from the education system and this contributes to a low skill base in Mauritius (Bunwaree, 2005).

According to Ah-Vee and Collen (2009), the language-in-use policy is failing children and results in schools are disappointing for a substantial proportion of learners who do not succeed to learn. They indicate that the current educational system in Mauritius does not consider children's rights to education, rather it prevents access to education and discrimination occurs on the basis of language. They also comment on the harm being done to students and its consequences on their individual lives, its negative implications on the whole country in terms of limited socio-economic development and limited use of the full potential of its human resource in terms of cognitive, emotional abilities and creativity. Mauritius is a small-island developing country where there are no natural resources and banking on an educated human capital is a major asset for the advancement of the country at national as well as international level.

Along the same lines, in October 2009, an international Hearing on the Harm done in Schools by the Suppression of the MT took place in Mauritius. The hearing consisted of a jury panel comprising of professionals from the education sector and researchers such as Phillipson (England) and Skutnabb-Kangas (Finland). Evidence gathered from 47 witnesses relates to 'the trauma' encountered by children whose MT is excluded from schools.
The Mauritius Examination Syndicate, a government body responsible for the setting up of various examinations in the country, published a report on the 2005 Certificate of Primary Education (CPE) examinations and stated that academic levels have fallen and each year until now the same problem is recurrently voiced. According to this report due to limited development in critical thinking, students failed to attempt logical questions. Where essay writing in English was concerned, no student obtained the maximum score, while 33.5 percent who sat for the examinations obtained zero. Poor performance in mathematics and science was also noted and this was accounted to limited language skills.

**MTBE and second language development**

Since civilisation came forth, the need to learn languages has evolved as a recurrent activity. Depending upon the progress made in the fields of linguistics and psychology, various theories and approaches have been deployed to teach and learn second or foreign languages (L2) such as the Grammar Translation Method (translating sentences from the target language into the learner's first language and vice versa) or the Audio-Lingual Method (language learning based on repetition and drills) (Dobobuto and Silva, 2007).

However most of these approaches cluster around one main focus which is the denial of the learner's first language or MT (L1). Where these past approaches excluded the L1 of learners from the second language learning classroom and the effectiveness of second language models of instruction being questioned over time (Walter and Dekker, 2011), experimental programmes carried out in the fields of second language acquisition have emphasised the relevance of the first language (L1) as a very useful medium for second language learning (Baker, 2006; Benson, 2004). Research
increasingly shows that children's ability to learn a second or additional local language(s) and international language(s) is not hindered when their MT is the language of instruction used throughout primary education (Baker, 2006; Benson, 2004; Cummins, 2000, 2001; Thomas & Collier, 2002).

A MTBE is a dynamic, basic education which starts in and promotes the MT by gradually introducing one (L2) or more other languages (L3, L4...) in a structured manner while building upon the learners' existing knowledge, experience and understanding in their first language (Pinnock, 2009). For this approach to deliver high quality learning outcomes, Alidou et al. (2006) believe that after spending 6 years studying in their first language at school, young learners develop sufficient MT literacy which in turn, establishes a cognitive and linguistic foundation for learning additional languages and helps in bridging the gap between home and school (Fafunwa, 2000). Furthermore, Thomas and Collier (2002: 7) point out that "the strongest predictor of L2 student achievement is amount of formal L1 schooling. The more L1 grade-level schooling, the higher L2 achievement".

In Mauritius no small- or large-scale investigation has yet been done in primary schools regarding use of the MT and its impact on students' learning and achievement. However, the Creole language is gradually paving its way in the education sector and in 2005, the BEC\(^2\) launched the 'Prevokbek' pilot project. This programme was meant to teach students who have failed the Certificate of Primary Education examinations twice and who were to join the prevocational field, with the MT as the medium in their prevocational literacy programme for 3 years. It was the very first time that the MT was used as a pedagogical tool in class and in 2008 the introduction of bilingual evaluations in English and Creole at the prevocational level was also included in the project. The results obtained

\(^2\)The Bureau d'Education Catholique is the executive office of the Roman Catholic Diocese in Mauritius for its education services. It runs 46 primary grant-aided schools and 17 secondary grant-aided colleges.
were rather positive: 76 percent of students who failed the CPE twice succeeded in these exams (75 percent succeeded in English, 93 percent in Mathematics, 82 percent in French, 92 percent in Integrated Science and Technical studies, 72 percent in Creative Arts and 64 in Creole (lexpress, 2008).

Moreover, in 2012, the government officially introduced the Creole language as an optional language in the primary curriculum and this received much resentment, misunderstanding, scepticism and even anger from some teachers, parents and concerned stakeholders (Le Mauricien, 2012). Hence use of MT in schools is still a sensitive issue in the educational framework of Mauritius. Considered by some as a political move and by others as a false debate, attitude towards the language needs to change to further accept it as a significant variable in the academic achievement of learners.

**MTBE and second language acquisition**

It has already been confirmed that young learners are more liable to learn additional local languages and foreign languages when their mother tongue or first language (L1) is the primary language of instruction (Thomas & Collier, 2002; Fafunwa, 2000; Adegbijia, 2003). Sufficient mastery of the mother tongue lay a strong, cognitive and linguistic foundation for second language (L2) acquisition.

Further studies show that some five to 8 years of instruction in the first language is necessary to develop the level of literacy and verbal proficiency required for academic achievement at primary and secondary level as well (Baker, (2006), Benson, (2005), Cummins, (2000).

"Transfer of linguistic and cognitive skills is facilitated in bilingual programs. Once students have basic literacy skills in the L1 and communicative skills in the L2, they can begin reading and writing
in the L2, efficiently transferring the literacy skills they have acquired in the familiar language. The pedagogical principles behind this positive transfer of skills are Cummins’ (1991, 1999) interdependence theory and the concept of common underlying proficiency, whereby the knowledge of language, literacy and concepts learned in the L1 can be accessed and used in the second language once oral L2 skills are developed, and no re-learning is required” (Benson, 2004: 2).

Children who begin learning a new language before they completely understand their first language have difficulty expressing abstract concepts or ideas in the second language. If however children are forced to switch abruptly or transition too soon from learning their mother tongue to schooling in a second language, their language acquisition may be weakened. More importantly their self-confidence as learners and their interest in what they are learning may decline, leading to lack of motivation, school failure and early school drop-out.

**MTBE and more equal access to education**

Language is the key to communication and understanding in the classroom (Benson, 2004). It is a considerable variable on which effectiveness of education systems is validated and academic success measured. However, in many developing countries including Mauritius, a significant number of school-age students enter school without a minimum knowledge of the language of instruction through which all officially prescribed subjects are to be taught. In the case of Mauritius, English is used in schools but foreign to most students. Instruction via a language that learners do not speak has been called submersion (Skutnabb-Kangas, 2000) because it is like getting trapped in a linguistic quagmire where coming out is very difficult.
Empirical findings based on longitudinal research conducted by Thomas and Collier (1997, 2000) mostly in American schools with 42000 students in bilingual programs, clearly acknowledges that when young learners are taught completely in a second language (L2), they do not interact meaningfully in the L2. They are more likely to experience learning deficiencies ahead in their studies when it comes to learn more complex and abstract academic concepts. The data drawn from the research also states that learners who receive formal instruction in their first language during 6 years, are more prone to complete their studies at a higher level and to acquire greater proficiency level in English as compared to those who are educated through submersion models.

In a same way, an inclusive education system is the one that takes the learners' language into consideration and a MTBE allows linguistic minority groups to integrate the mainstream system without impeding upon their ethnic and linguistic identity. It also enables learners from such groups to become fluent and confident in speaking, reading, and writing the language of education. Further to this, their MT/ L1 becomes a good 'bridge' to the school's second language (L2) or other languages of learning (L3, L4).

Based on his research and data analysis from 22 developing countries and 160 language groups, Smits (2008) revealed that children who had access to instruction in their mother tongue were significantly more likely to be enrolled and attending school, while a lack of MTBE was a significant reason for children dropping out. In Mali, Bender and Dutcher (2005) found out that students using their first language as the medium of instruction in classrooms, were five times less likely to repeat the year and more than three times less likely to drop out.

**MTBE and learning outcomes**
Krashen and Cummins (2000) advance that when communicative skills such as speaking, reading, listening and writing are well developed in the first language, the learners acquire "comprehensible input" that is meaningful input that facilitates the transfer of these skills to the second language acquisition.

"Use of a familiar language to teach beginning literacy facilitates an understanding of sound-symbol or meaning-symbol correspondence. Learning to read is most efficient when students know the language and can employ psycholinguistic guessing strategies; likewise, students can communicate through writing as soon as they understand the rules of the orthographic (or other written) system of their language. In contrast, submersion programs may succeed in teaching students to decode words in the L2, but it can take years before they discover meaning in what they are reading" (Benson, 2004: 2).

Evidence from Cameroon, India, Mali, the Philippines and Vietnam clearly shows the benefits of learning in a familiar language. First, children learn to read faster if they speak the language of instruction, because they already have a repertoire of vocabulary, knowledge of the linguistic structure of the language, and the ability to pronounce the sounds of the language (Ball, 2010). This prior knowledge facilitates learners to read, as well as understand text which in turn, facilitates academic learning.

On a recent evaluation of a mother tongue education program in Cameroon, Chuo and Walter (2011) show that children who were taught in their mother tongue, Kom, performed significantly better in multiple subjects (including mathematics and English) as compared with a group of peers who attended schools where English was the medium of instruction. In Vietnam, 68% of grade one students who attended a mother tongue program achieved the level of excellent as compared to only
28% of students not learning in their mother tongue (UNICEF, 2011).

According to research conducted by Walter and Dekker (2011) in second language instruction models in developing countries such as Africa, he states that normally students require 4-5 years to learn to read and even after 6 years he found out that learners read with low levels of comprehension. Data obtained from three different countries such as Eritrea, Cameroon and the Philippines clearly show that good to average students read fluently and with good comprehension capacity by the end of Grade 2 and even below average students start reading well by the end of Grade 3 when they are taught to read in their mother tongue.

**Mother tongue education and child-centered pedagogy**

A child-centered pedagogy refers to a model of education that includes active participation and interaction of learners, learning through cooperation and open-ended instruction (UNESCO, 2004). It is considered as an effective method for learning to "read mathematics, grammar, mother tongue, sciences, history and to some extent foreign languages" (UNESCO, 2004: 153). Thereby, a mother tongue education is a learner-oriented model where students actively drive their quest for new knowledge such that their reasoning, understanding, analysing and evaluating skills are reinforced instead of adopting traditional classroom techniques such as rote learning, memorisation and repetition (Kosonen, Malone and Young, 2007).

Considering the Mauritian case, a former Prevokbek teacher talked about the progress made by her students in class because they no longer feel strangers in schools but as an integrated part of it where teaching methods are adapted to them and to their culture (Desveaux, 2007). A mother tongue
instruction also allows teachers and students to interact naturally, to share their findings together.

All the same, assessment plays an important role in the academic lives of students. It not only measures their performance but most importantly it considers all intellectual tasks and educational achievements of learners (Swaffield, 2008). Hence, when it comes to assess the learning of students in a mother tongue model, it can effectively takes place. Since learners can express themselves, teachers are in a better position to evaluate what they have already assimilated, what needs to be taught and provide further support to those who lack behind (Benson, 2004).

Conclusion

Schools are assumed to be social and learning centers where students learn, cooperate, interact and collaborate with learners of same age group coming from different social and cultural backgrounds. However, not everyone is able to adapt himself/herself to a standard learning system in public schools. Students have different needs and they function in totally different manners. In formal educational settings it is not rare to find learners having limited cognitive skills, limited communicative skills and limited literacy skills after six years spent in primary education. Failure, early drops-out, repetition of grades classes or exclusion from the system are recurrent issues.

Language and education are closely related. It can be a bridge for social and educational advancement as well as a barrier that exacerbates social inequality and language learning. So, the choice of language to be implemented for learning is of utmost importance and impacts largely the performance of learners. Education experts such as Cummins (2000), Baker (2000) and Skutnabb Kangas (2000) among others have confirmed through their worldwide research that young learners who start their schooling in the mother tongue (MT) throughout their primary education are more
apt to develop their educational, linguistic and thinking skills. Fluency and literacy in the first language establishes a strong foundation for second language acquisition, for improved learning and reading aptitudes and for further studies.

However, there are still some ambiguities linked to the use of mother tongue in formal education. Questions are often raised on the pedagogical appropriateness of the MT and doubts often arise if teaching and learning might not endanger or 'jeopardise' learning in English later (D'Souza, 1987). Scholars like Phillipson (1992: 120) point out that "an apparent sound focus on the mother tongue as medium of education does not in itself provide a guarantee of enlightened education". During an interview published in a Mauritian newspaper (2011), Sydney University based Professor Dr Mahboob points out that if the MT were a solution to everything, there would have no English-speaking failing in countries such as United States, Australia and United Kingdom. He further points out that academic success in countries like China, Korea and Japan has been possible through massive investment on the development of their MT and its use for various purposes. Side by side, it is also important to learn English as a foreign language but it is not the language of instruction in public schools. In Singapore, which is a multiethnic and multicultural country as Mauritius, the medium of instruction is largely English but students are also taught their MT in schools and they are achieving success at international evaluations.

Academic success of students depends on various factors such as language planning and policy, curriculum contents and types of pedagogy. In the same way, the language of instruction in schools largely determines the academic performance of learners.
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