



Barbara Trudell and  
Diane Dekker,  
editors



## Good Answers to Tough Questions in L1-based Multilingual Education Volume 2



# Good Answers to Tough Questions in L1-based Multilingual Education

## Volume 2

Editors

Barbara Trudell and Diane Dekker



This volume is published by SIL International's  
Literacy and Multilingual Education Department

©2023 SIL International®



This work is licensed under the [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Cover photos ©2023 SIL International®

# Contents

<b>Introduction</b>	<b>1</b>
Barbara Trudell	
<b>1 What strategies can be used to assist language-in-education policy makers to promote policies that support the use of non-dominant languages in education?</b>	<b>2</b>
Kimmo Kosonen and Kirk R. Person	
<b>2 What does school language mapping contribute to effective MLE programming?</b>	<b>11</b>
Manasseh Wekundah	
<b>3 How can current reading methods be adapted for use with under-represented orthographies?</b>	<b>20</b>
Rudy Klaas	
<b>4 How can teachers in the Global South who speak the dominant language be supported to leverage students' whole linguistic repertoire, including non-dominant home languages?</b>	<b>25</b>
Sangsok Son	
<b>5 What does effective bridging look like?</b>	<b>33</b>
Leila Schroeder	
<b>6 What are the best uses of supplementary materials in an MLE reading program?</b>	<b>44</b>
Kristine M. Trammell	
<b>7 How can digital devices be incorporated into MLE classrooms to enhance literacy outcomes?</b>	<b>52</b>
Aaron Hemphill and Christy Hemphill	
<b>8 How can L1 language of instruction strategies be used most effectively in early childhood education?</b>	<b>59</b>
James A. Smith and Karla J. Smith	
<b>9 How can L1 language of instruction strategies support education in emergency contexts?</b>	<b>67</b>
Barbara Trudell	

# Introduction

**Barbara Trudell**

*SIL Africa Learning and Development*

In 2016, SIL published the first *Good Answers to Tough Questions in MTB-MLE*, a volume dedicated to providing “what works”-type responses to some of the most difficult challenges being faced by practitioners in the field. At that time, global awareness of the power of L1-medium learning was growing, and there were many questions about the “hows” of L1-based MLE. In this first volume, experienced literacy and MLE consultants from across the globe provided a set of practical responses to some of the most pressing questions of the time.

Seven years later, governments, NGOs, and local communities around the world are developing local languages as languages of instruction and initial literacy for a range of learners, while also ensuring that local culture is well represented in curricular and material resources. United Nations agencies, the World Bank, bilateral donors, and others are focusing attention on “inclusive and equitable quality education” (SDG #4) for all learners, through the provision of classroom instruction in local languages—as well as official languages—to increase learning and comprehension. This increased focus on local languages has resulted in positive changes in policy and implementation of L1-based multilingual education in many countries around the world.

However, the “tough questions” have also changed somewhat over time. So, this second volume of *Good Answers to Tough Questions* addresses new issues and questions related to the implementation of local language-medium multilingual education programming. In this volume we explore some of the more recent questions related to policy, school language mapping, orthographic challenges, digital tools for learning, early childhood education, education in emergencies, and more.

These practical suggestions are intended to facilitate and strengthen the implementation of L1-based MLE programs as they are being developed around the world today. We hope our “good answers” are helpful!

# What strategies can be used to assist language-in-education policy makers to promote policies that support the use of non-dominant languages in education?

**Kimmo Kosonen**

*SIL Senior Literacy and Education Consultant*

**Kirk R. Person**

*SIL Senior Literacy and Education Consultant*

## 1.1 Introduction

Most nations are linguistically diverse, yet language-in-education policies typically privilege a few dominant languages. Consequently, as much as 40 percent of the global population may not have access to education in the language(s) they know best (UNESCO 2016).

Over the past two decades, several countries in the Global South have increased the use of non-dominant languages (NDL) in education.<sup>1</sup> Bringing NDLs into national education systems in multilingual countries is essential to improving the quality and equity of educational opportunities.

This chapter analyzes the role of various actors in developing inclusive language-in-education policies and practices. Sources include national case studies, United Nations documents, and a recently introduced theoretical framework (Kosonen and Benson 2021). We do not claim to have solutions guaranteed to work in all contexts. Rather, our aim is to provide suggestions for stakeholders interested in promoting the wider use of NDLs in education.

## 1.2 Envisioning language policy change

Susan Malone's diagram of the components of effective multilingual education (MLE) programmes includes "Supportive MTB-MLE Policy" (see the figure below). But what are MLE

---

<sup>1</sup> **Non-dominant language (NDL)** refers to a language or language variety spoken in a given place that is not considered the most prominent in terms of number, prestige or official use by the government and/or the education system (Kosonen 2010). **First language** or **L1** refers to the language that a speaker (a) has learnt first, (b) identifies with, (c) knows best, or (d) uses most (Skutnabb-Kangas 2000, UNESCO 2003).

advocates to do when a supportive environment does not exist, or when policies that look good on paper are not implemented, or when policies forbid the use of NDLS at school?

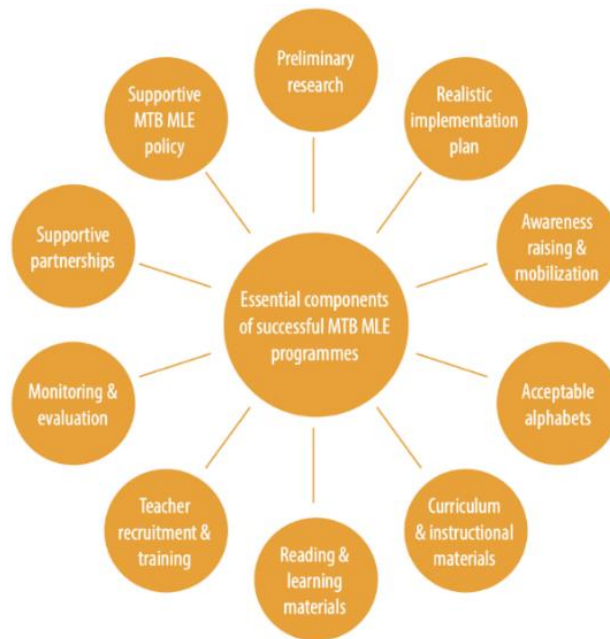


Figure: Essential components of successful MTB MLE programmes  
(UNESCO 2018, used by permission).

Kosonen and Benson 2021 analyzed language policy developments in 20 countries. The resulting model provides a useful tool for visualizing policy evolution through the interaction of three stakeholder groups:

**Actors from above**, principally high-level government entities and personnel

**Actors from the side**, including academics, local education officials, international development organizations, etc.

**Actors from below**, including local NGOs, religious groups, ethnolinguistic associations, etc.

Experiences in multiple countries demonstrate two main approaches through which the three groups have collaborated to impact national policies. Kosonen and Benson call these the **piloting approach** and the **advocacy approach**. The role of each actor and the steps taken over time are detailed in table 1 (Kosonen and Benson 2021, adapted with permission):

Table 1: Two possible approaches to language policy change

<b>Piloting - change from the side with below to above</b>		
<b><i>Initial phase:</i></b> <ul style="list-style-type: none"> <li>- Side actors initiate small-scale pilot activities using NDLs.</li> <li>- Early on, they partner with NDL communities for linguistic and community support.</li> <li>- Written policies may or may not exist, but the use of NDLs is not prohibited.</li> </ul>	<b><i>Intermediate phases:</i></b> <ul style="list-style-type: none"> <li>- Side actors continue piloting MLE for some time.</li> <li>- As activities expand, new NDL communities join.</li> <li>- Pressure from the side with supporting evidence, and demand from below lead actors from above to adopt supportive policies and allocate more resources.</li> </ul>	<b><i>Possible future direction:</i></b> <ul style="list-style-type: none"> <li>- Side actors continue as major implementers.</li> <li>- Actors from the side and below may become integrated.</li> <li>- Actors from above may eventually accept more leading roles in bringing NDLs into education.</li> <li>- Existing policies may be strengthened.</li> </ul>
<b>Advocacy - change from the side to above, and then to below</b>		
<b><i>Initial phase:</i></b> <ul style="list-style-type: none"> <li>- Side actors advocate for MLE with policymakers based on access/quality arguments.</li> <li>- Written policies may support only dominant languages in education.</li> <li>- Side actors initiate small-scale pilot activities using NDLs.</li> </ul>	<b><i>Intermediate phases:</i></b> <ul style="list-style-type: none"> <li>- Side actors continue piloting MLE for some time.</li> <li>- Advocacy continues, focused on policymakers, gradually gaining support.</li> <li>- Effectiveness convinces more grassroots actors to become engaged, and actors from above to become more supportive.</li> </ul>	<b><i>Possible future direction:</i></b> <ul style="list-style-type: none"> <li>- Side actors continue as major implementers.</li> <li>- Actors from the side and above may become integrated.</li> <li>- New NDL communities may be included based on government framework/guidelines.</li> <li>- Existing policies may be strengthened.</li> </ul>

Cambodia, Mozambique, the Philippines, and Thailand exemplify the **piloting approach**. Side-level actors such as academics and NGOs initiated work with actors from below (NDL communities). At that point, actors from above (government agencies) were paying little attention to educational activities in NDL communities. The side actors worked with NDL communities to initiate small-scale literacy and early childhood education pilots. Orthographies and L1 learning materials were developed. Later, student learning achievement and parental



testimonies attracted the attention of education officials. Local-level policies (e.g., MLE teacher recruitment, training, budget, etc.) were developed, and eventually new national policies were adopted. The language-in-education policy-making process was thus driven and informed by successful local projects, as well as influential side actors (Ball and Smith 2019, Kosonen and Person 2021).

Timor-Leste exemplifies the **advocacy approach**. Side-level actors including local and international NGOs and UN agencies advocated for MLE at a time when the government was focused on promoting Portuguese (Walter 2016). Piloting was seen as being politically sensitive and impractical (as few NDLs had orthographies). A prominent individual with strong connections to the government, the UN, and a local NGO emerged as a strong MLE champion. The side-actors, the champion, and the Ministry of Education then developed a policy that allowed pilot projects. This approach highlights the role of “key actors” whose contributions to successful policy change are indispensable.

### 1.3 Ideas for side actors

Side actors are crucial to policy change, as they serve as bridge-builders between NDL communities and government officials. They are also information brokers and advocates. This may include introducing globally-validated principles and practices and demonstrating how they could be locally implemented.

To gain the interest of actors from above and below, side actors should “scratch where it itches”: discover topics of concern to the government and the community and demonstrate how the use of NDLs in education could improve the situation. For the government, this could include low literacy rates, high drop-out rates, poor school performance in rural areas, social inequalities that might produce unrest, or the desire to improve the country’s Sustainable Development Goal progress. For communities, this could include fear of language loss, future job prospects, or concerns about children rejecting their heritage culture.

Therefore, advocacy messages must be adjusted to fit the audience. In Thailand, side actors (mostly academics) began with “one size fits all” messaging, emphasizing how MLE would help preserve endangered languages and cultures. Communities were somewhat interested in this idea, but education officials were unimpressed: why save a language that is dying? Side actors quickly found that the government was much more interested in improving children’s national language abilities. Thus, the message to officials became “MLE is an effective method to improve the Thai language learning of ethnic minority children, thus enhancing national development and social cohesion” while the message to communities was “MLE will help



children maintain and value their language and culture while acquiring the tools they need to do well in school and get good jobs.”

Some side actors have appealed to United Nations rights documents as part of their advocacy efforts. The UNESCO *Convention against Discrimination in Education* (1960) and the UN *Declaration on the Rights of Indigenous Peoples* (DRIP 2007) are among the dozen or so UN documents that mention linguistic and cultural rights (Person 2022). But is that an effective strategy? None of these documents are legally binding, meaning that the UN will not hold countries accountable for ignoring them. Additionally, government attitudes toward these documents vary. Some take issue with specific terms, claiming, for example, that their ethnic minority populations do not fit the UN’s definition of “Indigenous,” rendering DRIP meaningless. Many governments reject assertions that NDL speakers have special rights that are different from those of the majority population.

In some contexts, it may be more effective to appeal to UN Sustainable Development Goal (SDG) 4’s emphasis on “inclusive and equitable quality education.” Nations report on their SDG 4 progress via a series of indicators—some of which are compulsory for all countries while others are voluntary (the “thematic” indicators). Thematic indicators, 4.5.2 (percent of students in first language primary education), 4.5.3 (education resources for disadvantaged populations), 4.6.2 and 4.6.3 (literacy) are particularly important in multilingual contexts. Government agencies responsible for SDG tracking may not have a clear understanding of the indicators. MLE advocates could thus help interpret the indicators and provide insight into how data might be disaggregated by ethnicity and language (to demonstrate unequal progress among different social groups).<sup>2</sup> The SDG 4 perspective informed UNESCO’s *Bangkok Statement on Language and Inclusion* (UNESCO 2020), which has thus far been translated into five languages, endorsed by sixteen countries, and will be promoted during the UN International Decade of Indigenous Languages (2022–32) (Person 2022).

A unique case of language-in-education policy development took place in Myanmar, as UNICEF’s Language and Social Cohesion (LESC) initiative brought hundreds of local government officials and NDL community leaders together in a series of “facilitated discussions” to develop broadly acceptable local language policies (Lo Bianco 2016). These became the basis for state and national-level policy recommendations. While a single high-level politician ultimately rejected LESC’s national policy conclusions, the LESC framework provides

---

<sup>2</sup> MLE advocates can also encourage their national UNICEF offices to disaggregate data on the basis of home language in the Multiple Indicator Cluster Survey (MICS) conducted every 3–4 years, and to include the optional MICS Foundational Learning Module (disaggregated by home language) to provide data on the literacy and numeracy skills of children aged 7–14. (UNICEF 2017)

an excellent example of how MLE advocates can engage multiple stakeholders to develop local agreements that inform national policies.

It can be challenging for project personnel to collect longitudinal data on student performance. Nevertheless, such data are vital to improving student outcomes and providing the government with evidence to justify support for MLE (UNICEF 2018; UNESCO 2018; UNESCO 2020). Such evidence drove policy change in the four countries where the piloting approach was observed (Kosonen and Benson 2021).

In communicating with government officials, Joseph Lo Bianco (author of Australia's 1987 National Policy on Languages) recommends brevity (Lo Bianco 2008). A two-page executive summary with one or two easy-to-understand graphs is more likely to be read and understood than a long research report (although more lengthy documents could be attached to the summary!)<sup>3</sup> Similarly, PowerPoint presentations, videos, and other advocacy materials should be succinct and clear. MLE advocates should practice 20–30 second “lift talks” to communicate the benefits of multilingual education to a busy official.

## 1.4 Limitations

Some ideas discussed above will likely work in multiple contexts. However, it is worth acknowledging some caveats.

The most important factor to be considered is time. Sustainable changes in language policies have generally taken a long time, sometimes decades. This is not necessarily a bad thing; quick policy decisions imposed from above may lack crucial insight into the mechanics of operationalization and thus prove difficult to implement.

Another limitation is that, despite continuous advocacy, the policies in most countries support only a few years of NDL instruction in the early primary grades (the “early-exit” model). Ironically, this may be due to successful pilots; government officials see NDL students doing better than ever in the national/official language and wrongly conclude that the children no longer require L1 support!

Finally, as Kosonen and Benson say, “with new generations of national leaders, there may be negative turns due to lack of comprehension or experience with MLE, which means that actors from the other levels will be vital to keep implementing, documenting, supporting, and

---

<sup>3</sup> The *Salzburg Statement for a Multilingual World* (2018) is an example of a policy brief, integrating data and recommendations (but lacking graphics). UNICEF Viet Nam's *Lao Cai Primary Classroom Language Profile* (2012) clearly summarizes student ethnicity and academic outcome data.

advocating for NDLS in education” (Kosonen and Benson 2021:45). In other words, advocacy never ends.

## 1.5 Conclusion

This chapter envisions language policy change as a process involving collaboration between actors from above, below and the sides. The text and the recommendations that flow from it are oriented toward side actors. We thus close with the following observations.

**Piloting** is the best approach where there is no written policy and no restrictions. As small-scale pilots are usually non-threatening, they can “mature” over time, and their good outcomes can inform and influence policy—first at the local level, and ultimately at the national level. Throughout the piloting process, networking with actors at all levels and recurrent advocacy on the benefits of multilingual education is needed.

**Advocacy** towards language policy change is the best approach where piloting is not possible. Influencing the thinking of policymakers is essential to gain latitude for foundational actions, such as orthography development or literacy training for community members. This may enable piloting later.

**Communication** and advocacy strategies carried out by side actors should fit the needs of the target audiences. This often means creating different messages for different audiences.

The good news is that language policy change is possible! In many countries, side actors have played a vital role in creating the conditions for policy reform. Nonetheless, these positive results have usually come as the result of many years of focused, evidenced-informed work at all levels.

## References

- Ball, Jessica, and Smith, Mariam. 2019. Independent evaluation of the multilingual education national action plan in Cambodia, July 2018–February 2019. Phnom Penh, Cambodia: UNICEF. <https://www.unicef.org/cambodia/reports/evaluation-multilingual-education-national-action-plan-cambodia>.
- Kosonen, Kimmo. 2010. Ethnolinguistic minorities and non-dominant languages in Mainland Southeast Asian language-in-education policies. In M.A. Geo-JaJa, and S. Majhanovich (eds.). *Education, language, and economics: Growing national and global dilemmas*. Rotterdam, Netherlands: Sense Publishers.

- Kosonen, Kimmo, and Carol Benson. 2021. Bringing non-dominant languages into education systems: Change from above, from below, from the side—or a combination? In Carol Benson and Kimmo Kosonen (eds.) *Language issues in comparative education II: Policy and practice in multilingual education based on non-dominant languages*. Leiden, Boston Paderborn and Singapore: Brill. [https://doi.org/10.1163/9789004449671\\_002](https://doi.org/10.1163/9789004449671_002).
- Kosonen, Kimmo, and Kirk R. Person. 2021. Language policy and planning in Mainland Southeast Asia. In Mathias Jenny and Paul Sidwell (eds.). *The languages and linguistics of Mainland Southeast Asia: A comprehensive guide*. Berlin: De Gruyter Mouton.
- Lo Bianco, Joseph. 2008. Interview with Joseph Lo Bianco by Kirk R. Person. Ms.
- Lo Bianco, Joseph. 2016. Language education and social cohesion (LESC) initiative: Myanmar country report. Bangkok, Thailand: UNICEF East Asia and Pacific Regional Office. <https://www.unicef.org/eap/reports/language-education-and-social-cohesion-lesc-initiative-0>.
- Person, Kirk R. 2022. The Bangkok statement on language and inclusion: A rose by any other name? In Tove Skutnabb-Kangas and Robert Phillipson (eds.). *The handbook of linguistic human rights*. Oxford: Wiley-Blackwell.
- Salzburg Global Seminar. 2018. The Salzburg statement for a multilingual world. Salzburg Global Seminar, 2018. [https://www.salzburgglobal.org/fileadmin/user\\_upload/Documents/2010-2019/2017/Session\\_586/EN\\_SalzburgGlobal\\_Statement\\_586\\_-\\_Multilingual\\_World\\_English.pdf](https://www.salzburgglobal.org/fileadmin/user_upload/Documents/2010-2019/2017/Session_586/EN_SalzburgGlobal_Statement_586_-_Multilingual_World_English.pdf).
- Skutnabb-Kangas, Tove. 2000. *Linguistic genocide in education – Or worldwide diversity and human rights?* Mahwah, NJ: Lawrence Erlbaum Associates.
- UNESCO. 2003. Education in a multilingual world. Paris: UNESCO. <https://bangkok.unesco.org/content/education-multilingual-world-unesco-education-position-paper>.
- UNESCO. 2016. If you don't understand, how can you learn? Global Education Monitoring Report, policy paper 24. Paris: UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000243713>.
- UNESCO. 2018. MTB MLE resource kit: Including the excluded: Promoting multilingual education - UNESCO Digital Library. Bangkok: UNESCO Asia and Pacific Regional Bureau for Education. <https://unesdoc.unesco.org/ark:/48223/pf0000246278>.

- UNESCO. 2020. The Bangkok statement on language and inclusion. UNESCO Bangkok.  
<https://bangkok.unesco.org/content/bangkok-statement-language-and-inclusion>.
- UNICEF. 2017. Collecting data on foundational learning skills and parental involvement in education. New York : Data and analytics section, division of data, research and policy, UNICEF.  
<https://mics.unicef.org/files?job=W1siZiIsIjIwMTcvMDYvMTUvMTYvMjc vMDAvNz MxL01JQ1NfTWV0aG9kb2xvZ2ljYWxfUGFwZXJfNS5wZGYiXV0&sha=39f5c31dbb91df26>.
- UNICEF. 2018. Bridge to a brighter tomorrow: The Patani Malay-Thai multilingual education programme. UNICEF Thailand. <https://www.unicef.org/thailand/reports/bridge-brighter-tomorrow>.
- UNICEF. Viet Nam 2012. Lao Cai primary classroom language profile.  
<https://drive.google.com/file/d/1ssTqgP0MR-AjrHtyB77GNFN94-9lBjtI/view?usp=sharing>.
- Walter, Stephen L. 2016. The EMBLI endline evaluation study. Project report. Ms.  
<https://www.laohamutuk.org/educ/CAFE/EvalEMBLIFullEn.pdf>.

## What does school language mapping contribute to effective MLE programming?

**Manasseh Wekundah**

*Director, SIL Africa Learning & Development*

### 2.1 Introduction

Language plays a pertinent role in effective teaching and learning. Research shows that teacher-pupil interaction is important to pupils' progress, particularly in the early years of school. In fact, children who understand the language of instruction in school are more likely to enroll in school on time and attend school regularly and are less likely to drop out of school (Shaeffer 2020; Pflepsen and Pallangyo 2019).

In addition, multilingualism is a way of life for three-quarters of the human race (David Crystal 2006, in Lid 2018). Although there seems to be a decline in languages due to migration, urbanization, and other factors, in reality, there are about 7000 living languages actively used in the world today (Eberhard 2021). This is partly because of a renewed global resolve to maintain local, regional, and national languages (Lid 2018). People acquire different languages in order to interact effectively in different environments. In some contexts, individuals speak the ethnic language to identify with their culture and people. They speak the official language in meetings, and the language of wider communication for non-formal interactions such as trade (Holmes 2013).

In an increasingly globalized world, multilingualism is important in creating effective communication across cultures. It is practiced differently based on the context and the language policies in place (Stein-Smith 2016). It is this understanding that motivates us to think about how different countries deal with multilingual situations, especially in education. A question could then be asked: Is multilingualism a barrier to effective learning? Research done by Mueller (2021) on code-mixing among multilingual children in Germany and Spain revealed that multilingual children only use the instructor's language, even those who do not have good proficiency in the language. Is this really the case in other places? Language mapping seeks to answer questions like these, through investigation of language attitudes, existing language policies, pupils' linguistic competence, and performance in a given location. This paper reviews the role of language mapping in effective MLE programming.

## 2.2 Context

It is worth noting that a huge majority of people who speak international languages, such as Arabic, Portuguese, French, Spanish, and Mandarin, use these languages as second, third, or later-acquired speech varieties, thereby supporting the statement that there are more multilingual individuals in the world than there are monolinguals (Tucker 2001). The use of multiple languages in different parts of the world can be attributed to the heterogeneity of some countries, such as Singapore; or to religious attitudes, such as the way the Sanskrit language marks Hinduism and the Pali language marks Buddhism (Tucker 2001). In many African nations, colonialism contributed to multilingualism because national boundaries were drawn arbitrarily by colonialists without a critical review of the cultural and linguistic realities of the time (Vilhanova 2018). Wide and diverse cultural and linguistic groups remain despite the borders, resulting in the existence of trans-border languages in most African nations (Nkonko 2018).

### 2.2.1 Theoretical issues

Languages operate within certain environments. The location, purpose, people's attitudes, and policy environments are important considerations to review.

### 2.2.2 Language policy

In language planning, the selection of languages of instruction in schools is of utmost importance, since these languages affect children's ability to learn (Alidou et al. 2006). Research has shown the obvious benefits of using indigenous languages in education, such as increased academic achievement, the development of a strong foundation for learning other languages, and a sense of cultural identity (Rajathurai 2020), to mention but a few. Despite these benefits, there is a policy formulation trend that mandates foreign languages of instruction in the first few years of compulsory schooling, before a strong foundation in a language that learners understand has been put in place, as is evident in Uruguay and Hungary (Enever 2020).

In Africa and elsewhere, a number of negative views persist around local languages: that multilingualism is an obstacle to national unity; that indigenous languages are not equipped to serve as medium of education; and the fear of isolation from developed countries (Ouane and Glanz 2011). Even the countries that have policy support for the use of indigenous languages in the primary grades experience a disconnect between theory and practice, with a general preference for the colonial languages (Trudell 2016). In this context, the majority of children in



Africa are taught in a colonial language, even though they start school with limited or no ability in those languages (Evans and Acosta 2020). Although most African countries give emphasis to international languages for education, only 10–15 percent of the African population is fluent in these languages (UNESCO 2010 in Nyaga 2013). Approximately 2500 languages are spoken in Africa (UNESCO 2010 in Nyaga 2013); out of these, only 176 languages are used for education (Gadelii 2004 in Nyaga 2013). That being the case, most pupils achieve poor learning outcomes with many dropping out of school before finishing the primary level (Pflepsen and Pallangyo 2019).

In order to strengthen multilingual practices, there is a need to enhance language-in-education policies in multilingual contexts. This will go a long way to show the significance of multilingualism in a fast-paced world (Okal 2014). Countries with enacted laws that support bilingual education include the United States of America, which enacted the Bilingual Education Act in 1968, thus catalyzing the formulation of the Bilingual-Bicultural Act in California in 1976 and as a result, creating a supportive environment for children whose primary language was not English. In Canada, the 1969 Languages Act stipulated that English and French will be used as official languages at the federal level. Other countries with officially supported multilingualism through legislation include Belgium, South Africa, and Switzerland (Okal 2014). Having a clear policy framework that supports multilingualism is the most strategic way of ensuring that policy implementers understand the benefits of multilingualism.

### **2.2.3 Multilingual education**

Multilingualism is a reality in most parts of the world. Countries such as Belgium, Switzerland, South Africa, and Nigeria are highly multilingual (Okal 2014). Over the years, many African governments have held onto myths that view multilingualism as an impediment to national unity and technological advancement, and as too expensive to implement especially in education. As a result, some of these countries have chosen a trans-ethnic language or colonial ones for education (Ouane and Glanz 2011). Research has, however, shown that multilingualism among children promotes better social adaptability, and improves reasoning and thinking skills while enhancing cognitive abilities (Okal 2014). It is, therefore, important for multilingualism to be entrenched into education in order to produce solid and well-rounded individuals. Further, in mother tongue-based multilingual education, the mother tongue is a bridge to the acquisition of other languages (Beban 2013). This basically confirms that multilingualism does not impede but aids in the learning process, including learning of other languages.

## **2.3 Contributions of language mapping to effective MLE programming**

The main purpose of language mapping is to identify and document information on language relationships and use (Kindell 1991). In a school environment, for instance, language mapping involves identifying the languages that are spoken by the children in the target group; this information can then be compared to the language(s) used for instruction.

### **2.3.1 Identifying discrepancies**

Language mapping creates awareness of any discrepancy between language policy and practice, and what is being practiced is measured against the policy stipulations. If policy and practice are not aligned, the data gives information on why this is the case, and consequently, gives pointers to what could be done to mitigate the situation.

Language mapping discloses the percentage composition of various languages in multilingual classrooms. This gives information on the language continuum from the dominant to the least spoken home languages in the targeted classes. The report also reveals the languages that are used for instruction in class.

Additionally, language mapping reveals any mismatch between home languages and those used for instruction in schools. Here, it is generally agreed that children learn best in a language that they understand. Since most school compositions in Sub-Saharan Africa are multilingual, the mapping exercise identifies the percentage of children taught in a language other than their home language. Based on this data, recommendations can be made on the best strategy for encouraging the use of home language(s), especially at the primary level of school.

Language mapping focuses on the linguistic repertoire of the catchment area for the targeted schools. In this case, the questions one would ask include the following: Is there a lingua franca on the study site? And if there is, which language is it? Is it a local, regional, national, or official language? This information gives context and ensures that the languages spoken in schools are not viewed in isolation.

### **2.3.2 Catalyst for action**

Arguably, language mapping is a catalyst for action since the findings from the mapping exercises create awareness of any discrepancy between language policy and practice, thereby driving policy implementers to enforce stipulations of the law while drawing attention to challenges in the sector. Language mapping reports are often used as the basis for monitoring policy implementation by government agencies and progress in the education sector. In

response, measures can be put in place by government agencies and other stakeholders. Some of the measures include teacher recruitment, teacher training, management of multilingual classes, and materials development. The overall effect of this is improvement in the quality of education that the learners experience.

Language mapping changes the perception of education stakeholders from viewing multilingualism as a barrier to viewing it as the resource that it is in education. Understanding the percentage composition of the language varieties spoken in a class is important in identifying and recommending effective strategies for instructing learners who may come from different linguistic and cultural contexts. Since all children go to school with knowledge ‘stored’ in their home language, each language should be given attention.

Language mapping also reveals the language situation and identifies any mismatch between the home language and those that are used for instruction in schools. This information is important in the recommendation of the most appropriate languages for instruction in class depending on the context. This, in turn, enables pupils to learn in languages that they understand and thereby reap the benefits of learning in familiar languages, the result of which is good learning outcomes.

Moreover, the linguistic composition outside the school environment is of interest because it has an influence on pupils’ language choices in schools. As such, the function that the lingua franca plays in a particular location, such as trade, determines the extent and motivation for its use in the community. In most cases, the lingua franca used for trade is most likely spoken in other domains as well as by children in schools.

### **2.3.3 Identifying language mismatches**

In Kenya, the Teacher Service Commission, a body that recruits teachers, has a policy for teacher transfers. In some schools, teachers in the lower grades are transferred regularly. Whereas these transfers are intended to bring about equity and balance of teachers in schools, the practice affects multilingual education initiatives because some of the trained teachers that speak the local language may be transferred to schools in other counties, thereby creating a gap. When this happens, it is not uncommon to find a school with the entire teaching staff speaking languages not spoken by the learners in the school. Instances have also been reported of teachers teaching in their own mother tongues, even when none of the children in their classes speak that language (Nyaga and Anthonissen 2012; Nyaga 2013). This mostly results from not having teachers who speak the languages spoken by the learners, occasioned by teacher placement and transfers.

A language mapping exercise among the Pokomo speakers on the coast of Kenya pointed out a practice of frequent transfers of lower primary teachers without due consideration of the language resources that they bring to class. These findings were discussed with the local education officials and some of the planned transfers were halted. In addition, education officials agreed that they will only transfer lower primary school teachers if they have replacements that can speak the languages of the catchment area.

Similarly, the findings of a mapping exercise done in Amudat District, Uganda, revealed that children at the lower level sit for exams in English while the policy does not even allow exams at that level. This was a cause for concern by officials from the government agency involved in curriculum development. Eventually, the agency promised to monitor schools and visit the area more.

There have also been multiple cases of mismatch between the languages of instruction and children's home languages. In Indonesia, for instance, although Bahasa is the national language, and is also taught in schools, children from communities farther away from the cities such as Maluku are disadvantaged because they understand very limited Bahasa (ACDP 2014). Here, language mapping exercises can be said to highlight these challenges. The assessments also give recommendations, such as the selection of teachers who speak the local variety in cases where this is possible, to mitigate these disadvantages.

#### **2.3.4 Limitations**

The recommendations that result from language mapping can only be implemented if the language in education policy allows the use of multiple languages for education. The language policy which dictates the language(s) of instruction in schools is thus the framework for any of the recommended strategies.

In some contexts, there are a limited number of teachers at the lower levels of the school who speak the languages of their school's catchment area. This makes it difficult for any meaningful multilingual education strategy to work.

Another limitation is teachers' and education stakeholders' perceptions of multilingual education. Some of them believe that multilingual education is a barrier to academic achievement and competence in the learned languages. This is not the case, especially given the Common Underlying Proficiency (CUP) theory by Cummins, which states that proficiency in the first language is important in learning and mastery of the second language and the development of cognitive skills in both languages (Guzmán 2008).

## 2.4 Conclusion

School language mapping lays bare the languages that are spoken in schools, their catchment areas, and the various functions of these languages. At the centre of this inquiry is the question of whether or not children are learning in a language that they speak and understand. Practical experience has shown that policymakers and implementers may make assumptions about certain languages based on anecdotal evidence; this in turn has a negative impact on the selection of the appropriate languages for instruction in schools. Language mapping is the bridge over this knowledge gap. The findings are evidence-based, with contextual and practical recommendations.

Language policies are at the core of robust multilingual education strategies. There is, therefore, a need to find out more about language policies in Sub-Saharan Africa, the motivation behind these policies, and why there is limited alignment between policy and practice.

## References

- Analytical and Capacity Development Partnership (ACDP). 2014. Mother tongue based multilingual education. Working paper.  
<https://www.adb.org/sites/default/files/publication/176282/ino-mother-tongue-multilingual-education.pdf>.
- Alidou, Hassana, Aliou Boly, Birget Brock-Utne, Yaya Satina, et al. 2006. *Optimizing learning and education in Africa – the language factor*. Paris: ADEA.  
<https://www.semanticscholar.org/paper/Optimizing-learning-and-education-in-Africa-the-a-Alidou-Boly/b0a3351b54d43442b12ded8acc7404f702c23944>.
- Beban, C. 2013. Mother tongue-based multilingual education: Empirical foundations, implementation strategies and recommendations for new nations. Multilingual education in Africa: Lessons from the Juba Language-in-Education Conference. British Council. Ms.  
[https://www.teachingenglish.org.uk/sites/teacheng/files/C413%20Juba%20Publication\\_FINAL\\_WEB%20ONLY%20v3.pdf](https://www.teachingenglish.org.uk/sites/teacheng/files/C413%20Juba%20Publication_FINAL_WEB%20ONLY%20v3.pdf).
- Enever, J. 2020. Global language policies: Moving English up the educational escalator. *Language teaching for young learners*, 2(2)162–191. DOI:10.1075/ltyl.19021.ene.
- Evans, David K., and Amina Mendez Acosta. 2020. Education in Africa: What are we learning? *Journal of African Economies*, vol. 30(1)13–54. doi: 10.1093/jae/ejaa009.

- Guzmán, N. A. 2008. Underlying linguistic proficiencies. In J. González (ed.), *Encyclopedia of bilingual education*, 865–867. Thousand Oaks, CA: Sage Publications Inc.  
[https://www.academia.edu/8247276/Guzm%C3%A1n\\_N\\_2008\\_Underlying\\_Linguistic\\_Proficiencies\\_Encyclopedia\\_of\\_Bilingual\\_Education](https://www.academia.edu/8247276/Guzm%C3%A1n_N_2008_Underlying_Linguistic_Proficiencies_Encyclopedia_of_Bilingual_Education).
- Holmes, Janet. 2013. Ethnicity and social networks. In *Introduction to sociolinguistics*, 4th ed., 186–205. London, New York: Taylor & Francis Group.  
<https://www.taylorfrancis.com/books/mono/10.4324/9781315833057/introduction-sociolinguistics-janet-holmes>.
- Kindell, G., ed. 1991. *Proceedings of the Summer Institute of Linguistics International Language Assessment Conference, Horsleys Green, 23–31 May 1989*. Dallas: Summer Institute of Linguistics.
- Lid, K. 2018. The impact of multilingualism on global education and language learning. University of Cambridge Local Examinations Syndicate.  
<https://www.cambridgeenglish.org/Images/539682-perspectives-impact-on-multilingualism.pdf>.
- Müller, Natascha. 2021. Multilingualism – A barrier or a blessing? Department of Romance Studies, University of Wuppertal North Rhine-Westphalia, Germany. Scientia.Global.  
[https://www.scientia.global/wp-content/uploads/Natascha\\_Muller/Natascha\\_Muller.pdf](https://www.scientia.global/wp-content/uploads/Natascha_Muller/Natascha_Muller.pdf).
- Nkonko, M., K. 2018. The issue of the medium of instruction in Africa as an “inheritance situation”. *Current Issues in Language Planning*, 19(2)133–135.  
<https://www.tandfonline.com/doi/full/10.1080/14664208.2017.1357987>.
- Nyaga, Susan., and Christine Anthonissen. 2012. Teaching in linguistically diverse classrooms: Difficulties in the implementation of the language-in-education policy in multilingual Kenyan primary school classrooms. *Compare: A Journal of Comparative Education*. Vol 42(6)1–17. DOI:10.1080/03057925.2012.707457.
- Nyaga, Susan. 2013. Managing linguistic diversity in literacy and language development: An analysis of teachers' attitudes, skills and strategies in multilingual Kenyan primary school classrooms. Stellenbosch University. <http://scholar.sun.ac.za/handle/10019.1/79899>.
- Okal, B., O. 2014. Benefits of multilingualism in education. *Universal Journal of Educational Research* 2(3)223–229. DOI: 10.13189/ujer.2014.020304.  
<https://files.eric.ed.gov/fulltext/EJ1053855.pdf>.

- Ouane, A. and Glanz, C., eds. 2011. *Optimising learning, education and publishing in Africa: The language factor*. UNESCO Institute for Lifelong Learning; Association for the Development of Education in Africa. <https://unesdoc.unesco.org/ark:/48223/pf0000212602>.
- Pflepsen, A., and A. Pallangyo. 2019. *Handbook on Language of Instruction Issues in Reading Programs*. A Global Reading Network Resource. University Research Co., LLC. Reading within REACH initiative for USAID's Building Evidence and Supporting Innovation to Improve Primary Grade Assistance for the Office of Education. Chevy Chase, MD. [Handbook on Language of Instruction Issues in Reading Programs \(globalreadingnetwork.net\)](https://globalreadingnetwork.net).
- Rajathurai, N. 2020. Understanding the importance of mother tongue learning. *International Journal of Trends in Scientific Research and Development (IJTSRD)*. 5(1)77–80. [https://www.researchgate.net/publication/345436020\\_Understanding\\_of\\_the\\_Importance\\_of\\_Mother\\_Tongue\\_Learning](https://www.researchgate.net/publication/345436020_Understanding_of_the_Importance_of_Mother_Tongue_Learning).
- Shaeffer, S., F. 2020. Mother tongue and early childhood care and education: Synergies and challenges. UNESCO. [Mother tongue and early childhood care and education: synergies and challenges - UNESCO Digital Library](#).
- Stein-Smith, K. 2016. The role of multilingualism in effectively addressing global issues: The sustainable development goals and beyond. *Theory and Practice in Language Studies*. 6(12). [\(PDF\) The Role of Multilingualism in Effectively Addressing Global Issues: The Sustainable Development Goals and Beyond \(researchgate.net\)](#).
- Trudell, B. 2016. The impact of language policy and practice on children's learning: Evidence from eastern and southern Africa. Nairobi: UNICEF. <https://vivivanam.files.wordpress.com/2017/02/unicef2016languageandlearning-fullreportsingleview.pdf>.
- Tucker, R. 2001. A global perspective on bilingualism and bilingual education. Georgetown University Round Table on Languages and Linguistics 1999. [\(PDF\) A Global Perspective on Bilingualism and Bilingual Education \(researchgate.net\)](#).
- Vilhanova, V. 2018. Multilingualism in Africa: Challenges and Solutions. ResearchGate. [https://www.researchgate.net/publication/323357591\\_Multilingualism\\_in\\_Africa\\_Challenges\\_and\\_Solutions](https://www.researchgate.net/publication/323357591_Multilingualism_in_Africa_Challenges_and_Solutions).



## **How can current reading methods be adapted for use with under-represented orthographies?**

**Rudy Klaas**

*SIL Language and Education Consultant*

### **3.1 Introduction**

One of the greatest challenges experienced by reading specialists working in languages around the world concerns the orthographic under-representation of important linguistic features. The feature is considered to be important when regular and frequent confusion results from its lack of representation. Under-representation can result when the orthography of one language, whether European or other, is used to represent the linguistic features of another language which has more linguistic features. The mapping of linguistic features to graphemes is then greater than 1:1, that is, there are more language features than there are graphemes to represent them. Some features are then left unrepresented, or multiple features are represented by a single grapheme. This results in graphemes whose value is then ambiguous, leaving the reader to guess the value, or pronunciation, of the grapheme. Guessing can lead to a decrease in reading comprehension and/or reading fluency.

Orthographic under-representation may not have been intentional, as many well-meaning linguists, or others charged with making orthographies, may have been unaware of the importance of features in some languages such as tone, vowel length, or ATR (Advanced Tongue Root) vowel quality. Others may have been aware of these features but found them to be too complex and so chose to ignore them. Yet others may have suppressed the representation of these features for the sake of making the orthography look more like that of a European or other language. Whatever the case, once the orthography has been codified by linguistic and/or government authorities, attempted orthography reform can be unpopular because the reform process can demand a high level of effort and can be very time-consuming. Often the authorities do not prioritize the gains in reading fluency and reading comprehension that could be realized with a more representative orthography.

Whatever the cause of resistance to orthography reform, the linguist/reading specialist can be caught in the position of having no option other than using the mandated orthography. In these cases, the reading specialist should have a toolbox which contains pedagogic techniques

to lessen the effects of ambiguity due to orthographic under-representation. While an approach which includes phonics may effectively address most phonemes in an under-represented orthography, the remaining ambiguous graphemes will require additional attention. Such techniques will be discussed in the body of this chapter.

### 3.2 Theoretical issues

The design of an easily read orthography which represents all important linguistic features and phonemes is not a simple undertaking even with a modern understanding of linguistics and reading methodologies. The theoretical issues at stake pertain to both the linguistic and pedagogical domains.

Linguistic features such as tone and ATR are often represented on the vowel grapheme, frequently in the suprasegmental space immediately above the vowel grapheme. When two or more features are marked in the same space, the result can be rather confusing. Marking both features with diacritics on a single grapheme would result in overcrowding of the suprasegmental space. For example, ATR is frequently marked as a diacritic above the vowel grapheme. When the mandated orthography limits vowel shapes to a, e, i, o, and u, the result could be è, à, ì, ò, ù. If tone is also an important feature, then marking tone in the same suprasegmental space results in complex diacritic combinations that can be difficult to read. As an example, in Western Pokot, a Kalenjin language of Uganda, vowel length is represented by a diacritic in the suprasegmental space above the vowel grapheme rather than being represented by a doubling of the vowel grapheme. With the suprasegmental space already occupied by the vowel length diacritic, the marking of tone and/or ATR on the same vowel grapheme is not possible. In Western Pokot, tone and ATR are not marked; this leads to potential ambiguity.

To address the overcrowding of the suprasegmental space above the vowel grapheme, the use of additional grapheme shapes, such as ɔ and ɛ, has proven helpful in some languages, such as Mangbetu in eastern DRC. The additional vowel grapheme shapes represent ATR vowel quality, leaving the suprasegmental space above the vowel grapheme available to accommodate a tone marking. Vowel length is not problematic for the reader in that its occurrence is indicated by a doubling of the vowel grapheme. These additional vowel shapes are, despite their linguistic and pedagogical rationales, often rejected by some education authorities and language communities, because they do not resemble graphemes used in prestigious languages.

Whatever the cause of under-representation, the reading specialist must find a way to teach reading using the mandated orthography. Some reading methodologies are more suited to teach orthographies which are transparent and have a 1:1 phoneme to grapheme ratio.

These same methodologies struggle, however, to address ambiguous graphemes and so should be complemented by the inclusion of additional pedagogical techniques.

### 3.3 Suggested pedagogic activities

There are circumstances in which the reading specialist is compelled to work with an orthography that under-represents important linguistic features, resulting in ambiguous graphemes.

One possible approach in such situations consists of a series of learning activities which guides the learner from the known, the sounds of their own language, to the unknown, the ability to decode the sound/symbol relationship of ambiguous graphemes. In this approach, the 5 C's (phonemic awareness, phonics, vocabulary, fluency, and comprehension) will remain in focus, but the competencies of phonemic awareness and phonics will be bolstered by additional pedagogic techniques.

1. The first technique is a phonemic awareness activity that raises the students' awareness of the different sounds in the language and teaches them to distinguish between these sounds. This is strictly an oral exercise; no print is used. No mention is made of the fact that two different sounds are being represented by the same grapheme. The activity begins by introducing the sound to be learned with the popular 'I say, We say, You say' procedure. The teacher then orally presents the students with words from a prepared list, some of the words contain the new sound and some do not. Students are invited to interact by raising their hands each time they hear the new sound in the words which are read one at a time by the teacher. The teacher reinforces appropriate responses. Next, the students are invited to propose words which contain the new sound from their own mental repertoire. When a proposed word does contain the new sound, the teacher asks if the word contains the new sound at the beginning, middle, or end of the word.
2. The second activity serves to further differentiate sounds by sorting words according to the sounds in question. Again, as this is strictly an oral activity. The activity begins with the presentation of two images, perhaps drawn on a chalkboard. The two images are introduced using 'I say, We say, You say.' The names of the images are minimal pairs; that is, they are pronounced exactly the same except for the pronunciation of the ambiguous grapheme which would appear if the word were written. As an example, the two words differ only by the + or – ATR quality of the vowel, a distinction made in oral language but not in the written. These words are homographs but not homophones. The teacher then orally proposes other words that contain either the + or the – ATR vowel quality of the vowel in question. Students recognize the sound and indicate the image on the board

which contains the same vowel quality. The distinction between long and short vowel sounds in English could be taught using this activity. The word wind (to wind a watch) and wind (a breeze) differ only by this feature. An image of each is drawn on the board. When given the word 'find', the student would recognize the long i sound and sort it with the image of winding a watch. When given the word 'fin', it would be sorted with the image of breeze. This activity works best when monosyllabic words are used so that the vowels of syllables not in focus do not cause a distraction.

3. A similar sorting activity can also be used in the phonics section which teaches sound to grapheme relationships. Having heightened the awareness of the existence and distinctions of these sounds, this activity now teaches the student to relate them with their associated graphemes. Two minimal pair homograph images drawn on the board are now accompanied by the spelling of each word written directly below its corresponding image. The teacher then writes a new word on the board which contains the same + or the – ATR vowel sound as in one of the words already written on the board. Students are then invited to come rewrite the new word under the image/word that has the same vowel quality. This procedure can be repeated for many words, eventually resulting in two lists of words distinguished by vowel quality. This activity is greatly facilitated if all the words implicated are decodable and monosyllabic.
4. Another helpful technique is the familiar cloze activity. This activity teaches the student to associate and distinguish the multiple pronunciations of an ambiguous grapheme as well as the meanings of homographs, according to the context in which it is found. The Cloze activity is made possible by teaching unambiguous graphemes first to provide decodable context which can be used to guess the pronunciation of the ambiguous grapheme in question. The teacher presents a word which is spelled out minus the ambiguous vowel grapheme. A blank represents the spot where the grapheme would normally appear in the printed word. The student is asked to write in the missing grapheme and to orally fill in the blank with whichever pronunciation of the ambiguous grapheme makes sense. As a hint, an image may accompany the incomplete word, or the word may appear in a sentence.

### 3.4 Conclusion

While it is preferable to represent all important linguistic features in an orthography, this is not always possible. Orthographic under-representation can result in ambiguous graphemes. In these cases, the reading specialist should reinforce their approach with additional pedagogic techniques. The techniques described above have worked well in Africa, especially among

those orthographies which include ambiguous graphemes due to the under-representation of important linguistic features such as tone and/or ATR. These activities should be included in the teacher guide and should be thoroughly covered during initial and in-service teacher trainings.

## **How can teachers in the Global South who speak the dominant language be supported to leverage students' whole linguistic repertoire, including non-dominant home languages?**

**Sangsok Son**

*SIL Literacy and Education Consultant*

### **4.1 Emergent bilingual students from different home language backgrounds and dominant language-speaking teachers**

The home languages of linguistic minority students around the world are likely to be non-dominant languages (NDLs) in their respective societies. More often than not, these linguistic minority students tend to study together with students from other non-dominant language (NDL) and dominant language (DL) backgrounds due to the dislocation of people resulting from migration, urbanization, et cetera. The classroom thus becomes linguistically heterogeneous. Moreover, NDL students are emergent bilinguals as they learn their new school languages in addition to their home language. Emergent bilingual students in this multilingual classroom tend to be taught in a medium of instruction that is often the dominant language of their society.

Teachers in this linguistically heterogeneous classroom context often come from the dominant language community of the society and do not understand students' various home languages. Some teachers might happen to be speakers of one home language out of the various home languages of students, but they cannot be speakers of all of the students' home languages. Due to different home language backgrounds between students and teachers, a linguistic barrier exists between the two groups. The linguistic barrier may be big when students are not yet proficient enough in the language of instruction, especially during the early grades of primary school.

The language-in-education policies in these schools, however, are likely to be monoglossic, allowing only the dominant language to be used as a medium of instruction for both DL and NDL speaking students. What kind of roles can teachers who speak the DL play in the quality education of their NDL speaking students? The teachers can either be “uncritical bystanders passively acquiescent” (Mohanty et al. 2010) of monolingual language-in-education policy that

is imposed upon them, or policy negotiators who create spaces where they could fill the chasm between dominant language-only policy and linguistically diverse emergent bilingual students. I argue that teachers can best negotiate the linguistic gap by utilizing translanguaging pedagogy.

## 4.2 The Translanguaging Top Model

Translanguaging (TL) is using a speaker's whole linguistic repertoire freely across language boundaries and appropriately according to the unique communicative context to make a full meaning (Son and Kim 2021a, b). TL pedagogy is a teaching-learning method that leverages students' translanguaging to teach academic content and develop both the students' school and home languages (Son and Kim 2021a, b). Even though teachers may not necessarily understand students' various home languages, they can design their lessons in such a way that students strategically translanguate in class to enhance the learning of content in both school and home languages and develop both their home and school languages. The Translanguaging Top Model (named for the shape of a spinning top) has been developed by the author and Minjung Kim from a TL pilot research project in Chiangmai, Thailand in order to help dominant language speaking teachers to leverage students' whole linguistic repertoire to enhance students' performance in school.



Figure 1a.



Figure 1b.

In this model, a learner's multiple languages are represented on the TL Top (figure 1a). When the top is in static mode (figure 1a), it represents the policy and practices where one language is used at a time. The boundaries between languages are strictly kept. Students are told not to mix different languages by crossing the language boundaries. When the top is in spinning mode (figure 1b) on the other hand, it represents linguistic practices in which students are encouraged to use all of their linguistic repertoire freely by crossing the language



boundaries. Presently, most schools around the world tend to only have “Static Top” policies and practices. In this situation, emergent bilingual students whose home language is different from their school language are forced to learn subjects only in the school language even when their proficiency level of the school language is still very low. They have to bury a significant part of their linguistic repertoire that consists of their home language. On the other hand, monolingual students whose home language is the same as the school language can use most of their linguistic repertoire for learning (García 2017). With this condition, school language-speaking students are likely to perform better while emergent bilingual students lag behind in learning. This current situation shows that the education playing field is sloped. On this sloped playing field demonstrated by the slope of the lower triangle in figure 2, emergent bilingual students have to trudge uphill with challenge while school language-speaking monolingual students can easily go downhill.

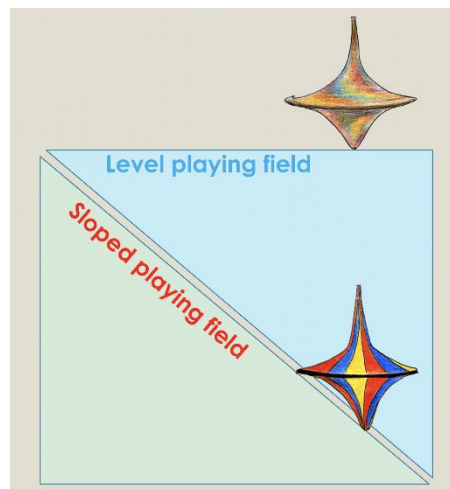


Figure 2.

Then how can we make this sloped playing field level? We should allow emergent bilingual students to spin their TL Top in addition to Static Top practices. By adding a Spinning Top to classroom activities, emergent bilingual students can also use most of their linguistic repertoire including their home language. By balancing between the Static Top and the Spinning Top, teachers can make the education playing field more level as in figure 2. To balance between the two states of top, Spinning Top-related strategies need to be added as they tend to be missing in schools. Thus, in the following section I discuss how teachers can design various TL Spinning Top activities.

### 4.3 TL strategies of four TL Top states<sup>4</sup>

As Vygotsky said, “Learning is inherently social” (Cole et al. 1978). Students learn better in their “zone of proximal development (ZPD)”, that is, the space where assistance from more knowledgeable people supports better learning. Bilingual students learn better in the space where they receive such assistance from more knowledgeable people who use both of their languages. Moll and Dias call this space “bilingual zone of proximal development (BZPD)” (Moll and Dias 1987).<sup>5</sup> Students learn better when they spin their TL Tops together. 1) Teachers need to group students according to the students’ shared home languages and encourage them to use both their shared home language and school language freely as a group (*Spinning Top together*). Students with different performance levels in each of their languages help one another in learning. Students are likely to play a role of more knowledgeable others to one another in their bilingual zone of proximal development. 2) Once teachers are satisfied with the performance level of each home language-based group, each individual student may be led to work on similar tasks alone using both school and home languages (*Spinning Top alone*). 3) Students with different home language backgrounds may also be grouped together and use only the school language as it is the common language in the group (*Static Top together*). 4) Finally individual students perform in each of their school and home languages (*Static Top alone*). In this way students may learn the content better and develop each of their languages. (In order to enhance bilingual students’ performances in each of their school and home languages, it is important to first recognize and leverage students’ whole linguistic repertoire, first together with peers then alone by themselves for their learning.)

During our various Translanguaging in Education (TLE) workshops, we gave teachers opportunities to experience these four states of the TL Top through a writing activity that would enable them to be in the same shoes as their students. After the activity, they were asked to assess their writing performances along with the four states, and they produced the following conclusion. When the language of the Static Top is the weaker language of learners, such as English for the teachers and Thai for students in the primary level, the learners’ performance level is likely to decrease at each state of the TL Top in the descending order of the Spinning Top together, Spinning Top alone, Static Top together, and Static Top alone as in figure 3.

---

<sup>4</sup> Visit the following website for the various example activities of TL strategies of four states of TL Top: <https://www.translanguagingeducation.org/translanguaging-top-activities>.

<sup>5</sup> Moll and Dias contend that “bilingual students learn new knowledge and skills when they can use their two languages to help their learning in interaction with others” (Moll and Dias 1987).

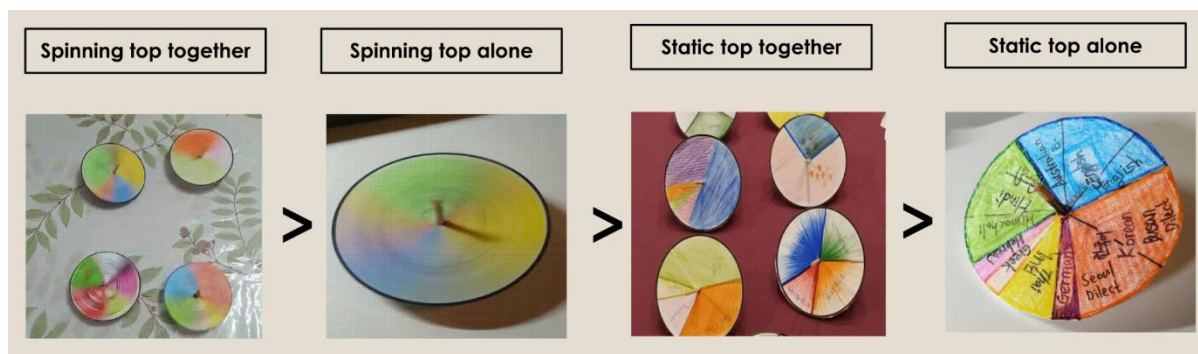


Figure 3.

With this TL Top performance formula in mind, teachers are supported to design various TL activities that need to be within either the ZPD or BZPD of the students. Moreover, these various TL activities need to be designed based on students' performance levels in each and all of their languages.<sup>6</sup> These various TL activities need to be planned and included in the TL unit plan.<sup>7</sup>

#### 4.4 Condition: The teacher's stance

Just as a toy top needs someone to spin it, the TL Top also needs teachers to spin it. Teachers, as final arbiters of the language-in-education policy in its implementation, could encourage students to use their whole linguistic repertoire as much as possible to help their learning. It is crucial for teachers to have a “stance of amplification” (García et al. 2017) with which they could see the potential of students' bilingualism and home language as resources for learning. From several TLE workshops held in June and December 2020, we found that most government school teachers used to have a stance of simplification or ignorance (García et al. 2017) with which they did not expect high standards from emergent bilingual students due to their low performance level in Thai, the school language, or they just ignored the fact that their students are bilingual and speak their home language well. However, we noticed that their stance started to transform while they participated in various sessions in the workshop that have helped them to see students' home language and bilingualism as a resource to be leveraged for

<sup>6</sup> TL performance Top was developed as a tool to assess students' linguistic performance for learning. It helps teachers to understand how well each student can perform for a given learning task both when using each single language that students know (Static Top) and when using all of their language resources (Spinning Top). For more information such as how to draw TL performance Top, visit the following website: <https://www.translanguagingeducation.org/tl-performance-top>.

<sup>7</sup> See the sample TL unit plans for four subjects (English, Thai, Math, Science) for grade 4 at the following website: <https://www.translanguagingeducation.org/translanguaging-unit-plan>.

better academic performance (Son 2020a). Furthermore, we found that there is a correlation between teachers' stances and their application of TL pedagogy. Those with a strong stance on amplification make an effort to apply TL pedagogy while those without it have shown less effort (Son 2020b, Son et al. 2021).

#### **4.5 Non-dominant languages in the 1/3rd versus the 2/3rd world**

The TL Top model that is practiced here in Chiangmai, Thailand is neither the first nor the only example of pedagogical efforts to overcome linguistic barriers between DL speaking teachers and NDL speaking students in the world. One can surely benefit from various TL strategies for kindergarteners through high schoolers, developed by Ofelia García and her colleagues in the New York State Initiative on Emergent Bilinguals<sup>8</sup> that were initially applied to various schools in the State of New York in the USA. One can also find various TL activities for kindergarteners and students in the early primary level from "Linguistically Appropriate Practice" developed by Roma Chumak-Horbatsch (2002) that was practiced in various developed countries such as Canada, Germany, Iceland, Luxembourg, and Sweden (Chumak-Horbatsch 2019).

However, what makes the TL Top model unique and different from these two programs is the kind of NDLs used by the students. The home languages of students from the above programs are mostly DLs in the respective countries of students' origins thus most likely print-rich languages with various reading materials readily available on the internet. This is not the case for the most home languages of students in the 2/3rd world, such as Thailand, as these home languages are minority languages in the country and written materials in these languages are newly being developed.

#### **4.6 Writing home languages using the script of the school language**

In our project, students write their home languages using the script of the school language, Thai, for several reasons. First of all, this idea is inspired from the existing practice of transliteration of English using Thai script among students. Secondly, students using this method can be exposed to better conditions to develop their home languages not only orally but also in written form. By writing their home and school languages side by side, they often have chances to compare the similarities and differences between the two languages and can raise metalinguistic awareness. Thirdly, by using Thai script that is also known to teachers, teachers can facilitate the comparison between languages and they themselves can also write students' home languages. Teachers often write key academic terms and sentences on the

---

<sup>8</sup> Visit the following website to know more about the initiative: <https://www.cuny-nysieb.org/>.

blackboard in the home languages of students using Thai script while students dictate to the teachers. Then the writing is confirmed by the group of students with the respective home language. Lastly, Thai has a phonetic alphabet system with a higher number of letters than the phonemes, making it a good candidate to be used for transliteration. This strategy, however, should not discourage every effort to seek chances for students to learn their own writing system if those chances are available. Further research on parents' responses and students' identity and performance in relation to this strategy needs to be conducted to more thoroughly investigate the strengths and weaknesses of it.

## References

- Cole, M. et al., eds. 1978. *Mind in society: The development of higher psychological processes*. L. S. Vygotsky. London: Harvard University Press.
- Chumak-Horbatsch, Roma. 2002. *Linguistically appropriate practice (LAP): A guide for working with young immigrant children*. Toronto: University of Toronto Press.
- Chumak-Horbatsch, Roma. 2019. *Using linguistically appropriate practice: A guide for teaching in multilingual classrooms*. Bristol: Multilingual Matters.
- CUNY-NYSIEB (New York State Initiative on Emergent Bilinguals). 2021. A project of the Research Institute for the Study of Language in Urban Society (RISLUS) and the PhD Program in Urban Education. <https://www.cuny-nysieb.org/>.
- García, O. 2017. Talk of Ofelia García on Translanguaging. The multilingualism and diversity lectures at Stiftung Universität Hildesheim. <https://www.youtube.com/watch?v=5l1CcrRrck0>.
- García, Ofelia, Susana Ibarra Johnson, and Kate Seltzer. 2017. *The translanguaging classroom: Leveraging student bilingualism for learning*. Philadelphia: Caslon. <https://doi.org/10.1002/tesq.401>.
- Mohanty, Ajit K., Panda, Minati and Rashim Pal. 2010. Language policy in education and classroom practices in India: Is the teacher a cog in the policy wheel? In Kate Menken and Ofelia García (eds.). *Negotiating language policies in schools: Educators as policy makers*. London: Routledge.
- Moll, L. C. and S. Dias. 1987. Change as a goal of educational research. *Anthropology and education quarterly* 18:300–311.

- Son, Sangsok. 2020a. Translanguaging pedagogy teacher training workshop report. Ms.  
<https://www.translanguagingeducation.org/references>.
- Son, Sangsok. 2020b. Report of first on-site coaching for teachers. Ms.  
<https://www.translanguagingeducation.org/references>.
- Son, Sangsok, Wanna Tienmee, and Natthida Tannumsaeng. 2021. Report of research on teachers' stance and performance translanguaging pedagogy. Ms.  
<https://www.translanguagingeducation.org/references>.
- Son, Sangsok and Minjung Kim. 2021a. Spinning the Top: Translanguaging pedagogy for Just Education for Students from minority language groups in northern Thailand. With Hamish McIlwraith (ed.). British Council.  
<https://www.asiapacificmle.net/conference/2019/academic%20papers>.
- Son, Sangsok and Minjung Kim. 2021b. Translanguaging in education.  
<https://www.translanguagingeducation.org/translanguagingtop-model>; Static Top alone activities, <https://www.translanguagingeducation.org/translanguaging-top-activities>; and TL performance Top, <https://www.translanguagingeducation.org/tl-performance-top>.

## What does effective bridging look like?

**Leila Schroeder**

*SIL Senior Literacy and Education Consultant*

Our job as educators in multilingual programs is to help local language speakers to read and learn well with comprehension throughout their schooling. A well-designed national and local curriculum, from grade 1 to grade 8, can form a strong bridge to reading and learning via a language of wider communication. If a broad language gap is narrowed by a well-planned transitional reading curriculum, the final step off the bridge can be short and simple. A linguistic and pedagogical bridge can be constructed to narrow the linguistic gaps as children grow and learn.

Because of the immense linguistic and orthographic distance between European languages and Asian, Latin American, or African languages, a bridge must be carefully constructed (Schroeder 2020). It needs a far reach, and it must carry millions of learners to access higher learning at the secondary level and beyond. Such bridges have been proven effective in Mali, Burkina Faso, Ethiopia, and Nigeria (Schroeder, Trudell, and Mercado 2021).

If proven solutions are implemented on a national level, we can expect these indicators of effective bridging for speakers of minority languages: a significant increase in the proportion of language minority students entering secondary schools, and then an increase in the proportion of language minority students entering universities. These would be direct results of bridging programs which leverage the home languages (L1) of the students in learning throughout lower and upper primary school, and which also support strong acquisition of an official national L2.

Because African and Asian languages are very different from European languages such as French, Portuguese, and English, the bridging process is not as simple as the one American or British children undertake when adding Spanish or French to their repertoire (Probert and de Vos 2016, Share 2008) or the one that Spanish-speaking immigrant children undertake when learning English in the US. Those destination languages are Indo-European, not African or Asian. The “linguistic distance” (Koda 2005:311–315) is evident in their grammars, phonologies, and lexicons. In the United States, most immigrants receiving ESL instruction are Spanish-speaking. Spanish belongs to the same language family as English and French: Indo-European. The challenge of L2 acquisition is even greater for Asia and Africa because their



grammar, phonology, and lexicons are from widely divergent language families, and language-minority children rarely hear English spoken outside of school.

Currently, very limited time is given to L1 literacy in public or private schools (Bunyi and Schroeder 2017 and Kim 2016), blunting young children's ability to gain fluency, to comprehend the texts provided, and to expand their intelligence by adding concepts and vocabulary to what they already know in their L1 (Koda 2005). The result, at the end of primary school in grade 8, is low exam scores and weak study skills which reduce minority language speakers' access to secondary education (Heugh et al. 2010:295 and Bender 2019, personal communication; Fasokun 2000:5).

Schroeder, Mercado, and Trudell carried out an extensive desk review of multilingual education programs on the African continent, looking for factors predicting long-term academic success. They examined twenty-five countries, finding four programs which produced higher level academic success for their students. The same could assuredly be done in the Philippines, India, or Pakistan.

Indicators of academic success were identified as “measurable long-term impact”, with minority-language-speaking students entering secondary schools and universities in greater numbers. Testing outcomes at both the end of primary school and the end of secondary school were indicators of failure. The seven challenges we found are listed below. The recommended solutions, which promote bridging, were unique to the programs which led to higher education for those students (Schroeder et al. 2021).

## **Seven challenges to effective bridging and seven solutions**

### **Challenge 1: Linguistic distance challenge.**

American teachers explicitly teach less than 400 new words per year, following their curriculum guidelines (Walter, K. 2005). The list is relatively small because American children are expected to also acquire thousands of new words naturally, in their home environment. On the other side of the Atlantic, rural children rarely see or hear the official languages outside of school.

### **Solution: Narrow the gap with systematic L2 oral instruction.**

The linguistic chasm can be narrowed considerably by national-level oral second language instruction. Truly successful multilingual education models with proven sustainability provide such curricula (Schroeder et al. 2021). Some countries, like Uganda, have already set such

standards. Curriculum developers analyze the content of every required textbook, identifying key terms used and grammatical elements to be mastered yearly.

A necessary next step is developing a yearly L2 curriculum for a teacher to follow, which reflects these expectations.

- Provide L2 vocabulary development. If national content area textbooks grades 9 through 12 are to be understood, thousands of L2 vocabulary terms must be mastered yearly (Walter, K. 2005).
- Develop learners' comprehension skills for content area textbooks, starting with their L1. Teachers of all subject areas need to ask students lots of questions as they read and listen to them, so they are aware of learners' understanding of texts. Teachers' guides and teacher training for all content area teachers must scaffold interactive instruction (Bender 2002:2).
- Develop L2 phonemic awareness, focusing on unfamiliar vowel contrasts and syllable structures such as word-initial and word-final consonant clusters. Start with listening and discrimination of phonemes and their positions in words and syllables, followed by speaking.
- Use a total physical response approach to introduce children to hearing, listening, doing, and speaking the L2 in grade 1 (Malone 2015).
- Use a grade 1 textbook with lots of pictures to supplement the teacher's actions and learning activities (Trammel 2016).
- Use trans-languageing to leverage learners' knowledge of concepts they already have, adding L2 labels to those concepts. Pair children to use each other's knowledge of their L1 to enhance their new, growing L2 vocabulary via games (Schroeder, Trudell, and Mercado 2021; Trammel 2016).
- The L2 curriculum must systematically develop learners' vocabulary over several years. (Walter, K. 2005:87). Walter calculates that a 95 percent density of known to unknown words will make L2 academic textbooks comprehensible. Seventy-five to ninety five percent is a minimum goal for vocabulary in L2-medium textbooks. Developing and supporting such a growing list should carry minority learners to secondary school.
- Use L2 specialists who visit each classroom daily, or extensively train every primary school teacher for this.

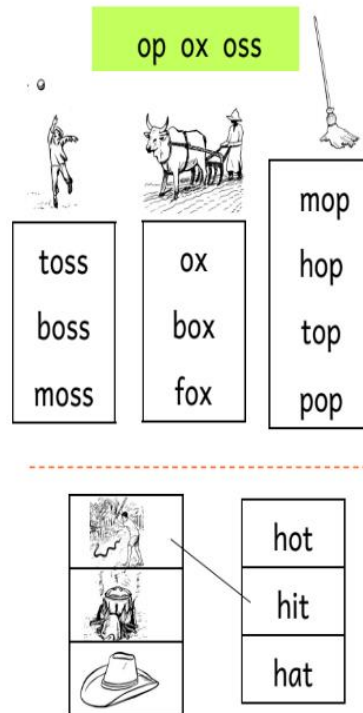
## **Challenge 2: Orthography mismatch between local languages (L1s) and European languages (L2s) makes bridging to L2 reading challenging.**

The orthographies of most colonial languages pose challenges to reading transfer: English and French orthographies are deep and inconsistently written, and Portuguese is not far behind (Seymour, Aro, and Erskine 2003). Minority orthographies, recently developed/developing, have shallower, more consistent sound/symbol correspondences. Research has shown L2 reading to have a negative effect on L1 reading, because different reading skills and strategies are needed for the European orthographies (Schroeder 2020; Share 2008; Probert and de Vos 2016).

**Solution: Once L1 decoding has been mastered (in grade 3, hopefully), introduce L2 reading systematically, for 30–40 minutes per day, over two years. Begin in early primary school and continue adding vocabulary every year.**

Treat the L2 orthography as if it is consistent and decodable. Use simple rhyming word patterns, beginning with CVC monosyllabic words such as cat, hit, pot, cut, and set, in the first year of orthography bridging (around grade 3). These English examples may help.

- Use rhyming words which make initial consonant substitution possible, for example: Year 1: sat, cat, fat, mat; Year 2: gate, fate, mate, day, say, may, pain, main, gain.
- Use syllable patterns and consonant substitution for recognition of initial consonant clusters such as st, sl, sk, sp, sm; fl, fr; gr, cr, tr, fr, dr in year 1.
- Use syllable patterns and rhyming for recognition of syllable-final consonant clusters such as -nt, -nd, -ns, -nk in year 1.
- Use vowel substitution, strengthening phonemic awareness.



- Develop recognition of suffixes, such as -ing, -ed, and -er.
- Develop recognition of r-controlled vowels -ar, -er, -or, -ir and -ur (see Bear, Templeton, Invernizzi, and Johnston 2012).
- Introduce a new reading skill: recognition of L2 sight words. Limit these to two new sight words per week so learners don't completely lose trust in their strong decoding skills.



Sight word: **my**.

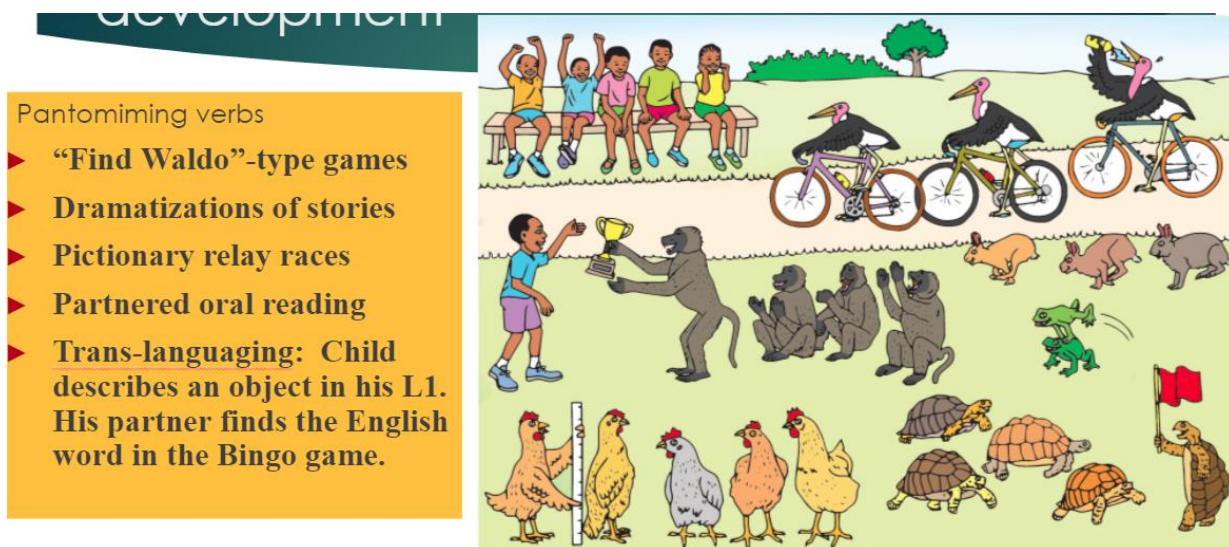
Teacher say: Children, help me read!

1. **My** arms are long.
2. **My** legs are short.
3. **My** ears are big.
4. **My** lips are thin.
5. **My** tail is long.
6. **I am** beautiful. I am a monkey.

- Use large group read-alongs with teacher involvement.
- Use fun, predictable cloze activities which are scaffolded with limited word choices. They can be simple stories, with teachers in supporting correct answers which make sense in the context.
- Use illustrations to scaffold comprehension and make grammatical words (Example: my, your, his; hers, yours, theirs) they have already learned in Oral L2 instruction.
- The vocabulary used in L2 reading instruction starts with the oral L2 vocabulary they have already developed, slowly adding more to ensure all texts will be comprehensible.
- Always ensure that new vocabulary is orally practiced before any L2 texts are read, and ask plenty of comprehension questions throughout the process (Brock-Utne and Alidou 2011:187–215).

### Challenge 3: Poor comprehension of L2 textbooks, throughout primary and secondary.

**Solution: Develop and use L1 textbooks which follow the national curriculum or provide textbooks which help learners comprehend the L2 content.**



- Ensure that the L1 textbooks are developed to teach the same concepts and develop the same skills as the original L2 textbooks which should be discarded.
- During oral L2 sessions, extend children's L2 vocabulary, using their L1 to explain new concepts. Give children practice using the new vocabulary in sentences, in dialogues, in games, and in other activities.

- Train teachers at all grade levels to use the L1 for scaffolding new concepts even in the oral L2 subject, including charts, advance organizers, word banks, and trans-linguaging activities. Teachers will need an interactive style of teaching rather than a lecture approach, because they must constantly monitor learners' comprehension.

#### **Challenge 4: Students' L1 is not the medium of instruction.**

Children sit for hours looking at their teachers without understanding what they say and without being able to ask or answer the teachers' questions (Bunyi and Schroeder 2017).

#### **Solution: Substitute L1 for L2 as medium of instruction through the day, except for second language instruction.**

- Allow children to develop their concepts and extend their intelligence and schemata (Davis 1991) in their L1.
- Promote the addition of L2 vocabulary to their schemata, piggybacking it to their continuously developing L1 knowledge and skills (Walter, K. 2005). Children will need an L2 vocabulary which includes the domains taught in the national curriculum by the time they finish upper primary. This prepares them to understand all the content area lessons they will face in secondary school.
- Promote learning using the L1 for a minimum of six years, or throughout primary school (Heugh 2011:120–121; Baker 2006:173; Walter, S. 2013:275). This learning will be the anchor for all the L2 skills they will gain, and will ensure that none of their school time is wasted.

#### **Challenge 5: Many children are very weak in reading their own languages.**

Experience in African classrooms and often Asian ones as well indicates that children's reading ability in their own languages is poor or nonexistent. The reason, of course, is that they are not taught to read in those languages.

**Solution: Provide a strong L1 reading curriculum and give it 30–45 minutes daily in the national teaching schedule, developing these skills:**

- Phonemic awareness, word medially, initially, and finally
- Comprehension, which goes beyond simple word identification to summarizing, predicting, evaluating, and inference
- Skimming and scanning for information in a text
- Spelling
- Creative writing

**Challenge 6: Teachers rarely teach an L1 reading curriculum and lack the knowledge and skills for doing so (Alidou and Brock-Utne 2011:159–172; Piper and Kim 2018).**

**Solution: Give teachers all they need to teach well, using the L1 all day, providing:**

- Strong L1 reading textbooks and teachers' guides.
- One year of formal teacher training or a minimum of three weeks of in-service training, spread over one year, with coaching also provided (Piper et al. 2018; Piper and Kim 2018; Kim, Boyle, Zuilkowski, and Nakamura, 2016:51–54).
- Even secondary school instructors would benefit from training in evaluating and strengthening the comprehension and growing vocabulary of their learners (Schroeder 2020).
- Provide L1 textbooks, rather than L2 textbooks, for every subject through at least grade 6. This will encourage teachers to use the L1 for all subjects except oral L2.
- Transfer reading pedagogical materials to be used all day for two weeks, with all content area teachers in charge of one class for that time.

**Challenge 7: Teachers rarely use the L1 for teaching subjects because examinations don't cover these areas/skills using the L1.**

**Solution: Develop exams for every subject, in the local L1** (Ouane and Glanz 2011: 35–36, Alidou and Brock-Utne 2011:168, and Benson 2013:288).

- Work with a national board or commission to ensure that local exams match a set of national standards for measurable skills.

Research has substantiated the power of good multilingual programs to bring students across a skills bridge, using the power of their L1s to add the official languages for access to higher learning. Each of the seven factors is essential to success, but details were provided for designers and users of oral second language curricula and of transitional reading curricula. Both require high professionalism and knowledge of applied linguistics. The results are worth it: equal access to higher education for all language groups.

## References

- Bear, D. R., F. Johnston, M. Invernizzi, and S. Templeton. 2009. *Words their way: Word study for phonics, vocabulary, and spelling instruction*. Boston: Pearson.
- Bender, P. 2002. Language of instruction seminar series: Notes from the presentation on Mali. World Bank.
- Brock-Utne, B., and H. Alidou. 2011. Teaching practices – teaching in a familiar language. In A. Ouane and C. Glanz (eds.). *Optimising learning, education and publishing in Africa: the language factor*. Hamburg, Germany. UNESCO Institute for Lifelong Learning and ADEA.
- Bunyi, G. and L. Schroeder. 2017. Bilingual education in Sub-Saharan Africa: Policies and practices. In O. Garcia, A. Lin, and S. May (eds). *Encyclopedia of Language and Education* 9. Springer International.
- Davis, Patricia. M. 1991. Cognition and learning. Dallas, TX: Summer Institute of Linguistics.
- Fasokun, T. O. 2000. Aliu Babatunde Fafunwa. *Prospects: The Quarterly Review of Comparative Education*, 1–11.



- Heugh, K., C. Benson, M. Yohannes, and B. Bogale. 2010. Multilingual education in Ethiopia: What assessment shows about what works and what doesn't. In K. Heugh, and T. Skutnabb-Kangas (eds). *Multilingual education works: From the periphery to the centre*, 287–315. New Delhi: Orient BlackSwan.
- Kim, Guang-Ho. 2016. *Happy schools: A framework for learner well-being in the Asia-Pacific*. UNESCO Bangkok Office. Paris, France and UNESCO Bangkok Office.
- Kim, Grace Young-Suk., Helen N. Boyle, Stephanie Simmons Zuilkowski, and Pooja Reddy Nakamura. 2016. Landscape report on early grade literacy. USAID.  
<https://www.air.org/resource/report/landscape-report-early-grade-literacy>.
- Kim, Young-Suk, Stephanie Zuilkowski, and Hansol Lee. 2019. Impact of interventions on reading skills in low- and middle-income countries: A meta-analysis. *Child Development* 91(2)638–660. DOI:10.1111/cdev.13204.
- Koda, Keiko. 2005. Impacts of prior literacy experience on second-language learning to read. In K. Koda and A. M. Zehler (eds.). *Learning to Read Across Languages*, 68–96. New York: Routledge. Multilingual Matters.
- Koda, Keiko. 2008. Transfer, metalinguistic awareness and L2 reading. In V. Cook and B. Bassetti (eds.). *Second Language Writing Systems*, 311–334. Buffalo, NY: Routledge.
- Malone, Susan. 2015. *Teachers' guide to introducing English using Total Physical Response Approach*. SIL International.
- Piper, Benjamin, and Y. Kim. 2018. Cross-language transfer of reading skills: An empirical investigation of bidirectionality and the influence of instructional environments. *Reading and Writing*. <https://doi.org/10.1007/s11145-018-9889-7>.
- Piper, Benjamin, Stephanie Simmons Zuilkowski, Margaret Dubeck, Evelyn Jepkemei, and Simon J. King. 2018. Identifying the essential ingredients to literacy and numeracy improvement: Teacher professional development and coaching, student textbooks, and structured teachers' guides. *World Development*, 324–336.  
<https://doi.org/10.1016/j.worlddev.2018.01.018>.
- Probert, T., and M. de Vos. 2016. Transfer of word-recognition strategies from a transparent to an opaque orthography: Evidence for a cyclic model of word recognition. *Reading and Writing*. 7(1)1–33.

- Schroeder, Leila, Barbara Trudell, and M. Mercado. 2021. Research in multilingual learning in Africa: Assessing the effectiveness of multilingual education programming. In E. Erling and J. Clegg. *Multilingual learning in low-resource contexts: Opportunities and obstacles*. Routledge.
- Schroeder, Leila. 2020. Narrowing the Language Gap for Africa's Learners: a pathway for change model. *Global Education Review* 7(3)1–21.
- Seymour, P., M. Aro, and J. M. Erskine. 2003. Foundation literacy acquisition in European orthographies. *British Journal of Psychology* 94:143–174.
- Trammel, Kristine. 2016. *Let's learn English!* Dallas, TX: SIL International.  
[https://drive.google.com/drive/folders/10y0rCsEhxlo7Cj5moqR\\_iW\\_D5-rE1oOA?up=sharing](https://drive.google.com/drive/folders/10y0rCsEhxlo7Cj5moqR_iW_D5-rE1oOA?up=sharing).
- Walter, K. 2005. The Eritrean English Curriculum: Assessing Academic Readiness. MA thesis. The University of Texas at Arlington.
- Walter, Steven L. 2013. Exploring the development of reading in multilingual education programs. *Language Issues in Comparative Education*. 1:265–281.

## **What are the best uses of supplementary materials in an MLE reading program?**

**Kristine M. Trammell**

*SIL Senior Literacy and Education Consultant*

### **6.1 Introduction**

In many places, few instructional materials exist in non-dominant languages. Sometimes, the only books available are reading primers or textbooks that focus on sequential phonics instruction. While materials of this sort are fundamental for learning to read and write, they are insufficient for developing proficient readers (Mullis and Martin 2019). Therefore, it is essential to develop a variety of supplementary reading materials for various purposes. This chapter will describe four types of supplementary reading materials and how best to use them in a Multilingual Education (MLE) reading program.

- Listening Stories
- Large Texts and Big Books
- Leveled Reading Books
- Literature for Independent Reading

### **6.2 Context**

The goal of reading is to comprehend the text. Therefore, the prerequisite for reading comprehension is to understand the language of the text, which is why education in the students' primary language is crucial. However, understanding the language is just the foundation of the reading process. On that foundation, readers must build proficiency in the following five basic skills (National Reading Panel 2000):

- recognizing and manipulating the sounds within words
- phonetically decoding the sound symbols
- understanding the vocabulary
- reading fluently with expression
- using a variety of comprehension strategies

To learn these skills, students need to see them modeled and practice them by reading independently (Grabe and Stoller 2011). Listening stories and large texts are supplementary materials teachers can use to model reading skills. Likewise, leveled texts and a variety of literature are supplementary materials students can use to practice reading.

An effective instructional strategy for using the supplemental materials listed above is to organize the literacy lesson into three parts with specific activities used before, during, and after reading (Literacy Matters 2021). This three-part strategy is especially helpful for beginning readers but can be adapted to facilitate intermediate readers to develop greater fluency and comprehension. The following activities are provided as an example.

### 6.2.1 Before reading

#### *Comprehension:*

- Read the title and ask students to look at the picture on the front cover. Then ask them to make predictions about the content.
- Discuss some of the illustrations. Be careful to maintain suspense by not telling the ending.
- Explain features such as indices, captions, or graphs.
- Give students a reason to read. For a fictional text, they could read to discover the main character's problem. For a nonfiction text, they could discover five facts about the topic.

### 6.2.2 During reading

The following activities are appropriate to use while modeling reading. However, when students are reading independently, it is best to allow them uninterrupted time to practice reading.

#### *Fluency:*

- For the first reading, read the text through for enjoyment.
- Read with phrasing and expression to convey the characters' emotions and emphasize important words.

***Vocabulary:***

- Model thinking aloud strategies. For example, when there is a word that might be unfamiliar to the students, ask yourself aloud, "I wonder what this word means? I'll reread the sentence to see if I can figure it out." Here is another example, "I see in the picture that she is using a tool to dig; that must be what a shovel is—a tool to dig."

***Comprehension:***

- Ask students what they think will happen next and confirm or revise their predictions throughout the reading.
- Stop a few times to ask questions for discussion in groups or pairs.

**6.2.3 After reading*****Comprehension:***

- Ask the students to
  - tell if their predictions were correct,
  - answer the “reason-to-read” question,
  - answer comprehension questions and do activities that require the ability to remember, understand, apply, analyze, evaluate, and create,
  - make their own questions based on the text, and
  - share their thoughts about the text orally or in writing.

***Fluency:***

- Reread the text on subsequent days. Try echo reading, choral reading, or taking turns reading different sections.

***Vocabulary:***

- Have students find new vocabulary words in the text and discuss their meanings. Then ask them to use the words in original sentences.
- Do cloze activities in which vocabulary words are covered or removed from a passage for the student to complete.

***Phonemic awareness and phonics:***

- Do various activities using the text, such as finding rhyming words, matching words, breaking words into syllables, and looking for words containing a specific letter or combination of letters

## **6.3 Supplementary materials for modeling reading skills**

### **6.3.1 Listening stories**

Listening stories are essential supplementary reading materials that allow teachers to model fluent reading behaviors for the students to emulate. In addition, listening stories provide opportunities for the teacher to demonstrate comprehension strategies. Listening stories should represent a variety of genres, be above the students' independent reading levels, and have age-appropriate themes that promote conversation.

The use of listening stories with comprehension discussions is referred to as interactive read-aloud (Fountas and Pinnell 2019b). The teacher reads to the whole class and pauses to ask questions to promote dialogue. Rather than merely listening to stories, students interact with the teacher and other students by thinking and talking about the text altogether, in pairs or small groups.

### **6.3.2 An example from Timor Island**

In Eastern and Western Timor, minority language speakers held a workshop to learn to write interesting listening stories. The same language group from each country (East and West Timor) shared their stories with each other. Then they translated the new stories to the languages of wider communication in each country so that other language groups could translate them to their local languages. In this way, they multiplied the number of stories for each language. The schoolchildren enjoyed listening to the stories even though there were no pictures, and they eagerly answered comprehension questions.

## **6.4 Large texts and big books**

Large texts are an excellent way for teachers to model and motivate reading for their students. Often oversized books (referred to as Big Books) with enlarged print and illustrations are used, but the text could also be a song or poem written on a large chart or the blackboard. Besides being interesting, the text should be predictable, containing repeated phrases and sentences or

rhyming words. It is important to design the illustrations carefully to help new readers figure out the text.

The use of large texts for whole group instruction is often called shared reading (Fountas and Pinnell 2019c). The most critical aspect of shared reading is for all students to see the words. Therefore, the text should be written with large letters, and the teacher should use a pointer underneath the words as they are read. The same text can be used for several days, allowing plenty of practice and instruction on different reading skills.

### *An example from Thailand*

First language MLE schools in Thailand have used Big Books for teaching beginning reading. First language speakers created the books using cultural themes chosen by the community. They even made smaller versions of the books for students to take home and read to their parents.

In some classrooms, people from the community shared their expertise about a topic. After the visit, the students dictated a story about the experience that the teacher wrote on the blackboard. The teacher then used the text for shared reading activities. In this way, the teacher modeled both writing and reading. Later the teacher copied the text on chart paper for display in the classroom. The students loved reading books they had a part in creating!

## **6.5 Supplementary materials for practicing reading skills**

### *Leveled books*

The primary purpose of leveled books is for students to practice reading. The use of leveled books in the classroom is called guided reading (Fountas and Pinnell 2019a), in which the teacher works with a small group of students who read at the same ability level. The teacher gives the students a text that is neither too difficult nor too simple but slightly challenging. The teacher assists them to read the text.

The beginning levels are usually about topics familiar to the children and have predictable patterns and repetitive phrases that correspond directly to the illustrations. The letters are large, with wide spacing between words. The final page often has a surprise ending to make the story interesting. The more advanced levels have smaller print, varied sentence structures, unfamiliar content, and challenging vocabulary.

A relatively simple way to determine students' reading levels is to have them read a portion of text aloud and answer three or four comprehension questions. If the students make several errors while reading or cannot answer the questions, the text is too difficult. On the

other hand, it is probably too easy if the students can read the text quickly and easily. After assessing the students, the teacher forms groups for instruction using the appropriate-leveled books.

### ***An example from Cameroon***

The Kom MLE program in Cameroon used leveled texts for reading instruction. The instructional team created thirty leveled stories for the first, second, and third-grade classes. The content of each story taught objectives from the national syllabus for Science (Environmental and Health) and Civics (Citizenship, Moral Education, and Culture). The use of leveled books to teach content objectives allowed students extra reading practice at their instructional level. The students read one story each day for a week. After the daily rereading, the teacher taught lessons focused on comprehension, vocabulary, or phonics. In addition to these literacy activities, content area objectives were met by doing hands-on activities such as experiments or field trips.

## **6.6 Literature for independent reading**

Beginning readers, as well as proficient readers, need lots of practice to improve their reading ability. A good reading program includes daily time for reading individually. During independent reading (Fountas and Pinnell 2019d), students choose the books to read by themselves or with a friend. The amount of time allotted for independent reading depends on the age of the students, but it is generally around 15 minutes.

The literature for independent reading should have materials at different levels to accommodate students' abilities and include a variety of genres such as poetry, fiction, nonfiction, comic books, and biographies. It is also essential to validate students' culture by developing literature about their traditions, art, folktales, and ways of life.

### ***An example from the Solomon Islands***

A significant component of MLE implementation in the Solomon Islands is the use of classroom libraries for independent reading. At a community writers' workshop, people from the local community wrote and illustrated fifty to eighty books for each grade. First language speakers with good writing skills edited, photocopied, and stapled the books together with cardstock covers.

During independent reading time, the students choose books from the classroom library. There was always considerable excitement as they scrambled to grab books to read. Some read



just one book, while others read several in the same period, but everyone enjoyed having time to practice reading independently.

## 6.7 Conclusion

Supplementary reading materials are essential for effective literacy programs, especially in contexts with few materials in the non-dominant language. In addition to the direct sequential instruction of phonics skills, effective MLE reading programs need supplementary materials for modeling fluent reading and providing independent reading practice. The best use of these materials is to employ instructional activities before, during, and after reading to promote vocabulary development, sound, and symbol correspondence, reading fluency, and comprehension. Students are enthusiastic as they listen to stories and engage in the shared reading of large texts and Big Books. These experiences model the skills needed for fluent reading, which students practice when reading leveled books and literature independently. The benefits of creating supplemental reading materials in non-dominant languages are worth the effort to ensure that students become proficient readers in their own languages.

## 6.8 Sources for creating supplementary reading materials

Creating enough literature in the students' first language is daunting but not impossible. Here are a few outstanding resources.

- Forester, L., and Saurman, M. 2013. Producing Culturally Relevant Language Development Materials for a Mother Tongue-Based Education Program. SIL International. [Producing Culturally Relevant Language Development Materials](#).
- Malone, Susan. 2013. Resource for Developing Graded Reading Materials for Mother Tongue-Based Education Programs. SIL International. [Developing MT Reading Materials](#).
- SIL's Bloom bookmaking software for producing a variety of literature is a powerful resource for creative vernacular literature. The software enables users to create books with illustrations in various formats, from Big Books and audiobooks for modeling reading, to leveled books for independent reading. The Bloom library contains thousands of books that can be downloaded and translated. You can visit the library and download the software at <https://bloomlibrary.org/>.

## References

- Grabe, William, and Fredricka L. Stoller. 2011. *Teaching and researching reading*, second edition. Applied Linguistics in Action. London: Pearson Longman.
- Fountas, I. C., and G. S. Pinnell. 2019a (January 18). What is guided reading? In Fountas & Pinnell Literacy™ Blog: <https://fpblog.fountasandpinnell.com/what-is-guided-reading>.
- Fountas, I. C., and G. S. Pinnell. 2019b (January 25). What is interactive read aloud? In Fountas & Pinnell Literacy™ Blog: <https://fpblog.fountasandpinnell.com/what-is-interactive-read-aloud>.
- Fountas, I. C., and G. S. Pinnell. 2019c (February 1). What is shared reading? In Fountas & Pinnell Literacy™ Blog: <https://fpblog.fountasandpinnell.com/what-is-shared-reading>.
- Fountas, I. C., and G. S. Pinnell. 2019d (February 15). What is independent reading? In Fountas & Pinnell Literacy™ Blog: <https://fpblog.fountasandpinnell.com/what-is-independent-reading>.
- Literacy Matters. 2021, October 28. Before, during, and after reading strategies. *TVDSB Literacy Online Toolkit*. <https://sites.google.com/gotvdsb.ca/literacy-toolkit-tvdsb/reading/before-during-after-reading-strategies>.
- Mullis, I. V. S., and M. O. Martin. 2019. PIRLS 2021 Assessment Framework. TIMSS & PIRLS International Study Center. Boston: Lynch School of Education, Boston College and International Association for the Evaluation of Educational Achievement (IEA).
- National Reading Panel (U.S.) & National Institute of Child Health and Human Development (U.S.). 2000. *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development.

## How can digital devices be incorporated into MLE classrooms to enhance literacy outcomes?

**Aaron Hemphill**

*SIL Mobiles for Literacy Advisor*

**Christy Hemphill**

*SIL Training Coordinator*

### 7.1 Introduction

With the rapid rate of innovation and global dissemination of new technologies, many under-resourced education systems are able to take advantage of EdTech tools that were previously inaccessible. As tablets and smartphones become more affordable and internet access extends to more remote areas, schools can take advantage of digital device-based educational resources such as adaptive learning software, e-books, reading apps, and educational game apps. These tools can positively impact MLE learning outcomes.

MLE contexts can differ significantly in several important dimensions. In some contexts, there are formal literacy programs in the home languages of students, or there are formal bilingual programs or limited proficiency programs to help students transition from their home language to the dominant language of classroom instruction. In other contexts, all instruction in home language literacy is informal and supplemental to instruction in the language of education. In some contexts, funding and expert support services are allocated by school systems or the government for the development and distribution of digital education content. In other contexts, all the resources are being developed and distributed outside of formal systems by highly engaged community members or individual teachers.

The scope and organization of available digital content also varies. In some contexts, there is access to material that could comprise a significant part of the classroom reading curriculum over entire grade levels. In other contexts, material that could be incorporated into existing lessons is scarce. Educational contexts also vary significantly in reliable access to internet and electricity, as well as prevalence of computers, tablets, and smartphones in the community, which affects the baseline technology skills that students, teachers, and parents can be expected to rely on.

In this chapter we will focus on educational resources that can be deployed to classrooms with access to tablets or smartphones, even in situations with limited or inconsistent access to internet or electricity. Such programs have already been successfully implemented using the following platforms:

- African Storybook's African Storybook Reader [Kenya, Nigeria] (Kinyanjui 2020, Wepukhulu 2022)
- Chimple Learning's Chimple Kids [India] (Global 2019)
- Curious Learning's Feed the Monster [Syria] (Koval-Saifi and Plass 2018)
- GraphoGame's GraphoGame [India, Zambia] (Patel et al. 2022, Jere-Folotiya et al. 2014)
- onebillion's onetab [Brazil, Malawi] (Outhwaite et al. 2020, Levesque et al. 2020)
- SIL's Bloom Reader [Guatemala, Papua New Guinea] (Maldonado 2022, Jones 2019)
- War Child Holland's Can't Wait to Learn [Sudan, Lebanon] (Brown et al. 2020, Turner et al. 2020)
- Worldreader's Worldreader [Ghana, Uganda] (Jaffe et al. 2014, Local 2020)

We will also focus on the potential of incorporating reading and learning game apps into the MLE classroom as an aid to home language literacy instruction and improved educational outcomes in multilingual classrooms.

## 7.2 Theoretical issues

Many MLE contexts face significant challenges because some or many of the following factors are issues in the typical classroom:

- There is no full-fledged school-based literacy program in students' home language(s).
- Students begin formal schooling with limited or no speaking proficiency in the dominant language of instruction.
- Students are introduced to foundational literacy skills in a language they lack vocabulary and speaking fluency in.
- There is a significant lack of age-appropriate, leveled reading material in home languages or in a minority language of instruction.
- Teachers are held accountable for literacy goals tied to the dominant language of education, not literacy goals in student's home languages.

When teachers are trained to develop and utilize supplementary digital educational resources, some of these challenges can be mitigated, and obstacles to success in acquiring literacy skills in the dominant language of education can be minimized.

In addition, incorporating technology in the classroom provides the following benefits:

- In many places possession of digital devices is a status symbol and access to home language reading material or games on these status devices enhances language prestige and enforces a positive cultural self-image and identity. Using the home language to text friends, read books, and play games affirms the individual and the language.
- When teachers are not themselves speakers of students' home language(s) or when students do not all speak the same home language(s), access to individualized, self-paced, or adaptive learning materials allows for acquisition of important foundational literacy skills in a familiar language. These skills can then be transferred to tasks in the classroom language.
- Whereas print media resources often require substantial investment to acquire and maintain (and many contexts are not hospitable to maintaining books due to high heat, humidity, dust, lack of secure storage space, or other environmental factors), digital resources can be reproduced and distributed without cost and used repeatedly once an initial investment in hardware has been made for the classroom.
- A single digital device can be loaded with a whole library of resources in multiple languages, allowing for maximum individualization to student learning needs and language preferences.
- Many digital resources have reporting capabilities that allow teachers to monitor the progress of users toward learning goals and provide documentation to administrators or funders who want to make outcome-based decisions.

### **Recommendation # 1 – Digital books**

To begin creating digital tools for an L1-based MLE program, teachers can collect or create an ever-growing inventory of digital books in both the school and home language(s) of the classroom. The World Bank's Loud and Clear policy paper recommends several software options, including SIL's Bloom software. Importantly, these tools facilitate the creation of story apps that can highlight the text as the app plays an audio recording. This allows for three types of uses: (1) listening without reading along, (2) listening while reading along, and (3) reading without listening to the audio. With repeated exposure to the same story, students can progress toward independent reading. This is especially helpful for educators in contexts where multiple

home languages are represented in a single classroom and when the teacher does not speak the home language(s) of the students.

Digital books have certain advantages over print counterparts. First, digital books can incorporate full color pictures, sound effects, simple animations, and even interactive elements such as comprehension quizzes or games. Second, because digital books can be edited and revised without a materials cost, teachers are free to pilot new material and make changes based on feedback. This is especially important where orthographies are still being standardized and where physical reprints are infrequent. Third, in multilingual contexts, each teacher can load content for their classroom specifically tailored to the language needs of the students in their classroom. Fourth, students who manipulate digital devices in the classroom build practical skills which transfer to an increasingly digital world. Finally, unlike physical books, the owner of a digital book can easily share copies, allowing for distribution of books beyond the classroom into the wider community.

Teachers with access to digital devices who want to begin amassing a collection of digital books can take the following practical steps. First, investigate what content is already available in classroom languages in the Google Play Store or in repositories such as the Bloom Library. Where there is a shortage of digital reading material, teachers and community members who read and write the local language(s) may need training on how to produce new content or convert existing print material to digital books using tools such as Bloom. They should start with reasonable goals of converting or creating a small sampling of books for each grade level. Often digital books are initially used for extra-curricular and other enhancement activities, and then over time the digital books are integrated into the curriculum.

## **Recommendation # 2 – Gamified learning**

There are a growing number of apps that gamify literacy skill building. For example, SIL's Alpha Tiles and Curious Learning's Feed the Monster are apps that teach sound/symbol relationships and spelling. SIL's Bloom Reader app now supports embedded HTML5 activities, known popularly as "widgets," which allow the incorporation of simple activities including multiple choice, true/false, and sequencing the letters of a scrambled word. These apps are fully functional offline and do not require updates, meaning they can be accessed and shared without internet access. When literacy game apps for a particular language incorporate high-frequency words or phrases from a primer series or leveled book collection, the game experience motivates and rewards students for practicing skills needed for success in the classroom.

In addition to supporting literacy skill building in the language of the classroom, literacy game apps can be used to build beginning literacy skills in students' home languages. Some may question whether there is value in creating or promoting literacy games for languages that do not have significant inventories of print or digital books for students to read, or in contexts where no formal literacy instruction happens in home languages in the schools. In these situations, literacy skill building in the home language often improves the student's attitude toward reading, because they master learning tasks more quickly when working in a language they already know well. Students then take these skills and positive attitudes toward literacy with them into their interactions with the dominant language of instruction in the classroom.

An illiterate person needs a significant amount of help from an expert reader to engage with a print book or primer. In contrast, an illiterate person can begin using an app at a very basic level and progress independently with very little help, guided by the app's interactive audio-visual elements and immediate feedback. This allows students in multilingual contexts to learn skills even when the teacher does not speak the language that the app is teaching.

### **Recommendation # 3 – Teacher training**

One key component of successfully integrating educational technology is teacher training and buy-in. In most MLE contexts, teachers will be involved in creating and curating the content that gets loaded onto digital devices. They will also make decisions about how digital material is incorporated into classroom lessons.

Successful integration of educational technology into the classroom requires training on the particular software (e.g. SIL's Bloom software). Teachers also require training on basic image and audio editing, permissions (e.g. Creative Commons), and story writing. Once digital content has been developed and necessary equipment has been procured for classrooms, teachers require training on incorporating this digital content into their lessons. Teachers must see models of effective integration of technology into the existing curricula. While students can independently use apps to learn, it is the teacher who knows best which activities fit at a given point in the sequence of the course.

Where there is adequate access to devices, classes may complete learning activities that depend exclusively on digital content. However, more often a limited number of digital devices are integrated with traditional tools (paper, pencil, chalkboard) in "hybrid lessons." For example, each student might take a turn playing a round of a learning game on a tablet as the screen is projected onto a wall, while classmates write down the word in focus. Before integrating educational technology into the classroom, teachers should have a clear plan for the use of devices and should be confident about their ability to use the technology. Otherwise,

devices are more likely to be used as toys or extra-curricular entertainment instead of an important resource in meeting defined course objectives.

### 7.3 Conclusion

As more schools embrace the potential of digital devices and more local teachers take on the companion task of preparing digital content and incorporating it into their lessons, important research questions arise that merit investigation. How effective are literacy game apps for pre-primary and early primary students in the home language for improving literacy outcomes in the primary classroom language of instruction? Also, which literacy skills (e.g. sound/symbol relationships, vocabulary development, decoding/spelling, reading comprehension) do literacy game apps independently teach most effectively or least effectively? More investigation is needed to understand what skills are best taught by in-person interactions with expert teachers and what skills can be developed through relatively independent use of devices.

### References

- Brown, F., A. Farag, F. Hussein, K. Radford, L. Miller, K. Neijenhuijs, H. Stubbé, T. de Hoop, A. Abdullatif, J. Turner, A. Jetten, and M. Jordans. 2020. Can't wait to learn: A quasi-experimental mixed-methods evaluation of a digital game-based learning programme for out-of-school children in Sudan. *Journal of Development Effectiveness*.
- Jaffe, S., Z. Lowe, and F. Mahesri. 2014. Ghana iRead Study 2012–2014. Worldreader.
- Jere-Folotiya, J., T. Chansa-Kabali, J. Munachaka, F. Sampa, C. Yalukanda, J. Westerholm, U. Richardson, R. Serpell, and H. Lyytinen. 2014. The effect of using a mobile literacy game to improve literacy levels of grade one students in Zambian schools. *Educational Technology Research and Development* 62(4)417–436.
- Jones, Richard. 2019. Sharing literacy with Bloom Reader: Findings from the rapidly improving standards in elementary project in Papua New Guinea, 2017–2019.
- Kinyanjui, Mary. Use of African storybooks at Knls Kibera Library during COVID-19. 2020. <https://www.africanstorybook.org/use.php?id=52>.
- Koval-Saifi, N., and J. Plass. 2018. Feed the monster: Impact and technical evaluation. Washington, DC: World Vision and Foundation for Information Technology Education and Development.



- Levesque, K., S. Bardack, and A. Chigeda. 2020. Tablet-based learning for foundational literacy and math: An 8-month RCT in Malawi: Imagine Worldwide.
- Local content for African libraries (LOCAL) final project report. 2020. Worldreader.  
<https://comms.worldreader.org/wp-content/uploads/2021/02/LOCAL-Final-Project-Report.pdf>.
- Maldonado Bode, Sophia. Reading networks using WhatsApp in Guatemala. 2022. Presentation to Comparative & International Education Society, April 18, 2022.
- Outhwaite, L., A. Gulliford, and N. Pitchford. 2020. Language counts when learning mathematics with interactive apps. *British Journal of Educational Technology* 51(6)2326–2339.
- Patel, P., M. Torppa, M. Aro, U. Richardson, and H. Lyytinen. 2022. Assessing the effectiveness of a game-based phonics intervention for first and second grade English language learners in India: A randomized controlled trial. *Journal of Computer Assisted Learning* 38(1)76–89.
- Turner, J., K. Taha, N. Ibrahim, K. Neijenhuijs, E. Hallak, K. Radford, H. Stubbé-Alberts, T. de Hoop, M. Jordans, and F. Brown. 2022. A proof-of-concept study of Can't Wait to Learn: A digital game-based learning program for out-of-school children in Lebanon. *Journal on Education in Emergencies* 8(1)76–109.
- Wepukhulu, Dorcas. 2021. Sparking self-publishing using the African Storybook Maker app.  
<https://www.africanstorybook.org/use.php?id=61>.

## How can L1 language of instruction strategies be used most effectively in early childhood education?

**James A. Smith**

*SIL Senior Literacy and Education Consultant*

**Karla J. Smith**

*SIL Senior Literacy and Education Consultant*

### 8.1 Introduction

Most of the world is linguistically diverse, speaking several languages in everyday life. However, many children are still not enrolled in school and of those who are, UNESCO (2016) states that “40% of the global population does not access education in a language they understand.” This is a major factor that contributes to the more than 1 billion people above the age of 15 years who are still illiterate (World Bank 2020, Worldometer 2021).

Many countries in the world today have an education system inherited from a colonial past. They often use the colonial language as the language of instruction. There are other linguistically diverse countries that use one of their main languages as the language of instruction, and do not account for portions of the population that speak one of the other languages. In either case this is a great disadvantage to a huge number of children who are forced to start their education in a language that they do not know. Since real learning can only take place when there is understanding, many of these children become primary school dropouts, or if they continue, they are functionally illiterate.

Early childhood education (ECE) is generally thought of as a critical period from birth through eight years of age. Children’s brains are developing at a rapid rate with many connections being made both internally and with the world around them. Children in the early years of preschool<sup>9</sup> and beyond need to be able to hear the language they know best to understand what they are learning, develop their critical thinking skills beyond just knowledge

---

<sup>9</sup> Preschool in some settings is nursery ages 2–4 (also can be called playschool) and then kindergarten 5–6 years and in other settings the word kindergarten is considered part of formal school. There can be different names used in different contexts. In this article *preschool* covers from approximately ages 3–6 or until the child goes to year 1 or grade 1 in the school system.

and understanding and be able to transfer these skills to other languages as needed. In these years children are developing their language skills, developing physically, socially, emotionally, and cognitively. Using a systematic, child-centered method in these formative years will give children a strong education foundation no matter their socio-economic situation or geographic location.

There are numerous studies that show the short- and long-term benefits of early childhood education. It is extremely important that education begins with the learners' first language (L1) and then adds other needed languages. The benefits of children beginning in their first language include staying on longer in school and the likelihood of being employed in higher-skilled jobs (World Bank 2021). If linguistically diverse countries used multilingual education (MLE) principles in their ECE programmes, the results would be a significant decrease in the number of illiterates and an increase in the number of citizens making positive contributions to their countries.

## 8.2 Context

This paper is set in the context of Southeast Asia and the Pacific, and a quality MLE programme will help learners build a strong foundation by beginning with and continuing the development of the first language (L1)<sup>10</sup> orally and teaching reading and writing in the L1 during their first six or eight years of school. This educationally sound pedagogy is based on the principle of moving from the known to the unknown, from prior knowledge to new knowledge. MLE builds a strong academic foundation in the first language (L1). Teaching the second language (L2) orally is done before teaching reading and writing in the L2. The preparation for and implementation of an MLE programme must be systematic, beginning with the L1 in the early preschool years and continuing, with time given for each phase over a six-to-eight-year period. This allows the children to use all their languages as they continue their education. This principle holds for the teaching of subsequent languages.

Over the past six decades there have been numerous pilots, small studies and educational programmes showing that a good MLE programme will have a positive impact on children's education. However, political and education leaders in many countries are slow to acknowledge this fact. While this is often for political and cultural reasons, there are also many misconceptions about MLE. Meanwhile, children in early childhood education who are not allowed to develop their L1 in the school continue to struggle in the L2 or L3 and are consigned

---

<sup>10</sup> Some children learn and speak more than one language while still in their first few years of life depending on their context.

to memorizing with limited understanding. They are unable to express their thoughts fully and freely or engage in critical thinking which leads to more meaningful learning.

One example is Timor-Leste with Portuguese and Tetun as the two official languages used in the schools. Although the country was under colonial rule for hundreds of years, less than 1 percent of the population speak Portuguese fluently, yet teachers are expected to teach the language. Tetun, a local creole language, is widely used in the capital and larger towns. In Statistics Timor-Leste the 2015 government census shows that approximately 70 percent of the children enter school speaking another language other than the official languages. A classroom language mapping project, carried out in all primary schools, grades 1-6 listed thirty different languages (Owen 2015), but some state there are more. This is a real challenge in an education system that continues to struggle with focusing on the national languages first when children who use another L1 need to start and learn in the language they know best before adding the national or required languages using good educational principles.

Someone in a rural multilingual area said about learning in the L1, “Logical. If I am learning something new, even like fixing a car or building something, I want it in a language I can understand well.” Another person made the comment that, “It is common sense. Why would I want to sit in a classroom just hearing words and not knowing what they mean?”<sup>11</sup> Cummins (1979) distinguished between everyday language (Basic Interpersonal Communication: BICS) and the academic classroom language, (Cognitive Academic Learning Proficiency: CALP) which becomes more abstract and complex as one progresses in education. Research over the past four decades has shown this to be true across the world.

## **8.3 Strategies used in ECE**

### **8.3.1 Play**

Play is imperative for children in ECE,<sup>12</sup> especially in the years before primary or grade school. Play means learning, and it is just as important as nutritious food for their growth and development. Play includes describing, guessing, active and pretend games, all in their L1. Some play materials that enable children to learn various skills are blocks, crayons, finger paints, clay, puzzles, natural materials, sticks, vines, rubber bands, chalk, scissors, play money, balance beam, balls, swings, hoops, old tires and other outdoor materials. Materials can be found and used based on what is available in the area.

---

<sup>11</sup> Personal communication 2016.

<sup>12</sup> See Smith (2021) for further explanations and a practical handbook for starting ECE classes.

### 8.3.2 Meaning-based learning

This learning is founded on the principle that the children should understand what they are learning, not just rote or memorization. Meaning-based learning can happen in these early years if they are using their L1. Children can learn many different skills while doing a variety of daily activities such as

- talking: It is important for children and their caregiver to talk together often to contribute to their on-going language development.
- telling, listening to and beginning to “read” stories
- singing and listening to songs develops language and auditory skills
- dancing, crafts and other cultural community activities
- activities, stories and songs that teach math, science and health
- activities that involve gross and fine motor skills
- learning to read and write

Second language learning begins with oral language development at this stage in preschool (Smith 2021). One of the popular methods for this is the Total Physical Response (TPR), initially developed by James Asher (1969),<sup>13</sup> which will be discussed later in this paper.

### 8.3.3 Four language skills

Listening, speaking, reading, and writing are the four language skills. As babies, we listen and learn to speak the language(s) that are spoken to us. It is very important to continue this language development in the early years, as it is through this language that children learn to communicate their desires and thoughts, to think critically, and learn more about the world around them.

#### *Oral language development*

These four language skills should be developed in the L1, starting with oral language development which enables the learner to develop the vocabulary and structure of the language. This can involve a variety of interactive and learner centered activities: talking, singing, telling stories, answering open ended questions, playing games, showing and talking

---

<sup>13</sup> James Asher developed TPR based on his observations of how children learn language. It is an example of the comprehension approach to language learning that is used worldwide.

about something, reading stories, dramatic play, and puppets. It includes the first time listening to a story where the teller or reader asks prediction questions, and questions that require more than a yes or no answer.

While children are learning new concepts in their first language(s), L1, they can be engaged in language learning in the official or national languages in a measured, structured way. Once these new concepts are learned they can then be expressed in other known languages. It is possible to have the children learning the L2 orally, focusing on listening first and then speaking as they learn the language. There are multiple language learning approaches. The foundational principles of one, Total Physical Response (TPR), developed by James Asher (1969) is a strategy that has proved to be successful and enjoyed by children. They listen to oral commands, understand, and respond by doing the action to the command given without having the pressure of having to speak or pronounce words correctly. There are various levels in this strategy and many activities such as listening, singing, games, pantomimes, role-plays, and storytelling.

### ***Reading and writing***

The skill of reading is best understood in the language one knows best, the L1, and this skill will transfer to other languages. In learning to read during the preschool and kindergarten years, games can be played as the student is learning the sounds, syllables and characters in the script of the language. Reading in a Roman script<sup>14</sup> should involve both the phonics (letters and sounds to words and then phrases, sentences to stories) and whole language (stories, sentences and phrases, and then words to sounds and letters) approaches. Writing should be taught along with reading as this is another distinctive skill. Writing requires language, recalling the orthography, hand-eye coordination and concentration.

#### **8.3.4 Multi-Strategy Method (MSM)**

The Multi-Strategy Method or Two Track Method<sup>15</sup> is one of the best ways to develop the four language skills. The Meaning Track is the story track (Whole Language – from whole to part) and the Accuracy Track is the workbook or primer track (from part to whole).

---

<sup>14</sup> Letters of the classic Latin alphabet, like in this book.

<sup>15</sup> Malone adapted the MSM originally by Mary Stringer 2001.

PHASES IN MEANING TRACK	PHASES IN ACCURACY TRACK
Students listen and respond	Distinguish and learn sounds, syllables, words, sentences, and texts
Speak and share ideas with each other	Use vocabulary, pronunciation, and grammar correctly
Read, understand, and use new information	Recognize and read parts of words, phrases, and sentences
Write to communicate their ideas	Form letters, spell and use grammar correctly

### 8.4 Stages – concrete, pictorial, abstract

Manipulatives are an extremely important part of ECE. Again, children operate in the language(s) they know best, their L1, and this continues through all the stages of learning new concepts in ECE. Young children use all their senses to engage with **concrete** objects that can be touched, smelled, tasted, seen or heard. In ECE, new concepts need to be taught clearly using **concrete** objects or manipulatives as needed with explanations given. A variety of objects such as sticks, small stones, large seeds and shells are needed. These manipulatives are used when counting a certain number of objects or when putting the objects together as in adding or when taking them away as in subtraction. In the case of alphabet letters, when teaching a new letter sound, the children can see and touch the objects that begin with that letter while saying the name and the beginning sound. It is important to repeat the word and the **sound** of the beginning letter. For example, if the object is a ball, they would say the sound of the letter “b”.

Next is the **Pictorial**, or visual stage, and refers to pictures of a variety of objects. This can be pictures of the same concrete objects and/or other objects. Then comes the **Abstract** stage that refers to a symbol such as a shape, number, or letter. The teacher explains that this is how the number or alphabet name is written and demonstrates how to write it. In the case of the number, the teacher shows the children the corresponding quantity of objects and the picture that matches the numeral/number symbol. The children count out objects to match the quantity shown and choose the picture that correctly matches the number symbol. For the alphabet letter, it is shown while the sound is pronounced. The teacher explains that this is how the sound is written and models how to write the letter. The teacher and children give examples of objects that start with that letter sound. The children practice writing both letters



and numbers with their fingers in the air, in their hand, on the table, floor, sand or dirt with a stick, or with chalk or pencil. Much practice is needed. (Smith 2018)

## 8.5 Conclusion

Crucial to any discussion on L1 instructional strategies is for countries to acknowledge that children in ECE need to be taught in the language they know best, even when it is not an official language(s) of the country. The leaders need to accept this is most efficient when learning any new concept and leads to a better acquisition of literacy and numeracy. It is a first step and foundation for the children that continues with their learning in other languages and should continue in a structured way through the primary school years.

Teacher training in the principles of ECE and how to engage the children in learning through play and discovery is essential and central to any hope of a high-quality programme. This includes both pre-service and on-going in-service training and work. The L1 curriculum<sup>16</sup> must link to the learning outcomes of the mainstream curriculum. Any educational bridge between languages takes time. There are no “quick solutions” to better education. The use of L1 strategies must be and can be effectively implemented.

## References

- Asher, James. 1969. The Total Physical Response approach to second language learning, *The Modern Language Journal* 53(1)3–17.
- Cummins, Jim. 1979. Cognitive/academic language proficiency, linguistic interdependence, the optimum age question and some other matters. *Working Papers on Bilingualism* 19:121–129.
- Owen, James E. 2015. Timor Leste classroom Language Mapping Preschool to Grade 6, República Democrática de Timor Leste. Ministério da Educação.
- Smith, James, and Karla J. 2021 (in press). *First language early childhood education, stage 2*, Electronic version.
- Smith, Karla J. 2018. Heritage language playschools for indigenous minorities, (stage 1), third edition. Dayak Bidayuh National Association (DBNA) and SIL Malaysia.
- Statistics Timor-Leste. 2015. <https://www.statistics.gov.tl/category/publications/census-publications/>. Accessed August 2021 (but no longer accessible.)

---

<sup>16</sup> There is a stage 1 readiness and stage 2 curriculum available, written by the authors of this chapter. They are available as E-copies and can be requested from karlajsmith20@gmail.com.

- Stringer, Mary D, and Nicholas G. Faraclas. 2001. Multi-Strategy Method (MSM). Original development. SIL Australia, Kangaroo Ground, Victoria.
- UNESCO. 2016. 40% don't access education in a language they understand. Global Education Monitoring Report, GEMReport / #MLD2016: UNESCO. <https://en.unesco.org/news/40-don-t-access-education-language-they-understand>.
- World Bank. 2020. Literacy rate, adult total (% of people ages fifteen and above). <https://data.worldbank.org/indicator/SE.ADT.LITR.ZS>. Accessed August 2021.
- World Bank. 2021. Early childhood development. <https://www.worldbank.org/en/topic/earlychildhooddevelopment#1>.
- Worldometer. 2021. Current world population. <https://www.worldometers.info/world-population/>. Accessed August 2021.

## How can L1 language of instruction strategies support education in emergency contexts?

Barbara Trudell

*SIL Africa Learning and Development*

### 9.1 Why is this question being asked?

The challenges of education in emergencies are a significant issue in international education today. The term education in emergencies refers to the provision of “learning opportunities for all ages in situations of crisis, including early childhood development, primary, secondary, non-formal, technical, vocational, higher, and adult education”.<sup>17</sup> Such crises include conflicts, situations of violence, forced displacement, disasters, and public health emergencies.<sup>18</sup>

Of the 82.4 million forcibly displaced people around the world, 35 million are children under 18 years of age.<sup>19</sup> UNESCO observes that

Conflicts, disasters caused by natural hazards and pandemics keep millions of children out of school and the numbers are rising. In crisis-affected countries, school-age children are more than twice as likely to be out of school as their peers in other countries.<sup>20</sup>

Children’s education is often one of the first activities abandoned when such crises occur, yet education can play a critical role in building the resilience of children and their communities in these adverse circumstances.<sup>21</sup> The families affected recognize this. The International Network for Education in Emergencies (INEE) notes that “when children and parents living in emergency and crisis situations are asked what they need most, time and time again they tell us they want to continue their education.”<sup>22</sup>

Determining how best to serve children who are geographically displaced often requires consideration of language of instruction issues. This is particularly the case where people have

---

<sup>17</sup> [Education in Emergencies | INEE](#).

<sup>18</sup> Ibid.

<sup>19</sup> [UNHCR - Refugee Statistics](#).

<sup>20</sup> [Education in emergencies \(unesco.org\)](#).

<sup>21</sup> [Disaster Risk Reduction \(DRR\) and Climate Change | Plan International \(plan-international.org\)](#).

<sup>22</sup> [Education in Emergencies | INEE](#).

been displaced across national borders, where the language of schooling and the national curriculum are usually different from that of the refugees' original location.

However, the issue of language of instruction for displaced children also brings many questions of its own. One of the central issues has to do with expectations about how long displaced populations will be out of their original community settings. Where it is expected that children will return to their home countries in the short term, it is reasonable to incorporate the curriculum of the home country into education provision. However, the reality is that short-term refugee status is not the norm. The general estimate is that worldwide, refugees spend an average of 17 years away from their home countries. Such longevity of displacement has serious implications for curriculum choices, including language of instruction.

## 9.2 The context

The education needs of refugee children encompass both pedagogical and socio-emotional support. Minimizing the disruption to a child's learning career is crucial, as is providing a secure environment in which children can not only learn but feel safe in doing so (Smart et al. 2020). Organizations that focus on education in emergencies expend a great deal of energy and resources on providing these pedagogical and socio-emotional benefits. Once on the ground, practitioners find that the language in which these program benefits are delivered is central to their effectiveness and impact on the children (Hicks and Maina 2018).

However, the unfortunate reality is that language issues are all too often missed in planning and implementing refugee education. Trudell, Teera, and Nannyombi (2019:5) argue that in many cases

the language mismatch between pupils and teachers, and the related language fluency issues, are “the elephant in the room” where refugee learning is concerned. They underlie poor literacy levels and poor student placement; they also link to student dropout, teacher frustration and inadequacy, and poor learning outcomes generally. Learners are not able to tell the teacher what they know, and they cannot ask the teacher for help with what they do not know. The content knowledge that a student brings to the classroom is of no help if he or she cannot communicate in the classroom.

This language mismatch between pupils and their teachers has severe implications for learning (McCarty 2012; Glewwe, Kremer, and Moulin 2007:112). It is particularly problematic where learning to read is concerned. The ability to read, a foundational skill for success in formal education, requires competency in the language of the text. Reading is largely a linguistic task, and reading comprehension depends on fluency in the language of the text (Grabe 2009, Trudell and Adger 2014:12).

In the refugee education context, these negative implications of language mismatch are multiplied by the curricular environment and challenging classroom contexts. Trudell et al. (2019:10) studied the language-related learning challenges faced by refugee children in Ugandan refugee settlements, where children from countries where English is not the language of instruction have been entering Uganda in large numbers. The figure below describes the multiple challenges to children's learning in the Ugandan refugee context.

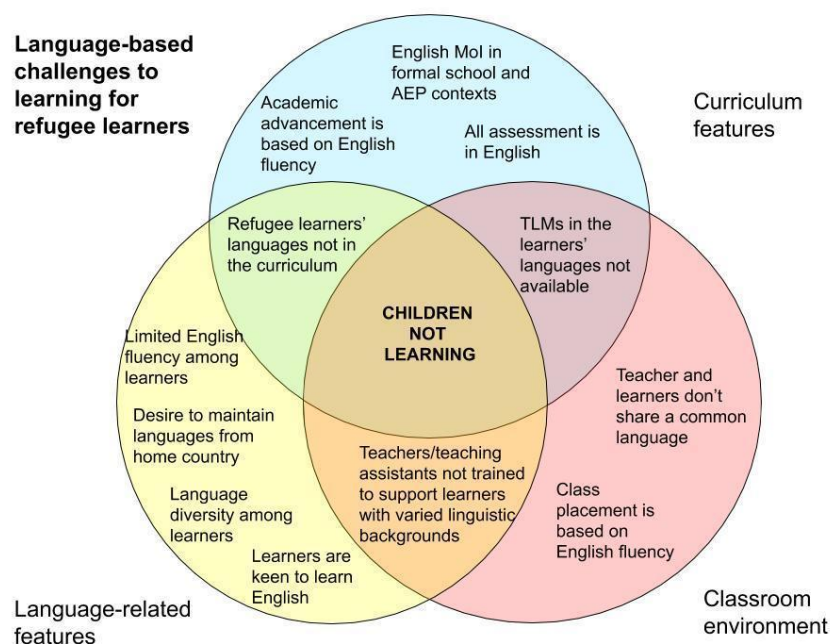


Figure: Language-based challenges to learning for refugees.

### 9.3 Some ideas to try

Language solutions to the challenges of refugee children's education are typically shaped by four contextual parameters:

- The length of time expected in the refugee situation, and whether short-term or long-term education solutions are being sought. This parameter shapes assumptions about whether the child's learning experience will be based on the curriculum and language of instruction (LoI) of the host country, or those of the home country.
- The type of educational programming that is feasible, whether formal, classroom-based education or nonformal learning alternatives.
- Assumptions about the LoI to be used: the LoI of the host country, the LoI of the home country, or the language(s) that the refugee population have brought with them (if they differ from the LoI in either host or home country).

- The degree of linguistic heterogeneity in the refugee population: whether the population is comprised of one primary language community, or whether the refugees have come from a range of locations and language areas.

A few possible LoI strategies are described below. These strategies are presented as “ideas to try”, and several of them are based on existing program experiences.

### 9.3.1 Internally-displaced people (IDP) in multilingual contexts

LoI challenges for IDP children are most acute when their new location is in a different language community from their home location. Where local LoI are part of the national curriculum, the IDP child may be faced with a local LoI that he or she does not understand; where the school LoI is the same in the new location as it was in the previous location, this curricular obstacle is less acute. However, the socio-emotional obstacles faced by IDP children, as well as the substantial amount of time these children are likely to be spending out of school, speak to the value of focused attention to the use of their home language for learning.

Nonformal programming that features reading materials in their own languages will help to ameliorate both the socio-emotional dysphoria and the learning gap faced by these children. Easy-reading materials could be developed that use the child’s home language, focusing on both skills development (math, reading, etc.) and themes that provide a sense of identity and stability for the young reader (e.g., “my family”, familiar animal stories, “life in the city”, etc.). Reading clubs, reading camps, and facilitators who speak the child’s language could help to build the child’s reading skills in a nonthreatening way. Such programming could be offered alongside formal education if the latter is available.

Alternatively, tablet-based learning could be considered as a way of providing local-language materials to children in conflict-affected and disaster-affected areas. An example of tablet-based learning technology for rural IDPs is the Kio Kit ([Kio Kits: Created for Africans, By Africans \(borgenproject.org\)](http://KioKits.org)) developed by BRCK Education, a Nairobi-based software innovation company.

### 9.3.2 Linguistically homogeneous cross-border refugee camps

Given the typically long-term experience of most refugees in cross-border refugee camps or settlements, such refugee learners are generally expected to be accommodated in the schools—and LoI—of the host country. This means that the refugee learner has few opportunities to learn in the language of his or her home and/or home country. This in turn can cause a sense

of sociocultural dislocation and loss of connection with the home-country context, making any eventual return to the home country difficult.

One way this challenge can be addressed is by means of targeted home-language reading materials. A Norwegian Refugee Council-led project carried out in Dadaab refugee camp in northern Kenya (primarily populated by Somali refugees) in 2017 focused on the development of 50 Somali-language books for use in community development and accelerated education programs in the camp. The books included not only fictional stories, but also addressed issues of livelihood, values, physical protection, and concerns about being able to eventually transition back to life in Somalia. The stories were all loaded onto tablets and were received with enthusiasm by the young Somali learners.

### **9.3.3 Refugee settlements with large, multilingual population intake**

Where conflict situations are chronic and geographically broad-based, refugee services may have to manage large numbers of arrivals from different locations daily. The refugee population may be comprised of many recent arrivals, along with many long-term residents, and the number of languages represented among the population may be substantial. Lack of proficiency in the LoI of the host country poses a serious language obstacle to the children's long-term educational success.

The refugee settlements in western Uganda experience these challenges in their classrooms. Strategies used to cope include the recruitment of teacher assistants who speak the language(s) of the children to help communicate the learning content and answer questions. A stronger solution is posed in the study: Save the Children-Uganda (Trudell et al. 2019) a 6-9 month bridging program that focuses on teaching literacy skills in several of the large home languages, as well as English language learning. Such a program could facilitate the streaming of refugee children into the local school system, as they would be somewhat conversant in the language of the school, and able to read and write as well.

### **9.3.4 Host-language learning for long-term education access**

As noted above, the limited fluency of refugee children in the host country's LoI can be highly problematic. Lack of language proficiency in the LoI of the host country hinders the refugee child's optimal participation in the formal learning system and impedes the child's ability to make a decent future life for himself or herself in the host country.

The Syrian civil war that began in 2011 posed just such a problem for the many Syrian refugees in Turkey. In response, the government of Turkey announced its intention to ensure

that all Syrian refugee children would be integrated into the Turkish national education system. The Ministry ordered all temporary education centres for the refugees to offer 15 hours of Turkish language instruction per week to prepare students for the transition to Turkish schools. With the financial support of the EU-funded Facility for Refugees in Turkey, the Ministry of Education implemented a large-scale project through which Turkish language classes, academic support programs, school materials, and subsidized transportation could be provided, and teachers could receive additional training (UNHCR 2019:19). Such an approach is a realistic and inclusive response to providing educational assistance to long-term refugee populations.

## 9.4 Conclusion

Research on the many challenges of refugee education has generated several proposed solutions to those challenges. However, the context of emergency response and the demographic fluidity inherent to refugee crises can make implementation of any but the simplest strategies a challenge in itself. The issues surrounding language of instruction are no different. More research is needed on issues such as refugee language demand, and on the options for either transitional or maintenance multilingual education models for the larger and more stable refugee populations.

## References

- Glewwe, P., M. Kremer, and S. Moulin. 2007. Many children left behind? Textbooks and test scores in Kenya. *NBER Working Paper Series* 13300. Cambridge, Massachusetts: National Bureau of Economic Research. <https://www.nber.org/papers/w13300>.
- Grabe, W. 2009. *Reading a second language: Moving from theory to practice*. New York: Cambridge University Press.
- Hicks, R., and L. Maina. 2018. The impact of refugees on schools in Uganda: A study into the impact of refugees on schools in three districts in northern and western Uganda affected by their arrival, with special emphasis on language mapping and language use. [https://www.britishcouncil.ug/sites/default/files/uganda\\_schools\\_language\\_for\\_resilience.pdf](https://www.britishcouncil.ug/sites/default/files/uganda_schools_language_for_resilience.pdf).
- McCarty, T. 2012. Language choice, education equity and mother tongue schooling: Comparing the cases of Ethiopia and Native America. In Skutnabb-Kangas and Heugh (eds.), *Multilingual Education and Sustainable Development Work: From Periphery to Center* 62–84. NY: Routledge.



- Smart, A., M. Sinclair, A. Benavot, J. Bernard, C. Chabbott, S. G. Russell, and J. Williams. 2020. Learning for uncertain futures: The role of textbooks, curriculum, and pedagogy. Paper commissioned for the UNESCO Futures of Education report. <https://unesdoc.unesco.org/ark:/48223/pf0000374078>.
- Trudell, B., and C. Adger. 2014. Early reading success in Africa: The language factor. In Zsiga, Boyer and Kramer (eds.), *Languages in Africa: Multilingualism, language policy and education* 12–20. Georgetown: Georgetown University Press.
- Trudell, B., L. Teera, and P. Nannyombi. 2019. *A bridging programme for refugee children in Uganda: Perspectives and recommendations*. Kampala: Save the Children. [A Bridging Programme for Refugee Children in Uganda: Perspectives and recommendations | Resource Centre \(savethechildren.net\)](#).
- UNHCR. 2019. Refugee Education 2030: A strategy for refugee inclusion. [5d651da88d7.pdf \(unhcr.org\)](#).