CHILDREN'S VOICE IN INVESTIGATING THEIR USE OF MULTILINGUAL ABILITIES IN LEARNING TO READ IN TWO OR MORE LANGUAGES IN THE MAURITIAN CONTEXT

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Abstract

Research in multilingual education and biliteracy has, over the last 30 years, increasingly questioned the monolingual bias while celebrating multilingualism as an asset for language acquisition. This study is located within the above paradigm shift, guided by the need to study multilinguals for who they are rather than as flawed forms of a monolingual native speaker. Based on the theoretical hypothesis that multilinguals have a multi-competence (Cook, 1991) – i.e., knowledge and use of two or more languages – that enables them to explore their language resources strategically, this study uses Hornberger's continua of biliteracy framework (1989, 2003b) to better understand how multilingual children draw from their potential cross-linguistic reservoir of abilities when learning to read in two or more languages simultaneously. This study focuses on the child's perspective by giving voice to ten-year-old children. It is guided by their unique insights about the cognitive and social complexities underlining their concurrent reading acquisition in a multilingual context. This research also investigates factors that may facilitate or hinder their experiences of learning to read.

Using a case study approach that inscribes itself in the interpretivist paradigm, this study has been carried out in the Mauritian context which presents a fascinating and specific multilingual set-up. The chosen context is interesting for the biliteracy field as contrarily to most researched contexts, the child's first exposure to reading usually takes place in his/her L2 and L3 concurrently, with no basics acquired in his/her L1.

Findings from the study highlight the importance of recognising children's agency in developing biliteracy alongside the role of family, teachers, or other stakeholders. Another key contribution to knowledge focuses on the importance of exploring multilingual children's Dominant Language Constellation (Aronin, 2016) in their concurrent reading acquisition, and therefore argues for a fluid and multidirectional rapport between languages of the multilingual child's DLC for lexical access and meaning making of texts. Findings also highlight how colonial and monolingual legacies are embedded in multilingual children's 'knowledge' about languages and thus impact on their own representations of these languages and hence their reading confidence in the latter languages.

Keywords: multilingualism, biliteracy, children's voice, continua of biliteracy framework, dominant language constellation, language policy, multilingual abilities

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List of acronyms

CEE	Commission of Enquiry on Education
CPE	Certificate of Primary Education
CSO	Central Statistics Office
DLC	Dominant language constellation
EdD	Professional Doctorate in Education
FL	Foreign language
KM	*Kreol Morisien*
L1	First language
L2	Second language
L3	Third language
MEAC	Ministry of Education, Arts and Culture
MECHR	Ministry of Education, Culture and Human Resources
MEHRD	Ministry of Education and Human Resource Development
MES	Mauritius Examinations Syndicate
MESR	Ministry of Education and Scientific Research
MEST	Ministry of Education, Science and Technology
MIE	Mauritius Institute of Education
MK	Mauritian Kreol
MTB-MLE	Mother tongue-based multilingual education
NCF	National Curriculum Framework
NLS	New Literacy Studies
NYCBE	Nine Year Continuous Basic Education
PSAC	Primary School Achievement Certificate
SIDS	Small Island Developing Countries
SLA	Second language acquisition
TLA	Third language acquisition
ZEP	*Zones d'Education Prioritaire*

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Author's declaration

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree and does not incorporate any material already submitted for a degree.

Signed:

Dated: 22 January 2023

Chapter 1. An overview of the study

1.1. Introduction

This chapter provides an overview of the research that will be undertaken. It starts by outlining how the researcher came to investigate the research problem that will be addressed in this study. It then presents the rationale and research focus, the chosen context of study as well as the research aim and questions.

I am a teacher educator in French language and literature as well as a curriculum developer (involved in developing policy papers for educational reforms and writing primary school textbooks and other educational resources) in the multilingual context of Mauritius. In this position, I have been increasingly intrigued by the fact that despite improvements and innovations in the education system, there is a persistent rate of about 30% failure at the end of primary examinations every year[1]. Earlier documents had noted a similar trend in the rate of failure despite examinations being criterion-referenced and not norm-referenced in Mauritius: 41% in 1989 (*Ramdoyal Report*, MEAC, 1990), 35% and 33% respectively in 1997 and 1998 (CSO, 1998) for instance.

In 2012, I carried out a study to better understand the nature and causes of reading difficulties encountered by nine-year-old children in a ZEP[2] and a non-ZEP school. I was fascinated by one of the findings whereby one participant told me after trying for some time that she was not able to read the English word 'church' but knew that it meant '*église*' in French. This motivated me to explore how multilingual children construct reading knowledge and skills concurrently in at least two languages which are not necessarily their first language (L1). I wanted to better understand how multilingual children deal with such a situation where they do not have the same support and landmarks as a child who learns to read in his/her mother tongue. Hence, I decided to research the fields of multilingualism and biliteracy. These two fields are closely related as multilingualism refers to 'the various forms of social, institutional, and individual

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[1] The statistics dating back to 2005 are available on the website of the Mauritius Examinations Syndicate (MES) which is the main examining body in the island: www.mes.govmu.org

[2] ZEP stands for '*Zones d'Education Prioritaire*' (i.e., Priority Education Zones). This education project was launched in July 2003 to cater for high academic failure rates among 30 primary schools in the Republic of Mauritius: 27 primary schools in the deprived regions of Mauritius, two in Agalega and one in Rodrigues (UNESCO, 2013).

ways that we go about using more than one language' (Francheschini, 2011, p. 344) that also include biliteracy[3] which refers to being able to communicate 'in two (or more) languages in and around writing' (Hornberger, 1990, p. 2).

I started my Professional Doctorate (EdD) journey by investigating the role and impact of postcolonial multilingual contexts (such as Mauritius) on the development of reading among primary school children. I then explored how multilingualism and biliteracy are understood at policy level in Mauritius, namely how far the understanding takes into consideration recent research and specificities of the local context, and the latter's impact on the teaching of reading among multilingual children.

Over the years, I also had to make challenging choices with regard to the teaching of French in a multilingual context, namely how far to welcome local vernacular (i.e., Mauritian Kreol[4]) in French lessons and primary textbooks to name local food for instance. Another major challenge was working on the implementation of a multilingual approach to teach concepts using formal trilingual (English-French-L1[5]) resources. This was a first for Mauritius, but the materials met with a lot of resistance from unions, teachers and parents as discussed in Chapter 2. Indeed, though literature on multilingualism was a solid supporter in this endeavour, what seemed to be missing was empirical studies carried out in Mauritian classrooms to support the multilingual approach in teaching and learning. In fact, Tirvassen (2012) claims that Mauritian schools tend to underrate the complexity of learning to read in a multilingual context and that they do not provide appropriate conditions for efficiently teaching it.

Carrying out an empirical study to better understand how multilingual children learn to read concurrently in two or more languages in a multilingual context came as an obvious step to further inform practice and policy. Along this line, Dworin (2003) argues for more research based on current classroom literacy practices to help develop a multilingual pedagogy.

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[3] Based on the above definition of biliteracy which includes two or more languages, the term will be used instead of 'multiliteracy' in this study.
[4] The official term 'Mauritian Kreol' is used in this study to refer to both the language spoken in Mauritius and to the subject taught at school. It is to be noted that the appellation may change to 'Kreol Republik Moris' (KRM) in the near future.
[5] Mention is made of the L1 to introduce concepts. As highlighted by Oozeerally and Hookoomsing (2021), the L1 is, in fact, an indirect reference to Mauritian Kreol.

1.2. Rationale and research focus

Part 1.2 further sheds light on the rationale of this study and the research focus.

Few countries can claim to be completely monolingual as the world's population is increasingly becoming multilingual (Herdina and Jessner, 2002; De Angelis, 2007; Cenoz, 2009; Martin, 2010; Martin-Jones *et al.*, 2012). This is the case even in countries advocating a monolingual language policy due to growing economic globalisation, migration, use of social media, and travel made easy. As a result, classrooms are also becoming more and more linguistically diverse (Conteh *et al.*, 2014). Different countries have thus developed different language-in-education policies, multilingual education systems and bilingual literacy approaches. However, the history of migration in different areas of the world and for different reasons, has given way to complex forms of multilingualism with different needs and specificities (heritage languages, minority languages, immigrant languages and languages in postcolonial settings). Multilingual contexts – and this is even more problematic in postcolonial contexts like Mauritius because of their legacy of colonial languages and education systems –, have to face logistical and pedagogical issues to enact educational policies that support multilingual literacies, 'especially in time of increased standardisation and accountability worldwide' (Warriner, 2012, p. 508). Indeed, multilingual postcolonial contexts are subject to historical and ideological pressures, especially with persistent neo-colonialism influencing language-in-education policies (Chimbutane, 2011).

Research into multilingual practices which has its roots in the fields of second language acquisition (SLA) and bilingualism, has for long used monolingual lenses to study language acquisition and its implications on the literacy development of a multilingual child. In the monolingual research perspective, multilinguals are presented as a 'deviation from the monolingual norm[6]' (Herdina and Jessner, 2002, p. 58) and consequently as 'defective monolingual native speakers[7] or – even worse – failed native speakers' (Dewaele, 2018, n. p.). However, monolingual-based research has proved to have limitations while its strong biases

[6] Historically, monolingualism is the result of attempts towards nationalism and territorialism in many countries of the world, following the concept of 'one language, one people, one state' (Wright, 2004). One example is Parisian French in France at the expense of regional languages like Provençal for example.
[7] The concept of 'native speaker' originates from the 'need applied linguistics has for models, norms and goals' (Dewaele, 2018, n. p.) and acts as some form of benchmark.

have had negative consequences on how multilinguals are defined, studied, and assessed (refer to Grosjean, 1985 and 1989, for a list of these negative influences on bilingual research).

Research over the last 30 years or so, has therefore increasingly adopted the multilingual perspective whereby multilingualism is recognised as an asset (e.g., Grosjean, 1982; Hornberger, 1989; Cook, 1992; Bialystok, 2010; Cenoz, 2013, Aronin, 2019). The paradigm shift from monolingual to multilingual perspectives has thus moved research interests from what multilinguals 'cannot do and why, relative to native speakers of one or the other language, to what bilinguals do differently and why' (Athanasopoulos, 2016, pp. 355-356). Researchers like Kramsch (1998) and García (2014a) further question the terms 'native speaker', considering the latter to be a monolingual construct.

Eminent researchers like Grosjean (1985) and Cook (1991) have also argued for the need to study multilinguals for who they are rather than as flawed forms of monolingual native speakers. Recent research in multilingualism field has, in fact, acknowledged that multilinguals have 'a unique and specific linguistic configuration' characterised by the 'coexistence and constant interaction of the two languages in the bilingual' (Grosjean, 2010, p. 24), i.e., a *multi-competence* (Cook, 1991) which refers to 'the overall system of a mind or community that uses more than one language' (Cook, 2016a, p. 3).

My research focus is therefore based on the theoretical hypothesis that multilinguals demonstrate a different type of language competence compared to that of monolinguals (Cenoz *et al.*, 2001). Similarly, Singleton and Aronin (2007) argue that multilinguals have a well-developed language awareness that leads them to use their language resources strategically. Bialystok (2002, p. 167) also posits that bilingual children use 'strategies and insights (including phonological) that are specific to reading different languages'. Moreover, the acquisition of more than two language systems is believed to help multilinguals develop metacognitive strategies (Herdina and Jessner, 2002). **But how are the above asserted different type of competencies and strategic use of language resources and insights manifested when a multilingual child concurrently learns to read in two or more languages?** This is what this study proposes to shed some light on and understand better.

Furthermore, what happens when a child's first exposure to reading takes place in his/her second language (L2) and third language (L3)[8] concurrently, with no basics acquired in his/her L1 as is the case in Mauritius? Although much research has been carried out over the last 30 years on biliteracy development, it has mostly studied the introduction of literacy skills in the L1 first, and in both L1 and L2 in quick succession or simultaneously. It tends not to focus on children who are concurrently learning to read in two languages which furthermore are not their first languages and to which exposure varies prior to entering formal instruction and sometimes even in the classrooms. As a matter of fact, the Mauritian child is not benefitting from the scaffolding of his/her L1 to enter the task of L2 reading as put forth by research advocating for the development of mother tongue literacy first at school and highlighted in the *Addendum to National Curriculum Framework Kreol Morisien*[9] *Stds 1-6* (MIE, 2012).

My research interest is also driven by the fact that biliteracy development is an 'increasingly inescapable feature of our lives and schools worldwide, yet one which most educational policy and practice continues blithely to ignore' (Hornberger, 2003a, p. xii) and thus needs to be further explored. Jiménez *et al.* (1996) moreover claim that studying reading knowledge and strategic processes of culturally and linguistically diverse students could contribute to the teaching of reading as well as provide appropriate alternative models. Reyes *et al.* (2012) likewise emphasise **the importance of examining different contexts where biliteracy happens, given scant existing research on the subject**. The above-mentioned researchers also highlight the importance for different stakeholders (including educators, scholars, and policymakers) to understand that biliteracy is a process (that involves developing competencies) and not just an outcome, be aware of the advantages of being biliterate, and to know how to 'support the natural process of becoming biliterate' (Reyes *et al.*, 2012, p. 307).

This study therefore proposes to contribute to filling in the above-mentioned gaps in biliteracy research by investigating children's use of multilingual abilities to enhance their text comprehension in the Mauritian context and thereafter plough the findings back into teacher training, curriculum development and policymaking. By looking at insights of effective biliterate experiences (the 'enabling'), my inquiry moves away from a deficit (the 'disabling')

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[8] L1 generally refers to the native language, L2 to a non-native language and L3 to additional non-native languages inclusive of the third language. Refer to Part 2.2 for a discussion on the terminology used.
[9] The term '*Kreol Morisien*' is commonly used in official documents, at school and in everyday discourse to refer to Mauritian Kreol.

multilingual model. It proposes instead to work towards a 'pedagogy of the possible' (Hélot and Ó Laoire, 2011) and a socially just pedagogy, in which all children can be empowered to become biliterate. In fact, 'social justice education challenges us to expand traditional forms of thinking […] to create greater equity in access and achievement for all learners' (Cioè-Peña and Snell, 2015).

As part of the EdD Stage I, I used narrative inquiry to investigate the 'insights' mentioned by Bialystok (2002) when she wrote that studies regarding literacy development among multilinguals 'do not explain how young bilinguals establish the insights that enable them to become literate' (p. 165). My focus then was on the multilingual adults' stories of learning reading experiences and their beliefs and attitudes towards reading. Interestingly, the participants perceive their multilingualism as an asset as it enables them to translate from one language to another and even to transfer knowledge acquired in one language to another for instance. However, the participants were not able to elaborate on this phenomenon of which they had only some vague memories. This has led me to focus on multilingual children by investigating how they use their multi-competence (Cook, 1991) in learning to read in two or more languages concurrently.

This research thus chooses to focus on the child's perspective by giving voice to ten-year-old children instead of foregrounding the adult's perspective, such as that of the teacher for example. Choosing the child's perspective is a means to **better understand 'what readers know about themselves, the task of reading, and various reading strategies'** (Jiménez *et al.*, 1996, p. 93). Gutiérrez *et al.* (2010, p. 338) also advocate for **more research on young simultaneous biliterates that would capture both**

> **cognitive and sociocultural complexities of becoming literate and biliterate, and policies that promote robust language and literacy learning, rather than seeking silver-bullet solutions for this important child population**.

This study hence fills in another research gap in child-led research as child-centred researchers (e.g., Bell, 2008; O'Neill, 2014; Bourke *et al.*, 2017) argue for more children's agency in educational research as they have the right to be heard while their unique insights may further contribute to adults' understanding of how educational policies and practices substantially impact on children (Bourke *et al.*, 2017).

1.3. Context of study

Having discussed the theoretical background to this study and the research gaps that it proposes to fill, Part 1.3 describes the intricacy of the language situation and education policy of the context where the research takes place.

My chosen context of study is the small island of Mauritius located in the Indian Ocean. Due to its dual history of colonisation by France and Great Britain, Mauritius is both a member state of the *Organisation Internationale de la Francophonie* and the Commonwealth of Nations among others. It is also considered as a Small Island Developing State (SIDS). Although the definition given by United Nations Conference on Environment and Development in 1992 tends to present SIDS as a group of developing countries that are vulnerable due to their 'small size, limited resources, geographic dispersion and isolation from markets [that] place them at a disadvantage economically and prevent economies of scale' (Jules and Ressler, 2017, p. 26), SIDS have demonstrated that they also have much to teach to the larger world (Petzold and Ratter, 2019).

Despite the island having only a population of about 1.2 million, Mauritius presents a fascinating and specific multilingual set-up, and has been described as a language laboratory (Robillard, 1993). Mauritius does not have an autochthone population and was populated by the French and slaves (from Africa and Madagascar) under the French colonisation (1715-1810), and by the British, Indian indentured labourers and Chinese people under the British rule (1810-1968). It is thus a multi-ethnic and multilingual country with English, French and Mauritian Kreol as the main languages used in almost all domains of use, and Hindi, Telugu, Marathi, Urdu, Tamil, Gujarati, Bhojpuri, Hakka, and Cantonese, as 'ancestral languages' inherited from the forefathers.

The language situation in Mauritius

As argued by Nadal and Ancoura (2014, p. 40), 'the idiosyncrasy of the Mauritian situation resides in the absence of any specific mention of provisions governing language status in the country' contrarily to the Seychelles for example where English-French-Creole[10] also cohabit.

[10] Which refers here to Seychellois Creole.

Despite being the official language *de facto* – and not *de jure* (Carpooran, 2003) –, English is not the home language of the majority of Mauritians. Interestingly, English is not mentioned in the previous *Population Census 2011* (CSO, 2011) where it seems to form part of the category 'other' which 7.1% of the population have as home language only. However, it is explicitly mentioned in the latest *Population Census 2022* (CSO, 2022) as being the home language of 0.6 % of the inhabitants. According to the same document, 90% of the population claimed that the language that was usually spoken at home[11] was Mauritian Kreol only, 5.1% stated Bhojpuri only and 4.4% French only. Yet, English is used in all official spheres of the island (civil service, judiciary, administration, education system, *etc.*), like in many African countries that have opted to 'continue to use colonial languages […] based on the search for an ethnically neutral language (Blommaert, 2001)' (Spolsky, 2004, p. 131). Similarly, English is considered as a 'neutral' language in Mauritius as it 'is not associated with any large permanent section of the population' (Ramdoyal, 1977, p. 137). To keep the *status quo* and a certain political stability amidst ethnic tensions[12] among other reasons, the national anthem in English was adopted at the time of independence in 1968 and has remained unchanged until now.

Following the Act of Capitulation of 1810 when Great Britain took over the island from France, French has maintained its status as semi-official language *de facto* in the island. Associated with prestige and economic power, French is used for socialisation, legislation, media, culture, and education. French is also gradually becoming the home language of many middle-class families wishing to secure social and educational success for their children (Sauzier-Uchida, 2009). Mauritian Kreol has emerged as the *lingua franca* among slaves who were forced to interact in a common language with other slaves from other tribes sharing a different linguistic code, as well as with the French colonisers[13]. This explains the prestigious status attached to both English and French by Mauritians, whereas Mauritian Kreol is still seen as an inferior language (Harmon, 2015). Despite being the home language for 90% of the population, no specific provision has been made regarding the status and uses of Mauritian Kreol in the country. It is however tolerated in the spheres occupied by English and French languages (Tirvassen, 1999).

[11] As per the wording in the census questionnaire (CSO, 2022a).
[12] Underlined by outbursts of ethnic conflicts in 1965 and 1968.
[13] Although this is a dominant theory on the origin of Mauritian Kreol, it is contested by competing theories like Chaudenson's theory positing that Mauritian Kreol has evolved from Bourbonnais (Reunion Creole), in a similar fashion to Seychellois Creole, which is in turn contested by Mauritian linguist Virahsawmy (Harmon, 2015).

As for the Indian and Chinese languages brought to the island by immigrant workers mainly after the abolition of slavery in 1835, they are closely related to different ethnic groups living on the island. These languages have been maintained for cultural, religious and identity reasons. They are used for religious and cultural ceremonies, and some are taught as subjects as from the primary level.

The language-in-education policy in Mauritius

Language-in-education policies refer to policy measures regarding languages to be used as media of instruction and to be taught as subjects. They raise questions as 'when to begin, for how long, by whom, the type of languages students should acquire, for what purposes, by which methods, textbooks, tests, the number of hours, *etc.*' (Shohamy, 2006, p. 177). As such, they can be a 'major indicator of institutionalised linguistic discrimination' as well as 'an effective mechanism of language maintenance' (Mohanty, 2010, cited in Tupas, 2015, p. 114).

School in Mauritius is compulsory from pre-primary up to the age of sixteen. It comprises three years of pre-primary (children are usually schooled from the age of three), six years of primary (Grades one-six sanctioned by the Primary School Achievement Certificate[14] examinations, i.e., six-eleven years old), three years of lower secondary (Grades 7-9 endorsed by the National Certificate of Education examinations, i.e., 12-14 years old), and four years of upper secondary education (i.e., 15-18 years old) with Cambridge School Certificate examinations being held at the end of Grade 11 and Cambridge Higher School Certificate examinations at the end of Grade 13. It is to be noted that failure in the subject 'English' at Cambridge School Certificate results in an automatic 'Fail' grade as a general result.

As well as being my professional context, the Mauritian context has been chosen as it presents 'a linguistic and literacy paradox' (Auleear Owodally, 2012, p. 52). Indeed, as a result of its colonial heritage and global pressures – as is the case in many other postcolonial contexts (Bamgbose, 2004; Mathias and Masaazi, 2012) –, the Mauritian government has opted for a multilingual language-in-education policy that 'promotes colonial and international languages but downplays the children's home language as a language of literacy' (Auleear Owodally, 2012, p. 55). This is also the case in other countries which have opted for top-down policies

[14] Henceforth referred to as PSAC.

that intend to make pupils 'efficient multilingual European citizens, while at the same time neglecting or simply ignoring the linguistic and cultural diversity of [the nation's] bilingual/multilingual pupils' (Hélot and Young, 2006, p. 69). Indeed, Ball (1998, p. 127) discusses how globalisation may 'frame and 'produce' the contemporary 'problems' of education' in the elaboration of a language education policy. An example would be the promotion of English as a global language, over local mother tongue(s) as medium of instruction, thus resulting in some form of linguistic imperialism (Phillipson, 1992).

From as early as the pre-primary level, Mauritian pupils learn to read in English and French (inherited colonial languages). These two languages are compulsory subjects up to the Cambridge School Certificate for French and the Cambridge Higher School Certificate for English. Introduced as early as 1955 during colonial times, ancestral languages (e.g., Hindi, Tamil, Marathi, etc.) are offered as optional languages from primary up to secondary and have been maintained to this day for ethnic identity reasons. Other optional languages also include Arabic, Modern Chinese and Mauritian Kreol.

Mauritian Kreol was introduced in 2012 as an optional language instead of the long-fought for status of medium of instruction which would have acknowledged its status as the country's *lingua franca*. Given the strong resistance to its introduction as language of instruction due to Mauritian Kreol's perceived low status, this was considered to be a compromise solution according to Carpooran (2007, p. 159) as it allowed the language,

> for long banned, to enter school by the front door, and thus have its image valorised, and in the meantime, psychological and sociological conditions need to be worked on for this language to be fully accepted as one of the mediums of instruction and thus participate in a teaching pedagogy[15].

The psychological and sociological conditions that have been acting as obstacles come from Mauritian Kreol being viewed as 'a broken non-standard language' (Rajah-Carrim, 2007, p. 52), its potential negative transfer on French due to the phonological and lexical proximity and its ethnic affiliation with the Creole community (Nadal and Ankiah-Gangadeen, 2018b). The term 'Creole' has a dual meaning in Mauritius. Apart from referring to the language, it also refers to the ethnic group who has African and Malagasy slaves for ancestors. Mauritian

[15] My translation of '*jusqu'ici honnie, par la grande porte à l'école, ce qui ne pourrait que rehausser son image, en attendant que les conditions psychologiques et sociologiques soient réunies pour la faire participer positivement dans une véritable pédagogie d'enseignement en tant que l'un des médiums d'enseignement*'.

Kreol's successful introduction is ironically due, not to a 50-year-old pro-mother tongue education advocacy, but to the winning political party's electoral promise targeting one ethnic group in particular, the Creoles who felt left behind for not having any ancestral language offered at school compared to the other ethnic groups (Carpooran, 2014). Indeed, in 2004, optional languages – which comprised, at that time, Asian Languages and Arabic only – were conferred the same status as the four other examinable subjects (English, Mathematics, French and EVS). The results in these optional ancestral languages thus contributed to the allocation in the best performing secondary schools at the end of primary schooling[16]. This decision somehow put pupils, mostly from the Creole ethnic group who did not have these languages as ancestral languages, at a disadvantage in the race for best secondary school places.

As outlined in language-in-education policy research, language policy in the Mauritian school is principally a political issue (Rajah-Carrim, 2007; Sauzier-Uchida, 2009) which does not always respect the psycho-pedagogical dimension of teaching and learning at school and the cognitive development of the Mauritian child (Tirvassen, 1999). Indeed, Kee Mew (2017) argues that the power play between languages in Mauritius has over time become taken-for-granted whereby dominant discourses regard multilingualism as an economic asset, and as a cultural heritage to be preserved through the upholding of so-called ancestral languages, at the expense of a multilingual language policy aligned with the dynamic multilingual profile and needs of the Mauritian learners.

As per the Education Ordinance of 1957, English is the official language of instruction for all taught subjects (Mathematics, Science, History & Geography) except for French and optional languages. Using English exclusively as medium of instruction becomes mandatory from Grade 4 while teachers may choose to use any other language during the first three years of primary schooling. However, textbooks and assessments remain in English from Grade 1. This means that the Mauritian child is expected to learn the English language and to learn in English at the same time. English as the official medium of instruction has never been revised since 1903 (Ramdoyal, 1977). Yet, various local reports on education (e.g., *Report of the Commission of Enquiry*, 1918; Ramdoyal, 1990) and end of primary examination reports (e.g., *CPE Reports 2015*, MES, 2016) have pointed out the problem of teaching in English.

[16] https://education.govmu.org/Documents/AboutUs/theminister/Documents/Pqs/minstatspeech/mspscal2001.pdf

Unlike neighbouring islands like the Seychelles and Madagascar for example, Mauritius has not dared to introduce another language such as Mauritian Kreol as medium of instruction, which, it has been argued, would have contributed to its decolonisation (Nadal, Ankiah-Gangadeen and Kee Mew, 2017). Still, despite having obtained its independence in 1968, Mauritius seems to prefer to maintain such an aporic situation. This may be explained by the status of the various languages in the island which renders languages in the classroom a 'serious matter of controversy […] opinions about the role of languages in education are such a sensitive issue that politicians try to avoid taking a firm position' (Sonck, 2005, p. 43). Although no formal amendment has been brought to the Education Ordinance, two memos in 1982 and 1990 have been sent to primary schools authorising the use of Mauritian Kreol and of Bhojpuri at all levels of the primary schooling (Tirvassen, 2012).

However, the discourse in the policy documents legitimating the language situation at school, seems to nurture an elite system and as a result, existing inequalities by refusing to address language difficulties encountered by pupils who have limited exposure to English prior to entering formal schooling. In fact, 'literacy can be used to empower and disempower people' (Edwards, 2009, p. 9). It is consequently more than high time to study what makes our multilingual children, 'successful' readers in English and French (the two core literacy subjects) amidst the chaotic language situation at school. This study proposes to do so by investigating how multilingual children use their cross-linguistic abilities (Genesee, Lindholm-Leary, Saunders and Christian, 2005, cited in Cummins, 2010) for developing reading for understanding in two or more languages concurrently. The focus is on the profile of children who form part of the 70% passing the end of primary examinations each year.

When it comes to the classroom reality, many teachers use Mauritian Kreol to teach French, and Mauritian Kreol or French to teach English (Tirvassen, 1999). Collen (2016, p. 167) further adds that 'teachers at all levels use Kreol[17] all day long'. Moreover, language practices in the classroom often depend on teachers' cultural beliefs and assumptions they may hold about the languages (Tirvassen, 1999; Schwinge, 2010). French is perceived as a natural tool for pedagogical communications because of its phonological and lexical proximity with Mauritian Kreol. English is maintained for scientific knowledge (concepts), whereas Mauritian Kreol is mostly used for teacher-pupils communication purposes, thus creating a gap whereby the pupils

[17] The original spelling used in quotes (such as Creole or Kreol) to refer to Mauritian Kreol has been maintained.

are not ‘prepared for an efficient passing on of knowledge nor for knowledge found in the textbook, and are even less coached to render in English, during tests, the skills developed’[18] (Tirvassen, 2012, p. 67). Mauritian Kreol is viewed as a language already known to the pupils and thus accessible to them (Nadal and Ankiah-Gangadeen, 2018b). However, it is sometimes used as a sign of condescension from teachers towards pupils from socially deprived areas (Tirvassen, 1999). As I have observed during my 16 years as a teacher educator and during school visits, the choice of the language for classroom talk often depends on teachers’ proficiency and linguistic insecurity in English and French, schools’ policy, and the social background of the pupils. Indeed, middle-class pupils are likely to be exposed to French at home before starting and during primary school (Sauzier-Uchida, 2009).

Delimiting my area of research in the Mauritian context

Research carried out so far on languages in the multilingual set-up of Mauritius focuses mainly on issues such as educational policies and the sociolinguistic context of the island. Although research has first been published in French (e.g., Robillard, 1990; Tirvassen, 1990, 1993, 1999, 2002, 2005, 2012; Hookoomsing, 1993; Rughoonundun, 1993; Carpooran, 2003, 2007), a growing interest on similar issues has been noted over the last eighteen years within the Anglophone academia (e.g., Sonck, 2005; Rajah-Carrim, 2007; Sauzier-Uchida, 2009; Mahadeo Doorgakant, 2012). These studies focus mainly on language uses in Mauritius, language choices at school and the mitigated views on the relevance of Mauritian Kreol in education.

Research post 2012 (i.e., following the formal introduction of Mauritian Kreol as an optional language in primary schools) tends to focus on the challenges and benefits of learning to write in Mauritian Kreol and eventually scaffolding to English and French using Mauritian Kreol in Grade I (Rughoonundun, 2014; Rughoonundun and Jean-François, 2013), as well as insights into the study of Mauritian Kreol in schools: factors motivating parental choice back in 2012 (Nadal and Ankiah-Gangadeen, 2018a), the dynamics of pupils opting in and out of Mauritian Kreol over a six-year period (Nadal and Ankiah-Gangadeen, 2018b), and the impact of formal

[18] My translation of ‘*ne sont préparés ni à une structuration efficace des connaissances ni à accéder à celles qui sont dispensées dans les manuels et encore moins à restituer, en anglais, dans les contrôles, les compétences développées*’.

learning of Mauritian Kreol on the academic experience of learners (Rughoonundun-Chellapermal *et al.*, 2018).

Other research on the multilingual context of the island focuses on emerging trends of Mauritian speakers (Auckle and Barnes, 2011), translanguaging in the Mauritian classroom (Jean-François and Mahadeo Doorgakant, 2013), and the primary school learner's spoken linguistic repertoire (Mahadeo Doorgakant, 2017). Except for Auleear Owodally (2007, 2008, 2011, 2012, 2013) and Rughoonundun-Chellapermal (2007, 2011) whose studies dwell on emerging literacy among pre-schoolers and in the first years of primary schooling, no research has been carried out so far on multilingual reading strategies being used by ten-year-old multilinguals as they learn to read concurrently in two or more languages. In this study, learning to read is understood as an ongoing process and does not focus on emergent literacy. While Auleear Owodally's research tends to focus more on teachers' practices, Rughoonundun-Chellapermal's longitudinal study about how young children first begin to learn to read and write, is based on the assumptions that the literacy languages (i.e., French and English) are both foreign languages to the Mauritian child.

1.4. Research aim and questions

Having foregrounded this research, Part 1.4 presents the aim of this study as well as the research questions that it intends to address.

This study aims to explore and understand how multilingual children use their multi-competence (i.e., the dynamic interaction between languages that they learn and use in their everyday life), and hence their potential cross-linguistic reservoir of abilities when learning to read in at least two languages simultaneously in a multilingual context. This study also aims to shed light on factors that may enable or hinder their concurrent reading acquisition.

My research questions are as follows:

- How do multilingual children draw from their cross-linguistic reservoir of abilities in learning to read in two or more languages concurrently?
- What are the factors that impact on their learning to read in two or more languages concurrently?

These two research questions look to address both ‘cognitive and sociocultural complexities of becoming literate and biliterate’ (Gutiérrez *et al.*, 2010, p. 338), which constitute the two major strands in biliteracy research as explained in Chapter 2. Investigating the cognitive complexities will contribute to unveil potential multilingual abilities and strategies while studying the sociocultural complexities (namely social and historical implications as well as language-in-education policies) will help to provide insights into impacting factors.

1.5. Relevance of research in the broader context

Following the overview of this study, Part 1.5 discusses its relevance to broader knowledge and context.

The global and national benefits of this study lie in the fact that with regard to existing models of bilingual programs and biliteracy projects (refer to Akinnaso, 1993) in Africa, Canada, Europe, India, North America, and Asia, the Mauritian context provides a different multilingual programme. The Mauritian multilingual model is characterised by the absence of a L1 and an equation L2 + L3 + an optional language (whereby L1 has been relegated among ancestral languages) as taught languages. Formal instruction is given in L3 (English) throughout primary, secondary and even tertiary levels (except for French and optional languages), and literacy is taught simultaneously in L2 (French) and L3 (English) but not in L1 (Mauritian Kreol) unless the pupils opt for it[19]. Although the oral use of Mauritian Kreol and/or French is tolerated as scaffolding for the pupils to learn English and learn in English, all assessments, and textbooks (except for French and optional languages) are in English. The ‘highly complexed interactions between multilingualism and literacy’ (Edwards, 2009, p. 7) make research on conditions for effective literacy learning in two or more languages of interest both to Mauritius and beyond.

Moreover, this study situates itself in SIDS research whereby SIDS contexts struggle to find the right balance between international demands and local needs, especially when small states like Mauritius for example, strive to find their place in the global world, as discussed in research on ‘big’ policies and small states (Ball, 1998; Nadal, Ankiah-Gangadeen and Kee Mew, 2017).

[19] As an indication, 20% of pupils opted for Mauritian Kreol for PSAC in the 2020-2021 examinations, https://mes.govmu.org/mes/?page_id=4360#132-year-2020-2021-before-re-assessment.

The findings of this study will thus enable both research and practitioner communities to gain a better understanding of how best to use the different languages in multilingual children's dynamic linguistic repertoire to teach literacy as well as develop their biliterate competencies, and thus inform 'potential implications for language policies, pedagogical practices, and theories of learning and language learning' (Warriner, 2012, p. 512). My findings may also feed into the elaboration of a more appropriate multilingual pedagogy where pupils' multilingualism will be viewed 'not as a threat for the development of specific language competencies but as an opportunity which the school should take advantage of' (Jean-François and Korlapu-Bungaree, 2012). Furthermore, Blackledge and Creese (2010, p. 214) advocate for more research on 'classroom language ecologies to show how and why pedagogical bilingual practices come to be legitimated and accepted by participants'. Garcìa (2014) recalls, for her part, the importance for multilingual education to cater for the increasing complexity of language practices in the 21st century. This study will hence enable teacher educators to train better 'bilingual educators-in-the-making' (Varghese, 2000, cited in Hornberger, 2004, p. 159).

1.6. Organisation of the thesis

This study is organised in five chapters. Chapter 1 lays out an overview of the research. Chapter 2 provides a review of significant theoretical literature on multilingualism and biliteracy as well as the continua of biliteracy framework which will be used to inform my methodological approach and analysis. Chapter 3 discusses the choice of methodology. As for Chapter 4, it presents the findings and discusses the analysis, relating the findings to the theoretical discussions outlined in the literature review. Chapter 5 brings forth the contribution of this thesis to knowledge and puts a conclusion to the research.

Chapter 2. Literature review

2.1. Introduction

This chapter examines converging literature between multilingualism and biliteracy which are the two main research fields that inform this study. A thorough literature search in these two fields reveals that most of the relevant literature stems from North American, European, and some African and Asian contexts[20]. The fact that studies carried out so far have been situated mostly in the global north and west has also been pointed out by Martin-Jones *et al*. (2011). There indeed seems to be a gap regarding other multilingual populations such as the complex language situation in Mauritius. Yet, contextualised research is crucial to better address the needs of multilinguals and develop appropriate educational practices.

This chapter also discusses the significance of the continua of biliteracy framework's (Hornberger, 1989; Hornberger and Skilton-Sylvester, 2000) for this research and the multilingual context of Mauritius. The continua of biliteracy framework is among the first, if not the first, to offer a theoretical lens into the complex issue of multilingualism and biliteracy, exploring different dimensions (research, practice, educational policy) underlining their coming together, more so in socio-political contexts where one language has a higher status than the other.

This theoretical framework which proposes an integrated and dynamic way of developing biliteracy skills by drawing on all four points of its continua, has in turn guided the emergence of key themes and the unveiling of potential gaps in the current research. It has thus enabled me to further engage with my research questions. Indeed, theories are important as they help 'to better understand why some interventions work and others do not for the diverse populations being served' (Hornberger, 2002a, p. 139).

[20] Some examples for Europe are research carried out by Aronin, Cenoz, Jessner; North America: Cummins, García, Hornberger, Reyes; Asia: Zhang *et al*.; Africa: Lukhele, Makalele, Plüddemann, etc.

2.2. Emerging theoretical groundings following a paradigm shift from monolingual to multilingual perspectives

Part 2.2 outlines the theoretical groundings following the paradigm shift from monolingual to multilingual perspectives that have led to the unveiling of new understandings of multilingualism and biliteracy in which this study inscribes itself.

Redefining multilingualism: monolingual versus multilingual perspectives

The paradigm shift from monolingual to multilingual perspectives stems from a change in the way of understanding and presenting multilingualism, consequently impacting on the way research is conducted and on the discussion of findings about for instance how multilinguals learn and may be taught.

As stated in Chapter 1, multilingualism refers to 'the various forms of social, institutional, and individual ways that we go about using more than one language' (Franceschini, 2011, p. 344). This definition, to which this study adheres, goes further than the common description of a multilingual as 'an individual familiar with three or more languages to some degree of fluency' (De Angelis, 2007, p. 8). It is good to note that the terms 'bilingual' and 'bilingualism' are often used to refer to two or more languages in multilingual research. One example is found in Grosjean's (2010, p. 20, emphasis is mine) remark:

> The definition I use for 'bilingualism' – the regular use of two (or more) languages – **includes the concept of multilingualism**. The former term was used in the original article [1985].

Another example is present in Cook's (2016a, p. 1, emphasis is mine) comment: 'there is the bilingual perspective that sees L2 users from the point of view of the person who speaks **two or more languages**'.

In multilingual research dominated by the monolingual perspective, multilinguals are measured against the monolingual archetype and expected to reach the ideal standards of the native speaker (Davies, 2003). Monolingual-based research also argues that the coexistence of two language systems is 'likely to result in unidirectional transfer (in case of one dominant linguistic system), which will lead to a reduction of language competence' (Herdina and

Jessner, 2002, p. 10). The phenomenon known as interference or negative transfer, works both from L1 to L2 and vice versa (Weinreich, 1953). Likewise, in Mauritius, languages are often seen as competing against each other, and underachievement in education is attributed to language interference, namely between French, Mauritian Kreol and English (MES, 2016). Indeed, it is feared that Mauritian Kreol, being a French-based Creole language may be detrimental to the learning of French due to the

> high probability of confusion between the structures of the two related languages, favouring massive negative transfer from KM[21] to French, while the apprehension regarding English is the overburdening of the child's lexical and syntactic memory (Rughoonundun *et al.*, 2018, p. 133).

This constitutes, according to Herdina and Jessner (2002) a misunderstanding of the very nature of the multilingual's language system. Languages' barriers are, in fact, permeable in a multilingual, and languages are not viewed as separate entities in one's repertoire (Blackledge and Creese, 2010).

Many researchers have questioned the use of monolingualism as a yardstick, arguing that half of the world's population is nowadays multilingual (Grosjean, 1985) and that multilingualism is a common feature in various parts of the world like India, Africa, some parts of Europe and the Indian Ocean to cite a few examples (Lo Bianco, 2014). Moreover, monolingual-based research has proved to have limitations while its strong biases have had negative consequences on how multilinguals are defined, studied, and assessed (refer to Grosjean, 1985 and 1989).

Research over the last 30 years or so, has increasingly adopted the multilingual perspective, recognising multilingualism as an asset (e.g., Grosjean, 1982; Hornberger, 1989; Cook, 1992; Herdina and Jessner, 2002; Cenoz and Gorter, 2010). Following the paradigm shift from monolingual to multilingual perspectives, research interests have moved from what multilinguals 'cannot do […] to what [they] do differently and why' (Athanasopoulos, 2016, pp. 355-356). My study thus proposes to contribute to the enactment of a multilingual turn in languages education (Conteh and Meier, 2014) whereby children's multilingualism and biliteracy are treated as a resource rather than a problem (Reyes *et al.*, 2012; Conteh and Meier, 2014).

[21] Refers to *Kreol Morisien*.

Grosjean's wholistic view of multilingualism, Cook's multi-competence and Aronin's Dominant Language Constellation as theoretical groundings to this research

This research inscribes itself in the multilingual paradigm and more specifically embraces Grosjean's wholistic view of multilingualism, Cook's multi-competence and Aronin's Dominant Language Constellation[22] for its theoretical groundings.

During my literature search, I found it important to go back to the ground-breaking works of Grosjean and Cook, which respectively define what makes a multilingual speaker and theorise what the interaction of two or more languages in the mind of the latter may reveal in terms of multilingual abilities for language acquisition. Indeed, from the onset of their research and throughout their writings, both Grosjean and Cook argue for the need to study multilinguals for who they are and not as flawed forms of a monolingual native speaker. Multilinguals indeed need to be acknowledged for learning and using languages differently and cannot be assessed like monolinguals (refer to Shohamy, 2011, for one of the few studies on multilingual assessment).

Grosjean (1985, 1989) advocates for the need to move beyond the long-accepted monolingual view of a bilingual being merely two monolinguals put together. The researcher's famous affirmation 'The Bilingual Is Not Two Monolinguals in One Person' (1989) has been cited by many researchers since, as they discuss persistent (mis)understandings about multilingualism. As opposed to what he considers to be a fractional view of multilingualism, Grosjean argues for a wholistic view and proposes instead to consider multilingualism as a type of progress along a continuum.

My research therefore chooses to adopt Grosjean's definition of multilingualism as 'the regular use of two (or more) languages' (2010, p. 20) 'separately or together – for different purposes, in different domains of life, with different people' (p. 24), which he would later term the complementary principle (1997). These needs and uses may furthermore vary and grow along the multilingual's life journey. Although Grosjean's work is focused mainly on the multilingual speaker, his definition has proved useful for analysing my data in Chapter 4, as it has enabled

[22] References will be provided along with the discussion of their works in this chapter.

me to grasp how reading acquisition is intricately intertwined with language domains of use and language representations in multilingual contexts.

While reviewing Grosjean and Cook's works, I noted some similarities between the two researchers as they both choose to focus on L2 users rather than L2 learners: 'L2 *users* are exploiting whatever linguistic resources they have for a real-life purpose […] L2 *learners* are acquiring a system for later use' (Cook, 2007, n. p.[23]). Indeed, multilingual children living in a multilingual context are not learning languages for later use only but are engaged with several languages in their everyday life. Similarly, in the multilingual context of Mauritius, children may be considered as *users* and not as mere *learners* of languages taught at school like English and French for instance. They usually use English for learning other school subjects and French in other spheres such as broadcast and print media.

Another theoretical grounding on which this study is built is that a multilingual

> has a unique and specific linguistic configuration. The coexistence and constant interaction of the two languages in the bilingual has produced a different but complete language system (Grosjean, 2010, p. 24).

Multilinguals are indeed considered to have a plus, a *multi-competence*[24] (Cook, 1991) or a *multilingual proficiency* (Herdina and Jessner, 2002).

I have opted for Cook's seminal multi-competence perspective, as it sheds light on how languages interact in the multilingual mind. In fact, the very concept of multi-competence was introduced by Cook in 1989[25] to address the fact that there was no word to describe the state of a mind that knows more than one language. To ensure a clear understanding of the broad prospects that multi-competence perspective offers, Cook has brought its meaning to evolve from 'the compound state of a mind with two grammars' in 1991 to 'the knowledge of more than one language in the same mind or the same community' in 2003, then to 'the knowledge and use of two or more languages by the same individual or the same community' in 2012, and recently to 'the overall system of a mind or a community that uses more than one language' (all four definitions are cited in Cook, 2016a, pp. 2-3). I adhere more to the fourth definition as

[23] Refer to http://www.viviancook.uk/Writings/Papers/EFLGoals.htm for the online version of this paper.
[24] The term 'multi-competence' is sometimes written with the hyphen and sometimes without by Cook himself. For coherence purposes, I will use the spelling with the hyphen.
[25] The term 'multi-competence' was first mentioned by Cook at the AILA Congress in Thessaloniki. The contribution later became the well-known publication of 1991.

the Mauritian multilingual child is part of a multilingual society in his/her everyday life, be it in his/her home environment, at school, etc.

Cook's multi-competence perspective offers interesting insights into multilingual abilities such as 'transfer' – which will be discussed through the lens of the continua of biliteracy framework in Part 2.5.2 – as a three-way process or more, depending on the number of languages present in the language repertoire of the multilinguals. The multi-competence standpoint is useful to discuss the benefits of L2 (or more) acquisition on other aspects of the user's linguistic competence and cognition such as his/her learning reading experiences in two or more languages concurrently (Cook, 2016c[26]). However, despite the foregrounding contribution of multi-competence research, Hall *et al.* (2006, p. 225) argue that it 'has failed to use the findings on multilinguals' language knowledge to reconsider some primary theoretical assumptions framing these efforts', one of which being that differences in language knowledge could be the result of 'the quality and variety of individuals' experiences in multiple communicative contexts' instead of knowledge of more than one language only (p. 233). This is the reason why I find Grosjean's definition of multilingualism to be most appropriate as it compasses both knowledge and uses of two or more languages 'for different purposes, in different domains of life, with different people' (2010, p. 24). This also explains why the present study chooses to position itself both in the sociocultural and psycholinguistic strands guiding biliteracy research, as discussed in Part 2.3.

In line with Grosjean's wholistic view of a multilingual and Cook's multi-competence, Aronin's Dominant Language Constellation (DLC) also 'evokes 'visualising' the existence of more than one language in one's mind and activates interest in the complex interaction of languages' (Aronin, 2016, p. 153). The DLC further sheds light on how multilinguals may 'exploit the full array of their multilingual affordances in language learning' (Aronin, 2019, p. 237). Basing themselves on Gibson's (1979) theory of affordances which refers to opportunities and resources available in the environment[27] that an individual may explore for his/her benefit, Singleton and Aronin (2007) state that lexical processing strategies and self-help strategies in learning languages are some examples of multilinguals' use of affordances. As for Aronin and Ó Laoire's (2004, pp. 17-18) concept of multilinguality (i.e., the

[26] Refer to http://www.viviancook.uk/Writings/Papers/MCentry.htm for the online publication.
[27] This will be further developed in the ecological approach by Haugen (1972) and Hornberger (2002b).

multilingual's linguistic identity), it posits that a multilingual's specific abilities and resources are based on the individual's array of languages *at any level of proficiency*, 'including partial competence and incomplete fluency, as well as metalinguistic awareness, learning strategies and opinions, preferences and passive or active knowledge on languages, language use'. As further discussed in Part 2.5.2, the DLC will be used as an analytic tool for analysing data in Chapter 4.

Some terminology issues: (re)defining L1 – L2 – L3, mother tongue, home language and foreign language

One of the consequences of the paradigm shift discussed above is that meanings of some key terms which have been borrowed from SLA and bilingualism research, are being called into question or problematised. Many researchers (Cook, 1995; Hall *et al.*, 2006; Hammarberg, 2014; Franceschini, 2016) share the view that there is a need to review some existing concepts as well as conceptualise new terminology better adapted to research on multilingual practices, the more so with the recent move from SLA to third language acquisition (TLA) and trilingualism (e.g., Cenoz *et al.*, 2001; Hoffman and Ytsma, 2004; De Angelis, 2007; Jessner, 2008a; Aronin and Hufeisan, 2009). In fact, Hammarberg (2014, p. 3) argues that the shift from

> a bilateral view which has prevailed in language learning theory (*bi*lingualism; *L1/L2*; a *second* language acquisition) to situations that explicitly involve more complex language settings and new areas of inquiry, the use of established terms may in some cases lead to complications.

Below, I discuss some terminology choices, issues, and limitations regarding L1 – L2 – L3, mother tongue, home language and foreign language.

Linguists and policy makers cannot seem to agree on what constitutes a mother tongue which – depending on criteria used – may mean different things (Skutnabb-Kangas, 1981, cited in García *et al.*, 2012). Akinnaso (1993, p. 273) indeed points out:

> If the mother tongue is one's native language, as it is commonly defined, is it the language of one's parents (even if one does not speak it)? Or is it the language one first acquired and spoke?

Conceptualising mother tongue(s) in a postcolonial multilingual context like Mauritius also proves to be sensitive (Ramdoyal, 1977; Sonck, 2005). The term 'mother tongue' has, itself, undergone multiple definition changes by UNESCO and various countries to cater for ever-

changing socio-historical and multilingual realities (Ballgobin, 2007). It is often substituted in literature with 'local language', 'language of the immediate community', 'language best known to the child'. Research on biliteracy also tends to use 'home language', 'first language' and 'mother tongue' as synonyms (e.g., Goodman *et al.*, 1979; UNESCO 2003).

First language (L1) usually refers to 'one or more NLs (native languages)' and second language (L2) to 'one or more NNLs (non-native languages)' (Hammarberg, 2014, p. 6). According to McLaughin (1984, cited in Hammarberg, 2010), the L1 is usually acquired during infancy, i.e., by about three years old. Third language (L3) generally refers to additional languages inclusive of the third language (De Angelis, 2007). These terms are sometimes used differently by different researchers.

SLA research also tends to group 'all non-first language learners as second language (L2) learners' (Hammarberg, 2010, p. 91). Concurring with Canagarajah (2007), Cook (2016a, p. 6) recalls how second language and L2 are not synonymous

> despite most researchers' habit of reading L2 aloud as second language. The word second is ordinal counting for sequence – King Edward II came after King Edward I – or for quality – a second-class degree is less valued than a first-class degree. The number 2 on the other hand is cardinal counting of quantity – two drinks, two Houses of Parliament.

According to Chomsky (1986, cited in Cook, 2010, n. p.[28]), 'it is the acquired knowledge that is crucial, not the order in which it is acquired'.

As Hammarberg (2014) concedes, the linear model of successive acquisition of languages may pose problem in complex situations such as simultaneous acquisition of several languages where it is difficult to order the languages sequentially, like in Mauritius but also in South Asia, Africa and South Africa for example. Cenoz and Jessner (2000, p. 3, cited in Aronin and Ó Laoire, 2004, p. 21) also argue that in trilingualism, 'the chronological order in which the three languages have been learnt does not necessarily correspond to the frequency of use by, or the level of competence in the trilingual speaker'. In fact, these terms tend to lose relevance altogether in multilingual contexts (Dworin, 2003). But, in the absence of an appropriate terminology, researchers (including myself) continue to use the existing terms L1 – L2 – L3

[28] Refer to http://www.viviancook.uk/Writings/Papers/ConseqB.html for the online publication.

for convenience purposes. However, these terms need to be explicitly defined for each context of study, as is the case below.

In research literature on the Mauritian context, Mauritian Kreol is generally acknowledged as a local *lingua franca*, a home language as well as a first language. The terms 'home language' and 'first language' tend to be used interchangeably. As for the Mauritian language-in-education policy documents pre-2015, they have opted for terms like 'mother tongue', 'L1', 'home language' and 'language of the environment'[29] without naming explicitly to which language these refer[30]. The absence of precision may be the result of a legal challenge by the Federation of Pre-School Playgroups (FPSP) and two parents to the constitutionality of the Pre-school curriculum published in March 1997 and which excluded the child's mother tongue. It may also stem from a desire to evade the sensitive language issue discussed in Chapter 1.

In fact, the latest educational policy document, *National Curriculum Framework Grades 1 to 6* (MIE, 2015a, p. 20)[31], plays the consensus card by opening the range of the L1 as follows:

> Most children who join Foundation Year[32] have a home language (L1) other than English. The L1 may be French, Mauritian Kreol, Bhojpuri or some other language. The curriculum values and promotes this linguistic diversity.

The vagueness around naming the home language (L1) seems to be a political strategy to not recognise Mauritian Kreol as the main L1 to be used in public schools, more so since it has been introduced officially in schools in 2012, not as medium of instruction but as an optional language at par with other ancestral languages. The first ever multilingual textbooks which were introduced in 2014 (and removed in 2016 as further explained in Part 2.4) in the Foundation Year also did not explicitly refer to Mauritian Kreol in the 'Notes for Teachers' as the L1 to be used to introduce concepts, etc.

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[29] The vague terms 'language of the environment' instead of the specific 'Kreol language' were used in the court ruling of the Constitutional Case against oppression of Mauritian Kreol entered by the Federation of Pre-school Playgroups (FPSP) and two parents as mentioned above, and thereafter in the 2003 and 2010 *National Curriculum Framework for Pre-primary*.

[30] This is however not specific to Mauritius. In fact, Akinnaso (1993, p. 264) makes a similar comment for Nigeria: 'This lack of precision leaves the policies far too weak for the federal government to enforce, let alone expect uniformity of implementation from the state and local governments. However, the evasiveness of the policies reflects the government's awareness of the delicacy of language issues in national development planning'.

[31] The *National Curriculum Framework Grades 1 to 6* (MIE, 2015a) is part of the latest educational reform in the island, the NYCBE (Nine Year Continuous Basic Education). It forms part of a set of documents which also include an explanatory document on the NYCBE reform (2015b) and Teaching and Learning syllabuses for all taught subjects.

[32] Refers to the first year of Primary level.

French is often referred to as L2, and English as a foreign language without further problematising the two terms. This is due to the complex sociolinguistic situation of Mauritius which makes it difficult for researchers to render a neat picture (as noted in Chapter 1). Carpooran (2007) clarifies how Mauritian children have a L2 exposure to oral French more than to its written version which they usually encounter at school like English, though he acknowledges that written French is also firmly present in the press, advertisements, etc. Even though foreign language (FL) refers to 'a language Y taught to people whose main language is not Y and who live in a country where Y is not the official or main language' (*Cambridge Academic Content Dictionary*), the foreignness of the language seems to be determined by its social use in the Mauritian context: a 'language that [the children] do not hear in their home or social environments' (Auleear Owodally, 2012, p. 63); 'the least socially used language' (Auleear Owodally, 2013, p. 1). Intriguingly, English is referred to as a 'second/foreign language' in the *National Curriculum Framework Grades 1 to 6* (MIE, 2015a, p. 33) while no further mention is made of the status of French except for when it was mentioned earlier in the policy document as an example of the mother tongue. Nadal, Ankiah-Gangadeen and Kee Mew (2017) posit, for their part, that French may be situated on the continuum from L1 to FL in terms of the children's use and exposure to the two languages in their environment, whereas English mostly holds the status of FL except when it is spoken at home. This is the case of Mauritian families where one of the parents has English as L1, the parents practice OPOL (one parent one language) or they opt for paid English-medium schools, in view of greater mastery of the language by their children.

In this study, 'home language(s)' and 'L1' are used instead of 'mother tongue', as these two terms seem to better capture the dynamic exposure of the multilingual child to more than one language at home, varying in its use according to the speakers (parents, grand-parents, and extended family), functions, etc. In the present research, Mauritian Kreol is usually referred to as L1, French as L2 and English as L3 unless otherwise specified, and whereby these languages may hold another status/function for the participants.

2.3. Exploring the biliteracy spectrum

Having examined the theoretical groundings emerging from the paradigm shift from monolingual to multilingual perspectives and its implications for this study, Part 2.3 provides

a critical appreciation of the rich definitions of biliteracy and the range of research endeavours in this field to better inform my study. Interestingly, 'spectrum' is a synonym of 'continuum', concept which underlines the continua of biliteracy framework as further discussed in Part 2.5.

The field of biliteracy has received proper attention only since the early 1980s (Jiménez *et al.*, 1996; Dworin, 2003; Bartlett, 2007; Reyes *et al.*, 2012). In line with the shift in the multilingualism paradigm discussed in Part 2.2, research on the acquisition of literacy in two or more languages has also questioned claims that learning two languages would prove challenging to children who are learning to read and write. Instead, Swain *et al.* (1990, cited in De Angelis, 2007) argue that bilingual literacy impacts positively on third language learning. Reyes *et al.* (2012, p. 308) also view biliteracy as 'part of the cultural capital that children bring to school and as an asset that could and should be used as a resource for learning'. My study therefore intends to better understand the cross-linguistic abilities and strategies that multilingual children use when learning to read in at least two languages concurrently.

Defining biliteracy

Many researchers define literacy as being not only a cognitive process but also as rooted in social interactions in a given context (Goodman *et al.*, 1979; Hornberger, 1989; Street, 2003; Reyes and Moll, 2007). Street (1984, p. 8, cited in Hornberger, 1989, p. 276) likewise argues for a contextualised view of literacy, stating how the 'meaning of literacy depends upon the social institutions in which it is embedded'. Context is important as every society does not necessarily have the same literacy practices and understanding. Thus, in a previous study I carried out on reading difficulties among Grade 4 pupils in Mauritius, one parent shared how she would buy textbooks or test-papers for her children to encourage them to read, as these were her representation of appropriate reading materials. Cook-Gumperz (1986, p. 22, cited in Hornberger, 1989, p. 279) has indeed noted a shift from a

> *pluralist* idea about literacy as a composite of different skills related to reading and writing for many different purposes and sections of a society's population, to a twentieth-century notion of a single, standardised *schooled literacy*.

This new schooled literacy tends to limit the definition of literacy and undervalues the linguistic and cultural resources that a child brings to the classroom. Empirical studies about literacy development have also overlooked the possible impact of peer relations and siblings on young children (Reyes and Moll, 2007).

The meaning of biliteracy first comprised reading only before evolving to encompass both reading and writing, and even more over time, as discussed in this section. Although my study inscribes itself in biliteracy research, the focus will be only on reading. Biliteracy has indeed been defined[33], in its early years, as the '**mastery of reading in particular**, and **at times also writing**, in two (or more) languages' (Fishman, 1980, p. 49, emphasis is mine). Pérez and Torres-Guzmán (1996, p. 54, cited in Reyes *et al.*, 2012, p. 308) include the importance of culture in their definition of biliteracy as 'the acquisition and learning of the decoding and encoding of and around print using two linguistic and cultural systems in order to convey messages in a variety of contexts'. Hornberger (1990, p. 2) also proposes a broad definition of biliteracy as 'any and all instances in which communication occurs in two (or more) languages in and around writing'. These instances may be 'events, actors, interactions, practices, activities, classrooms, programs, situations, societies, sites, or worlds' (Hornberger and Link, 2012a, p. 262).

Psycholinguistic and sociocultural strands in biliteracy research

Two main perspectives, namely the psycholinguistic and the sociocultural strands, guide biliteracy research. My study inscribes itself both in the sociocultural and the psycholinguistic traditions. The sociocultural perspective explores both linguistic and cultural factors impeding the child's literacy development, while the psycholinguistic perspective examines the cognitive processes for acquiring specific language competencies to develop fluency. This may explain why I was not able to find existing reading activities that would suit my study and why I had to devise my own reading activities (refer to Chapter 3). Although I am interested in transfer and metalinguistic awareness for instance, to which the psycholinguistic research has contributed a lot, I have not used psycholinguistic tests to measure reading competencies. The reason is not only because these tests often use monolingual benchmarks (Reyes *et al.*, 2012), but more importantly because my research focuses on how multilingual children use their multi-competence to develop their reading for understanding in at least two languages concurrently. My study further explores how this is impacted by their personal experiences which also include social and contextual experiences. The sociocultural perspective indeed analyses the impact of pupils' and families' cultural and linguistic backgrounds on 'the way

[33] For a comprehensive review of the most important definitions of biliteracy, refer to García *et al.* (2007) and Reyes *et al.* (2012).

they relate their life experiences to their in-school and out-of-school learning experiences with biliteracy' (Reyes *et al.*, 2012, p. 309).

Multilingual literacies, New Literacy Studies, multiple literacies, multiliteracies and pluriliteracies

Multilingual literacies, New Literacy Studies, multiple literacies, multiliteracies and pluriliteracies all resonate with Hornberger's (1990) broad definition of biliteracy and may thus be explored in one way or the other with the continua of biliteracy framework, in terms of the possibilities they offer (Street, 2003; García *et al.*, 2007; Warriner, 2012). So doing, the multimodal resources used in these plural literacies, such as mobile phones and websites for example, where the language setting may be changed, tend to 'make language difference a less important factor in social communication and multilingualism the norm' (Cope and Kalantzis, 2006, p. 34).

Martin-Jones and Jones (2000, p. 6) explain how the term 'multilingual' in **multilingual literacies**, acknowledges the 'multiple paths to the acquisition of the spoken and written languages' and the 'varying degrees of expertise in these languages and literacies' as we will see with the participants in my study. Martinez and Caraballo (2018) furthermore argue how literacy practices which may not reflect school expectations are encouraged through multilingual literacies. One example is the use of folk story to encourage pupils to explore their bilingual context, draw comparisons across languages, and move 'in and out of global and local discourses, access time and space zones and index social genres and discourses not anticipated by the teacher' (Blackledge and Creese, 2010, p. 154).

Similarly, the **New Literacy Studies** (NLS) perspective contests what Street (2003) terms 'the autonomous model of literacy', the so-called neutral and universal approach of literacy, the one-size-fits-all. Instead, the NLS approach argues that literacy is a social practice which varies according to different contexts and cultures, i.e., the 'ideological model of literacy' (Street, 2003, p. 77). Cummins (2005b) however claims that the two models are complementary. NLS give voice to literacies which are marginalised such as out-of-school literacy events and practices, including 'children's experiences of literacy in minority languages' (Edwards, 2009, p. 54) and their 'own cultural milieus' (Street, 2003, p. 83). An example from the Mauritian context is the fact that print in Mauritian Kreol remains absent from the classroom (other than

in that language's lessons) despite its formal introduction as an optional taught subject at primary level since 2012 and secondary level since 2018, and its ever-increasing presence in everyday life (e.g., advertisements, official communiques, pamphlets, posters, etc.) over the last decade. It is to be noted that even government communiques use a mixture of French and Mauritian Kreol orthographies to convey information in the latter, which somewhat undermines efforts made for the rightful recognition of Mauritian Kreol as a language on its own. The NLS movement thus proposes to go beyond the definition of literacy as the acquisition of reading and writing skills, and to conceptualise it as multimodal, which would include visual, audio, and spatial, as well as new communication technologies (SMS, emails, instant messaging, social media, etc.). Likewise, **multiple literacies** refer to how people go about their daily lives 'shaping literacies' instead of merely 'acquiring literacies' (Bloome and Encisco, 2006, p. 302).

Multiliteracies is a literacy pedagogical approach introduced by the New London Group (a group of ten international educators and researchers in the field of literacy pedagogy) to better address the teaching and learning of literacy amidst the diversity of language meaning making for different uses (cultural, social or professional) in the global world, and multimodal meaning making following growing access to new communication technologies (Cazden *et al.*, 1996; Cope and Kalantzis, 2006). One example is digital literacy which – contrary to the printed word – is non-linear, as people 'become browsers instead of readers. Information is packaged into screen size fragments, linked by the user's hypertextual choices' (Glister, 1997, cited in Cope and Kalantzis, 2006, pp. 32-33). Edwards (2009, p. 85) highlights how multiliteracies as an approach focuses on 'what people *do with* literacy, rather than on what literacy can *do for* people'. An example would be the popular memes phenomena on social media playing with different languages of a multilingual's repertoire to create meaning.

Building on all the above approaches and moving beyond the latter, **pluriliteracies** also acknowledge literacy as social-cultural bound as well as multimodal. Furthermore, it proposes 'a translanguaging approach to biliteracy', encouraging multilingual pupils to develop agency in exploring 'their entire repertoire to make meaning, regardless of the language of the text or the language of instruction' (García, 2014a, p. 155).

Limits of sequential and simultaneous biliteracies

Two other concepts that need defining, problematising and contextualising before moving on to discuss multilingual education and biliteracy development in Part 2.4, are sequential and simultaneous biliteracies.

Formal public schooling in Mauritius illustrates the case of simultaneous biliteracy which refers to literacy being taught in two languages at the same time (García, 2014a). Despite successful exemplars of simultaneous biliteracy in ethnic mother tongues schools, community language classes and heritage language issues (refer to the list given in García *et al.*, 2007, p. 211), they focus on L1 and L2 only. Hornberger and Skilton-Sylvester (2000) also highlight that biliteracy research tends to focus on the development of literacy in the second language (usually English) which would be more valued as opposed to the L1. This is where the case of Mauritius may shed a new light on biliteracy research as literacy is taught in English and French (both international languages and colonial legacies) which are not necessarily the L1 of the children.

García (2014a, p. 153) further deplores how even in simultaneous biliteracy, bilingualism is generally viewed as 'involving two autonomous language systems, and not as a two-way dynamic system'. Prosper and Nomlomo (2016, p. 79) share similar findings:

> despite the progressive South African Language-in-Education Policy which supports additive multilingualism, classroom practices continue to reinforce monolingualism in English, which deprives the majority of learners of meaningful access to literacy in different languages as they do not exploit the socio-cultural and cognitive capital embedded in the learners' home languages for additive bilingual and biliteracy competence.

Furthermore, even when a biliterate approach is encouraged in language-in-education policy documents, no clear guidelines are concretely given as to how to enact this approach in the classroom, which is also the case in Mauritius.

As for sequential biliteracy, it refers to an additional language being introduced when a child has developed competencies in speaking, reading, and writing in the language that s/he has been taught literacy first (i.e., his/her L1). Cummins' (1979) developmental interdependency hypothesis and threshold hypothesis are both based on sequential biliteracy. Indeed, the

developmental interdependency hypothesis stipulates that the 'level of L2 competence which a bilingual child attains is partially a function of the type of competence the child has developed in L1 at the time when intensive exposure to L2 begins' (Cummins, 1979, p. 233). As for the threshold hypothesis, it posits that the positive impact of bilingualism on cognitive growth would depend on the child attaining first 'a certain minimum or threshold level of competence in a second language' (Cummins, 1979, p. 229).

However, the issue with literacy being introduced in the L2 only after the basics have been developed in the L1 (as recommended by Cummins' threshold theory and UNESCO's mother-tongue education, 1953, 2003), is that the 'idea was not to develop biliteracy per se, but rather to advance literacy in the dominant societal language by teaching children to read in a language they understood' (García *et al.*, 2007, p. 210). Edelsky (1986, 1989, cited in Dworin, 2003, p. 177) also decried as monolingual myths that 'the first language must serve as a base for literacy and that a fixed sequence for learning is desirable in a second language'.

As opposed to sequential biliteracy and simultaneous biliteracy research whereby 'each literacy [is] taught as monolingual literacy' (García *et al.*, 2007, p. 212), Hornberger's continua of biliteracy framework (1989) – which this study will explore – emerges from the need to develop an appropriate methodology better suited to the needs and profile of the multilingual child. This original conceptual framework commended by many eminent researchers in the biliteracy field (e.g., García *et al.*, 2007; Reyes *et al.*, 2012; Warriner, 2012), proposes an integrated way of developing language and literacy skills by drawing on all four points of the continua (context, development, content and media). This framework has also been chosen because it acknowledges that there are multiple pathways to biliteracy development (Dworin, 2003), as discussed in Part 2.5.

2.4. Multilingual education and its implications for biliteracy development in Mauritius

After engaging with the theoretical part of multilingualism and biliteracy fields, Part 2.4 discusses the implications of multilingual education on biliteracy development in Mauritius, given that this study's findings may be used to inform policy and practice. Indeed, the relations between multilingualism, multilingual education, and biliteracy development remain poorly

understood, thus making it hard for educators, researchers, and policymakers to make informed decisions on matters that impact children's biliteracy development.

Despite multilingualism being presented as an asset (refer to Part 2.2), Prosper and Nomlomo (2016) recall that recent research has also pointed out educational challenges faced by children (both from countries in the North and in the South hemispheres) who learn literacy in languages other than their home languages when they start schooling. This is often due to the language-education-policy in place as well as the multilingual education programme that has been implemented.

Bamgbose (2004) regrets that some policy decisions remain at a statement level only in policy documents and are not enacted in practice. One example is the Mauritian policy document *Education and Human Resource Strategic Plan 2008-2020* (MECHR, 2009, p. 62) that has as strategic objectives to develop a policy for language incorporating multilingualism in schools and train teachers accordingly:

> Teachers must be trained on the impacts of bilingualism and accompanying teaching methodologies in order to take advantage of this great resource of Mauritian children rather than allow it to serve as an obstacle to their learning. This aspect of teacher training is currently amiss in Mauritius and needs to be identified and addressed urgently. […] Knowledge and skills acquired in the native language – literacy in particular – are 'transferable' to the second language (that is, English). They do not need to be re-learned in English. Bilingual education programmes that emphasise a gradual transition to English and offer native-language instruction in declining amounts over time provide continuity in children's cognitive growth and lay a foundation for academic success in the second language.

Yet, nothing concrete has been done following the above statements regarding actual implementation and training of teachers. Ironically, the Foundation Year multilingual textbooks that promoted the transfer of competencies and knowledge through scaffolding of languages from L1 to French and English, were put aside in 2016 by order of the same Minister of Education who advocated a multilingual approach in the above-mentioned policy document presented in 2009! This episode is an example of resistance to change (by parents, elite groups, etc.) which along with availability and costs of resources (teachers and materials) may constitute major constraints regarding the implementation of policy decisions (Akinnaso, 1993; Bamgbose, 2004).

Ball (1998, 2003), for his part, cautions against the risks of 'fabricated performance' and the discursive constructions in official documents of small countries vis-a-vis 'big policies', to obtain funding from international institutions like the Word Bank and UNESCO for example. These institutions indeed play 'key roles in education sectors worldwide, including by providing international frameworks for education on key and complex issues such as medium of instruction policies' (Borjian, 2014, p. 2). One example is the nine-year schooling reform proposed in several Mauritian education policy documents (CEE, 1979; MEST, 1996; MEHRD, 1997; MESR, 1998) before being enacted in the Nine Year Continuous Basic Education (NYCBE) reform in 2015. The NYCBE is, in fact, a recommendation made by international instances like the Southern African Development Community (SADC) for example and therefore attests of the determination of Mauritius to align its education system to international standards as '[a]ll developed countries have their Education System on similar lines' (MEHRD, 1997, p. 10). Indeed, the NYCBE seems much concerned with aligning local education system with international standards so as to maintain the country on the global world economy map, as highlighted in the policy document: the reform 'is meaningfully aligned to UNESCO's Education Agenda 2030, itself a forerunner of Goal 4 of the Sustainable Development Goals' (MIE, 2015b, p. III) and aims to 'transform the Republic of Mauritius into a globally competitive economy' (p. 1).

Weber (2014) puts forth that language-in-education policies should instead draw on the resources of multilingual children's linguistic repertoire. This study therefore proposes to investigate insights into how multilingual children tap into their multi-competence to learn to read in at least two languages concurrently.

Multiple routes towards operationalising multilingualism and biliteracy

Multilingual education faces several unanswered questions and doubts with regard to 'policy and implementation, program and curricular design, classroom instruction practices, pedagogy, and teacher professional development' (Hornberger, 2009, p. 198).

Multilingual education refers both to the teaching through two or more languages of instruction (i.e., to teach other subject contents) as well as the teaching of two or more languages in the curriculum (i.e., taught languages). However, researchers such as García *et al.* (2006) tend to stress more on the first part of the definition, arguing that multilingual education cannot be

reduced to the sum of taught languages. Some researchers like Shoba and Chimbutane (2013) also claim that often the umbrella term of 'multilingual education' ignores the very multilingual profile of the learners. Hélot and Young (2006, p. 69) thus insist that a multilingual school should encourage multilingualism and multilingual literacies by allowing pupils' use of their home language alongside the school language both to learn and communicate and whereby teachers do not feel 'afraid and […] threatened to hear languages they do not know'. Mohanty (2006, p. 89) thus raises the issue of 'multilingualism of the unequals' as he puts forth that a multilingual education should work towards 'planning for a resourceful multilingualism that does not marginalise and deprive the minor, minority and tribal language groups'. Bono and Stratilaki (2009, pp. 212-213) also claim that when 'the potential asset of plurilinguals is confronted to the school system, school patterns and designs can inadvertently hinder its existence'. Plüddemann (1997, p. 17) further cautions against 'close-definition of terms' and simply 'equating language learning outcomes with particular programmes or types of models without regard to the contexts in which they are implemented'.

Cenoz and Gorter (2010) propose a distinction between *multilingual education*, which refers to 'educational programs that aim at achieving communicative competence in two or more languages' (p. 38) and which often use languages other than the dominant language as media of instruction; and *multilingualism in education* which is 'usually the result of the combination of teaching and learning the dominant national language and other languages' (p. 42). According to the two researchers, multilingualism in education proposes a broader view than multilingual education. In fact, despite recent research's findings, multilingualism is still perceived as a double or multiple monolingualism whereby languages are taught as separate entities and learners expected to have the same level as a monolingual speaker. García *et al.* (2006, p. 22) point out how 'bilingual, trilingual or multilingual programs that separate languages have more prestige than the models that use languages interchangeably'.

(a) Additive and subtractive bilingual models

There are various types of multilingual education programmes, whose designation sheds light on the power relationships between language(s) of instruction and the student:

> to be 'immersed' into a language not your own, you need to be a power majority […]. Alternatively […], being taught through the medium of a foreign language is submersion

– unless this language happens to be that of your ancestors', your grandparents' or parents' revitalising language (García *et al.*, 2006, p. 15).

Additive and subtractive bilingual models have long been used in bilingual education research.

According to Lambert (1981), additive bilingualism refers to maintaining the first language while teaching a second or more languages, i.e., adding languages to an existing first language in the child's repertoire. Examples of such a model include foreign language pedagogies and immersion bilingual education in Canada where L1 + L 2 = L1 + L2 (García and Flores, 2012). However, these two researchers (2012, p. 234) argue that additive bilingualism still embraces a monolingual lens and a monoglossic ideology whereby students 'are expected to clearly separate languages and to move towards balanced bilingualism with equal competence in the two languages'. Cummins (2007) refers to such case of additive bilingualism as the 'two solitudes assumption' while Swain (1983) calls it 'bilingualism through monolingualism'.

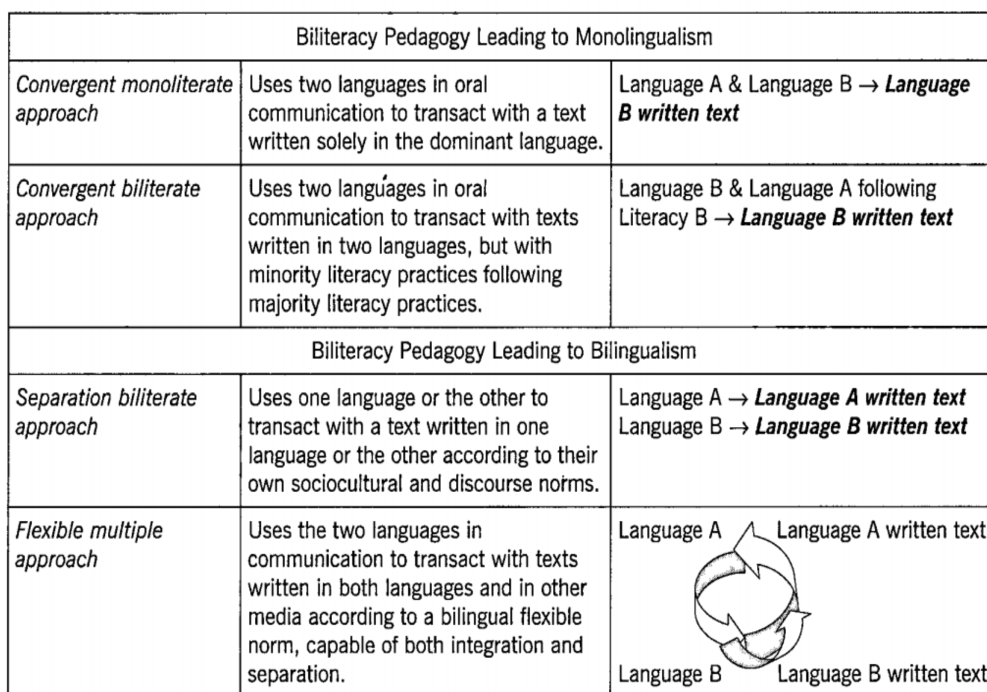
As for subtractive bilingualism, it involves the replacement of the first language by the second language in second language pedagogies and transitional bilingual education where L1 + L2 – L1 = L2 (García and Flores, 2012). Some examples are target-language immersion programmes for language minority children, and bilingual programmes with an abrupt transition from the home language to the target language after only a few years of schooling. This is the case in some African countries where a colonial language would take precedence over the first language (Migge *et al.*, 2010).

However, Mauritius proposes another scenario with the following equation L2 (French) + L3 (English). In fact, L1 (Mauritian Kreol) is absent as a core subject at primary and secondary levels. Mauritian Kreol is, instead, offered as an optional language at par with ancestral languages like Hindi for instance. Oral Mauritian Kreol remains, nevertheless, an ever-present underlying force in support of the above L2 + L3 equation. A summary of the three discussed models is given in Table 1.

Model of bilingualism	Language equation
Additive bilingual model	L1 + L 2 = L1 + L2
Subtractive bilingual model	L1 + L2 – L1 = L2
Mauritian bilingual model	L2 + L3 (+ an optional language)

Table 1

My understanding is that an additive bilingual education would use a separation biliterate approach while a subtractive bilingual education would apply a convergent monoliterate approach or a convergent biliterate approach. The categories of separate and convergent approaches to biliteracy have been developed by García (2014a) as illustrated in Figure 1. It can be argued that the multilingual education model in Mauritius seems to adopt both convergent monoliterate and separation biliterate approaches. In fact, on the one hand, there is the *convergent monoliterate approach* where the use of oral Mauritian Kreol and/or French is tolerated as scaffolding for the pupils to learn English and learn in English while all examinations and textbooks (except for French and optional languages) are in English. On the other hand, French and optional languages are taught using the *separate biliterate approach*.



Biliteracy Pedagogy Leading to Monolingualism		
Convergent monoliterate approach	Uses two languages in oral communication to transact with a text written solely in the dominant language.	Language A & Language B → ***Language B written text***
Convergent biliterate approach	Uses two languages in oral communication to transact with texts written in two languages, but with minority literacy practices following majority literacy practices.	Language B & Language A following Literacy B → ***Language B written text***
Biliteracy Pedagogy Leading to Bilingualism		
Separation biliterate approach	Uses one language or the other to transact with a text written in one language or the other according to their own sociocultural and discourse norms.	Language A → ***Language A written text*** Language B → ***Language B written text***
Flexible multiple approach	Uses the two languages in communication to transact with texts written in both languages and in other media according to a bilingual flexible norm, capable of both integration and separation.	Language A, Language A written text, Language B, Language B written text

Figure 1 (Source: García, 2014a, p. 154)

Based on García's (2009) dynamic bilingualism, García and Flores (2012) propose a dynamic view of biliteracy pedagogy whereby plurilingual/heteroglossic instructions do not separate languages but acknowledge children's complex fluid language practices, as well as use multimodal resources. These would be in line with the flexible multiple approach that also favours translanguaging whereby 'bilinguals and multilinguals select features and co-construct or *soft-assemble* their language practices from a variety of relational contexts in ways that fit their communicative needs' (García, 2014b, p. 95). According to García (2014b), translanguaging is based on the belief that there is not 'a' language per se and thus does not

include using languages separately or even shifting from one language to another. Translanguaging as a reading strategy will be explored through the lens of the continua of biliteracy framework in Part 2.5.2.

(b) Mother tongue-based multilingual education

Mother tongue-based multilingual education (MTB-MLE) refers to the 'use of learners' first languages or mother tongues as the primary media of instruction' (Tupas, 2015, p. 112). It is often recommended to offset school underachievement (Prinsloo, 2009) and under-valorisation of minority groups (Tupas, 2015). Following increasing research on the benefits of using mother tongue to facilitate learning and combat illiteracy (e.g., Akinnaso, 1993; Bamgbose, 2004; Hungi and Thuku, 2010; Corcoll, 2013) and the publication of UNESCO's position paper, *The Use of Vernacular Language in Education* (1953), many countries have adopted a mother tongue literacy policy. On the one hand, MTB-MLE faces structural and ideological challenges such as 'globalisation's English-only ideology' and 'colonially induced hatred towards the mother tongues' (Tupas, 2015, p. 118 and 120).

On the other hand, Weber (2014, p. 49) claims that due to the problematic notion of 'mother tongue', 'schools sometimes teach the standard variety of the assumed mother tongue without building on children's actual vernacular resources or varieties'. This is the case in Singaporean bilingual education policy comprising English and one mother tongue (either Malay, Mandarin or Tamil) where

> regardless of what language(s) may actually have been spoken in early childhood, the ethnic group of a child's father must determine which language is officially assigned as his or her mother tongue (Ng, 2011, p. 4).

The sexist assumption behind the father's language being considered *de facto* as the mother tongue needs to be highlighted while it relaunches the debate about the limits posed by the term 'mother tongue' discussed in Part 2.2. The Singaporean example is even more revealing as English is the official language while the choice of an ethnic mother tongue was decided by the government 'to give Singaporeans an anchor in their cultural traditions so as to avoid excessive Westernisation and to prevent deculturalisation' (Ng, 2011, p. 4).

Benson (2004, p. 4) raises concerns over the introduction of MTB-MLE which 'normally goes beyond pedagogical motivations to address social and political aims'. Discussing South-

Africa's post-apartheid policy of eleven official languages, Plüddemann (2015) highlights how the proposed language policy documents tend to ignore the complex sociolinguistic reality. To address the problematic implementation of a more appropriate language policy, the researcher recommends that children's resourcefulness in multilingual classrooms be documented and concepts like 'mother tongue' and 'medium of instruction' be reconsidered, stating that

> inadequate definitions of a unilingual mother tongue would have to make way for a broader understanding of mother tongue as a metaphoric construct that refers to one or more linguistic codes with which the child is comfortably familiar (Plüddemann, 2015, p. 196).

While commenting the Indian official three-language formula[34], Mohanty (2006, p. 282) argues that the question to be asked is not

> whether to use the mother tongue OR the other tongue. It is not about whether to use Hindi OR English. Multilingual education in India is about the mother tongue AND the other tongues as it develops multilingualism for all in Indian society.

Cummins (2000) also concurs that the debate should not be an *either-or* but rather a *both-and* logic.

Interestingly, Wagner, Spratt and Ezzaki (1989) have reported that children in some social and linguistic contexts were not taught in their mother tongue and yet, they still achieved literacy standards of the majority language group. This is attested by successful non-mother tongue education programmes such as the Singaporean English-medium and Mãori-medium education systems for example. In lieu of a mother tongue education which tends to reflect a fixed type of multilingual education, Weber (2014, p. 7) furthermore advocates for a flexible multilingual education (resonating with García and Flores' flexible multiple approach) which would 'build on students' *actual* linguistic resources in a positive and additive way', especially since children are increasingly developing multilingual repertoires and many grow up with more than one mother tongue.

[34] Comprising a regional language, a national language (Hindi) and an international language (English).

(c) Models of bilingual programmes

Many countries opt for the early-exit or short-term transitional bilingual programs (i.e., Model B in Table 2) like the Seychelles. However, Akinnaso (1993, p. 269) criticises the principle of many bilingual projects, which tend to focus on

> how learning in L2, the dominant language, can be enhanced by learning in L1, often an ethnic minority language, rather than on a genuine desire to ensure the use of the latter in literacy education.

This has further led to some form of misrepresentation in policy documents, as highlighted by Plüddemann (1997, p. 23): 'This minimalist interpretation of 'additive multilingualism' to effectively mean 'mother tongue education' has resulted in a degree of uncertainty in current policy documents'.

Regarding the models of bilingual programs and biliteracy projects which I have summarised in Table 2, the Mauritian context provides yet another model. In fact, instruction is given in a L3 (as per the definition discussed in Part 2.2) throughout primary, secondary and even tertiary levels (except for French and optional languages), and literacy is taught simultaneously in L2 (French) and L3 (English) but not in L1 (Mauritian Kreol) unless the pupils opt for it.

My summary of models of bilingual programs and bilingual literacy projects based on Akinnaso (1993, pp. 270-271)	
Model A (Late-exit/transitional)	Instruction is given only in L1 throughout the six years of primary education. L2 is taught as a subject.
Model B (Early-exit/Transitional)	Instruction is given first in L1 during three years of primary education while L2 is taught as a subject. As from Grade 4, L2 is used as medium of instruction and L1 is taught as a subject (e.g., Cummins, 1983[35])

[35] See Cummins, J. (1983) *Language and Literacy in Bilingual Instruction: Policy Report*.

Model C (Successive)	Instruction is given first in L1 and later replaced with L2, without ever switching completely from L1 (e.g., Modiano 1968[36]; Chu Chang, 1980[37])
Model D (Simultaneous)	Instruction is given simultaneously in both L1 and L2 throughout the six years of primary education (e.g., Chu Chang 1980)

Table 2

Multilingual education and biliteracy pedagogy in Mauritius

Many teachers are still convinced that languages should be taught as separate entities (Cummins, 2005a; Creese and Blackledge, 2010) though recent research has shown that boundaries between languages are permeable in a multilingual person (Blackledge and Creese, 2010). Similarly, in Mauritius, multilingualism seems to be understood as the teaching of more than two languages viewed as separate entities, as laid down in educational policy documents (e.g., MIE, 1977; CEE, 1979; MEHRD, 1997; MIE, 2015a). Multilingual education, in fact, endorses Cummins's (2005a, p. 4) separate underlying proficiency model where 'there is no transfer across languages and no underlying proficiency that links L1 and L2 (and L3, etc.)'. In fact, French and English literacies are taught simultaneously from Grade 1 in primary, and even in pre-primary where both languages are introduced formally. However, a comparative study of the French and English 2006 textbooks indicates that 'they do not acknowledge that decoding skills are transferable skills across languages that share similar writing systems' (Auleear Owodally, 2007, p. 198). The same may be said of the latest Grade 1 textbooks, and even further up in the Mauritian schooling which tends to maintain a steadfast compartmentalised teaching between these two languages (Police-Michel, 2007).

Curricular arrangements are also '*time-determined*, meaning that one language or the other is used at certain times' (García and Flores, 2012, p. 239), subject-determined (whereby English is the medium of instruction for all core subjects), and even teacher-determined, with subject specialist teachers introduced at secondary level, and optional languages specialists at primary level (namely for Mauritian Kreol, Hindi, Urdu, etc.). In many multilingual education programmes like the one in Mauritius for instance, there is 'no special coordination between

[36] See Modiano, N. (1968), 'National or mother tongue language in beginning reading: a comparative study', *Research in the Teaching of English*, 2, pp. 32-43.
[37] See Chu-Chang, M. (1980) *The Dependency Relation Between Oral Language and Reading in Bilingual Children.* Unpublished Doctoral Dissertation. Boston: Boston University School of Education.

the language teachers and the syllabuses are not developed in an integrated way' (Cenoz, 2009, p. 53). Yet, primary class teachers (also known as General Purpose teachers) in Mauritian public schools are responsible to teach both English and French among the other core and non-core subjects, and textbooks are developed by departments of the same institution.

Regrettably, parents, teachers and teachers' unions showed strong resistance against curriculum innovations, namely Foundation Year multilingual textbooks titled *Let's Learn with Timatou and Friends*. Introduced in 2014, they proposed to develop language competencies holistically and thus formally acknowledge the multilingual profile of the Mauritian child as clearly stipulated in the introductory pages:

> in this curriculum material, pupils' instructions are in English and French. This takes into consideration the multilingual practices of our local context. It is also highly recommended to start a number of activities in the L1 of the pupils before moving on to their L2s during this foundation year (p. v).

The material was thus written both in English and French with recourse to the child's L1 as support oral language to develop competencies and introduce concepts in Literacy and Language Development, Creative and Logical Thinking, Health and Physical Education, and Personal and Social Development. However, the multilingual textbooks which were implemented in the first year of primary schooling (Foundation Year) in January 2014, were finally replaced in January 2016 by separate monolingual and subject specific textbooks as was the case previously (all written in English except for French). This episode which is discussed in several research publications (Nadal, Ankiah-Gangadeen and Kee Mew, 2017; Peedoly, 2017; Rughoonundun-Chellapermal, 2017; Oozeerally and Hookoomsing, 2021), reminds us that, despite being labelled as multilingual in policy documents, Mauritian public schools are not ready for a multilingual approach which encourages the teaching of languages as a continuum and not as separate languages. This episode also highlights that the role of agencies and stakeholders is an important factor to be reckoned with.

My study proposes to investigate how multilingual children use their multilingual abilities when learning to read in two or more languages concurrently, in line with Cummins' (2007, p. 229) recommendation to create

> a shared or interdependent space for the promotion of language awareness and cross-language cognitive processing. The reality is that students are making cross-linguistic

> connections throughout the course of their learning in a bilingual or immersion program, so why not nurture this learning strategy and help students to apply it more efficiently.

Cross-linguistic influence and metalinguistic awareness as cross-linguistic abilities will be discussed in-depth in Part 2.5.2. Indeed, unless pedagogical multilingual practices are legitimated, children's multilingual abilities will continue to be underutilised.

2.5. Exploring the continua of biliteracy framework to investigate how children use their multilingual abilities in their concurrent reading acquisition and factors impacting on same

The literature review above provides the theoretical and empirical context for this study. Its implications for the aims and the framing of the research questions are discussed in the conclusion to this chapter. Part 2.5 presents and discusses the theoretical stance that has informed my research design (and helped develop my reading activities), key themes emerging from literature as well as potential gaps that my study proposes to address.

This study explores the continua of biliteracy framework (Hornberger, 1989; Hornberger and Skilton-Sylvester, 2000) as the overarching conceptual framework with the theoretical hypothesis that multilinguals have a multi-competence, and thus 'a dynamic interrelationship between the languages in the mind' (Cook, 2016b, p. 33). Inscribing itself in the multilingual perspective, the continua of biliteracy framework addresses the need to develop an appropriate methodology (for educational policy, practice and research) better suited to the needs and profile of the multilingual child. For recall, Herdina and Jessner (2002, p. 108) highlight how a multilingual speaker may

> draw on a fund of common linguistic experience on the one hand and on the other hand, s/he develops certain types of linguistic and cognitive skills which are either not present or less developed in monolingual speakers.

My study thus explores how these skills are manifested when multilingual children read for understanding.

2.5.1. Understanding the four points in the continua of biliteracy framework

Many researchers have explored the notion of continuum, which is also at the centre of the continua of biliteracy model. Grosjean (1985) refers to a situational continuum which ranges from a monolingual speech mode (i.e., use of either language A or B) to a bilingual speech mode (i.e., use of both languages A and B including codeswitching and borrowing). Franceschini (2016, p. 110) argues 'in favour of a continuum rather than a clear distinction between monolingual and multilingual individuals'. Cook (2003) suggests an integration continuum model with on one endpoint the total separation of languages in the same mind (i.e., the separation model) and on the other endpoint the integration of all languages (i.e., the integration), and in-between the interconnection model. Along this line, García (2014a, p. 145) posits that the term 'bilingual' refers to 'the continuum of language practices that are socially considered to belong to two language systems'.

The continua of biliteracy proposes an integrated way of developing biliteracy skills by drawing on all four points of the continua (i.e., context, development, content and media), stating that 'what (content) biliterate learners and users read and write is as important as how (development), where and when (context), or by what means (media) they do so' (Hornberger and Link, 2012a, p. 268). As the word 'continua' suggests, each point focuses on 'the continuity of experiences, skills, practices, and knowledge stretching from one end of any continuum to the other' (Hornberger, 2004, p. 156) along two sets of binary opposites from the 'traditionally less powerful' to the 'traditionally more powerful' (refer to Figure 2). Figure 2 sheds light on implicit power relations of one end of the continua over the other which tend to prevail in educational policy and practice. In fact, García (2014a, p. 151) recalls that Foucault (1991) has demonstrated

> how dominant language practices 'regulate' the ways in which language is used, establishing language hierarchies in which some languages, and ways of using language, are more valued than others. Schools provide the means of regulating the ways in which bilingual students perform language, thus excluding language practices that do not conform to their ways, and rendering bilingualism as a deficit.

It is, in fact, important, according to Hornberger and Skilton-Sylvester (2000, p. 99) to challenge 'the traditional power weighting of the continua by paying attention to and granting agency and voice to actors and practices at what have traditionally been the less powerful ends of the continua'.

Traditionally less powerful		Traditionally more powerful
	Context of biliteracy	
micro	⟷	macro
oral	⟷	literate
bi(multi)lingual	⟷	monolingual
	Development of biliteracy	
reception	⟷	production
oral	⟷	written
L1	⟷	L2
	Content of biliteracy	
minority	⟷	majority
vernacular	⟷	literary
contextualised	⟷	decontextualised
	Media of biliteracy	
simultaneous exposure	⟷	successive exposure
dissimilar structures	⟷	similar structures
divergent scripts	⟷	convergent scripts

Figure 2. Power relations in the continua of biliteracy (source: Hornberger, 2003c, p. 326)

The four dimensions of the continua show that literacy skills do not develop in an isolated way but interweave with each other, and that they are more apt to fully develop if the contexts enable learners to 'draw from across the whole of each and every continuum' (Hornberger, 2000, p. 354). Hornberger (2003a, p. xiv) also argues that one should focus on what is taking place in the spaces in between each endpoint of the four continua for 'it is in the dynamic, rapidly changing, and sometimes contested spaces along and across the intersecting continua that most biliteracy use and learning occur'.

Exploring the continua of biliteracy framework has enabled me to gain further insights into how my participants draw from their cross-linguistic reservoir of abilities as well as factors impacting on their concurrent reading acquisition, by locating them along the different continua. In Figure 3, I show in more details how the continua in each of the four points of the

Hornberger's framework for biliteracy development may be used to engage further with the discussion of the four major themes (ecology of literacy, cross-linguistic interaction and metalinguistic awareness, language dominance and lexical access, translanguaging as a reading strategy) that have emerged from my literature review along the lines of this study's aim and research questions. These themes will be discussed further in Part 2.5.2.

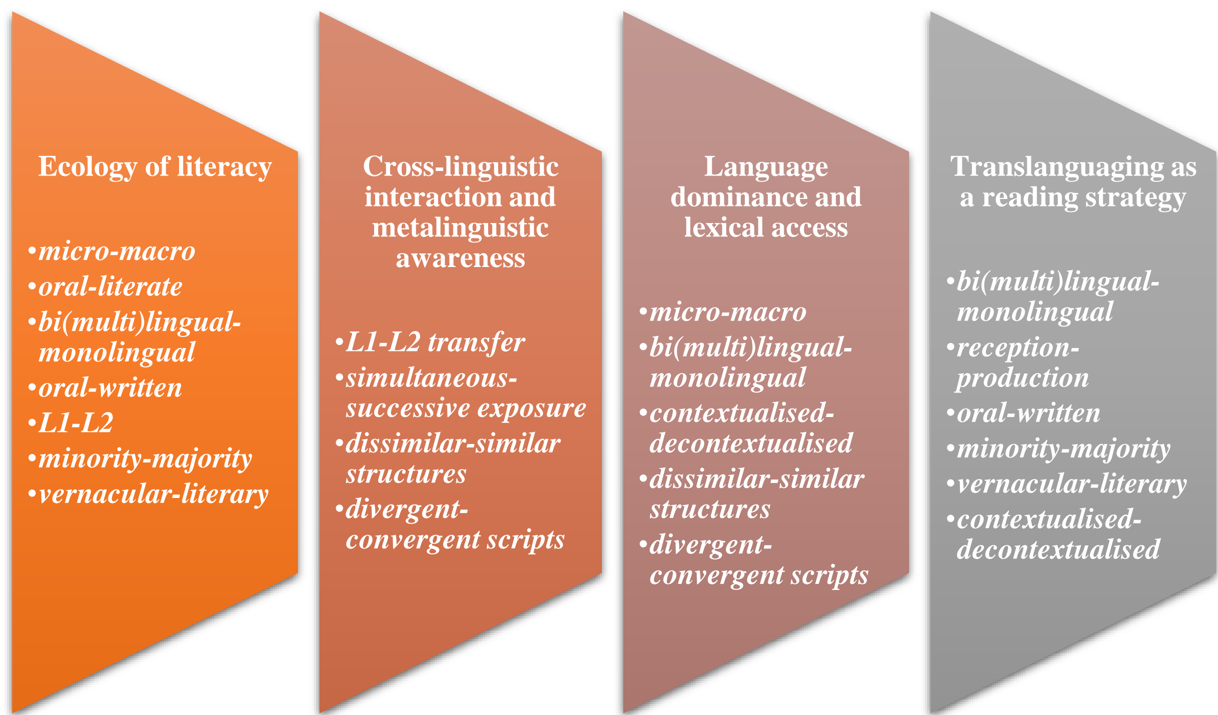


Figure 3

(a) Context of biliteracy

The context of biliteracy recalls the importance of context, in line with the very definition of literacy as being not only a cognitive process but also rooted in social interactions in a given setting. The **micro-macro continuum** comprises intersecting areas of research between linguistic and sociolinguistics analysis, ranging from the study of features of a given language in a text/discourse to the study of domains of use of languages in a society/country (refer to Figure 4).

micro-micro	micro-macro	macro-micro	macro-macro
(features of a language in a particular piece of text or discourse based on intrapersonal and interpersonal contexts of reading)	*(language use and choice may vary depending on the situation of the interlocutor)*	*(features of language examined in the context of a a society or a large social unit)*	*(domains of use of languages)*

Figure 4. My recap of the micro-macro continuum outlined in Hornberger (2003b)

In fact, patterns of language used at macro-macro level show that domains may be 'associated with one or another language in bilingual societies […] or that a language may fulfil one of a range of functions in the society' (Hornberger, 1989, p. 276), as is the case for the different languages in Mauritius. Some associated language functions may be generalised within the same country while others may form part of individual multilingual's DLC. Some literacies may be marginalised (e.g., Mauritian Kreol) because of diglossic relations while others may be specialised by functions (e.g., Asian languages like Hindi, Tamil, etc. used for religious ceremonies).

The dichotomy between oral and written languages, as highlighted in the **oral-literate continuum**, has often contributed to the perception that written languages have more value than oral ones, like Mauritian Kreol which is still looked down as 'a broken non-standard language' (Rajah-Carrim, 2007, p. 52). In fact, despite several individual (e.g., linguist and writer Dev Virahsawmy) and group endeavours (e.g., Ledikasyon Pu Travayer, the government commissioned *Grafi Larmoni* report) to propose an orthography over the past four decades at least, Mauritian Kreol has only acquired an official writing system since 2011 and is being taught at school since 2012. Auleear Owodally (2012, pp. 74-76) states how since preschool, Mauritian children are 'socialised into seeing English and French texts as normal print languages, internalising the view that these languages are superior print languages'. Indeed, the school print environment is mainly in these two languages and the children are regularly made to copy English and French texts. Prosper and Nomlomo (2016, p. 87) furthermore argue that when the L1 is mostly oral, it tends to 'reinforce subtractive bilingualism or monolingualism in English (L2) literacy only, instead of fostering biliteracy or multiple literacies'. It is to be noted that teachers in Mauritius (except for those trained in teaching Mauritian Kreol at primary and secondary levels) have not learnt to read and write formally in that language. This may explain their lack of cooperation, as demonstrated in a small-scale study carried out with some

primary trainee teachers (Kee Mew, 2016). On the one hand, there seemed to be some contradictions in these primary trainee teachers' discourse of multilingualism as an advantage and how they were ready to use Mauritian Kreol as a stepping-stone to teach English and French, but on the other hand, they disapproved of the language as a taught language at school.

The **bi(multi)lingual- monolingual continuum** also focuses on the specialisation of functions according to domains of use at macro level and switching of languages according to uses and contextual factors at micro (individual) level by multilinguals. However, many monolingual-based studies tend to heap opprobrium on the use of code-switching by multilinguals, believing it to be due to 'the bilingual's lack of complete knowledge and control of the two languages' when in fact, it 'represents highly competent, context-specific language use' (Hornberger, 1989, p. 279).

(b) Biliterate development in the individual

The notion of continuum in biliteracy development does not imply 'that development is necessarily continuous or gradual; it may, in fact, occur in spurts and with some backtracking' (Hornberger, 1989, p. 281) nor that it is unidirectional. In fact, often children 'can and do both read and write English before they have mastered the oral and written systems of the language' (Hudelson, 1984, cited in Hornberger, 1989, p. 282), as is also the case in Mauritius. This is due to emphasis being mostly placed on developing reading and writing skills as stated in several educational policy documents (e.g., MIE, 2015a) with children having to develop four generic competencies (listening, reading, speaking, and writing) which constitute the **reception-production continuum**. This is in line with what the **oral-written language continuum** has put forth, namely that writing seems to have more power than oral. In fact, written assessments take precedence over oral evaluations[38] in Mauritius, thus discarding as failures those pupils who may know the answers but are not able to write in English, as deplored in MES reports every year. An example is hereby cited:

[38] At primary level, oral assessments in English and French have been formally introduced since PSAC 2017 as a non-core subject 'Communication Skills'. However, they do not impact on the overall PSAC results which still comprise the pupil's performance in the written examinations. In fact, pupils are only given the following appraisal on their certificate for the oral assessments: Basic – Intermediate – Proficient.

> One possible reason for this poor performance is the language barrier; in the understanding but mostly in writing. […] the scripts showed that some candidates did not have the adequate linguistic ability to produce any writing at all (MES, 2020, p. 4).

Yet, this should not serve to relaunch the mother tongue literacy debate. In fact, based on eight studies conducted in seven multilingual countries, Dutcher (1982, cited in Hornberger, 1989, p. 283) argues that 'there is no one answer' to the question regarding what would be the best choice of language to start teaching primary children in.

> Rather, the answer varies from case to case depending on micro and macro contextual factors such as the child's cognitive and linguistic development in L1 (see also Niyekawa, 1983, pp. 104-113), parental attitudes and support from the languages and the school, and the status of both languages in the wider community.

Concerning the relations between languages in a multilingual's language repertoire in the **L1-L2 continuum**, the focus here is on the transfer of knowledge and skills for developing reading from L1 to L2, from L2 to L3, or L2 to L1 (for studies carried out so far, refer to Hornberger, 1989). In line with the claim by Thonis (1981) and Hakuta (1987) that most transfer of skills from L1 to L2 comprises processes and strategies (cited in Hornberger, 1989), my study focuses on strategies that multilingual children develop to optimise their concurrent reading acquisition in two or more languages.

(c) Media of biliteracy

The media of biliteracy cannot be dissociated from the context of study. It is indeed important to take into consideration the languages in which multilingual children are exposed to print and learn to read.

The **simultaneous-successive exposure continuum** looks at the impact of simultaneous and successive bilingualism on biliteracy development. One example is increased metalinguistic awareness in additive bilingual situations (refer to Parts 2.3 and 2.4 which define and discuss simultaneous and successive bilingualism, as well as additive bilingualism). Hornberger (2003b) mentions various educational programmes where (a) L1 and L2 are simultaneously taught; (b) L2 literacy follows minimal/moderate/well-developed L1 literacy, and (c) L1 literacy builds on L2 literacy at its different levels of development. In Mauritius, French and English literacies are introduced as from pre-primary. The educational system does not cater

for French and English to build on literacy developed first in Mauritian Kreol. Furthermore, literacy in the latter is introduced after English and French as from Grade 1. Mauritian Kreol is not a mandatory subject. English and French literacies develop alongside literacy in other so-called ancestral languages be it formally as from Grade 1, or informally in Chinese schools for Modern Chinese for example.

As for the **dissimilar-similar language structures continuum**, it examines the differences of learning two or more languages which are linguistically related (e.g., English and French) or not (e.g., English and Hindi). Regarding the **divergent-convergent scripts continuum**, research has shown that transfer of reading skills and strategies is more facilitated when the two orthographic systems share many common traits. Research[39] has also posited that divergence in the writing system would lead to less interference as compared to similar writing systems. However, Fishman *et al.* (1985) argue from their study involving Hebrew, Greek/Armenian, French and English, that 'divergence from or proximity to English made no noticeable difference in the rate or level of literacy acquisition by the time the second or third grade was reached' (cited in Hornberger, 1989, p. 288).

Media being the means by which multilinguals develop their biliteracy, it not only focuses on language but also acknowledges 'varying degrees of expertise in individuals' communicative repertoires' (Hornberger and Link, 2012a, p. 267), which links back to Martin-Jones and Jones' (2000) multilingual literacies.

(d) Content of biliteracy

The content of biliteracy has been added in 1997 following the contribution of Ellen Skilton-Sylvester based on her doctoral thesis titled *Inside, Outside, and In-between: Identities, Literacies, and Educational Policies in the Lives of Cambodian Women and Girls in Philadelphia*. It builds on resources and experiences, namely 'the ways of knowing, being, seeing, thinking, expressing, etc., that biliterate learners bring with them' (Hornberger, 2002a, p. 140). These often have to do with dynamic cultures and identities that determine self-awareness and relations with the world around us.

[39] For the list of researchers for both types of studies, refer to Hornberger, 1989, p. 288.

The three continua which make up the content of biliteracy, i.e. the **minority-majority continuum**, the **vernacular-literacy continuum** and the **contextualised-decontextualised continuum**, look at marginalised texts by

> minoritised authors, written from minoritised perspectives; vernacular ways of reading and writing include notes, poems, plays, and stories written at home or in other everyday non-school contexts; contextualised whole language texts are those read and written in the context of biliteracy events, interactions, practices, and activities of biliterate learners' everyday lives (Hornberger and Link, 2012a, pp. 268-269).

This links back to the range of possibilities explored by the spectrum of biliteracy (as described in Part 2.3) which have served as one of the basis for exploring the continua of biliteracy (Hornberger and Skilton-Sylvester, 2000), in terms of multimodal literacies, etc. The three continua that make up the content of biliteracy have also prompted the choice of local children's literature texts (contextualised minority texts) in Mauritian Kreol (vernacular) and French for my reading activities 5a, 5b and 7 (refer to Chapter 3).

2.5.2. Key themes emerging from literature and potential gaps

Having explored the four points of the continua of biliteracy framework and its implications for my research, the following sections will discuss key themes emerging from literature which I consider most pertinent for my study as well as potential gaps that it intends to address.

The mind-map (Figure 5) summarises the key concepts emerging from literature (in blue) that I found to be most pertinent for my study, the potential gaps in literature (in orange), as well as how the different points in Hornberger's continua of biliteracy framework (in green) may be explored to further the discussion of the emerging themes.

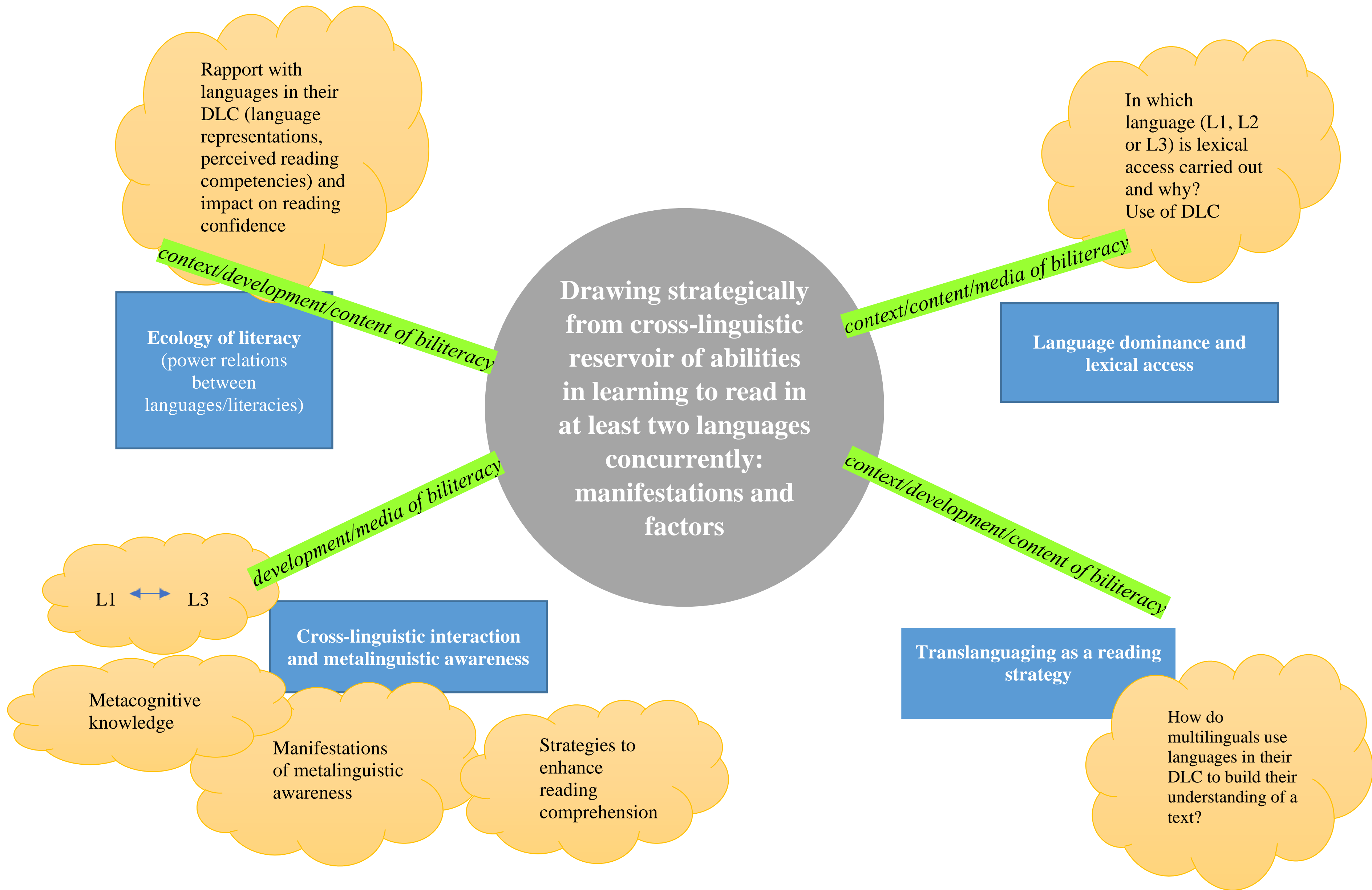


Figure 5

Ecology of literacy

In her 2003 edited book which bears as subtitle ‘An ecological framework for educational policy, research and practice in multilingual settings’, Hornberger shares how the continua model is premised on the metaphor of ecology of language, which views multilingualism as a resource. The ecological model, in fact, ‘acknowledges children’s development as dynamic, malleable, and influenced by environmental experiences that tap into their potential to become biliterate’ (Reyes *et al.*, 2012, p. 316).

First used in language studies by linguist and anthropologist Carl Voegelin in 1964, the concept of language ecology or ecology of language is usually associated with linguist Haugen (1972). While Voegelin and Voegelin (1964, p. 2, cited in Eliasson, 2015, p. 81) define linguistic ecology as a ‘shift of emphasis from a single language in isolation to many languages in contact’, Haugen (1972, p. 325) highlights the importance of studying interactions between a language and its environment in

> psychological terms (its interaction with other languages in the minds of bilingual and multilingual speakers) and in sociological terms (its interaction with the society in which it functions as a medium of communication).

Haugen’s definition echoes with the two main perspectives guiding biliteracy research, namely psycholinguistics and sociolinguistics as outlined in Part 2.3. This definition will also be useful in Chapter 4 while analysing how multilingual children explore language affordances emerging from the dynamic interactions between languages in their mind.

The concept of language ecology has been investigated further in the field of multilingualism by other researchers (e.g., Hornberger, 2002b; Creese and Martin, 2003; García and Menken, 2015). In fact, Mühlhäusler argues (1996, p. 313) that research should focus on ‘the functional relationship between the factors that affect the general interrelationship between languages rather than individual factors impacting on individual languages’. Kramsch and Whiteside (2008, p. 662) refer to the ecology of multilingual spaces where multilinguals navigate among various languages in their everyday exchanges, taking into consideration how the languages form ‘part of a more diversified linguistic landscape with various hierarchies of social respectability among codes’ as well as ‘their subjective resonances in the speakers’ embodied memories’.

Based on Haugen's language ecology, Barton (1994, cited in Heese, 2012) proposes the metaphor of literacy as ecology, which also aims to understand the impact of context, social practices as well as human activities on literacy development. Hornberger (2003b), for her part, proposes her continua of biliteracy framework as an ecological approach to literacy which demonstrates how an ecology of literacy is hemmed into power relations as highlighted in the different continua in Figure 2.

Few studies have examined inter-relationships between speakers and their language uses in the educational context (Creese and Martin, 2003) and even fewer research has been carried out on ecology of literacy. One of the studies which draw on Hornberger's continua of biliteracy framework is by Manan and David (2014), which compares literacy levels of undergraduate students in Pakistan in their mother tongues (located on the traditionally less powerful end of the continua), with Urdu and English (situated on the traditionally more powerful end of the continua) and discusses the users' perceptions of their mother tongues vis-à-vis the other two languages.

Cross-linguistic interaction and metalinguistic awareness

The continua of biliteracy framework posits that there can be positive transfer across literacies which may be either supported or hindered by contextual factors (Hornberger, 1989). Cross-linguistic interaction is presented as a strategy developed as part of metalinguistic awareness and metacognitive knowledge, whereby a multilingual may draw from his/her cross-linguistic reservoir of abilities to enhance his/her language competencies, including reading. In fact, literacy competencies have been found to be interdependent across languages, and consequently knowledge and skills developed in one language may be transferred to another. Hornberger (1990, p. 14) also claims that teaching for biliteracy should encourage children to 'connect and transfer', i.e., 'make explicit connections across their two languages'. My study thus investigates how cross-linguistic interaction happens when a child learns to read in at least two languages concurrently.

(a) Cross-linguistic interaction: frameworks, manifestations, and factors

Language transfer has for long been studied solely from L1 to L2, often with negative overtones (such as interference) before the paradigm shift in multilingual perspective.

However, Su (2016) argues that recently, an increasing number of SLA researchers have examined the phenomenon of language transfer from a multi-competence perspective.

Although transfer / cross-linguistic influence / cross-language transfer vary in name when used by different researchers, they have the same basis with transfer not necessarily happening from L1 to L2, but also from L2 to L3, L1 to L3, and vice versa (Cenoz *et al.*, 2001; De Angelis, 2007; Jessner 2008b). In fact, *transfer* refers to 'more than a one-way relationship between the first and second language […] consisting of multiple directional relationships between multiple languages' (Cook, 2016b, n. p.). Introduced by Kellerman and Sharwood-Smith in 1986 as a neutral term to counter the negative connotation associated with interference, *cross-linguistic influence* describes 'the interplay between earlier and later acquired languages' (cited in Cook, 2016b, n. p.). As for *cross-language transfer*, it has to do with 'conditions that allow learning that takes place in one language to enhance learning in the other languages (Perkins & Salomon, 1992)' (Chung *et al.*, 2018, p. 149). Herdina and Jessner (2002) have opted for *cross-linguistic interaction* which goes beyond Kellerman and Sharwood Smith's crosslinguistic influence to include 'not only transfer and interference, but also codeswitching and borrowing' (Jessner, 2008b, p. 275). Cenoz and Gorter (2011) argue, for their part, that transfer, codemixing, and codeswitching processes should be represented as different positions along a continuum rather than be considered as distinct processes.

What is pertinent to my study is the light that cross-linguistic interaction, also known as the M(ultilingualism) factor (Herdina and Jesser, 2002; Jessner, 2008b), has shed on the development of the following reading competencies: phonological awareness (syllable, onset-rime and phoneme), morphological awareness and orthographic processing, vocabulary and reading comprehension (performance and strategies).

Different cross-language transfer frameworks have been developed over the last 50 years and have contributed to a better understanding of the phenomenon in terms of 'what transfer is, what transfers or is transferrable, when and how transfer happens, and how transferred competence becomes functional in reading development in a target language' (Zhang *et al.*, 2017, p. 397). Some of these are Lado's contrastive-typological framework (1964), Cummins' linguistic interdependence framework (1979), Geva and Ryan's common underlying cognitive process (1993) and Koda's transfer facilitation model (2008).

The **contrastive-typological framework** inscribes itself in the behaviourist theory of learning, whereby positive transfer happens when linguistic features are transferable from L1 to L2, and negative transfer or interference is said to occur from L1 when the two languages do not share linguistic structures. As for the **linguistic interdependence framework**, Cummins (2005a, p. 3) posits that there is a common underlying proficiency across languages which enables 'the transfer of cognitive/academic or literacy-related proficiency from one language to another,' provided that L1 has been sufficiently developed to be transferable to L2. What is interesting in Cummins' framework is the light that it has shed on transfer in reading comprehension tasks. In fact, according to Genesee *et al.* (2006), the interdependence hypothesis helps to clarify

> 'procedural' knowledge that is essential for cognitively demanding academic tasks, such as defining the meaning of words, and the application of metacognitive and comprehension monitoring strategies. However, this hypothesis is not adequate for identifying specific skills or abilities that are transferred (cited in Chung *et al.*, 2018, p. 150).

The **common underlying cognitive process** claims that there are shared cognitive processes (such as working memory, phonological awareness, and rapid automatised naming) between L1 and L2, which are not transferable as such, but are common to both languages when processing fluent word reading for instance. Thus, Chung *et al.* (2018) explain how learners who encounter reading difficulties in one orthography may encounter reading difficulties in another orthography. As for the **transfer facilitation model**, it focuses on metalinguistic knowledge (such as phonemic awareness, and morphological awareness for example) that is transferable, and which may thus contribute to developing reading competencies in another language. However, this may not be applicable in the case of simultaneous bilingualism as according to Koda's criteria, 'young L2 learners who are developing L1 and L2 simultaneously may not possess L1 metalinguistic skills that are readily available to transfer in L2 learning' (Chung *et al*., 2018, p. 151). Furthermore, Zhang *et al.* (2017) underline that the developmental mechanism of transfer in Koda's model is not clearly spelled out.

However, the four models all present some limitations for my study, the main one being that they tend to focus mainly on transfer from L1 to L2, with competencies in L1 acquired first, which is not necessarily the case in the Mauritian context. In fact, Tirvassen (2012, p. 7) argues how in Mauritian schools, 'paradoxically, it is in the most foreign language (English)

that concepts are the most secured, and it is in the L1 (Creole) that there is most confusion'[40]. According to Odlin (1989, cited in Djigunović, 2010), there is no comprehensible theory of cross-linguistic influence that exists yet, given the diversity in evidence available so far and persisting issues despite the abundance of studies carried out over the years.

My study therefore aims at bridging some gaps in literature on cross-linguistic transfer. In fact, except for TLA which is 'still in its infancy' (Cenoz *et al.*, 2001, p. 2), few studies have examined transfer when more than two languages are involved. Secondly, research has mostly focused on transfer of phonological awareness while 'other constructs, such as orthographic processing and reading comprehension strategies, are less understood' (Chung *et al.*, 2018, p. 158). My study focuses on transfer of **vocabulary**, which is essential to meaning making of texts. One example is the impact of cognate awareness on enhancing reading comprehension and how it may help to infer meaning of unknown words in another language. My study also enquires into transfer of **reading comprehension strategies** which refer to

> deliberate actions readers use to monitor and repair breakdowns in comprehension (O'Malley & Chamot, 1990). These strategies include use of background knowledge, inference making, comprehension monitoring, and question generation (Chung *et al.*, 2018, p. 155).

Moreover, it would be interesting to study the directionality of transfer. Indeed, Zhang *et al.* (2017, p. 398) claim that transfer tends to be 'unidirectional from the stronger to the weaker language, but in view of the diverse contexts of L2 or bilingual reading, the issue could be more nuanced and complex'. Furthermore, Reyes *et al.* (2012, p. 312) put forth that research should concentrate on '[w]hat transfers and how the transfer can support biliteracy development are among the questions that still need to be explored'. My study therefore aims to unveil insights into how the multilingual child may tap into the different languages of his/her repertoire to facilitate understanding of unfamiliar words and further develop his/her reading comprehension skills.

Some of the factors underlying the use of cross-linguistic transfer which I consider to be most pertinent for my study are discussed below. They are psychotypology or language distance, the foreign language effect, and recency.

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[40] My translation of '*Paradoxalement, c'est dans la langue la plus étrangère (l'anglais) que les concepts sont les plus stabilisés, et dans la L1 (créole) que règne le plus de confusion*'.

Białystok *et al.* (2005) have drawn the correlation between the degree of similarity between language and the potential for transfer of literacy knowledge. The lesser the linguistic distance or what Kellerman's (1983) calls 'psychotypology' (which refers to languages viewed as typologically closer), the more learners would tend to transfer vocabulary and structures. With regard to L3 reading for understanding, Ringbom (2001) explains that lexical transfer is based either on L1 or L2 cues, and that the choice of L2-based cues is usually psychotypological. However, Cenoz (2001) concurs with previous research that it is not so much the *objective* linguistic distance but rather the *perception* of linguistic distance and 'transferability' that impact on cross-linguistic transfer. Indeed, the degree of similarity between Mauritian Kreol and French (which is mostly phonological and lexical) is often put forward while the syntactic closeness between Mauritian Kreol and English tends to be ignored.

A second factor is what Meisel (1983) calls the 'foreign language effect' or L2 status, whereby learners use 'the L2 or languages other than the L1 as the source language of cross-linguistic influence' (Cenoz, 2001, p. 9). As for 'recency' (Hammarberg, 2001), it is another factor that seems to echo with Aronin's DLC (discussed later in this subpart), whereby a learner would be more prone to borrow from a language s/he currently uses than from languages s/he may know but does not use. The constant selection and de-selection reflect the proactive activation and deactivation of languages in the multilingual's mind (Dewaele, 2001) in accordance with Grosjean's (1997) model of language mode continuum.

(b) Metalinguistic awareness

Defined as 'a set of skills or abilities that the multilingual user develops owing to her/his prior linguistic and metacognitive knowledge' (Jessner, 2008b, p. 275), metalinguistic awareness is one manifestation of multi-competence. As a multilingual's potential asset, it encompasses learning strategies as well as representations about languages and their speakers (Bono and Stratilaki, 2009). Metalinguistic awareness also involves metacognitive knowledge, as it 'turns the attention of the language apprentice towards the language(s) she/he is concerned with and towards him/herself as a language learner and language user' (Aronin and Singleton, 2012, p. 315). Cummins (2000, p. 195) thus points out the importance of drawing children's attention on similarities and differences between languages learnt to enable them to 'transform their spontaneous use and experience of two languages into a more conscious and 'scientific' awareness of their linguistic operations' and hence develop their metalinguistic awareness.

Edwards (2009, p. 90) also argues how Pakistani children's experience of learning to read and write in three languages (namely English in the mainstream classroom, Urdu in a lunchtime class and Arabic in after-school Qu'rānic classes), has enabled them to see literacies as systems: 'Far from perceiving these differences as confusing, they serve as a catalyst for thinking more deeply about reading and writing'. Similarly, Corcoll (2013, p. 33) demonstrated how engaging pupils in a language activity involving three languages by bringing their L1s (Catalan and Spanish) into the English class encouraged them to

> start thinking about and questioning some of the characteristics of the three languages they had at hand. And, most importantly, this happened spontaneously. They were not told to start thinking about the language: they just did it because they found themselves facing three languages at once.

Many researchers (Bialystok, 2002; Li Wei, 2016a; Zhang *et al.*, 2017) further recall how metalinguistic insights underlie reading acquisition. In fact, as Zhang *et al.* (2017, p. 395) explain: 'Because print encodes spoken language, the ability to reflect on and manipulate different linguistic units or metalinguistic awareness plays a critical role in learning to read (Adams, 1990; Perfetti, 2003)'. However, it seems that most research carried out so far on transfer of metalinguistic awareness has focused on beginning L2 biliteracy learners.

Bialystok (1987) differentiates between two components of metalinguistic awareness, namely analysis of knowledge (whereby one is able to explicit linguistic knowledge), and control of processes (whereby one exerts control on linguistic processes through intentional selection and application of linguistic knowledge), further claiming that bilingualism tends to impact positively on the second skill. Metalinguistic awareness may be studied from its different facets, i.e., phonological, syntactic, and morphological awareness. Metalinguistic awareness may also be linked to translation (Jessner, 2008b; Corcoll, 2013).

Given that existing tools to measure metalinguistic skills are debatable (Rutgers and Evans, 2017), I have decided to use verbal report from my participants to capture manifestations of metalinguistic awareness in tackling reading activities. In fact, my research does not aim at evaluating the impact of metalinguistic awareness as a transferable skill, but it rather focuses on how multilinguals use metalinguistic knowledge, as well as on the direction in which transfer facilitation occurs. Furthermore, my approach resonates with Jessner (2008a) who

points out that so far, studies have used introspective methodology to verbalise metalinguistic processes.

Language dominance and lexical access

Lexical access forms an important part of the act of reading, whereby the reader corresponds 'incoming orthographic information of a given word with the words he/she knows, stored as abstract form representations in an entity called the mental lexicon' (Aparicio and Lavaur, 2014, p. 164), which also includes lexical traits like orthography, phonology, semantics, and other language information. Research regarding lexical access involving multilinguals has raised issues of language interference (e.g., Font and Lavaur, 2004; Lemhöfer *et al.*, 2004), which somewhat reflects a monolingual perspective. It also puts forth that word recognition may be determined by bilinguals' proficiency, frequency of language use and age of acquisition (Midgley, Holcomb and Grainger, 2009). Manifestations of language dominance mostly in L1 or L2 have been noted, given that languages are arranged in multilinguals' memory in a hierarchical way and the dominant language is more easily triggered as compared to other languages (Aparicio and Lavaur, 2014).

Language dominance in multilingual research has to do with multilinguals' language choice and use. Mackey (1962, cited in Grosjean, 2016) makes an interesting distinction between *external functions* (i.e., language use in different situations and domains) and *internal functions* (i.e., non-communicative language use like praying and dreaming for instance). Dodson (1981, cited in Grosjean, 2016) uses the terms 'preferred language' and 'a second language' between which multilinguals may navigate according to their various daily experiences. The two statuses may alternate according to the situation or may be used at the same time. However, this is not the case in diglossic situations where 'two languages or varieties of a language have such precise and distinct functions that the bilingual speaker has little leeway in deciding which languages to use' (Grosjean, 2016, p. 67).

In his seminal paper, Grosjean (2010, p. 21) posited the importance of considering 'the bilingual's *differential needs* for the two languages or the *different social functions* of these languages (what a language is used for, with whom and where)'. Moreover, according to Grosjean's complementary principle (1997, p. 165), bilinguals use different languages 'for different purposes, in different domains of life, with different people', which may explain

why, for instance, some multilinguals are able to read in only one of the languages of their repertoire. One of my reading activities specifically examines language dominance effects in lexical decision making by participants in identifying words that may exist in the three main languages in Mauritius, pseudo-words and words which are specific to a given language.

Dominant Language Constellation (DLC)

While engaging with literature on language dominance, I found Aronin's (2016) Dominant Language Constellation (DLC) to be most useful to better understand how multilinguals use languages in their everyday life (and by extension for reading which is the focus of this research). In line with Grosjean's complementary principle, Aronin's DLC focuses only on those languages inside one's language repertoire (typically three) that will enable the multilingual to meet all his/her needs in a multilingual setting. The DLC is a constellation of languages further layered by languages of the language repertoire as follows:

> the relationships between the languages of multi-competence form an inner constellation of languages in active use, surrounded by a repertoire of other languages the person knows but does not currently use, surrounded in turn by languages the person is merely aware of to some degree' (Aronin and Singleton, 2012, cited in Cook, 2016b, n. p.).

In other words, the language repertoire refers to 'our linguistic assets, all 'what we have' in terms of language skills', while the DLC describes 'the way we use these language assets and describes 'what we actually do' with our languages' (Aronin, 2019, p. 240).

Two other criteria that make up the languages of a DLC are 'authentic communication' and 'reasonable immediacy', i.e., the languages should be easily available for immediate response so as not to break the communication flow, but they do not need to be fully mastered. So, if I were to use my own experience as a multilingual to illustrate the difference between a language repertoire and a DLC, I would say that my DLC comprises English, French and Mauritian Kreol, whereas my linguistic repertoire also includes Hakka over and above the three languages of my DLC. However, back when I was a student in France, my DLC consisted only of French and Mauritian Kreol while my linguistic repertoire also comprised English and Hakka, meaning that the DLC is not a fixed linguistic mapping but evolves following 'external social change and […] internal subjective motivations and changed circumstances and needs' (Lo Bianco and Aronin, 2020, p. 6).

The DLC, in fact, highlights the dynamic language interactions in a multilingual, where some languages are more activated, and others remain inactive as per the varying needs of the latter. It also acknowledges that some people may 'passively possess a limited knowledge of several languages, i.e., some words and expressions from unstudied languages, or the ability to comprehend without the ability to write' (Aronin and Ó Laoire, 2004, p. 20). I find the DLC's features particularly useful in multilingual contexts where a multilingual may find it difficult to describe his/her language competencies chronologically, as skills may change over time while languages may also vary in the language repertoire (Hufeisen, 2000, cited in Herdina and Jessner, 2002).

Given that 'each particular DLC is a representative form of one's multi-competence' (Aronin, 2016, p. 155) as well as of 'attitudes and emotions towards the languages, the timings of their use, the order and reasons of their use' (Aronin, 2019, p. 242), this study will use the DLC mappings for insights regarding the impact of language dominance on lexical access decisions in multilinguals' concurrent reading acquisition in two or more languages.

The DLC has been used in language teaching and learning involving minor/majority/heritage languages (e.g., Aronin, 2018, 2019), for reflecting on language-in-education policies (e.g., Coetzee-Van Rooy, 2018), etc. A list of growing current research using DLC may be found in Aronin and Vetter (2021, pp. 26-30). The editors, in fact, highlight the pioneering nature of studies using DLC to investigate educational topics: 'Each of them has unpacked a specific line of inquiry that opens the way for further studies in the areas of applied linguistics, linguistics, social studies, and educational policy' (Aronin and Vetter, 2021, p. 26). Interestingly, studies using DLC as a tool have not so far focused on concurrent reading acquisition among multilingual children in two or more languages. There has been a study on the impact of extensive reading on learning a new language by two multilingual adults (Krulatz and Duggan, 2018), one on crosslinguistic influence during a production task in L3 English using quantitative research design (Krevelj, 2021) and another one about cognate vocabulary between L1-L2-Ln being used as affordances in learning a foreign language (Otwinowska-Kasztelanic, 2011). However, their focus is not the same as my research topic.

Translanguaging as a reading strategy

Translanguaging, in its original use by Cen Williams (1994), refers to pupils hearing a lesson or reading a passage in one language (English for example) and producing their work in another language (in Welsh for example). In Williams' work, translanguaging as pedagogy is

> essentially about developing full biliteracy with no curriculum separation in literacy learning outcomes […]. Translanguaging thus partly assumes equality in literacy usage and smooth transitions between two literacies, with usage and practice available in either (Baker, 2003, p. 84).

However, Baker argues that Williams' understanding of translanguaging does not take into consideration politics of languages and power, one of the points of the continua of biliteracy. In fact, biliteracy often takes place in contexts of unequal power relations, marginalised literacies or where the latter are specialised by functions (Hornberger, 2003b), as is the case in Mauritius.

Other researchers (e.g., García, 2009; Blackledge and Creese, 2010; Canagarajah, 2011a, 2011b; Hornberger and Link, 2012a, García and Li Wei, 2014) have extended the term to refer to 'the flexible use of linguistic resources by bilinguals in order to make sense of their worlds' (García and Leiva, 2014, p. 200). The term has been explored profusely in different fields of study under different appellations as listed by Canagarajah in his 2011b paper.

While the concept of 'languaging' focuses on dynamic language practices from the perspective of the users, the prefix 'trans' highlights how the latter goes beyond socially accepted language systems (Li Wei, 2016b). This definition of translanguaging further posits that multilinguals only have one linguistic repertoire or unitary linguistic system (García and Otheguy, 2020), as opposed to code-switching, which presumes that the repertoire is made up of separate language systems between which multilinguals shift to communicate. Nevertheless, Reyes *et al.* (2012, p. 319) claim that code-switching is one of the biliteracy processes used to 'process information across and between languages'. Lasagabaster and García (2014, p. 558) thus present translanguaging as a process through which multilinguals 'create meaning while shaping their experiences and increasing their knowledge by using their linguistic and semiotic repertoire without arbitrary separation'.

Translanguaging inscribes itself in a language ecology perspective as it outlines the interdependence between skills and knowledge among languages (Creese and Blackledge, 2010). Although translanguaging studies have mainly focused on content meaning making, while research on its impact on biliteracy development has been lagging (Canagarajah, 2011a; García and Kleifgen, 2019; Wagner, 2020), existing research has shown how encouraging multilinguals to navigate in translanguaging spaces may enhance their reading skills and identities.

Indeed, García and Kleifgen's (2019) study using a translanguaging literacies framework demonstrates how translanguaging enables multilingual students to better understand written texts, as well as develop their metalinguistic awareness. The latter is, in fact, boosted with strategies like translation and cross-linguistic study of the students' bilingual practices (e.g., syntax, vocabulary, word choice, cognates, and discourse structure). Similarly, in their pedagogical guide on translanguaging, Celic and Seltzer (2011) explain how multilingual students are encouraged to use all their languages to respond to what they are reading, as well as multilingual resources such as the teacher's daily notes in both the taught language and their home language for example. Translanguaging has also been found to be beneficial for inference-making skills in reading by giving learners opportunities to express and share ideas 'using a tapestry of vocabulary in their entire linguistic repertoire' (Mgijima and Makalela, 2016, p. 89) and thus build their understanding of a given text. Furthermore, translanguaging supports what García *et al.* (2007) call 'pluriliteracy practices', whereby a person involved in reading may explore different literacy practices to make out the meaning of a text. Pluriliteracy practices encourage multilingual pupils to 'develop the agency to use their entire language repertoire to make meaning, regardless of the language of the text or the language of instruction' (García, 2014a, p. 155).

Some researchers (e.g., García and Kano, 2014; Velasco and García, 2014) moreover argue that translanguaging facilitates self-regulation in learning by using metalinguistic and metacognitive awareness as multilinguals reflect on their linguistic behaviour. Hornberger and Link (2012a and 2012b) also advocate the use of both translanguaging and transnational literacies in multilingual classrooms, whereby teachers and pupils draw on more than one language or literacy as well as on their different varieties (vernacular, formal, academic etc.). These dynamic language practices reflect what Blommaert (2010) calls language-in-motion as opposed to language-in-place. However, Canagarajah (2011b) cautions that while teaching

students to translanguage in literacy, they should also be invited to review their perception regarding texts and the reading activity, as assumptions of autonomous literacy will not enable them to acknowledge and use multilingual strategies.

Local researchers in Mauritius have also recently taken an interest in the phenomenon, comprising of a first theoretical paper discussing the potential of translanguaging in the Mauritian classroom (Jean-François and Mahadeo-Doorgakant, 2013), and a linguistic ethnographic study of the development of the linguistic repertoire of Mauritian primary school learners (Mahadeo Doorgakant, 2017). As discussed in Part 2.4 regarding the separate underlying model of the Mauritian multilingual system, both studies acknowledge the difficulties of setting up a translanguaging pedagogy in the Mauritian context. Mahadeo-Doorgakant (2017, p. 236) further argues in her doctoral study how

> multilingual learners step into the multilingual educational system with a rich flexible linguistic repertoire which is shaped by the environment in which they inhabit and that the multilingual educational system rigidly processes that repertoire so that it is separated into a number of languages which are taught within the system.

In fact, García (2014a, p. 151) deplores how educational programs and policy tend to deny 'bilingual students their dynamic bilingualism, their translanguaging practices, and their language and literacy multicompetencies'. Though considered objectionable as pedagogy, translanguaging is proliferating in the Mauritian public landscape (refer to Appendix 1 for examples of two posters for the COVID-19 and plastic ban sensitisation campaigns using translanguaging).

2.6. Conclusion

Chapter 2 has demonstrated how the reviewed literature in the fields of multilingualism and biliteracy has informed my choice of the continua of biliteracy framework in the multilingual context of Mauritius with its complexity and particularities.

Notwithstanding the availability of research findings and endeavours in some policy documents in Mauritius, there is still a misunderstanding of what multilingual education and biliteracy englobe and how to better exploit these. There is also a tendency to evade the issue by making as if (i) it is already being addressed in our education system and (ii) the language

issue is a no-issue, which is clearly not the case. By excluding languages that would support multilingual children's biliteracy development, schools reproduce educational inequalities (Conteh and Meier, 2014; Souto-Manning, 2016) and create a 'silent exclusion' (Chisholm, 2011, cited in Prosper and Nomlomo, 2016). However, by shedding light on the power relations which underline biliteracy development in many contexts, the continua of biliteracy model contests social inequalities of language (Hornberger, 2000; Hornberger and Link, 2012a).

Based on literature reviewed in this chapter, this study aims to discern how multilingual children use their potential cross-linguistic reservoir of abilities and their multi-competence when learning to read in at least two languages concurrently. My study also intends to explore factors that may impact on their biliteracy development. My research thus aims to take heed of the voices which, for long, have not been attended to. In so doing, it seeks to contribute to the field and help stop the squandering of multilingual resources at school.

Chapter 3. Methodology

3.1. Introduction

Chapter 3 outlines and discusses choices made during the process of carrying out this qualitative empirical study as well as the researcher's positioning. My choice of methodology stems from the way I construe reality, knowledge and the way knowledge is produced, which in turn influences my other decisions concerning the research design and data analysis methods.

The methodology chapter describes the planning and process that will enable this study to address its research questions, namely:

- How do multilingual children draw from their cross-linguistic reservoir of abilities in learning to read in two or more languages concurrently?
- What are the factors that impact on their learning to read in two or more languages concurrently?

3.2. Ontological and epistemological positioning

Part 3.2 presents the ontological and epistemological positioning that guides this study's methodology and analysis. Deciding on the paradigm through which to examine a particular phenomenon is crucial as its set of assumptions, assertions, beliefs and constructs will impact on research methods, data analysis and findings (Grix, 2002; Stephens, 2009; Silverman, 2013).

Ontology and epistemology are valuable for understanding the world and for situating oneself in this world as a researcher. The stance taken varies according to the kind of data and the field of research the researcher is interested in. My researcher's positioning originates from my assumption that knowledge obtained through talking to people (multilingual children here) is subjective, as they bring meaning to their world and thus construct realities which are socially and experientially based (Punch, 2009). For this study, I therefore situate myself as a **relativist ontologically** whereby reality is perceived as 'multiple, intangible mental constructions [...], and dependent for their form and content on the individual persons' (Guba

and Lincoln, 1994, p. 110) as I investigate children's perspective on their learning reading experiences. I also position myself as an **anti-positivist epistemologically**. In fact, I do not only believe that there are multiple ways of understanding and viewing the world and therefore of acquiring knowledge (Silverman, 2013) but that knowledge is created in the interactions between the researcher and the participants (Guba and Lincoln, 1994). As further discussed in Part 3.4, the children-participants are viewed as co-creators of knowledge in the present research.

My choice of the **interpretivist paradigm** involves carrying out a qualitative research to explore how individuals make sense of the world around them and their experiences (Merriam, 1998; Creswell, 2009), namely how multilingual children use affordances in a multilingual context in their concurrent reading acquisition of two or more languages. Indeed, what is interesting with interpretivist research is that it contributes to knowledge by

> describing and interpreting the phenomena of the world in attempts to get shared meanings with others. Interpretation is a search for deep perspectives on particular events and for theoretical insights (Bassey, 1999, p. 44).

Eisner (1991, cited in Harland, 2014) furthermore highlights the importance to learn from the experiences of others.

As a researcher, I am aware that my interpretation is not only guided by the meaning that the participants give to their experiences, but it is also shaped by my own assumptions, background and experiences (Creswell, 2009; Corbin Dwyer and Buckle, 2009), given that all data will get mediated through my subjectivity. Qualitative approach is indeed subjective both because it investigates 'data that are open to various interpretations' but also because 'each inquirer's experience can provide a different understanding' (Harland, 2014, p. 1115). However, in order to ensure reliability and validity in qualitative research, the researcher has recourse to rigour and triangulation in the way data are collected and analysed as explained further in Parts 3.7 and 3.8. This study, in fact, uses data source and methodological triangulations, as well as intra and inter-codings.

I also need to be aware of my insider researcher position during data collection and analysis. I consider myself as an insider researcher being a multilingual with my own concurrent reading acquisition in two languages and my own assumptions regarding issues of multilingual literacy development in my role as a teacher educator and curriculum developer.

However, Merriam (1998, p. 6) rightly puts forth not to lose sight that 'the key concern is understanding the phenomenon of interest from the participants' perspectives, not the researcher's', which is multilingual children for this study.

Bassey (1999, p. 43) further cautions about interpretive researchers being 'potential variables' in the study as 'by asking questions or by observing they may change the situation which they are studying'. I have indeed experienced the interviewer effect (Kerwin and Ordaz Reynoso, 2021, Leone *et al*., 2021), which may have influenced some exchange with my participants especially at the beginning of my data collection as discussed in Part 3.7.

3.3. Case study approach

Part 3.3 discusses the appropriateness of a case study approach for this research as part of the interpretivist paradigm and qualitative approach outlined above.

I undertook a case study as the exploration of a particular case is 'essentially interpretive, on trying to elicit what different actors seem to be doing and think is happening, in trying to analyse and interpret the data collected' (Bassey, 1999, p. 44). Case studies' strength 'lies in their attention to the subtlety and complexity of the case' (Adelman *et al.*, 1980, cited in Bassey, 1999, p. 23) and in their attention to data at micro level (Zaidah, 2007).

The case for my study is the multilingual child who is learning to read in two or more languages concurrently. What makes the above a case is its particularity and complexity (Stake, 1995) that I would like to untangle and better understand in given circumstances, i.e., the multilingual context of Mauritius.

Case study methodology, indeed, helps to better understand intricate social phenomena as its purpose is to observe, probe deeply and analyse intensively

> the multifarious phenomena that constitute the life cycle of the unit [a child, a clique, a class, a school or a community] with a view to establishing generalisations about the wider population to which that unit belongs (Cohen and Manion, 1989, pp. 124-5; cited in Bassey, 1999, p. 24).

Although generalisation based on a small sample is often viewed as a limitation in case study research, Eisner (1991) explains that the transfer from the singular to the general takes place through 'a critical process of engagement as ideas appear to the reader; ideas that allow past experiences to be seen in a new light. Cases, therefore, provide an opportunity for generalisation' (cited in Harland, 2014, p. 1116). However, it is good to note that interpretivist researchers tend to focus on gaining deeper insights into the complexity of a phenomenon in a specific context rather than on generalisation (Creswell, 2007). In the same line of thinking, this study's sample does not aim at providing a typical generalisation whereby every child with similar backgrounds may respond the same way. Rather, the sampled children serve as illustrations of the dynamic profiles of multilingual children and their learning reading experiences. Indeed, the eleven cases included in my sample (as discussed in Part 3.5) capture a range of language and socio-economic profiles which offer rich insights into concurrent biliteracy development. Emphasising the power of example in case study, Flyvbjerg (2006) explains that formal generalisation is not the only legitimate way to generalise knowledge, but that 'case study is well suited for identifying 'black swans' because of its in-depth approach: What appears to be 'white' often turns out on close examination to be 'black'' (p. 228).

Bassey (1999, p. 46) further explains about fuzzy generalisation which refers to some kind of prediction 'arising from empirical enquiry, that says that something *may* happen, but without any measure of its probability. It is a qualified generalisation, carrying the idea of possibility but no certainty'. Analysis of data collected with my participants hence serves as basis for fuzzy generalisation of how multilingual children may tap into their cross-linguistic abilities in learning to read in two or more languages concurrently.

There are two main epistemological strands for case study research. Stake (1995) and Merriam (1998) situate themselves in the socio-constructivist and interpretivist paradigm while Yin (2003, 2009) inscribes himself more in the post-positivist paradigm. Opting for Stake and Merriam's understanding of case study has been prompted by the researcher's positioning in the interpretivist paradigm for this study. This research moreover follows Stake's understanding of instrumental case study. The instrumental case study usually stems from 'a research question, a puzzlement, a need for general understanding, and feel that we may get insight into the question by studying a particular case' (Stake, 1995, p. 3) which is

the multilingual child learning to read simultaneously in two or more languages, in order to try to understand an outside concern, i.e., biliteracy development.

According to Stake (1995), the case study is developed as part of dynamic interactions between the researcher and the researched. This interactional aspect of the rapport that has been established between the researcher and the researched, came out strongly during my data collection phase as revealed by memoing annotations such as 'With my help (s)he managed to… When I prompted further, (s)he…'. Empathetic interactions are important in research with children as this helps to create a safe space for them as further outlined in Part 3.4.

As part of a qualitative approach, a case study privileges an inductive research strategy that 'builds abstractions, concepts, hypotheses, or theories rather than tests existing theory' (Merriam, 1998, p. 7). Interestingly, as Stake argues (1981, p. 47, cited in Merriam, 1998, p. 30), case studies sometimes witness the emergence of 'unknown relationships and variables […] leading to a rethinking of the phenomenon being studied', and hence help to better understand 'how things get to be the way they are'.

Many researchers (Merriam, 1998; Gilham, 2000; Flyvbjerg, 2006; Zaidah, 2007) highlight the importance of context for case study research, which has motivated my choice for this approach. In fact, biliteracy being a situated practice as discussed in my literature review, it calls for an emic approach. Yin (2013, p. 321) further argues that a case study 'should not be limited to the case in isolation but should examine the likely interaction between the case and its context'. This is in line with my conceptual framework, namely the continua of biliteracy framework which stipulates that literacy skills do not develop in an isolated way as 'what (content) biliterate learners and users read and write is as important as how (development), where and when (context), or by what means (media) they do so' (Hornberger and Link, 2012a, p. 268). Moreover, Sanders (1981, cited in Merriam, 1998) puts forth that case studies enable researchers to uncover context characteristics to help them better understand an issue or object.

Case study as qualitative research is concerned with the outcome as process rather than product and the analysis of data tends to focus on participants' perspectives, whereby researchers often find themselves

> listening to the participants that we [researchers] are studying and shaping the questions after we 'explore' […]. Our questions change during the process of research to reflect an increased understanding of the problem (Creswell, 1998, p. 15).

Listening to participants which is part of the case study's process suits research involving children as participants, given that the data collection methods used tend to provide them opportunities to express themselves, and therefore privilege their voice and meaning-making experiences. Stake (1995, p. 64) further adds that a case study serves principally to 'obtain the descriptions and interpretations of others'.

I also believe case study to be most appropriate for my research as this methodology is often considered as 'a step to action' (Adelman *et al.*, 1980; cited in Bassey, 1999, p. 23) in educational research whereby findings may be used to inform policymakers, practitioners, and further research. I finally adhere to Merriam's (1998, pp. 31-32) below definition of case study knowledge as:

> More concrete – case study knowledge resonates with our own experience because it is more vivid, concreted, and sensory than abstract.
>
> More contextual – our experiences are rooted in context, as is knowledge in case studies. This knowledge is distinguishable from the abstract, formal knowledge derived from other research designs.
>
> More developed by reader interpretation – readers bring to a case study their own experience and understanding, which lead to generalisations when new data for the case are added to old data.

The above summarises perfectly the reasons for using the case study approach to carry out this research.

Multiple case design

I have opted for a multiple-case design as opposed to a single-case design as my eleven selected cases present different facets of the multilingual child with their different language experiences. The variety in the profiles contributes to capturing multilingualism as a type of progress along a continuum (Grosjean, 1985). My sample has been constructed (refer to Part 3.5) to 'predict similar results (direct replications) or to predict contrasting results but for anticipatable reasons (theoretical replications)' (Yin, 2012, p. 8). Zaydah (2007, p. 2) also adds that 'multiple-case design enhances and supports the previous results. This helps raise

the level of confidence in the robustness of the method.' Hence, the reading activities as well as the interviews have been replicated with all participants.

Other biliteracy research (e.g., Gort, 2006) has also opted for the multiple case study design, arguing that it helps in particularising the findings by comparing them with other classroom contexts:

> In this way, the case study can provide rich insights about a specific situation and add nuance and subtlety to the perspective of theory. Thus, we may use the experiences of Lucy, Brian, Katherine, Jennifer, Jeremy, Steven, Jose, and Barbara as a starting point for discussion of how to benefit most fully and effectively from knowledge about the individual and collective writing processes of young, developing bilinguals (Gort, 2006, p. 349).

3.4. Exploring children's voice in qualitative research

Having laid down the methodological framework for this empirical qualitative study, Part 3.4 examines the role of children as co-creators of knowledge in qualitative research.

Research with children tends to present them as informants instead of collaborators although Tisdall (2017) claims that 'co-production may be the most promising, meaningful, and sustainable way to ensure children's views get accounted for beyond mere tokenism' (cited in Little and Little, 2021, p. 7). Yet, as McTavish *et al.* (2012, p. 252) argue, the notion of children as 'meaning makers, who utilise a range of communicative practices to make sense of their worlds, is embedded within the current shift in thinking about literacy', namely from an autonomous model of literacy to literacy viewed as a social practice and multimodal as discussed in Part 2.3. Schnoor (2012, p. 469, emphasis is mine) concludes his study about the social practices of considering children's voice as an 'alternative to research *on* children [which] seems to me only in some aspects research *with* children'.

Participation in co-research refers to 'the involvement of all individuals and groups who are directly and indirectly affected by the research activities and its outcomes' (Paganini and Stöber, 2021, p. 445), as is the case also for my research involving multilingual children. How to ensure that children's voice is taken on board as co-creators of knowledge in that case?

As put forth by Paganini and Stöber (2021, p. 446), co-creation of knowledge is a way of 'responding to and respecting the call of the 'researched' for mutual participation in knowledge creation and addresses the power academia holds'. This study is clearly concerned with **what children have to say and why** with regard to how they use their multilingual abilities and explore multilingual strategies when learning to read in two or more languages concurrently, and **not simply observing what they are doing**. The sharing of information is not limited to simply stating (the 'what') but also interpreting and reflecting (the 'why') on the children's part as the researcher invites them to clarify and justify strategies used, difficulties encountered, etc. Hill (2006, p. 74), in fact, argues that one of the limits noted in research involving children is that 'literature refers to children having been asked *what* they like or prefer, but does not indicate *why* they have these preferences'. Similarly, Rughoonundun and Jean-François (2013) acknowledge that a significant limitation to their study lies in the fact that their participants (Grade 1 children) were not given the opportunity to comment on strategies used when decoding the same words/noun phrase/short sentence in three languages.

Indeed, two voices may be heard in this study, namely that of the participants sharing information while trying to make sense of it, and that of the researcher making sense of the shared information. Indeed, I have two levels of data regarding multilingual strategies and cross-linguistic abilities that **participants say they are using** and what **the researcher has observed the participants use**. I therefore opted to present my data for the reading activities in such as a way that we can both see how the participants are tackling the activities and the researcher's comments through the use of analytic memos (refer to Appendix 8i for an example). This presentation serves to mitigate concerns about privileging what has been verbalised by the participants (the 'voiced') over 'the undomesticated voice/ the non-normative voice' (Mazzei, 2009, cited in Spyrou, 2011, p. 157) that focuses on 'what the child does not respond to, omits or ignores – the silent and the unsayable – might tell us more about the child's voice and perspective than what she actually verbalises'.

The main challenge in research involving children, as argued by Hill (2002, cited in McTavish *et al.*, 2012, p. 251) and experienced by the researcher in this study, is 'how best to enable children to express their views to an adult researcher'. The issue is not that children do not have much to say but rather, they often are not sure how much they know and what they can share on the subject. Indeed, my participants were not used to be asked their views with regard

to their learning reading experiences for instance. To mitigate this issue, I used prompts to encourage them to communicate their views. This indeed revealed interesting information about how the participants tackle their concurrent reading acquisition as well as view their status as biliterates for instance.

3.5. Sample and sampling strategy

After discussing the methodological lens through which this study has been carried out, Part 3.5 describes the sampling criteria that determine the selection of my sample. As Punch (2009, p. 162) highlights, qualitative case study research usually includes 'identifying the case(s) and setting the boundaries, where we indicate the aspects to be studied, and constructing a sampling frame, where we focus on selection further'.

I used purposive sampling for the selection of my participants. Purposive sampling selects participants 'in a strategic way, so that those sampled are relevant to the research questions' (Bryman, 2016, p. 408) and thus depends on 'a set of operational criteria whereby candidates will be deemed qualified to serve as cases' (Yin, 2009, p. 91).

The choice of ten-year-old (Grade 5) pupils for my participants has been prompted by the fact that 'older children can have a more accurate perception of linguistic distance that could influence the source language they use when transferring terms from one of the languages they know' (Cenoz, 2001, pp. 9-10) to another language. Ouzoulias (2004) also comments that children of that age would have developed a greater awareness of strategies used and difficulties encountered in their learning reading process. The next potential choice would have been eleven-year-old pupils, but access would not have been granted as Grade 6 pupils are usually out of bounds for any research or projects as they have to take end of year primary examinations which determine their transition to secondary schools.

I elected to get my cases in a Grade 5 primary school classroom which would provide me with a formal structure where I could carry out lesson observations to get better insights into the multilingual children's abilities and strategies used in reading in at least two languages. Furthermore, I could use their Grade 4 end-of-year examinations performance to determine my sample, given that my study focuses on insights of efficient biliteracy strategies. Having my sample in a specific school provided a familiar venue for the participants to engage with

the reading activities and later on, the interviews. Since they all had the same class teacher and Mauritian Kreol teacher and headteacher, I was able to get the latter's insights too, which was useful for triangulation of data. Convenience sampling which is a nonrandom sampling strategy (Farrokhi, 2012) was used for the choice of the primary school, in terms of getting access and geographical proximity as the span of my fieldwork was over several months. Since the school applies the mixed abilities policy, this gave me access to learners with varied academic profiles within the same class.

Sampling in qualitative research is usually 'nonrandom, purposeful, and small, as opposed to the larger, more random sampling of quantitative research' (Merriam, 1998, p. 8). Although I had planned to have a small sample of six-eight participants to allow a margin markup of potential dropouts, my purposive sampling strategy as outlined below has led to the screening of eleven participants. There are four boys and seven girls who will henceforth be referred to using the following pseudonyms for anonymity purposes:

Boys	Alan	Ben	Eddy	Sean			
Girls	Amelia	Celia	Elsa	Kelly	Lily	Nessa	Sophie

Table 3

Since my study focuses on multilingual children learning to read in two or more languages concurrently, my set of criteria comprises their linguistic profile and reading lessons observations. Given that the research also intends to understand factors impacting on concurrent reading acquisition, studying Mauritian Kreol (considered to be the home language of most Mauritians as outlined in Chapter 1) or not, was added as one of the criteria. The set of criteria used in this study is summarised in Figure 6 and discussed below.

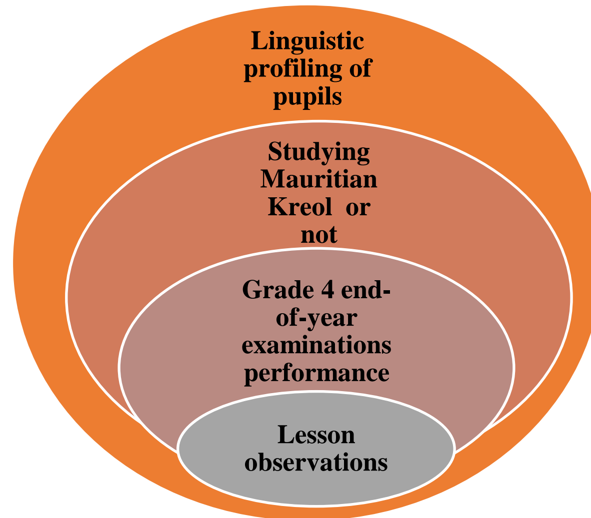

Figure 6

Lesson observations were geared towards getting insights into pupils' reading competencies during reading lessons in English and French, on which I based myself to work out my sample.

Comparing the results for **Grade 4 end-of-year written examinations for English and French** provided further insights for my sampling in terms of pupils' performance in the languages which have been chosen because literacy is first developed in these two as outlined in Chapter 1. Since my study focuses on insights of efficient reading strategies, I chose those pupils who obtained between grades 1-3 (Grade 1: >75 marks, grade 2: 60<75, grade 3: 50<60, grade 4: 40<50, grade 5: 30<40, grade 6: <30) as recapped in Table 4. I also included two pupils (Kelly and Sophie) for whom the large gap in their performance between French and English represented a potential area of interest for investigation. As Stake (1995, p. 4) points out: 'a 'typical' case works well but often an unusual case helps illustrate matters we overlook in typical cases'. Table 4 also contains the sampled pupils' performance in the optional languages (Mauritian Kreol and Hindi) for an overview of their performance across languages.

Grades and marks obtained at Grade 4 end-of-year examinations											
	Amelia	**Celia**	**Elsa**	**Kelly**	**Lily**	**Nessa**	**Sophie**	**Alan**	**Ben**	**Eddy**	**Sean**
English	1 (88.5)	2 (60)	2 (64.5)	1 (80)	2 (66)	2 (60)	5 (37.5)	3 (51.5)	2 (71.5)	3 (51.5)	1 (76.5)
French	1 (92.5)	1 (85.5)	1 (77.5)	4 (41)	1 (75)	2 (71)	1 (77)	2 (67.5)	1 (81.5)	1 (81.5)	1 (91)
Mauritian Kreol	1 (93)									2 (68)	
Hindi		3 (54)		2 (63)							1 (76.5)

Table 4

The sampled school's pupils tend to perform better in French than in English as well as in Mauritian Kreol, which tallies with the national performance in PSAC examinations at the end of primary for the last five years[41] as highlighted in Table 5.

PSAC results					
Subjects	**2021-2022**	**2020-2021**	**2019**	**2018**	**2017**
French	87.79%	83.17%	82.76%	82.12%	84.68%
English	85.37%	80.76%	78.06%	80.29%	83.20%
Mauritian Kreol	83.83%	80.74%	78.86%	77.87%	79.60%

Table 5

The third criterion was to have a mix of children who have opted for **Mauritian Kreol (MK) as an optional language** and those who have not, so as to better grasp the impact of L1 on the children's concurrent reading acquisition. Among the eleven participants, two (Amelia and Eddy) have opted for Mauritian Kreol. As for the other nine participants, six have not opted for any other optional languages (Alan, Ben, Elsa, Lily, Nessa and Sophie) while three have opted for Hindi (Sean, Celia and Kelly).

[41] No PSAC exams were held in 2020 because of school closure from 19 March to 30 June due to COVID-19 and national lockdown.

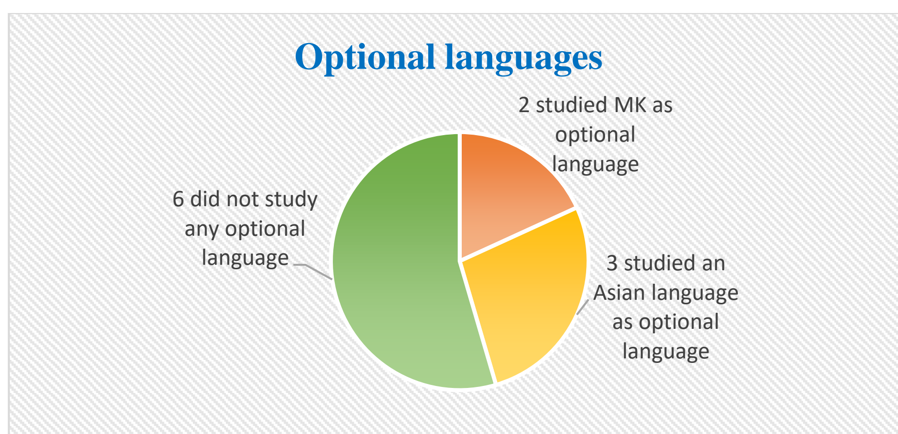

Figure 7

The number of children opting for Mauritian Kreol and Hindi in my sample (two versus three) seems to reflect current trends for optional languages, namely that Mauritian Kreol is the second most opted for subject after Hindi as per official figures provided on the MES website (refer to Table 6).

PSAC candidates per optional languages	2021-2022	2020-2021	2019
Hindi *(first most opted for)*	5195	4642	5023
Mauritian Kreol *(second most opted for)*	3253	2825	2975

Table 6

The fourth criterion concerns the **participants' linguistic profiling**. This selection criterion was motivated by Cenoz's (2001, p. 10) hypthesis that learners 'are more likely to borrow from a language they actively use than from other languages they may know but do not use'. I started by asking for insights from the class teacher as 'screening may consist of querying people knowledgeable about each candidate' (Yin, 2009, p. 91). I also used my lesson observation field notes. Then during the reading activities and interviews, I asked the sampled pupils about languages they speak at home. I repeated this question a number of times as I noted that some answers differed from what I had observed in class (for example, Alan told me that he speaks French at home but in class, I have heard him use mostly Mauritian Kreol). As discussed in Chapters 1 and 2, language is a sensitive issue in Mauritius, and often acknowledging that one speaks Mauritian Kreol may be frowned upon by some parents, the school and even society at large. Interestingly, my participants possess a dynamic repertoire of home languages, which reflect the complex language situation in Mauritius (Tirvassen, 2012) as shown in Figure 8.

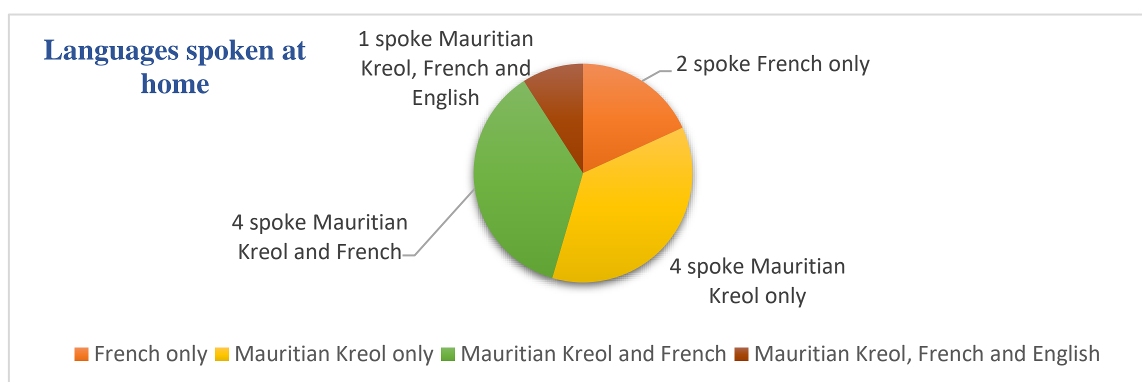

Figure 8

3.6. Ethical considerations when working with children

Part 3.6 highlights important ethical considerations to be looked into, especially when working with children who are considered as a vulnerable group. Issues related to consent versus assent, adults-children power relations, reliability, confidentiality, reciprocity for instance, as well as possible mitigations are discussed in this section.

Adult researchers working with children have encountered several methodological and ethical challenges as discussed in the literature about children's voice in research (e.g., Punch, 2002; Grover, 2004; Hill, 2006; Einarsdóttir, 2007; Bell, 2008; Schiller and Einarsdóttir, 2009; Eldén, 2013; O'Neill, 2014, Bourke, 2017). Using case studies tends furthermore to be more challenging than other research methods given that the interactions are not 'necessarily as structured as with other methods' (Yin, 2009, p. 74).

Common ethical issues have to do with informed consent, safety, confidentiality, and power dynamics. As per BERA (2011) guidelines, informed consent was obtained from the various gatekeepers: (i) the institution to which the school belongs, (ii) the school headteacher, (iii) the Grade 5 General Purpose[42] and Mauritian Kreol[43] teachers, and (iv) parents/responsible parties. In fact, as O'Neill (2014, p. 221) explains, children may 'assent' but not 'consent' as 'children in law do not have full autonomy (i.e., agency), they consequently cannot give

[42] The General Purpose teacher is the class teacher and teaches core subjects like English, French, Mathematics, and non-core subjects like Science, History and Geography.
[43] Mauritian Kreol is taught by a subject specialist teacher as is the case for other optional languages like Hindi, Modern Chinese, Telugu, Marathi, Urdu, etc.

consent to participate in research by themselves'. Verbal assent was therefore asked from my participants at the beginning of each activity and interview, assent being an ongoing negotiation when working with children (Eldén, 2013; Rogers *et al.*, 2016). Indeed, a participant has the possibility to opt out at any point of the study. I hence asked the participants' assent every time I used the audio-recorder and waited for the children to give me the green light before turning it on.

To ensure that my study does not interfere with the welfare and safety of the sampled children, I carried out my data collection inside the school compound itself which is a familiar and secure setting for the children. To maintain confidentiality, I anonymised my participants by using pseudonyms as outlined in Part 3.5. I was cautious not to transcribe any pupils' or teachers' names whenever they were mentioned during the interviews, and instead put 'xxx' in my transcripts. The school where I did my field work also remained anonymous.

I furthermore tried to curb any form of adult-children power relations that might crop up with me being the adult figure as children are considered to be 'potentially more vulnerable to unequal power relationships with the adult researcher than other groups' (Einarsdóttir, 2007, p. 204). The power dynamics may be reinforced on a one-to-one interaction such as interviews (Clark, 2005) and therefore have to be mitigated if need be. During my interactions with the children, I was careful not to force them to continue with a task if I saw that they no longer wanted to or they were tired for example. Some indications were participants getting fidgety on the chair or undergoing attention shifts from the activity to what was happening around them. I would then ask them if they wished to stop for now and continue later.

Power dynamics may also impact on validity and reliability of research involving children, due namely to the interviewer effect where children may be tempted to give 'expected answers' either to please adults or for fear of the latter's reaction. This is not specific only to children participants but also adult participants. Indeed, Miller and Glassner (2011, p. 134) raised the issue of how interviewees' respond may vary according to 'who we are – in their lives, as well as the social categories to which we belong, such as gender, class and race'. However, this may be mitigated through methodological triangulation as explained in Part 3.7. The duration of the field work may further encourage the formation and consolidation of a rapport of trust between the adult researcher and the children. Punch (2002, p. 325) further

argues that 'children's accounts have their own validity in terms of being their own perspectives and the way the world seems to them'.

Ethics are even more complex when working with children, maybe because they are often examined from the point of view of an adult and not that of a child. Research involving children therefore requires adopting a reflexive approach to ethical issues (Bourke *et al.*, 2017).

This has led me to reflect firstly on what my sampled pupils might be letting go to be part of my study, such as playtime for example. I was cautious not to impinge on their play/eating time (breaks/recess) as well as their learning time. The slots were discussed and agreed upon with the class teacher. It was decided that the reading activities and interviews would be carried out during the optional languages slots when pupils who do not study any optional language normally stay back in their classroom to catch up on their homework, read or do some other individual work. As for those who had to attend an optional language class, I would take them while the class teacher would give the pupils notes to copy or some written work to be tackled individually. As for the lesson observations, they were carried out in the least disruptive way possible for the whole class. I placed myself such that I was not in the pupils' nor the teacher's direct line of vision. After the first few minutes, they all seemed to forget about my presence.

Secondly, I reflected on how to cater for non-sampled children who might feel left out. In fact, I had noted that most studies focused on how to deal with sampled children and not the other children. Inspired by Flewitt (2005) who shared how she made sure to have extra tape for non-sampled children who expressed the wish to use the camera or be filmed like the other sampled children, I extended some of the activities to the other pupils while documenting data only for my sampled pupils.

Ethical considerations also involve reciprocity, whereby research needs to benefit both the researcher and the participants. This study may, in fact, enable the children to become better aware of their multi-competence and therefore use their cross-linguistic abilities in a more conscious and efficient way. Studies involving children's voice also tend to 'promote a deep approach to learning and […] result in an increase in pupils' efficacy' (Spalding, 2012, p. 2). The school, teachers and parents may in turn benefit from the study by getting further insights

into the multilingual children's concurrent reading acquisition in two or more languages, through seminars or workshops.

3.7. Collecting data

Part 3.7 discusses my selection of research methods in line with the case study approach and my theoretical framework as discussed in Chapter 2.

Lincoln and Guba (1985) recommend that researchers using a case study spend sufficient time on a case to be 'immersed in its issues, build the trust of those who provide data and try to avoid misleading information' (cited in Bassey, 1999, p. 76). My data collection was thus carried out over seven months and comprised an immersion period and a data collection period (refer to Table 7).

Field work	
Immersion period (one month)	- Familiarising with the children in their class setting during lesson observations - Informal conversations with the General Purpose and Mauritian Kreol teachers for insights into the sampling of my participants (linguistic profiling and readings abilities)
Data collection	- Grade 4 end-of-year examinations scripts (English, French and Mauritian Kreol) - Lesson observations (English, French) - Observation and audio-recordings of participants' engagement with reading activities - Post-reading activities short interactions with the participants - Interviews with participants - Questionnaires (General Purpose and Mauritian Kreol teachers and headteacher)

Table 7

A case study allows the use of multiple sources of evidence, which are often complementary, such as documents, artifacts, interviews, and direct observations. In this study, there are five sources of data, which in line with interpretative data, are mostly verbal (Bassey, 1999): (i) field notes during English and French lesson observations, (ii) Grade 4 end-of-year

examinations scripts for English, French and Mauritian Kreol, (iii) audio-recordings of reading activities and post-reading activities short interactions with the participants, (iv) audio-recordings of interviews with the participants, and (v) questionnaires (General Purpose and Mauritian Kreol teachers, headteacher). The choice of research methods such as observations and interviews, is furthermore consistent with case study approach as well as with research involving children.

It is to be noted that my main source of data is the reading activities while the lesson observations and examination scripts were used for sampling purposes. As for the interviews, they were carried out after the reading activities to explore in-depth certain aspects raised in the activities. The questionnaires were, for their part, used for juxtaposing the children's perspective against that of the adult stakeholders. The relationship between multiple data sources in this study as described above and summarised in Table 8, forms part of methodological triangulation which acts as a platform for validating data collected but also constitutes one of case study's 'unique strength[s]' (Yin, 2003, p. 8).

As highlighted in Table 8, three levels of data regarding multilingual strategies and cross-linguistic abilities were collected, namely what (i) *participants say they are using* (during post-reading activities short interactions and individual interviews), (ii) *I, as the researcher, have observed the participants use* (during lesson observations, children's engagement with reading activities), and what (iii) *the class teacher says his pupils use* (in the questionnaire).

		Research question 1			*Research question 2*
Data generated by the following instruments	**Sampling**	**Multilingual strategies/ Cross-linguistic abilities**			**Factors impacting on the participants' learning to read in at least two languages concurrently**
		my participants say they are using	**I have observed the participants use**	**the class teacher says his pupils usually use**	
Lesson observations					
Exams scripts					
Reading activities					
Interviews					
Questionnaires					

Table 8

Lesson observations and examinations scripts analysis

My immersion period lasted for about one month (from 20 February to 18 March[44]). During that period, I carried out six lesson observations of 50 minutes each, which allowed me to prepare the ground for later data collection tools, namely the reading activities, the interviews with the children, and the questionnaires for the teachers and headteacher. I needed to get immersed into the setting and get familiarised with the teachers, pupils, and any other people (teaching and non-teaching staff) to start building a rapport of trust as I gradually became a familiar figure and part of the school/class context.

Observation consists mainly of 'watching what people do; listening to what they say; sometimes asking them clarifying questions' (Gilham, 2000, p. 45). This is what I did, from a corner of the classroom so as not to disrupt the lessons. Based on my professional experience as a teacher educator for whom school visits play an important role, I have learnt to place myself so as not to disturb the class and somewhat become 'invisible' to both teachers and pupils. During the immersion period, I interacted only with the class teacher and not with the

[44] The year has been omitted to safeguard the school's and participants' anonymity.

pupils, as I had not yet selected my participants. However, the immersion period enabled the pupils to get used to my presence. Gradually, the pupils started greeting me outside the classroom, which they did not do for the first few weeks of my coming to school. Giving out the consent form to be signed by the parents (see Appendix 2[45]), provided the pupils with further insights into my presence in class (from a passive observer to somebody who would get them engaged with reading activities). Although observation presents many strengths as a research method, it is quite time-consuming (Gilham, 2000; Yin, 2009).

My data collection journey started with lesson observations and analysis of Grade 4 examinations scripts. These two data sets form part of my sampling strategy, as explained in Part 3.5. The six lessons that I was able to observe (refer to Table 9) were not all reading lessons *per se*. But I made the most of every lesson during my immersion period to identify pupils who could read. Yin (2009, p. 69) indeed points out that '[a]n investigator should be *adaptive and flexible*, so that newly encountered situations can be seen as opportunities, not threats'. An excerpt of the field notes taken during lesson observations can be found in Appendix 3.

Details on lessons observed for sampling purposes		
20 February	English lesson (LO1)	Reading
21 February	English lesson (LO2)	Grammar
25 February	French lesson (LO3)	Grammar and reading
27 February	French lesson (LO4)	Grammar
28 February	English lesson (LO5)	Reading
18 March	English lesson (LO6)	Grammar

Table 9

I proceeded with a tabular analysis of the whole class Grade 4 end-of-year examinations scripts for English, French and Mauritian Kreol for insights into how the pupils had tackled the reading comprehension questions (refer to Appendix 4 for an excerpt of the table comprising data for my sampled pupils only). All three language papers had a duration of 1½ hour and shared a similar structure. The reading passage was made up of 265 words for

[45] After discussing with the class teacher regarding the most appropriate way to explain this study to the pupils' parents, the consent form was written in French. According to the class teacher, French is usually viewed by parents as more accessible than English. It is also the usual language used in that school's communications. Simple language as well as the usual school format for requesting parental authorisation, were furthermore used.

English, 238 words for French and 293 words for Mauritian Kreol. It is to be noted that for PSAC examinations, the Mauritian Kreol paper is designed according to the same format as for English and French, which is not the case for other optional languages which follow another format (Rughoonundun *et al.*, 2018).

Reading activities

Once the sampling had been worked out and parental consent forms had been duly signed, I carried out the reading activities. This phase lasted from May to September (excluding one month of winter school holidays).

Basing myself on the theoretical hypothesis that multilingual individuals present a different type of competence characterised by a strategic use of their language resources, as highlighted in Chapter 2, I developed eight reading activities that would enable me to better understand how multilingual children use their potential cross-linguistic reservoir of abilities and thus their multilingual strategies in learning to read in at least two languages concurrently. The reading activities focused on reading comprehension (lexical access and meaning making of texts) rather than on decoding given that my study is not concerned with emergent readers but 'successful' biliterates. The activities comprised multimodal authentic texts such as newspaper articles, realia (like pizza brochure) and excerpts from children's local literature picture books. The materials were chosen in line with the broad definition of biliteracy as discussed in Part 2.3.

In terms of the preparedness of the participants to engage with the reading activities, they were told that they would be reading a text, a list of words or some documents (which varied as per the reading activities). They were then shown a text, some words, or a document, which they were free to manipulate. They were also given appropriate instructions as to how to proceed. They would only start reading when they were ready to, and they had given the greenlight to the researcher. While the participants were used to reading from the textbook (as in the first two reading activities), they were often surprised by the authentic materials being used, as these are not usually associated with formal reading at school.

Reading activities[46] 1 and 2 (R1 and R2) focused on the participants' understanding of a passage in English and French (including questions about vocabulary, identifying main ideas of a paragraph/whole passage, etc.), strategies used ('how do you know?'), difficulties encountered ('what?', 'why?'). Since these were my first activities with the participants, I opted not to depart too much from the familiar and used unseen texts (which the class teacher confirmed not having worked out yet in class) from their English and French Grade 5 school textbooks.

Informed by key themes in my literature review which I considered most pertinent for my study and potential gaps therein, R3 and R4 inquired into manifestations of cross-linguistic transfer and metalinguistic awareness. R5a and R5b explored the use of translanguaging as a reading strategy as well as the participants' rapport with the languages of the texts/their retellings. R6 covered lexical access, namely the language in which the participants would identify the list of given words and the cues used to proceed. R7 focused on the participants' response in writing to a reading passage and included metacognitive questions about what they had found easy/difficult in the text, and what strategies they had used to tackle difficulties encountered. A summary of the reading activities is provided in Table 10.

Except for R7 where the participants had to respond in writing, the other reading activities were carried out orally. Preference was given to oral interactions so as to give more leeway to the participants to answer and be in better position to capture their voice while they engaged with the reading activities. The participants could also more easily ask for clarifications while the researcher could reformulate whenever necessary and use prompts to encourage them to expand on some aspects of their answers if needed.

The choice of multilingual authentic reading materials and local children's literature has been driven by a contextualised view of literacy and the definition of biliteracy put forth by the continua of biliteracy framework and other fields of biliteracy research such as multilingual literacies, New Literacy Studies, pluriliteracies and multiple literacies (as discussed in Chapter 2). These materials also inscribe themselves in what Cook-Gumperz (1986, cited in Hornberger, 1989, p. 279) calls a *pluralist literacy* as opposed to a *schooled literacy*.

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[46] The reading activities will henceforth be referred to as R1, R2, R3, R4, R5a, R5b, R6 and R7.

Focus of reading activities	Reading aloud and understanding passages in English and in French		Manifestations of metalinguistic awareness with regard to different languages either from the participants' Dominant Language Constellation (DLC) or not, and capacity to transfer meaning from one language to another		Use of translanguaging as a reading strategy	Ecology of literacy and Language dominance	Tackling in writing passages in English, French and Mauritian Kreol
Reading Activities	***Reading activity 1 (R1)***	***Reading activity 2 (R2)***	***Reading activity 3 (R3)***	***Reading activity 4 (R4)***	***Reading activity 5 (R5a and R5b)***	***Reading activity 6 (R6)***	***Reading activity 7 (R7)***
Materials used	Unseen English passage from prescribed Grade 5 textbook	Unseen French passage from prescribed Grade 5 textbook	Authentic materials *(comprising English, French, Mauritian Kreol as well as other languages such as Italian present in the documents)*	Short newspaper article *(including English, French and Mauritian Kreol)*	(R5a) Read a story in French and then retell it in English and in Mauritian Kreol (R5b) Read a story in Mauritian Kreol and then retell it in French and in English	Word cards in English, French, Mauritian Kreol as well as some pseudo-words *(some words also exist in both or all three languages)*	Written reading comprehension comprising three texts in English, French and Mauritian Kreol

Table 10

All eight reading activities have been carried out on a one-to-one basis with the participants and included short questions to enable them to clarify their answers after each activity. The interactions were audio-recorded with the permission of the children. I always asked them at the start of each activity if I could use the recorder and waited for their assent to turn it on. I also ended every activity by asking them what they had liked or not in the activity and thanking them for their valuable input. My participants were quite at ease with my using the audio recorder and responded openly to my questions/prompts during and after the reading activities.

Interviews

Interviewing as a research method is considered appropriate when doing individual case studies (Gilham, 2000), especially when there is a small number of people. As recommended by Gollop (2000), the interviews with the children were treated as guided conversations. In fact, though children can 'give valuable and useful information […], knowledge is also in many cases implicit – that is, they are not aware of what they know, and therefore indirect methods are preferable' (Graue and Walsh, 1998, cited in Einarsdóttir, 2007, p. 199).

After carrying out the reading activities, I conducted individual semi-structured interviews with the eleven participants in September to capture their multilingual profiles and their learning reading experiences at home/school/in their immediate environment (refer to Appendix 5). Indeed, as Stake (1995) argues, when the case is a person – the multilingual child in my study –, 'home and family are usually important contexts which need to be described and investigated so as to capture bounds' (p. 63) as well as potential factors impacting on the learning reading experiences.

The questions were elaborated taking into consideration the different points in Hornberger's continua of biliteracy framework outlined in Chapter 2. I also included the possible impact of siblings' influence on the participants' reading experiences which has often been overlooked in empirical studies about literacy development (Reyes and Moll, 2007).

Given that the interview was carried out in the language that the children were more at ease, the questions were in French as I have noted during the reading activities that the participants preferred to interact with me in that language. Even when I shifted to Mauritian Kreol, they

would still reply to me in French – including those participants who have Mauritian Kreol as home language. This may be due to the interviewer effect or the fact that French is often used in classroom interactions as further discussed in sub-theme 4.3.1 in Chapter 4. Whenever some questions did not seem clear enough, I would rephrase in French or in Mauritian Kreol as needed.

The data collected during the interviews confirmed some of the information obtained in the post-reading activities short interactions though it sometimes challenged previous information shared by the participants. This may be due to the degree of trust that developed over time during my interactions with the children. One example is about the home language(s) which for some participants evolved from what they seemed to view as an expected answer – due to the interviewer effect or what Yin (2009, p. 102) calls 'reflexivity – interviewee gives what interviewer wants to hear' – to a more honest answer. The reinforcement of information shared from the reading activities to the interviews served to further validate data collected.

The interviews were audio-recorded with the verbal assent of the participants as discussed in Part 3.6. I also took some field notes to capture non-verbal cues or what seemed like interesting data on the spot.

Questionnaires

Having collected data from the children's point of view, I felt it was also important to get the point of view of adults who are responsible for developing multilingual children's biliteracy in the formal context of the primary school.

Three questionnaires were designed to capture the General Purpose and Mauritian Kreol teachers' and the headteacher's understanding of reading competencies, teaching strategies used, reading difficulties encountered by their pupils, and awareness of biliteracy development of multilingual children (refer to Appendices 6i, ii, iii[47]). The questions used in my questionnaires were open-ended questions in line with the qualitative nature of this study.

[47] To ease reading, I have removed the lines for participants to write their answers in the questionnaires in Appendices 6i, ii, iii.

The questionnaires were collected as per the participants' convenience. It is to be noted that the Mauritian Kreol teacher left several questions unanswered (Questions 10-12, 15-17), namely those which touched upon multilingualism and biliteracy. As for the General Purpose teacher and the headteacher, they provided quite lengthy answers. As a remote research method, questionnaires do not offer the possibility for on the spot follow up or clarification of responses given the gap in space and time of it being filled. An interview to finetune the responses (or lack of responses in some cases) of the Mauritian Kreol teacher could not be organised as she was transferred to another school in the middle of the school term.

3.8. Data analysis

Having described my research design and how it has enabled me to address my research problem and research questions, Part 3.8 presents the methods I have used for data analysis, as well as a detailed description of the actual analysis process.

I used thematic analysis, 'a method for identifying, analysing, and interpreting patterns of meaning' (Clarke and Braun, 2017, p. 297) with regard to multilingual strategies/cross-linguistic abilities that my participants say they are using and that I have observed them use while engaging with reading activities and during classroom observations; as well as factors that impact on their learning to read in at least two languages concurrently. Indeed, as put forth by Nowell *et al.* (2017, p. 2), thematic analysis is a useful method for 'examining the perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights'. Merriam (1998, pp. 7-8) furthermore argues that usually, 'qualitative research findings are in the form of themes, categories, typologies, concepts, tentative hypotheses, even theory, which have been inductively derived from the data'.

In order to interpret emerging findings about the participants' language representations and their ambiguous rapport with Mauritian Kreol as discussed in Chapter 4, I also used discourse analysis. Indeed, discourse analysis is useful for creating knowledge (Perryman, 2012) that defines what we know, how we engage with the world and each other, how we represent the world through the way language is used, which in turn shapes us into who we are. Discourse analysis also acknowledges that discourse is 'produced by speakers who are ineluctably

situated in a socio-historical matrix whose cultural, political, social and personal realities shape the discourse' (Gee *et al.*, 1992, p. 228, cited in Punch, 2009, p. 196).

It is important to highlight that I opted for discourse-as-evidence – rather than discourse-as-structure –, which 'studies discourse as it relates to other social, cognitive, political or cultural processes and outcomes' (Punch, 2009, p. 197). What is of interest for this research is Foucault's understanding of knowledge as '*connaissance*' (academic discourse) and as '*savoir*' (including social practices, beliefs, as well as institutional discourse such as policy papers), whereby '*savoir*' is necessary to bring about '*connaissance*' (Scheurich and McKenzie, 2005). For Foucault (1994, cited in Springer and Clinton, 2015, p. 89), discourse or discursive formations as he calls it, refer to 'all the systems and uses of rules that operate beneath the consciousness of individual subjects by which statements arising in social practices are dispersed'. Foucault also talks about 'dynastics of knowledge' (Faubion, 2000, p. XXXI), i.e., the genealogy of power/knowledge. This is important as it sheds light on the role of historical and cultural located systems of power/knowledge in the construction of 'truth' in discourse which 'is undoubtedly the sort of error that cannot be refuted because it was hardened into an unalterable form in the long baking process of history' (Foucault, 2000b, p. 372). In fact, as discussed in Chapters 1 and 2, language is a sensitive issue in Mauritius as its colonial history strongly permeates into present times. Using discourse analysis, I thus focused on the choice of words/phrases/claims by the participants to 'discern what is known about a particular problem or concern, but is not expressed, what is ignored or covered over, and what is thought but left unspoken' (Springer and Clinton, 2015, p. 88).

3.8.1. Use of memoing

I used memoing or analytic memos (Birks *et al.*, 2008) both in my field notes and in processing my raw data. Analytic memo refers to 'first impressions, reminders for follow-up, preliminary connections, and other thinking matters about the phenomena' (Saldaña, 2011, p. 95) and assists researchers to make 'conceptual leaps from raw data to those abstractions that explain research phenomena' (Birks *et al.*, 2008, p. 68). Indeed, coding and analytic memos work together in a 'reciprocal relationship between the development of a coding system and the evolution of understanding a phenomenon' (Weston *et al.*, 2001, cited in Saldaña, 2009, p. 33). So, I inserted short comments on what my data were telling me while going through the recordings for the reading activities and interviews. Sometimes, the data were linked to

my literature review. An example involving translanguaging is illustrated in the following excerpt from Reading Activity 1 (R1) data processing table:

The following could be an example of translanguaging, the word 'festival' being more familiar in English for the pupils (the theme 'Festivals in Mauritius' has normally been discussed since pre-primary and is a regular item in textbooks and other subject areas). The word 'festival' was pronounced in English by Elsa. This also illustrates how multilinguals make use of their dynamic repertoire.

At other times, I noted down patterns I noticed after going through two or three recordings of the same reading activity with different participants. One example is taken from R1 data processing table:

Like Elsa, Alan uses translation from English to French. This strategy gives to see the richness of the bank of words of the pupil and in which language, the lexical access is done more rapidly.

I also put a note when I came across an interesting phenomenon that I felt at that moment would be worth documenting and investigating deeper. Here are two examples taken from R2 and R3 data processing tables:

About Nessa's engagement with reading a passage in French, we have here an example of a child who is able to infer meaning from the text but lacks confidence as she is not readily able to explain in her own words, maybe due to a lack of appropriate vocabulary. However, with prompting from the researcher, she was able to put in words what she has understood from the text. **(R2)** Ben: '*Heinnn, c'est quelque chose pour commander chez Domino's pizza* [T[48]: Ohh, this is to order from Domino's pizza]'. I will have to comment on the way '*Heiinn'* is said as it illustrates how surprised Ben felt when he discovered that he has been given a pamphlet from a pizzeria to read. **(R3)**

[48] 'T' stands for 'My translation' and will henceforth be used in this study for the English translation of the participants' responses in French and Mauritian Kreol. I have chosen to reproduce the original version when quoting the participants in this study's analysis and discussion of findings, in line with preserving children's voice. The translation comes right after the quotation to facilitate reading.

3.8.2. Theming my data

Analysing qualitative data generated in case study research is a 'dynamic, intuitive and creative process of inductive reasoning thinking and theorising' (Basit, 2003, p. 143). In line with thematic analysis, I looked for patterns, inconsistencies (such as divergent views or outliers for example) and possible relationships. In fact, Woods (1986, cited in Bryman and Burgess, 1994a, p. 7) highlights the importance for the researcher to be attentive to 'repetitions of incidents or words, irregularities, unusual occurrences and how people say things'. This is what Mason (1994), Ritchie and Spencer (1994) call the indexing phase which is the 'first step in the conceptualisation of the data' (Bryman and Burgess, 1994b, p. 218). So doing, I looked up for concepts that could be linked to existing literature and any possible new concepts emerging within and across my data sets.

I used Braun and Clarke's (2006) six phases for thematic analysis which is not linear but flexible with the possibility of moving between phases until what the researcher considers a satisfactory set of themes has been achieved:

- familiarisation with data
- coding
- generating initial themes
- reviewing and developing themes
- refining, defining and naming themes
- writing up.

Indeed, the data analysis process is not a smooth procedure but requires reading and re-reading the raw data, reviewing codes and reworking themes (regrouping, eliminating, going back to discarded ones, etc.) until they tell a coherent story of the findings.

The familiarisation phase corresponds to processing the raw data which involves:

- typing the fieldnotes for my lesson observations
- organising data into tables for the analysis of examination scripts, the eight reading activities and the three questionnaires
- transcribing my eleven audio-taped interviews.

Then I proceeded to sift the processed data for both a priori and empirical codes while keeping in mind my two research questions. The a priori codes refer to what Miles and Huberman (1994) call 'a provisional 'start list' of codes [that] comes from the conceptual framework, list of research questions, hypotheses, problem areas and/or key variables that the researcher brings to the study' (cited in Basit, 2003, p. 145). As for empirical codes, they are generated by the data. My analysis thus confronted themes that exist already in literature (deductive approach) with emerging ones (inductive approach).

The a priori codes (in blue) and the potential gaps in literature (in orange) as summarised in the mind-map in Figure 9, have helped to inform my data processing, coding and analysis. In green are the different dimensions of Hornberger's continua of biliteracy framework under which the themes may be placed for further discussion (refer to page 52 for a blown-up version of Figure 9).

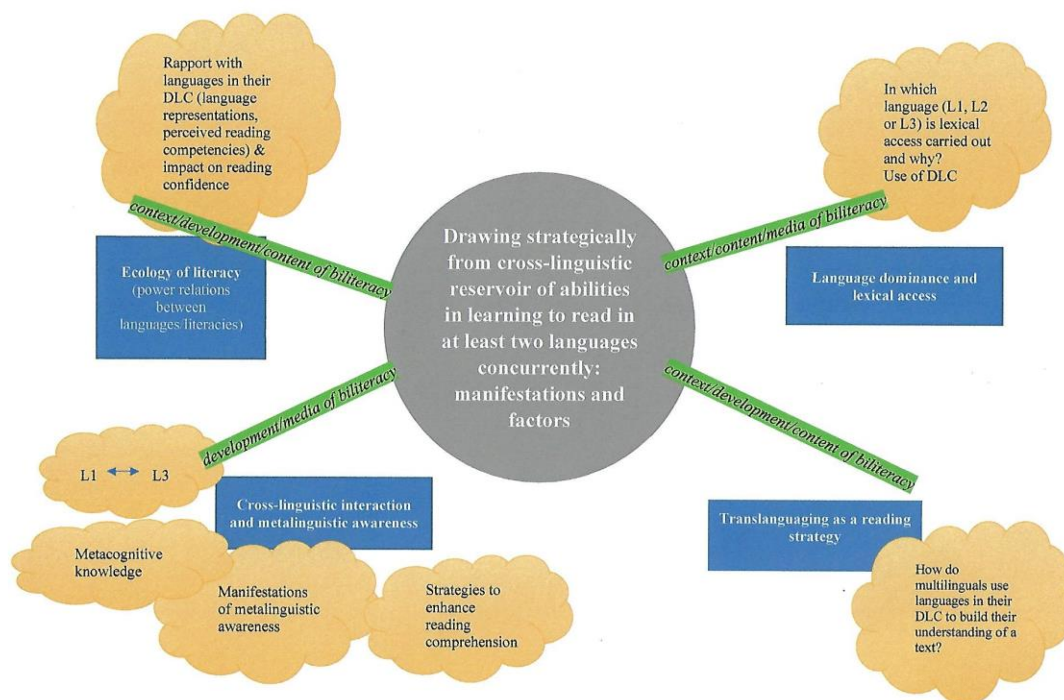


Figure 9

For my data analysis, I used both intra-data and inter-data coding. I first worked out each data set individually (intra-data coding) before proceeding with an analysis across the different data sets (inter-data coding). The following sub-sections present how I proceeded with processing and intra-coding of data collected for each data set, substantiated with examples

in Appendices 7-12: lesson observations, engaging with reading activities and post-reading activities short interactions, interviews, and questionnaires. As for the inter-coding process, it is explained and illustrated in Part 3.8.3.

Lesson observations

Apart from enabling me to sample my participants, the lesson observations also revealed some interesting features of a multilingual classroom. As Stake (1995, p. 62) explains, qualitative case study researchers often allow their observation record to 'tell its story […] The story often starts to take shape during the observation, sometimes does not emerge until write-ups of many observations are poured over'. For this study, the lesson observations proved to have more to say after I started analysing the other data sets and found occurrences dialoguing between the sets.

The presence of the three colours indicating the three languages (magenta: French; green: English; yellow: Mauritian Kreol) highlight the dynamic language uses during the French and English lessons as illustrated in Appendix 7.

Reading activities

The audio recording for the reading activities amounted to about 12 hours over which I went several times to ensure that I did not miss anything important. I opted for Data Processing Tables where I noted down how the participants tackled the reading activities and the multilingual strategies/cross-linguistic abilities used, instead of transcribing verbatim the whole 12 hours. In fact, Stake (1995, p. 66) argues that '[g]etting the exact words of the participant is usually not very important, it is what they mean that is important'. An example of how I proceeded for each reading activity is given in Appendices 8 (i)-(vii).

For ease of reference in this study, I used English to note down the participants' reactions, prompts used, etc. However, I transcribed verbatim whenever the participants' choice of languages was revealing or when the information was best captured in the original language. An example is given below where I kept the mixture of French and English in Ben's response (in bold) in Reading activity 3, as it demonstrated the participant's metalinguistic awareness and ability to translanguage:

At first, Ben says he does not know what it is about. When asked if there are words that he recognises in 'chicken *forestière*', he replies 'chicken'; and in '*forestière*', he recognises that '***dans la forêt*... *il y a* forest *dedans*** [T: in the forest… there is the word 'forest']'.

The data processing tables were developed based on categories of data I was looking for in terms of multilingual strategies/cross-linguistic abilities used and factors impacting on the participants' biliteracy development. While some categories were inspired by literature such as manifestations of metalinguistic awareness (R3, R4) and use of translanguaging (R5a, R5b) for example, other categories are unresearched aspects that I wanted to explore. Two examples are the ease with which participants navigate from one language to another in written texts (R3, R4) and the order in which participants choose to narrate the story in view of getting insights into their rapport with languages in their Dominant Language Constellation (R5). As Mason (1994, p. 92) explains, these categories are both

> grounded in the theoretical perspectives […] in the sense that they were themes which we felt would help us to marshal data enabling us to address those questions from a variety of angles. But the categories were also grounded in the data.

The data processing tables are furthermore situated in what Ritchie and Spencer (1994, p. 178) call the familiarisation stage, as well as the identification of a thematic framework in their five key stages to qualitative data: '[d]uring the familiarisation stage, the analyst is not only gaining an overview of the richness, depth, and diversity of the data, but also beginning the process of abstraction and conceptualisation'.

I then carried out coding for each reading activity based on the data processing tables. An illustration of the coding of the reading activities is given in Appendix 9. Along with examples from the data, I inserted comments (using analytic memo writing) which later contributed to developing the final themes. Saldaña (2011, p. 102), in fact, explains how analytic memos 'expand on the inferential meanings of the truncated codes and categories as a transitional stage into a more coherent narrative'.

Interviews

The eleven individual interviews were transcribed verbatim. To avoid any risks of researcher 'contaminating' the raw data as s/he tends to interpret, reflect and comment while taking notes, it is recommended that the researcher does not carry her/his word-to-word transcription but gets somebody else to do it. I therefore solicited the help of somebody who has been working as research assistant for several research projects and therefore was well-versed in transcribing interviews. For ethical purposes, that person had to sign a non-disclosure and confidentiality agreement regarding confidentiality and storage of the audio recordings and transcriptions.

Then I coded each interview using comments boxes while highlighting the corresponding quotes as illustrated in Appendix 10. Based on these codes, I worked out a cross-analysis of all the eleven interviews for recurrent codes. An example is found in Appendix 11.

Questionnaires

As for the questionnaires, I began with a comparative analysis of the General Purpose and Mauritian Kreol teachers' responses and then proceeded with the analysis of the headteacher's responses before working on a cross-analysis of all three responses as illustrated in Appendix 12.

3.8.3. From codes to themes

My different data sets have generated thirteen codes or units of analysis (Clarke and Braun, 2017) as illustrated in Table 11. I regrouped the proposed codes under my two research questions to facilitate the emerging of findings that would ultimately lead to my themes.

Colour codes used in my proposed thematic coding	
Research Question 1: Multilingual strategies/Cross-linguistic abilities	***Research Question 2: Factors***
1. Salmon	**2. Light pink** Multilingualism and biliteracy viewed as an asset

-Multilingualism as scaffolding tool for reading for understanding - Translanguaging for (a) meaning making (b) lexical access (c) use of translation	
3. Light blue A separatist view of languages: - characterised by ease in language switching - presence of languages being activated (DLC) while others remain inactive (language repertoire) as per varying needs of the multilingual	**3. Light blue** A separatist view of languages (in line with academic discourse) that stipulates that languages are to be taught in separate slots and highlights the gap between home and school languages
4. Pink Manifestation of language dominance - Language choice (for metalinguistic awareness skills) - Lexical access (use of mental lexicon)	**4. Pink** Manifestation of language dominance - Dominant language(s) - Language choice - Language use
5. Violet Use of lexical transfer (from French to English, Mauritian Kreol to English; language proximity between French and Mauritian Kreol) for meaning making	**6. Blue** - Language perceptions and prior experiences based on what Foucault calls '*savoir*' (i.e., institutional discourse and social practices) and '*connaissance*' (i.e., academic discourse) - Language barriers - Multilingualism and biliteracy taken for granted (refer to policy discourse on these two concepts in Mauritius)
	7. Lime - Rapport with Mauritian Kreol (based on what Foucault calls '*savoir*') - Reading in Mauritian Kreol considered as a given to all speakers of that language
8. Turquoise green Manifestation of metalinguistic awareness - for meaning making - identifying and differentiating languages	**8. Turquoise green** Under-explored knowledge and manifestation of metalinguistic awareness in Mauritian multilingual classes

	9. Grey Teacher role and other stakeholders' agency
	10. Moss Green Immediate family's (parents, siblings, aunts/uncles, grandparents) agency in biliteracy development (their representations either promoting or acting as deterrent)
	11. Mauve Pupils' agency (motivation)
	12. Brown Impact of written tasks/assessment overruling oral ones
	13. Turquoise blue Multiliteracies for lexical access and meaning making

Table 11

This step contributes to the triangulation and validity of data collected. After collating codes emerging from coding intra-data sets, I proceeded to do an inter-data sets comparison to see whether the occurrences could also be found among the different data groups in order to work out my emerging themes (refer to Table 12). In fact, Mason (1994, p. 92) posits the importance of 'trying out categories on batches of transcripts, developing new categories and refining existing ones in the light of these trials'. Bazeley (2009, p. 8) also argues that 'data must be challenged, extended, supported, and linked in order to reveal their full value'.

Colour coding of inter-data sets				
Lesson observations	**Exams scripts** *(for sampling purposes only)*	**Reading activities**	**Interviews**	**Questionnaires**
1		1	1	1
			2	2
		3	3	3
4		4	4	4
5		5	5	5
6	6	6	6	6
		7	7	7
		8	8	
			9	9
			10	10
		11		11
12				
		13		

Table 12

While putting together the building blocks of codes to create themes, I further fine-tuned and merged the proposed thematic coding into three main themes which will be analysed and discussed in Chapter 4. This is illustrated in Table 13. It is interesting to note how the four data sets (i.e., lesson observations, reading activities, interviews and questionnaires) have fed in Themes 1, 2 and 3 to varying degrees.

Theme 1	Managing one's dominant language constellation for lexical access	4
		11
		3
		8
Theme 2	Multilingualism as scaffolding tool for reading for understanding	1
		5
		11
		13

Theme 3	Impact of language representations on reading confidence	2
		6
		7
		10
		11

Table 13

3.9. Conclusion

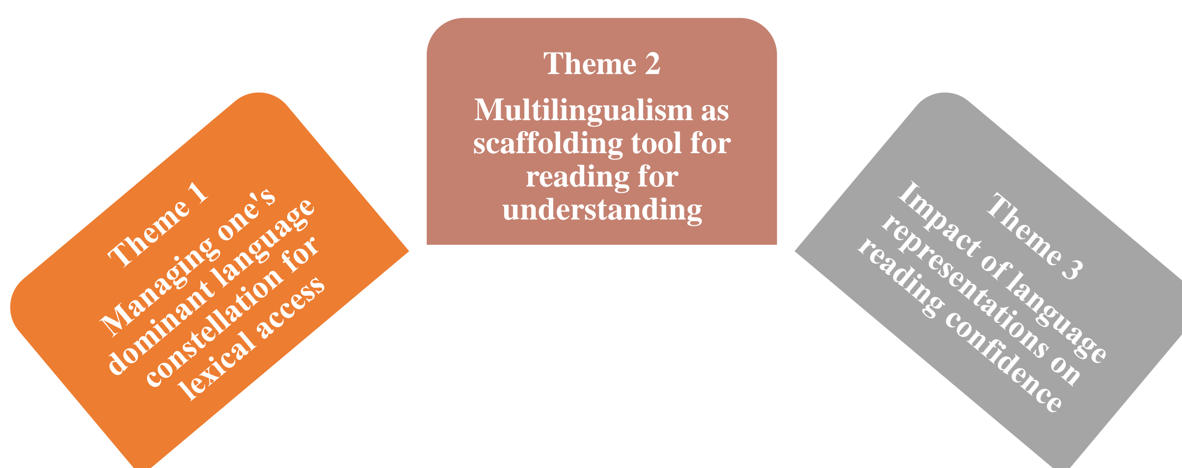
This chapter has outlined the methodological foundations of this study. Changing any of the elements that constitute the theoretical lenses, research design, data collection and data analysis method would give way to another study. Indeed, as Bryman and Burgess (1994b, p. 217) argue, they are ‘simultaneous and continuous processes’. This chapter has also discussed how the planning and implementation processes are determined by the ‘nature of the research problem or issue being addressed, the researchers’ personal experiences, and the audiences for the study’ (Creswell, 2009, p. 3).

Chapter 4. Presentation, analysis and discussion of findings

4.1. Introduction

In Chapter 4, theoretical insights, the research problem, the context and data collected engage in dialogues (Stephens, 2009) to better understand how multilingual children explore the dynamic interaction between languages that they learn and use in their everyday life, and hence their potential cross-linguistic reservoir of abilities when learning to read in at least two languages simultaneously, as well as factors that may facilitate or hinder their concurrent reading acquisition.

After a thorough analysis of the data as depicted in Part 3.8, the following three main themes have emerged:



Under **Themes 1 and 2**, I discuss how multilingual children resort to cross-linguistic abilities and develop multilingual strategies when learning to read concurrently in two or more languages, thus providing potential answers to Research Question 1: ‘How do multilingual children draw from their cross-linguistic reservoir of abilities in learning to read in at least two languages concurrently?’. The two themes indeed shed light on how multilingual children engage with lexical access (i.e., word identification by retrieving a word from their multilingual mental lexicon) and reading for understanding (i.e., meaning making of texts using multilingual strategies). They also provide some insights with regard to Research

Question 2: ‘What are the factors that impact on their learning to read in at least two languages concurrently?’.

As for **Theme 3**, it focuses on Research Question 2. Using discourse analysis, this theme reflects power relations at play in the multilingual child’s rapport with languages of his/her DLC and the impact of language representations on his/her reading confidence.

To avoid unnecessary repetitions during the presentation and analysis of data, I have chosen not to present them data set wise (i.e., lesson observations, reading activities, interviews, questionnaires). Rather, examples from the relevant data sets have been used to illustrate emerging themes and findings, and a discussion of the analysis is provided for each theme in this chapter.

This study’s focus being on children’s voice, the participants’ responses have been rendered as they were given, during the analysis and discussion of findings. Moreover, so as not to alter the children's voice, I have used literal translation and thus opted to preserve incorrect syntax for instance as uttered by the participants in their responses. This study, however, acknowledges that the responses may navigate between what the participants believe to be ‘truthful answers’ and ‘expected answers’. The present research both reports the participants’ answers taken at face value (especially when dealing with the reading activities data) and analyses their discourse (when examining the interviews’ transcripts and sometimes the reading activities interactions).

4.2. Profile of my participants

Before engaging further with the presentation and discussion of the findings, Part 4.2 gives a brief profile of each participant to familiarise the reader with the sample. The latter comprises eleven ten-year-old multilingual children: four boys (Alan, Ben, Eddy and Sean) and seven girls (Amelia, Celia, Elsa, Kelly, Lily, Nessa and Sophie).

The profile is a summary of information that has been obtained at different points in time during the eight reading activities interactions and the interviews. When some questions regarding home languages and language preferences were asked again, often additional

information was volunteered by the participants while explaining how they knew the meaning of a word or they recognised the language, etc. Further information concerning the participants' linguistic and socio-family profile, their reading experiences, etc., was obtained during the interviews. The data has been indexed as per categories outlined in Table 14.

Participant	Home languages	Language preferences	Optional languages learnt at school	Socio-family situation	His/her reading experiences	Siblings

Table 14

The following pen portraits are a faithful rendition of what the children have shared about themselves in their own words, in keeping with this study's focus on children's voice.

Alan

Alan has four elder siblings, two brothers and two sisters who are all adults and no longer live with the parents. His father is a site agent while his mother works as a child carer. Alan speaks mostly French at home. He says that he also speaks some Mauritian Kreol when I mentioned that he seems to use it frequently and fluently in class (even with the class teacher though the latter addresses him in French). He states that this is because he is ashamed to use French in class without further explaining the source of his shame. Alan and his father sometimes crack jokes in English. Alan uses Mauritian Kreol to WhatsApp his friends.

The language subjects that Alan is currently studying at school are English and French. His preferred language subject is French. He has learnt some Mauritian Kreol[49] in Grade 1 but only for a few months before opting for Hindi which he studied until Grade 3. The language which Alan finds most difficult to read is English.

[49] Four participants (Alan, Ben, Elsa and Sophie) have dropped Mauritian Kreol at different points in time of their primary schooling for different reasons. The decrease in Mauritian Kreol cohort size over the Grades at school seems to be systematic as noted by Nadal and Ankiah-Gangadeen's study (2018b) conducted in 43 Catholic primary schools.

Ben

Ben has a baby brother. His parents are divorced, and he lives with his mother. His father is an entrepreneur while his mother is a housewife. Ben speaks mostly French at home. His parents tend to switch to Mauritian Kreol when they are angry with him. Ben sometimes speaks Mauritian Kreol with them. He uses both French and Mauritian Kreol with his friends.

The language subjects that Ben is currently studying at school are English and French. His preferred language subject is French. He also studied Mauritian Kreol in Grades 1 and 2. He finds Mauritian Kreol easier to read than French and English. The language which Ben finds most difficult to read is English.

Eddy

Eddy has a younger sister. His parents are divorced, and he lives with his mother. His father works as a coast guard officer while his mother is an accountant. Eddy speaks only French at home. He speaks Mauritian Kreol with an aunt who lives with his father. He uses both French and Mauritian Kreol with his friends at school.

The language subjects that Eddy is currently studying at school are English, French and Mauritian Kreol. His preferred language subjects are Mauritian Kreol and French. He likes the Mauritian Kreol lessons as the classwork is not difficult. When asked if he preferred that we interacted in Mauritian Kreol, he hesitantly agreed, a little surprised by my question. But when I spoke to him in Mauritian Kreol, he replied in French only. He likes French because he speaks it every day and finds the subject as well as reading in that language easy. However, he later shared that the language which he finds most difficult to read is Mauritian Kreol.

His mother asks him to translate from French to English while reading to practise his English. So, presently, he is reading *Robinson Crusoe* in English and then in French on alternate weeks.

Sean

Sean has a younger brother aged two. His father works as driver while his mother is a secretary. Sean mostly speaks French at home. During our first encounters, Sean shared that he does not speak Mauritian Kreol at home. He later said that he speaks it at home only when required.

The language subjects that Sean is currently studying at school are English, French and Hindi. His preferred language subject is French which he finds easier than English. The language which Sean finds most difficult to read is Hindi.

Amelia

Amelia has two sisters aged six and two. Her parents are divorced, and she lives with her mother and the latter's new partner. They both work in an electronics shop.

Amelia speaks only Mauritian Kreol at home. The language subjects that Amelia is currently studying at school are English, French and Mauritian Kreol. Her preferred language subject is French. However, Amelia likes all three languages and has excellent grades in all three. The language which she finds most difficult to read is English.

Celia

Celia has two sisters aged thirteen and five. Her parents are separated, and she lives with her father. Her father has his own business while her mother works as a shop assistant. Celia speaks both Mauritian Kreol and French at home but says that she feels more at ease with Mauritian Kreol. She uses Mauritian Kreol with her two sisters, her father and her aunt who lives with them. She speaks French mostly with her mother.

The language subjects that Celia is currently studying at school are English, French and Hindi. Her preferred language subject is English. Celia has learnt to read Mauritian Kreol by herself. The language which she finds most difficult to read is English.

Elsa

Elsa's parents are divorced. She lives with her paternal grandparents. Elsa says that her father, who works as a spice seller, does not have time to look after her and her younger

sister aged eight. Elsa speaks only Mauritian Kreol at home as her grandparents are not proficient in French. She says that she speaks French with her mother, but the latter does not live with them.

The language subjects that Elsa is currently studying at school are English and French. She has also studied Mauritian Kreol from Grades 1 to 3 before dropping out because she tended to mix Mauritian Kreol and French spelling. Elsa declares that she does not have any language subject preferences though she would have preferred English if she was orally fluent in that language. The language which she finds most difficult to read is English.

Kelly

Kelly has an elder sister aged fourteen. Her father does miscellaneous jobs including air-conditioning installation, plumbing, etc., while her mother works as tea-lady in a secondary school. Kelly speaks mostly Mauritian Kreol at home. During our first encounters, she shared that she sometimes uses French with her parents but speaks Mauritian Kreol most of the time. Later, she stated speaking French only at school.

The language subjects that Kelly is currently studying at school are English, French and Hindi. Her preferred language subject is French as she finds it easier to read than Hindi and English. The language which Kelly finds most difficult to read is Mauritian Kreol.

Lily

Lily is an only child. Her parents are separated, and she lives with her mother although she visits her father regularly. Her mother works as a hairdresser and prepares food to sell. Lily speaks only French at home. She is self-conscious about her spoken Mauritian Kreol. She finds it difficult to understand when someone speaks lengthily in Mauritian Kreol like the priest’s homily during mass.

The language subjects that Lily is currently studying at school are English and French. Lily has learnt to read in English first as she attended an English medium pre-primary school for some time. She has some notions of Italian which she studied for two years at the age of five and six. Her preferred language subject is English over French as she does not master the verbs in French, and she also finds the words easier to understand in English. Lily has

learnt to read Mauritian Kreol by herself. It is also the language which she finds most difficult to read.

Nessa

Nessa has an elder sister aged twenty who works as a dentist's secretary. Her father works as truck driver while her mother is a chef in a hotel. Nessa speaks only Mauritian Kreol at home. She sometimes speaks French with an older cousin who lives in the same premises though she feels more at ease speaking Mauritian Kreol. Nessa prays in Hindi sometimes, being of Hindu faith. But she has not opted for it at school.

The language subjects that Nessa is currently studying at school are English and French. She does not have a preferred language subject. Nessa has learnt to read Mauritian Kreol by herself. The language which she finds most difficult to read is English.

Sophie

Sophie has four siblings: an elder sister in Grade 6, a smaller brother in Grade 4, a smaller sister in Grade 1, and another sister in pre-primary. Her father is a carpenter while her mother works as a housemaid. Sophie speaks mostly French with her aunt with whom she is currently living. She speaks Mauritian Kreol with her parents as her father does not like her speaking French. According to Sophie, her mother finds speaking Mauritian Kreol to be more convenient in her everyday life activities. Sophie uses Mauritian Kreol with all her siblings, including the two who also live with the same aunt.

The language subjects that Sophie is currently studying at school are English and French. She also studied Mauritian Kreol from Grades 1 to 4 before dropping out because she was mixing the two languages. Sophie's preferred language subject is French. She states knowing more words in French than in Mauritian Kreol. Mauritian Kreol is the language in which she believes she is least fluent.

4.3. Theme 1: Managing one's dominant language constellation (DLC) for lexical access

Under this theme, we can see how the Dominant Language Constellation (Aronin, 2016) is an appropriate analytic concept to make sense of how multilingual children use their multi-competence for concurrent reading acquisition in two or more languages, more specifically for lexical access decision-making. As explained in Chapter 2, the DLC is interesting for this study as it focuses on those languages inside a multilingual's linguistic repertoire that enable the latter to meet all his/her needs in a multilingual setting and thus utilise his/her multilingual affordances (Aronin, 2019).

Theme 1 comprises five sub-themes which explore how multilingual children use their multilingual abilities and how they have developed multilingual strategies for lexical access decision-making when reading a text:

- language choice – language dominance and language domains of use
- navigating among languages of one's DLC
- lexical access determined by language dominance
- lexical access using scaffolding of languages in one's DLC
- exploring metalinguistic awareness across one's DLC for lexical access.

4.3.1. Language choice: language dominance and language domains of use

As reviewed in Chapter 2, language dominance in multilingual research has to do with multilinguals' language choice and use for both internal (i.e., for praying, dreaming, etc.) and external (i.e., according to situations and domains of use) functions. Language dominance has often been linked to language fluency (Flege, Mackay and Piske, 2002, cited in Grosjean, 2016, p. 82) and consequently to native language / L1 (e.g., Gort, 2006; Anthony *et al.*, 2020).

However, this study's findings argue along with Aronin's DLC concept that a dominant language does not refer only to the multilingual child's home language as it varies according to everyday uses s/he makes of the different languages present in his/her DLC. Indeed, different DLCs may map languages differently depending on factors such as 'proficiency in each language, time of its use or emotions currently experienced by a speaker towards a

language [which] may put one language to the fore and others to the backburner' (Aronin, 2019, p. 245). This also concurs with Grosjean's complementary principle (CP), whereby

> languages are used in different domains of life, and [...] this can have an impact on dominance. According to the CP, different aspects of life require different languages. What this means is that dominance may be domain-specific (Grosjean, 2016, p. 83).

The following excerpt from the interview with Alan illustrates the above argument, as we can see the participant using different languages for different purposes such as Mauritian Kreol for playing with his friends and French for praying.

89	Interviewer	*Quand tu joues, tu parles quelle langue avec tes amis ?* [T: When playing, which language do you speak with your friends?]
90	Alan	*Créole*. [T: Creole]
91	Interviewer	*D'accord. Quand — Est-ce que tu pries ?* [T: Ok. When – Do you pray?]
92	Alan	*Prie ? Oui.* [T: Pray? Yes]
93	Interviewer	Hm-hm.
94	Alan	*Oui*. [T: Yes]
95	Interviewer	*Tu pries dans quelle langue ?* [T: You pray in which language?]
96	Alan	*Je prie en quelle langue ?* [T: I pray in which language?]
97	Interviewer	Hm-hm.
98	Alan	*Français*. [T: French]

Excerpt from Alan's interview

Alan also uses Mauritian Kreol for his social media interactions as highlighted by the example from **R6**.

> Alan explaining how he was able to read the Mauritian Kreol word '*ale*' meaning 'to go': '*sur WhatsApp, j'ai l'habitude d'écrire 'ale' comme ça* [T: on WhatsApp, I usually write '*ale'* this way]'.

Indeed, given the complexity of the sociolinguistic landscape of Mauritius, it is difficult to pin down the linguistic profile of the Mauritian multilingual child as this may vary according to parameters being used. Moreover, the variables are sometimes too great in number for a

clear picture to be drawn as discussed in Chapter 1. Aronin's DLC, instead, allows one to draw a more fluid and dynamic picture. This can be seen in Figures 10-14 which map out the eleven participants' DLCs based on data collected from the reading activities interactions and the interviews.

Most of the participants' DLCs (signalled by the inner circles) comprise French, Mauritian Kreol and English while a few have another language which the participants study at school (Hindi for Sean, Celia and Kelly) and/or which is related to their religious beliefs and culture (Hindi for Nessa, Tamil for Amelia). Indeed, a DLC may include languages over and above the home languages. Except for Alan and Lily who also have Hindi and Italian in their respective language repertoire[50] (signalled by the star on the outer circle), the participants do not have any other languages outside their DLCs.

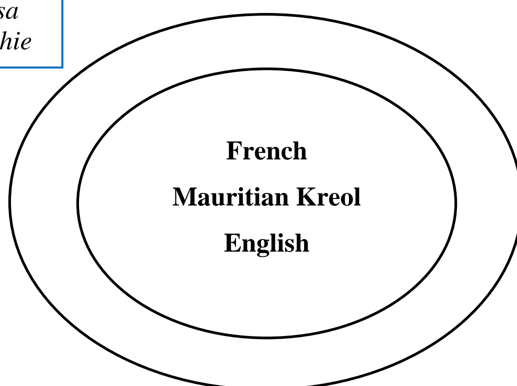


Figure 10

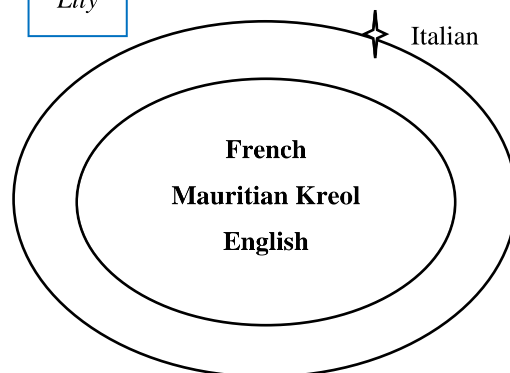


Figure 11

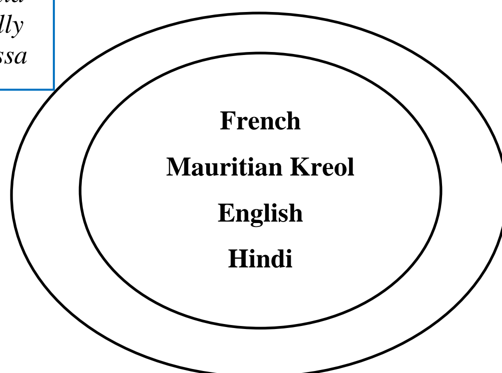


Figure 12

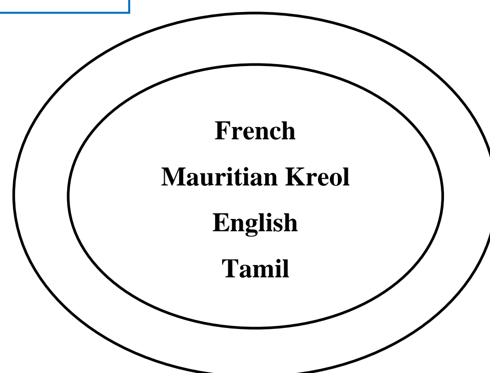


Figure 13

[50] As mentioned in Chapter 2, the language repertoire refers to 'our linguistic assets, all 'what we have' in terms of language skills' (Aronin, 2019, p. 240).

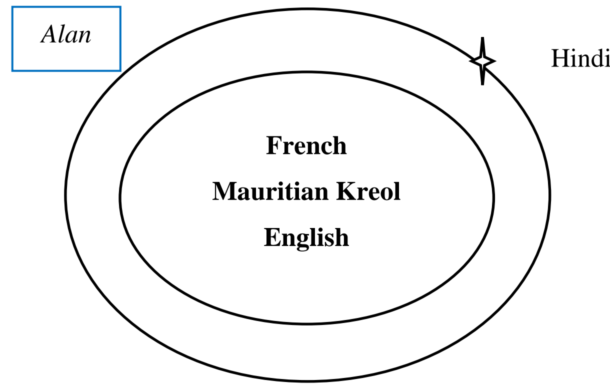


Figure 14

Furthermore, the reading activities interactions and interviews reveal that a distinction may be made between **averred home languages** which may comprise more than one language, and **averred dominant home language**, which refers to the language in which the multilingual child feels s/he is the most fluent among the averred home languages. This may be seen in the following excerpt from the interview with Alan who speaks French, Mauritian Kreol and English at home, but declares that he is most fluent in French.

61	Interviewer	*Allez, quelles sont les langues que tu parles ?* [T: Let's move on, what languages do you speak?]
62	Alan	*Français à la maison*. [T: French at home]
63	Interviewer	*Oui ?* [T: Yes?]
64	Alan	*Un petit peu de créole.* [T: A little bit of Creole]
65	Interviewer	Hm-hm ?
66	Alan	*Avec parfois pour plaisanter, un petit peu anglais*. [T: And sometimes to joke, a little bit of English]
78	Interviewer	*Quelle est la langue selon toi que tu parles mieux ?* [T: Which language do you speak most fluently according to you?]
79	Alan	*Français*. [T: French]
80	Interviewer	*Pourquoi ?* [T: Why?]
81	Alan	*Parce que j'ai l'habitude depuis je suis petit, ma maman – ma maman et mon papa parlent le français avec moi*. [T: Because I'm used to since I'm little, my mum – my mum et my dad speak French with me]

Excerpt from Alan's interview

I opted for the term '**averred**' as opposed to '**assumed**', given that this study moves from the adult's perspective to give voice to the multilingual child's perspective. The averred dominant home language may coincide with the averred home language if there is only one as it is the case for Lily. This is illustrated in the following excerpt.

93	Interviewer	*Quelles sont les langues que tu parles ? On a déjà parlé de*
94		*cette question, mais dis-moi.* [T: What languages do you speak? We already talked about that question, but tell me]
95	Lily	Français. [T: French]
96	Interviewer	Français, après ? [T: French then?]
97	Lily	Je parle pas le créole, que le francais. [T: I don't speak Creole, only French]

Excerpt from Lily's interview

A complete list summarising the eleven participants' DLCs, their averred home languages and averred dominant home language is also provided in Appendix 13. As illustrated in that list, nine out of eleven participants list Mauritian Kreol as one of their averred home languages while five out of these nine further indicate that it is also their averred dominant home language. Similarly, seven out of eleven participants list French as one of their averred home languages while six out of these seven point to French as their averred dominant home language. This reflects recent language trends in Mauritius whereby French is considered a prized language for its role as a social ladder, as outlined in Chapter 1.

This study not only highlights that some Mauritian children have *more than one* averred home language, but it also emphasises that they use different languages of their DLC (in addition to their averred home languages) for different purposes (such as education, leisure, socialisation, etc.). This comes out clearly in the table in Appendix 14, which has been prepared based on data collected from the reading activities interactions and the interviews. Another interesting finding is that participants often use different languages for the same domain of use. In fact, Ben, Eddy, Kelly and Lily said that they play with their friends in both French and Mauritian Kreol, and sometimes even in English according to Eddy. Other examples are for praying, listening to music, and reading for leisure for instance.

However, some of the participants' language uses depend on the context. With regard to cartoons for example, all the participants (except for Lily) said in the interviews that they prefer watching them in French. Cartoons are, in fact, mostly accessible in French and movies in English on National TV channels in Mauritius. Indeed, Amelia stated that the National TV broadcasts mainly movies in English and so it was not really a personal choice. Families that can afford cable television may opt for either French or English-medium channels.

It can also be noted from the interviews that none read for leisure in Mauritian Kreol. This may be because storybooks in Mauritian Kreol are not as readily available as those in English or French. Furthermore, as explained in Chapter 1, literacy in Mauritian Kreol remains marginalised due to its status, and despite its formal introduction in schools in 2012 and an increase in the use of the written language in everyday life (adverts, government pamphlets, communiques, etc.). This is further discussed in sub-theme 4.5.3. Indeed, during the interviews (see Appendix 15), Eddy, Sean and Celia stated that they have mostly English books at home while Elsa has asked her grandfather to get her more English and French books. Kelly, for her part, has mostly French books at home. No mention is made of any Mauritian Kreol book at home, not even by Eddy and Amelia who study the language at school. This echoes with findings from other contexts where vernacular home languages are undermined by a lack of textual resources as is the case for siSwati in Swaziland leading to a scarcity of material for leisure reading in the home language (Lukhele, 2013).

When encouraged to articulate their understanding of a word/text, strategies used, etc., my participants seem to suggest that their language choice is determined by French as the dominant language for classroom interactions. This can be seen both in the reading activities interactions and the interviews. Indeed, though the participants were given the choice of language to explain what they have understood from the English passage in **R1**[51], they all chose to reply orally in French. Yet, French is not the averred dominant home language of all the participants (refer to Appendix 13). In fact, French is often used in informal classroom interactions with the class teacher who also reverts to it to explain complex and technical concepts in other subjects such as Mathematics for example as is often the case in other public classrooms (Tirvassen and Ramasawmy, 2017). The status of French as a dominant language

[51] R1 focuses on the participants' understanding of an unseen passage in English from their school textbook (including questions about vocabulary, identifying main ideas of a paragraph/whole passage, etc.), strategies used, and difficulties encountered.

for classroom interactions is confirmed by Kelly during her **interview** when she said that her home language is Mauritian Kreol – '*A la maison je parle le créole* [T: At home I speak Creole]' (line 80) –, but that she uses French in class: '*À l'école je parle le français* [T: At school I speak French]' (line 86). On the other hand, opting to interact solely in French with me – though I told the participants that they could use any language including Mauritian Kreol if they wished – may be due to the interviewer effect (Leone *et al*., 2021), as is the case for Alan for example. In fact, Alan would use only French when interacting with me though I have observed him use Mauritian Kreol in class, be it with his peers or the class teacher. These examples highlight the specificity of the chosen context in multilingual studies as reading development is intricately intertwined with language domains of use and representations in Mauritius.

It is to be noted that the participants also used translanguaging when engaging orally with the reading activities as further illustrated in sub-theme 4.3.3, which discusses the extent to which language dominance may impact on lexical decision-making. However, no one used a language other than the language of the passage nor translanguaging when responding in writing in **R7**[52]. In fact, every participant opted to write in the language of the reading comprehension text, and none wrote in another language of their choice. So, for the Mauritian Kreol text, they all tried to answer in that language even though some stated not being able to read and write in Mauritian Kreol. One example is Elsa, who tried to respond to some of the questions (refer to Questions 1 and 6a in Figure 15) while leaving the others unattempted. She even wrote in Mauritian Kreol to say that what she found difficult in the passage was that she did not understand written Mauritian Kreol (refer to Question 8 in Figure 15): '*Mo pas konpran ditou Kreol* [T: I don't understand Creole at all]'.

[52] R7 focuses on how the participants respond in writing to reading passages in English, French and Mauritian Kreol, and includes metacognitive questions about what they found easy/difficult in the text, and what strategies they used to tackle the difficulties encountered.

1. Kifer Lilet ek Gaspar ti bien kontan ?

Parsiki zo ti pe naze bien dans la mer.

2. Ki zenn garson-la inn vinn fer kot lamer ?

Nom zelev :

6. Ki to konpran par sa bann mo-la :

(a) tapaz

fer boucou b

(b) dousman-dousman

(c) pli vit ki kapav

7. Ki to'nn trouv fasil kan to'nn lir pasaz-la ?

8. Ki to'nn trouv difisil kan to'nn lir pasaz-la ?

Mo pas Konpran ditou Kreol.

Figure 15

Sub-theme 4.3.1 thus provides further insights into the interplay between *context* (micro-macro and oral-literate continua) and *content* (vernacular-literacy continuum) along Hornberger's (2003c) continua of biliteracy framework. These insights also serve as factors impacting on multilingual children's biliteracy development.

4.3.2. Navigating among languages of one's DLC

Keeping in mind the participants' DLC mappings (see Figures 10-14) and drawing from reading activities data in R3, R4, R6, sub-theme 4.3.2 sheds light on how they navigate among languages of their DLC. Challenging the claim about language mix-up among multilinguals,

this finding suggests that multilingual children have a developed awareness of languages' differences and specificities, as well as the ability to move from one language to the other quite easily and fluently when reading aloud authentic multilingual texts in **R3** and **R4**[53] (refer to Appendix 16) for instance. There also seems to be a mismatch between some of the participants' display and use of their multilingual abilities in the reading activities and their beliefs pertaining to negative interference between French and Mauritian Kreol mentioned later in the interviews (e.g., Elsa and Sophie). This is further taken up in sub-theme 4.5.3.

In fact, all participants were able to switch and adapt pronunciation easily whenever the language changed, as well as explain the meaning of words (**R3**) or the gist of the press article (**R4**). Indeed, all eleven participants were able to read the English word 'smooth' and switch to the French words '*ultra doux et résistant, double épaisseur* [T: super soft and resistant, double thickness]' on a bilingual facial tissue box at a go in **R3**. Same was noted for the pizza flyer from **R3** as illustrated below.

In a pair or group of words: ex. 1. fiery (English) *zanana* (Mauritian Kreol word for 'pineapple'): 'fiery' is read in English and '*zanana*' in Mauritian Kreol (Ben, Elsa, Kelly, Lily, Nessa). ex. 2. chicken *forestière*: both words are read using English sounds despite '*forestière*' not being English (Alan, Ben, Elsa); 'chicken' is pronounced in English and '*forestière*' pronounced in French (Eddy, Sean, Amelia, Kelly, Lily, Nessa, Sophie).

The following example from **R4** also illustrates the above claim.

Eddy moved easily from French to Mauritian Kreol then back to French and again to Mauritian Kreol and back to French and then to English. He even auto-corrected his pronunciation when at one time, he read [lors][54] as in Mauritian Kreol (characterised by closed 'o' and 's' sounds) following the part on Mauritian Kreol '*Zoli lepok* [T: Beautiful era]' and then realised with the next word that the text is back to French and he immediately reread [lɔR] as in French (characterised by the open 'o' and [R] sounds) and continued with reading in French.

[53] R3 and R4 inquire into manifestations of cross-linguistic transfer and metalinguistic awareness using authentic multimodal materials.
[54] The symbol [] used in Mauritian Kreol and French phonetic transcriptions has been kept when having to illustrate how the words sound in the two languages.

Similarly, the participants were able to identify words correctly in a given language and name them in one or sometimes two other languages of their DLC. Some examples from **R6**[55] are given as follows:

(a) English: cheese cubes, delicate, essential, flavour, pebbles, recyclable waste

(b) French: *cacao*, *enveloppe*, *mixeur*, *produit*.
For '*cacao*', Kelly explained that it can be both French and Mauritian Kreol while for '*enveloppe*', Sean explained that removing the ending 'e' makes it Mauritian Kreol.

(c) Mauritian Kreol: Though not every participant stated being literate in that language, all eleven were able to identify the following words correctly: '*ale*', '*bann*', '*leker*', '*simin*'. Alan, Celia, Lily and Nessa were able to name '*gajak*' in French as '*amuse-bouche*' while Amelia, Lily and Sophie also named it in English as 'snacks'.

(d) When confronted with cognates in English/French/Mauritian Kreol, the participants were also able to identify the languages of the given words.

One example is 'information' which according to Elsa, can be both English and French as well as Mauritian Kreol: '*ça peut être en créole aussi parce que ma grandmère ne sait pas parler en français* [T: it can be Creole too as ma grandma is not able to speak French]'. Her grandma usually says: '*informasion pe komanse* [T: the news is starting]'.

Kelly exclaimed as it dawned on her '*mais au fait on peut le dire en créole, en français, en anglais* [T: but we can also say it in Creole, French and English]'.

While naming the word in English and French, the participants were also able to adapt their pronunciation as per the language stated and explained that it is written the same way but pronounced differently in the two languages (Celia, Lily, Nessa, Alan, Ben, Eddy and Sean).

Further examples from **R6** illustrate how participants do not mix up languages in their DLC as they are clearly able to recognise that a word may exist in more than one language and name the languages, as well as explain that these cognates are pronounced differently or

[55] R6 focuses on lexical access as participants have to identify a list of given words, the languages to which they belong, and state the cues that they have used to proceed.

written slightly differently in these languages. The above was also noted during **Lesson Observation 3** (**LO3**) where Alan explained that 'lollipop' meant '*sucette*' in French and '*bonbon baton*' in Mauritian Kreol.

4.3.3. Lexical access determined by language dominance

As can be noted in most reading activities data (e.g., R1, R2, R3, R4, R5b and R6), multilingual children manage languages in their DLC for lexical access (though one language may dominate or be dominated by another for different reasons) while navigating between languages of their DLC.

This finding resonates with the literature claiming that lexical decision is usually determined hierarchically by bilinguals' proficiency or frequency of language use, namely in 'the mother tongue in most cases, or the L2 if it reaches a higher level of proficiency' (Aparicio and Lavaur, 2014, p. 165). Similarly, multilingual children's lexical access is determined by language dominance of L1/L2 over L3 (i.e., Mauritian Kreol and/or French over English).

However, this study's findings also show that lexical access may be decided by language dominance of L3 over L1/L2 (i.e., English over Mauritian Kreol and/or French) and even L1/L2 over L1 (i.e., French over Mauritian Kreol), namely when identifying words that exist in all three main languages of Mauritius (both cognates and false cognates), pseudo-words and words which are specific to a given language.

The examples from the reading activities, give a clearer idea as to what may be motivating the manifestation of language dominance in some languages of a multilingual child's DLC over others, and thus inform his/her lexical decision-making.

An example of language dominance of Mauritian Kreol (L1) over English (L3)

In **R6**, Kelly chose to identify 'delicate' as Mauritian Kreol, using as cue, her knowledge of its meaning in that language: '*quand on épelle ça veut dire 'déguelasse'* [T: when we spell it, it means 'disgusting']'. The Mauritian Kreol word [delika] is the equivalent of 'queasy' when dealing with dirty/filthy objects.

Examples of language dominance of French (L1/L2) over Mauritian Kreol (L1)

Some examples were noted in **R6**:

L1 vs L1

- Ben (whose averred dominant home language is French but has both French and Mauritian Kreol as his averred home languages) identified Mauritian Kreol '*sove'* as the French word '*sauve* [T: escape]' before reconsidering after a closer look at the spelling. He then read it correctly as Mauritian Kreol. He explained the change in his lexical decision by the fact that the letter 'e' is mute in French but not in Mauritian Kreol.

- Alan (whose averred dominant home language is French but has both French and Mauritian Kreol as his averred home languages) chooses to identify '*leson* [T: lesson]' as French because of the presence of 'son'.

L2 vs L1

- Nessa (whose averred and dominant home languages are both Mauritian Kreol) also chose to identify '*sove*' as French, guided by the way it sounds rather than by the way it is written.

Examples of language dominance of French (L1/L2) over English (L3)

(a) In **R1**, Eddy identified some words which exist both in English and French, first in French before quickly correcting himself and reading them in English: 'a', 'festival', 'immediately'. He even read 'and' in French as '*et*' first before correcting himself.

(b) In **R4**, upon encountering the unfamiliar word 'Ravenala' and cognate word 'attitude', many participants chose to read them in French, their lexical decision being motivated by their language dominance of French over English. Some even read 'Ravenala' in its French translated version, i.e., '*Ravenale*'.

(c) Other cognates in **R6**:

- 'delicate' which seven participants identified as French and three correctly as English, the reason put forth by Elsa and Sophie, for instance, being that they are used to hearing it in French.
- 'biscuit' (seven in French > one in English). Six among those who identified it first in French conceded that the word exists in both languages with the same spelling but different pronunciation. Two stated that it could be both languages from the start while Kelly indicated that it could be both French and Mauritian Kreol.

(d) False cognates in **R6**:

- 'fillet' (in English vs '*filet*' in French) which all eleven participants chose to identify as French relating it to the fishing net. Lily who started by saying it was English, also quickly reconsidered her answer and stated that it was French.
- 'choir' (meaning 'to fall' in French vs 'a group of singers' in English): Seven identified it as French, compared to two as English.

Examples of language dominance of English (L3) over Mauritian Kreol (L1/L2)

Some examples were noted in **R6** where participants were requested to identify cognate words in the two languages:

- 'absorb': Amelia, Elsa, Kelly, Nessa who have Mauritian Kreol as L1, and Lily and Eddy for whom Mauritian Kreol is L2.
- 'prefer': Amelia, Kelly, Lily, Alan, Ben, Eddy and Sean

Examples of language dominance of English (L3) over French (L1/L2)

In **R2**[56], while engaging with a French text, Sean read '*suspect* [T: suspect]' as an English word before correcting himself and pronouncing it in French.

Regarding cognates in **R6**:
- 'fertile' (five in English > four in French) while two stated from the start that the word exists in both languages. This may be explained by lexical dominance being determined by the language where the word has been encountered first or is usually used. Here, 'fertile' is a concept present in the participants' History and Geography (as highlighted by Ben) and Science lessons (according to Nessa and Sophie). A few, like Lily, Sophie and Sean, realised that the word also exists in French when asked how it is named in the latter language.
- 'robot': ten participants identified the word as English, among whom five stated that the word exists in both English and French. Elsa and Kelly also recognised that it could be Mauritian Kreol.
- 'transfer': Alan changed his mind from identifying it as a French word to an English word when he had to explain the cue that he had used, and when he saw the ending '-er'.

It can thus be argued that language dominance informs multilingual children's lexical decision-making. Indeed, as highlighted in the examples provided above, even though some participants seem aware that a given word exists in more than one language, they still choose to identify it in a specific language, e.g., 'biscuit', 'fertile, 'robot', etc.

This finding further sheds light on how lexical access of a word/expression for a multilingual child seems to take place in the language where it has been encountered first and s/he usually uses it (as illustrated by cognate words like 'absorb' and 'prefer' being identified in English rather than in Mauritian Kreol). The referent also seems to be attached to the signifier in that language only and is not necessarily known in another language. An example can be seen in the fieldnotes taken during **R5b**[57] where I noted that the Mauritian Kreol '*moulin kann* [T: sugar factory]' did not seem to be part of the participants' mental lexicon as they knew/learnt the terms solely in English from their History and Geography lessons. Elsa's reaction in **R5b** indeed supports the above claim.

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[56] R2 focuses on the participants' understanding of an unseen passage in French from their school textbook (including questions about vocabulary, identifying main ideas of a paragraph/whole passage, etc.), strategies used, and difficulties encountered.
[57] R5b explores the use of translanguaging as a reading strategy as well as the participants' rapport with the languages of the texts/their retellings.

Elsa: Factory *je sais c'est usine* [T: I know it's factory]

Interviewer: *Tu ne dis pas* [T: You don't say] 'sugar factories'?

Elsa: Non [T: No].

Interviewer: Sugar mills?

Elsa realising that it is the same: Sugar mills *c'est moulin* [T: it's factory?]?

Interviewer: *oui* [T: yes].

Elsa: *Ah… si j'ai fait moi mais je croyais c'était un autre chose*. [T: Ah… yes I have studied it but I thought it was something else].

Another example from **R5b** is Elsa and Sean who could not make out the meaning of '*syuple* [T: please]' and thus kept it as it is in their French retelling: '*une dame syuple* [T: a lady please / by all means]'. Indeed, the French expression '*s'il vous plaît* [T: please]' which forms part of polite words learnt/used since pre-primary school, seems to make more sense to them than the Mauritian Kreol word '*syuple*'.

An example from **R6** is 'shape' which all participants correctly identified as an English word; a mathematical concept taught in English in Mauritian public schools since pre-primary as highlighted in Nessa's response below. However, most participants (such as Amelia, Kelly, Nessa, Ben and Sean) were not able to name this word in French (except for Eddy) nor in Mauritian Kreol (except for Alan).

Nessa: *dans les devoirs de Maths, il y a* 'shapes' [T: in Maths homework, there is 'shapes'].

Interviewer: en français? [T: in French?]

Nessa: des… j'ai oublié [T: the… I've forgotten].

Similarly, the majority of the participants identified 'absorb' as English because they have encountered the word in Science lessons, as Amelia, Nessa and Sophie explained when asked about the cue that they had used.

- Amelia: *on fait ça en sciences* [T: we do this in Science].
- Nessa: *dans les sciences* [T: in Science]
- Sophie: *il y avait ça dans le livre de sciences* [T: it is in the Science textbook]

Excerpts from Reading activity 6 data processing table

Celia, for her part, identified '*mixeur*' correctly as French and was able to explain its meaning as it is used to crush tomatoes at her place. But she was unable to name the object in English.

4.3.4. Lexical access using scaffolding of languages in one's DLC

Based on reading activities data (e.g., R3, R5b and R6), sub-theme 4.3.4 provides insights into how multilingual children transfer lexical knowledge across languages of their DLC to scaffold for lexical access. Indeed, my participants draw on lexical knowledge they have of other languages of their DLC, such as orthography, phonology, semantics, etc., to infer that these words come from such and such language. This finding not only concurs with literature on cross-linguistic interactions which argues that children should be encouraged to 'make explicit connections across two languages' (Hornberger, 1990, p. 14), but it also demonstrates that multilingual children are able to explore any language from their DLC when learning to read in two or more languages concurrently.

Interestingly, the participants also use lexical knowledge of one or more languages (y or z languages) to determine why certain words cannot be labelled under these languages rather than refer to lexical knowledge of the actual languages under which they have opted to categorise the words. The participants seem to proceed by compare/contrast method, applying their metalinguistic awareness of other languages to another language as further discussed in sub-theme 4.3.5. This finding reinforces Cummins' (2007, p. 229) plea to stop squandering children's multilingual abilities, arguing that they are making 'cross-linguistic connections throughout the course of their learning in a bilingual or immersion program, so why not nurture this learning strategy and help students to apply it more efficiently [?]'.

Another interesting finding drawn from the reading activities involves a predominance of orthographic lexical awareness over phonological and semantics knowledge among my participants when accessing words using scaffolding of languages in their DLC. This may be the result of written assessments taking precedence over oral ones in the Mauritian context as discussed under the oral-written continuum of Hornberger's (2003c) continua of biliteracy framework (refer to Part 2.5.1). Some examples from **R3** and **R6** are given in Table 15.

Phonological knowledge ***(the word is pronounced differently from other languages in the DLC)***	**Semantics knowledge** ***(the word is named differently from other languages in the DLC; often French is used as benchmark)***	**Orthographic knowledge** ***(the way the word is written as compared to other languages in the DLC)***
R3		
Celia said that 'smooth' did not sound like French.	Eddy pointed out that '*fri*' in Mauritian Kreol means '*fruit*' in French but he was referring here to the French word '*frit*' which meant '*friture* [T: fried food]'.	
R6		
Nessa: '*ça se prononce différemment* [T: it's pronounced differently]' implying from French when talking about words like 'cheese cubes', 'chunky', 'crimpy'	Sean: '*parce qu'en français, on allait dire 'cubes de fromage*' [T: because in French, we would say '*cubes de fromage'*]' (i.e., 'cheese cubes')	Sean: '*en français, on allait retirer 'y', on allait mettre '-r-i-e'* [T: in French, we would remove 'y' and put '-r-i-e']' when talking about 'chunky' and 'laundry'. Same remark for 'crimpy' where he stated that '*en créole, on allait mettre juste un 'i'* [T: in Creole, we would put 'i' only]'.
Sean said he knew that 'transfer' was an English word because it is pronounced like this in French.	Nessa, Ben and Sean identified '*leker*' as Mauritian Kreol because it is named differently in French, i.e., '*un coeur* [T: a heart]'	Ben and Sean identified '*nwar* [T: black]' as Mauritian Kreol because the French spelling is as follows 'n-o-i-r'.
	Lily identified '*nwar*' and '*simin*' as Mauritian Kreol because there are no such words in French or English.	Ben stated that '*chausser*' is French because of the presence of two 's' whereas in Mauritian Kreol, it would have been a 'z'.
	Alan identified 'prefer' as English as in French, it becomes '*préférer*'.	Lily stated that '*mixeur* [T: mixer]' is French because in English, a suffix other

		than ‘eur’ would have been added to ‘mix’.
		As for ‘*motorisé* [T: motorised]’, Elsa, Alan and Sean identified it as French because there is no acute accent ‘*é*’ in Mauritian Kreol.
		Alan, Ben and Sean explained that they identified ‘*boutey* [T: bottle]’ as Mauritian Kreol because it is not written this way in French, whereby it is spelled as follows: ‘b-o-u-t-e-i-l-l-e’.

Table 15

This scaffolding strategy was also used by the participants to identify the language correctly for unfamiliar words which they have never encountered before and for which they do not know the meaning, as illustrated in below examples from **R6**.

- **English**: e.g., ‘chunky’ (all except for Kelly and Alan), ‘crimpy’ (all except for Celia), ‘kibbles’ (Amelia, Elsa, Lily, Ben, Eddy and Sean), ‘laundry’ (Kelly), ‘pebbles’ (Amelia, Elsa and Ben)
- **French**: e.g., ‘*choir*’ (Elsa, Kelly, Alan and Ben), ‘*calisson*’ (Celia, Elsa, Sophie, Ben and Eddy)
- **Mauritian Kreol**: ‘*gajak*’ (Kelly, Ben and Sean), ‘*larm*’ (Celia, Nessa and Ben)

In fact, Elsa stated that according to her, ‘chunky’ is an English word because she was unable to pronounce it in French while Amelia, Celia, Kelly and Lily based themselves on its orthography to identify the language. Similarly, Elsa, Kelly, Alan and Ben used letter-sound correspondence typical of French such as ‘c-h’ and ‘o-i-r’ to identify ‘*choir*’ as French. Ben, Eddy and Sophie also based their lexical decision on the presence of the double ‘s’ and ‘-on’ in the French word ‘*calisson*’ (a traditional French candy) while Celia explained that ‘*le mot ressemble à un mot français* [T: the word looks like French]’ and Kelly stated ‘*quand on épelle même ça fait français* [T: even as we spell it, it sounds French]’. Another example is ‘kibbles’ which Lily identified as English based on the way it sounded when she read it while Amelia stated that it was obvious that the word was English: ‘*c’est comme ça* [T: it’s like that]’.

This may have to do with being immersed in several languages as a multilingual in a multilingual context. Regarding the English word 'kibble' and French words '*calisson*' and '*produit* [T: product]', Elsa said that though she did not know their meaning, she had heard them before in the above languages. Similarly, Ben was able to identify 'pebbles' correctly because he had encountered the word in his Science textbook and in an English reading book respectively.

An interesting finding concerns some participants who identify a word as Mauritian Kreol because they can neither classify it as English nor as French. French and English being the languages in which they have learnt to read first, their lexicon acts as benchmarks for lexical access. Consequently, whatever words that do not seem to fit under these two languages are automatically labelled as Mauritian Kreol, as illustrated in below excerpts from **R6**.

- Nessa stated that 'kibbles' was Mauritian Kreol because it was pronounced differently (implying from the two other known languages of her DLC) while Sophie used its orthography, namely the syllable 'ki' which is indeed common in Mauritian Kreol: '*parce que il y a 'ki'* [T: Because there is '*ki'*]' and in French, '*on doit pas dire 'ki'* [T: we don't use '*ki'*]'.

- Seven participants identified the unfamiliar word 'satay' as Mauritian Kreol with the following justification from Lily: '*parce qu'il n'y a pas de mots comme ça en anglais ni en français* [T: Because there are no such words in English nor French]'.

- Sean identified the unfamiliar French word '*rosace* [T: rose window]' as Mauritian Kreol, stating '*quand on regarde on ne sait pas, c'est comme si on écrit ça en créole* [T: When we look at it, we don't know it, it's as if it's written in Creole]'.

It seems that lexical access in written form is most distant for Mauritian Kreol as opposed to French and English, despite it being one of the averred home languages for nine out of the eleven participants. This may be due to lack of practice in print processing in Mauritian Kreol, as highlighted in sub-theme 4.3.1 and discussed in the light of the vernacular-literacy continuum of Hornberger's (2003c) continua of biliteracy framework (refer to Part 2.5.1). On another note, some of the participants (e.g., Celia, Kelly, Lily, Nessa and Sean) who have never studied Mauritian Kreol formally, have taken the initiative to teach themselves to read in that language, as discussed in sub-theme 4.5.3.

Although this scaffolding strategy may not always result in correct answers, it illustrates how multilingual children exploit cross-linguistic interactions in their DLC for lexical access. Indeed, even though research regarding lexical access involving multilinguals has raised issues of language interference (Dijkstra and van Hell, 2003; Font and Lavaur, 2004; Lemhöfer *et al.*, 2004; Orfanidou and Sumner, 2005; cited in Aparicio and Lavaur, 2014), this study instead argues that interference forms part of a learning process/curve, a sort of stepping-stone whereby multilingual children would explore languages in their DLC to make sense of the world and new words, and therefore continue to build their mental lexicon through associations.

Another example as to how the participants scaffold among languages of their DLC for lexical access is the use of translation, which is considered 'a natural trait in the majority of multilinguals' (Jessner, 2008b, p. 277). Indeed, translation from one language of their DLC to another is used by participants to find words, especially when retelling a Mauritian Kreol story in French and in English in **R5b**. So, Lily and Alan used literal translation when retelling the given story in English as they struggled to find the appropriate English words. Similarly, Amelia opted for literal translation only from Mauritian Kreol to English as she was able to retell the story rather fluently in French.

4.3.5. Exploring metalinguistic awareness across one's DLC for lexical access

As pointed out in Chapter 2, metalinguistic awareness is one manifestation of multi-competence as it involves knowledge of two or more languages in the same mind. It has been duly recognised as a transferrable resource from one language to another to facilitate biliteracy development (Durgunoglu, 2002; Genesee *et al.*, 2006; Geva, 2014; Koda, 2005; cited in Zhang *et al.*, 2017). Indeed, the reading activities (e.g., R3, R4, R5b, R6) demonstrate how the participants explore metalinguistic awareness as a multilingual strategy. This finding further shows how the multilingual child develops his/her metacognitive knowledge as s/he focuses on the characteristics of the language (phonology, semantics, and orthography) as well as ways in which s/he may exploit them for lexical access.

All participants showed confidence in explaining that English, French and Mauritian Kreol are different and in providing examples regarding their phonological, orthographic or semantics differences (refer to Tables 15 and 16). This finding thus challenges the claim of

languages mix-up among multilinguals and inscribes itself along research which instead argues that multilinguals demonstrate 'a fair measure of quasi-theoretical awareness' (Singleton and Aronin, 2007, p. 89) when discussing languages in their DLC. The quasi-theoretical awareness refers to multilinguals' awareness of abilities and strategies that they are exploring when learning multiple languages. These include, for instance, metalinguistic awareness.

There are indeed manifestations of both components of metalinguistic awareness in the data collected (analysis of knowledge and control of processes). As explained in Chapter 2, analysis of knowledge refers to the ability to explicit linguistic knowledge while control of processes refers to the ability to exert control on linguistic processes through intentional selection and application of linguistic knowledge (Bialystok, 1987).

Some examples of analysis of knowledge in metalinguistic awareness extracted from various reading activities are as follows:

Languages	Phonological awareness	Orthographic awareness
English	**R3** Kelly, Eddy and Sean stated that 'smooth' sounded like English.	**R6** Ben and Eddy identified 'maple' as English because of its ending '-ple'. They were both able to give another English word with the same ending: 'apple' (Ben), 'table' (Eddy).
French	**R6** Celia explained that she correctly identified '*calisson*' as French because of the sound [s].	**R3** Amelia, Kelly, Eddy and Sean recognised '*forestière*' as French because of the presence of the grave accent, which is not used in English.
Mauritian Kreol		**R3** Amelia commented that the word 'pizza' in '*Manz enn pizza avek so fromaz* [T: Eat a pizza with cheese]' is not written correctly in Mauritian Kreol: ''*Pizza', je ne crois pas qu'on écrit ça en créole comme ça… C'est p-i-d-z-a.* [T: 'Pizza', I don't think it's written this way in Creole… It's p-i-d-z-a]'.

Table 16

One example of control of processes in metalinguistic awareness is highlighted by the participants' use of lexical traits to identify the language of a given word, whereby lexical access seems guided by their metalinguistic awareness of the languages in their DLC. Thus, as illustrated in an example from **R4**, all participants used their knowledge of 'the' as being an English word to decide to read 'Hotel' in that language.

- Celia: The Ravenale Attitude Hotel.
- Lily/Amelia/Sean: The Ravenale Attitude Hotel.
- Eddy/Sophie/Ben: The Ravenala Attitude Hotel.
- Nessa: The Ravenala Attitude Hotel

Other examples whereby the participants demonstrated control of processes in metalinguistic awareness are given in the excerpts from **R3** and **R4**.

- **R3**: '*forestière*' which Elsa identified as French because of the word '*forêt*', further stating that in English, it becomes 'forest'.
- **R4**: Eddy explained that Mauritian Kreol is different from French and English, using as example that Mauritian Kreol '*ki*' is written differently from French '*qui* [T: who]' while the English word 'island' becomes '*zil*' in Mauritian Kreol, and '*oiseau* [T: bird]' in French becomes '*zwazo*' in Mauritian Kreol.

Manifestations of metalinguistic awareness are reiterated by the participants in the interviews as illustrated in the example from the interview with Amelia. Interestingly, Amelia pointed out that being able to read in French (her L2) has helped her with learning to read in Mauritian Kreol (her averred dominant home language) as she consciously taps on her metalinguistic awareness of the two language systems:

> *Il y a des mots en créole comme si quand on écrit c'est presque la même chose en français. S'il y a accent aigu en français, on ne met pas d'accent aigu en créole* [T: There are words in Creole, as if when we write, it's almost the same as for French. If there is a grave accent in French, we don't put it in Creole] (**Interview-Amelia**, lines 283-285).

On the one hand, this study has shown that the multilingual child is clearly able to demonstrate metalinguistic awareness and use this knowledge for lexical access. Indeed, Amelia who

studies Mauritian Kreol at school, was able to point out in **R5b** that some of the words (namely '*tu*') in the Mauritian Kreol passage did not use the official orthographic conventions:

> *Comme si c'est le 'u' n'est pas le même. Il fallait mettre 'ou' pour que ça devienne [tu], il fallait mettre 'ou'* [T : It's as if 'u' is not the same. It should have been 'ou' for it to become [tu], we should have used 'ou'].

Some of the participants also demonstrated the ability to provide a critical appreciation of their reading proficiency in the different languages of their DLC, as illustrated by the two excerpts from **R5b**.

- Amelia commented how she found the reading activity: '*il y avait des mots que je ne connais pas. Pour le français, c'était pas trop trop difficile. Le créole, il y a des mots qu'on n'écrit pas comme ça, j'ai essayé de comprendre le mot.* [T: there are words that I don't know. For French, it was not so so difficult. For Creole, there are words that are not written this way, I tried to understand the word]'.
- Kelly rated her ability to read the Mauritian Kreol text as follows: '*Comme si sur dix, c'est six.* [T: As if over ten, it's six]'. When asked in which language she found the activity to be easier, she replied 'French': '*parce que je connais beaucoup plus de mots en français qu'en anglais.* [T: because I know many more words in French than in English]'.

On the other hand, this study's data highlight that multilingual children are not taught explicitly to draw their attention on similarities and differences between languages in Mauritian classes despite literature arguing that this may be beneficial to their biliteracy development (e.g., Cummins, 2000; Bialystok, 2002; Edwards, 2009; Corcoll, 2013; Zhang *et al.*, 2017). Indeed, when prompts were used repeatedly during the reading activities, the participants were able to walk their way through unknown words. One example from **R3** is Ben first saying that he did not know the meaning of the word 'smooth' but upon being prompted to look at the words that follow, he was able to answer that it meant '*doux*' in French. This finding thus argues that multilingual children's metalinguistic awareness remains under-explored in Mauritian classrooms. Consequently, their metacognitive knowledge also remains under-developed. This may be due to the fact that children's multilingual abilities are often taken for granted. The data collected from the questionnaires to get the perspective of adults who are responsible for developing the participants' biliteracy,

also concur with this point, as highlighted by their choice of words (emphasis is mine) in the provided excerpt.

> Answering Questions 15 and 13 respectively about 'how do pupils manage having to read in two or more languages at the same time?',
> - the General Purpose teacher replied: 'I guess they **have been used** to it'.
> - the Headteacher wrote: 'It seems that it's **easy** for them to switch very easily for example from Creole to French or from French to KM.'
>
> ***Excerpts from General Purpose and Headteacher's questionnaires***

4.4. Theme 2: Multilingualism as scaffolding tool for reading for understanding

Apart from lexical access, meaning making is also crucial to be able to read for understanding. Theme 2 comprises three sub-themes which examine how multilingual children use their cross-linguistic abilities as scaffolding tool to make meaning of texts:

- lexical transfer or transfer of meaning,
- translanguaging, and
- multilingual literacies.

4.4.1. Use of lexical transfer/Transfer of meaning

This sub-theme explores how multilingual children have recourse to lexical transfer among languages of their DLC to infer the meaning of unknown words and build their understanding of texts. So doing, it proposes insights into how such transfer of meaning can assist biliteracy development (Reyes *et al.*, 2012) as explained in Chapter 2. My participants indeed showed awareness of and used lexical transfer (which is essential to reading comprehension) from words encountered in different contexts/modalities and languages in their DLC to scaffold understanding of words/texts in a given language, as illustrated in the two following examples.

When asked how she usually tackles difficulties encountered in reading an English passage in **R7**, Lily explained that she resorts to lexical transfer when she encounters a word whose meaning she does not know as can be seen in Figure 16.

9. What do you do when you find it difficult to read?

When dont know a word we must see if we know a word like this word.

Figure 16

Similarly, when asked what she likes about being a multilingual, Amelia explained that lexical transfer enables her to find the correct word to answer a passage question.

173	Interviewer	*[...] est-ce que tu aimes le fait de pouvoir parler toutes ces langues-*
174		*là ?* [T: do you like the fact that you are able to speak all these languages?]
175	Amelia	*Oui* [T: Yes]
176	Interviewer	*Pourquoi* ? [T: Why?]
177	Amelia	*Bein, parce que pour les exam – pour les examens ça peut, comme si m'aider*
178		*un peu. S'il y a une question, comme si, on ne sait pas comment dire, on peut*
179		*penser à un dessin animé ou quelque chose comme ça pour écrire le mot.* [T: Well, because for the exam – for the exams it can, like, help me a little. If there is a question, like we don't know how to say the word, we can think of a cartoon or something similar to write the word]

Excerpt from Amelia's interview

Two attributes regarding lexical transfer have been noted in the data collected from lesson observations, reading activities, interviews and questionnaires: namely that lexical transfer is multidirectional, and that cognate awareness transfer is also used by participants to infer meaning. The two attributes are further discussed and illustrated in the subsequent sections.

(a) Multidirectional lexical transfer

Although, as highlighted in Chapter 2, literature tends to point towards transfer as being mainly unidirectional from the stronger to the weaker language (Zhang *et al.*, 2017), this study's data show that lexical transfer may also happen from any language of the multilingual child's DLC to another, and vice versa. This finding concurs with recent Third language Acquisition (TLA) research which argues that though language transfer has for long been

studied solely from L1 to L2, it does not happen from L1 to L2 only, but also from L2 to L3, L1 to L3, and vice versa (Cenoz *et al.*, 2001; De Angelis, 2007; Jessner 2008b).

Some examples taken from the lesson observations, reading activities and interviews, to illustrate how the participants used lexical transfer as scaffolding tool for reading for understanding between any two languages of their DLC, are provided below.

Mauritian Kreol/French (L1/L2) → English (L3)

As put forth by existing literature (Zhang *et al.*, 2017), lexical transfer usually takes place from the more familiar languages ('stronger') to the least used ones ('weaker'), which would be from Mauritian Kreol and/or French to English in the case of my participants. In fact, they mostly resort to French or Mauritian Kreol first to make sure they have understood the meaning of a given word before proceeding to answer the question in English, as demonstrated in the given example.

Teacher: What is the past tense of 'teach'?

Ben: *montre* [T: taught]

Teacher: What is the past tense of 'bring'?

Elsa: *prendre* [T: bring]

Excerpt from lesson observation 5's fieldnotes

Similarly, Kelly admitted to resorting to lexical transfer from Mauritian Kreol to English.

462	Kelly	*l'anglais comme si, quand moi je lis, parfois comme si, je dis un mot*
463		*en créole avant de lire en anglais* [T: English, like, when I read, sometimes like, I say a word in Creole before reading it in English].
464	Interviewer	*Donc, tu lis en créole d'abord* [T: So, you read in Creole first]?
467	Kelly	*Oui* [T: Yes].

Excerpt from Kelly's interview

Another example shows Elsa turning to French as a stepping-stone to better understand the story to be retold in English as illustrated in the excerpt from **R5a**[58] data processing table.

At some point, Elsa said that she could not find the words in English and proceeded to say them aloud in French (see the two words highlighted in magenta) first. This enabled Elsa to translate them back into English (in green) as she became more confident in retelling the story: 'I am looking for my dad. Please *conduire* [T: drive] Please can you drive me'; 'Tikoulou and Ruby *regarde* [T: look] look everywhere'.

Both the class teacher and the headteacher concurred with the above findings as they acknowledged the use of lexical transfer by pupils to make meaning in reading comprehension in their responses to Questions 11a and 13 of their respective questionnaires. Indeed, the class teacher admitted having observed his pupils use cognate awareness transfer (which is further discussed in the next section): 'At times, it occurs that pupils use words from one language to help them understand words in another language, for example the word pharmacy/*pharmacie*, medicines/*médicament*, accident (English or French)'. As for the headteacher, he stated that '[p]upils tend to translate in their mother tongue to better understand new words or sentences'.

English (L3) ⟶ French (L2)

This study also argues that the multilingual child does not only move from the 'stronger' to 'weaker' languages but may also navigate among the different languages of his/her DLC as scaffolding strategy to make meaning of a text. One example is Kelly having recourse to an English word when she was unable to find the appropriate word in French while explaining what she had understood from the passage in **R1**: '*Elle a commencé de faire* acting [T: she has started to act]'. Similarly, Amelia explained that when she cannot find a word in French and Mauritian Kreol, she says it in English.

187	Amelia	*[…] Moi, parce que je ne savais pas*
188		*comment dire ça en franç—créole, je l'ai dit en anglais.* [T: Me, because I didn't know how to say it in Fren-Creole, I said it in English]
		Excerpt from Amelia's interview

[58] R5a explores the use of translanguaging as a reading strategy as well as the participants' rapport with the languages of the texts/their retellings.

Mauritian Kreol (L2) ⟶ French (L1)

Living in a multilingual context also means that some referents may have signifiers which may not necessarily belong to the averred home language of the multilingual child but to another language of his/her DLC. One example from **R6** is Eddy using lexical transfer from Mauritian Kreol (which is not his averred home language) to guess the meaning of an unfamiliar word in French, '*confiserie*'. In fact, he thought that the word referred to pickled fruits ('*konfi*' in Mauritian Kreol) because of the presence of '*confi-*' in '*confiserie*'.

Hindi (L3) ⟷ English (L3)

Another interesting finding from the data analysis shows that lexical transfer may occur among third languages (e.g., English and Hindi) which refer to additional languages inclusive of the third language (De Angelis, 2007). This finding is important as what seems to be currently missing in Mauritian multilingual classrooms is the absence of a proper framework as to how to use all the languages of the multilingual child's DLC to enhance his/her reading comprehension in any of the languages being taught at any one time.

So, according to Kelly's DLC, her averred (dominant) home language is Mauritian Kreol while French and English are languages learnt at school. The same applies to Hindi, which she studies as an optional language. However, Kelly likes to listen to a Korean band that sings in English and to watch serials in Hindi. Being of Hindu faith, this language also forms part of her cultural and religious identity though she states that she does not understand prayers in Hindi when she accompanies her parents at the temple and that she uses the language only in Hindi classes. Interestingly, Kelly says that she uses subtitles in English to improve her understanding of Hindi words while watching Hindi serials. According to Kelly, these serials have also helped her to enrich her English vocabulary, as illustrated in the given excerpt.

302 303	Kelly	*Mais, quand je regarde des séries indien là, au bas ils écrivent en anglais. J'apprends plus les mots anglais*. [T: when I watch Indian serials, there, at the bottom they write in English. I learn more about English words]

Excerpt from Kelly's interview

This finding about multidirectional lexical transfer goes beyond the factor of psychotypology (Kellerman, 1983) which, as discussed in Part 2.5.2, posits that the lesser the distance between languages which are typologically close, the more learners would tend to transfer vocabulary and structures. Rather, it embraces the factor of 'recency' (Hammarberg, 2001) whereby a learner would be more prone to borrow from a language s/he currently uses (DLC) than from languages s/he may know but does not use (language repertoire). Indeed, a multilingual's mind juggles with constant selection and de-selection of languages as put forth by Grosjean's (1997) model of language mode continuum.

(b) Cognate awareness transfer to infer meaning

As discussed in Chapter 2, one form of lexical transfer lies in the use of cognate awareness to infer meaning of unknown words in another language, based on similarities in meaning, spelling and pronunciation between two languages (Proctor and Mo, 2009). As this study argues, transfer may take place among any language of the multilingual child's DLC, while in SLA research, crosslinguistic (cognate) predictions are usually facilitated from native language to second language, or from home language to majority language (refer for example to Anthony *et al.*, 2020). This study's findings moreover posits that we should not limit the possibilities to the above dichotomous relationships but rather consider that multilingual children are exposed to the various languages of their DLC through multiliteracies realia or domains of use.

Some examples from the reading activities whereby the participants used cognate awareness transfer to infer meaning are given hereafter.

French ⟶ English

- **R1**: 'international', 'immediately'. In both cases, Elsa shared that she was able to make out the words in English because they looked like the French words. Similarly, though Sean stated not knowing the meaning of 'operator', he was able to recognise that is the same as the French word '*opérateur*' and said that it meant '*opérer* [T: operate]'. Other examples are: 'actress / *actrice*' (Celia), 'documentaries / *documentaires*' (Nessa), 'director / *directeur*' (Sophie).

English ⟶ French

- **R3**: Amelia, Kelly and Lily recognised the English word 'forest' in the French word '*forestière*'.

French → Mauritian Kreol

- **R5b**: Lily recognised the French word '*la richesse*' in the Mauritian Kreol '*larises* [T: wealth]' while Amelia, Elsa and Nessa recognised the French word '*riche* [T: rich]' in '*risar* [a rich person]'.

As for words from languages that are not part of the multilingual child's DLC, examples from **R6** show that the participants would use known lexical resemblance with English and French words respectively to guess the meaning of Italian words '*biscotti*' (Elsa – 'biscuit') and '*bruschetta*' (Nessa, Ben, Eddy – '*brochette* [T: skewer]'). Similarly, Amelia, Alan, Ben and Sean rightly guessed that the Italian words '*Quattro formaggio*' meant '*Quatre fromages* [T: Four cheese]' based on their lexical proximity with French (*quattro – quatre* [T: four]; *formaggio – fromage* [T: cheese]).

4.4.2. Use of translanguaging for meaning making

This sub-theme provides further insights into existing research as to how multilinguals use translanguaging – which refers to 'the flexible use of linguistic resources by bilinguals in order to make sense of their worlds' (García and Leiva, 2014, p. 200) – as scaffolding tool for meaning making of texts. Michel-Luna and Canagarajah (2007, cited in Velasco and García, 2014, p. 10) rightly call this approach, a 'strategic scaffolding of text negotiation' in reading comprehension. As mentioned in Chapter 2, translanguaging studies have mainly focused on content meaning making, while research on its impact on biliteracy development lingered behind (Canagarajah, 2011a; García and Kleifgen, 2019; Wagner, 2020).

Although pedagogical translanguaging is not formally acknowledged in Mauritian classes (Mahadeo-Doorgakant, 2017), my participants resort to this strategy for different reasons as outlined in the interviews and reading activities and as noted during lesson observations as well as from the class teacher's questionnaire. The main justification could be the participants' lack of lexical access in a specific language that would trigger the use of translanguaging in another language. This finding concurs with literature on translanguaging approach to biliteracy that encourages multilingual students to 'develop the agency to use their entire repertoire to make meaning, regardless of the language of the text or the language of instruction' (García, 2014a, p. 155).

In fact, the lack of lexical access often noted in English (as compared to French for instance) would lead to the participants scaffolding from French in order to explain the meaning of English words, as can be seen in the excerpts below from **R1**.

- Elsa: 'heroine' being defined as '*superhéros. C'est une fille* [T: a superhero. It's a girl]'.
- Amelia: 'release' being defined as '*quand le film va commencer à jouer [...] au ciné* [T: when the movie will start to play [...] at the cinema]'.

Alan also uses translanguaging to compensate for his lack of lexical access while retelling a Mauritian Kreol story in English as illustrated in the excerpt from **R5b**.

Alan: One day in one *pei* [T: country] [...] she has... she has plantations, *mulin kann* [T: sugar factories]
Interviewer: *Comment on dit en anglais?* [T: How do we say in English?]
Alan*:* Sugar factories, sugar mills, sugar factories and ... *karo dite* [T: tea fields]
Interviewer: *Tu m'as dit tout à l'heure, 'karo' ça veut dire champs.* [T: You told me earlier, '*karo'* means 'fields'] In Mauritius, we have sugarcane...
Alan: Fields.
Interviewer: '*Karo' c'est quoi?* [T: 'Karo' means what?]
Alan: *Euh des champs* [T: Hmm fields]
Interviewer: *Tu viens de me dire là* [T : You just told me] 'sugarcane'...
Alan: Sugarcane fields fields *euh* [T: hmm] ... and she have a factory, and she have a reservoir of water, she has a reservoir of water.

Moreover, as argued in sub-theme 4.3.4 whereby participants scaffold between languages in their DLC for lexical access, Elsa decided to resort to Mauritian Kreol '*Mo krwar dan twa*' when she was unable to find the equivalent of the English words 'I believe you' in French (**Interview-Elsa**, lines 530-531). Elsa hence chooses to make meaning in the language she feels more proficient or knows the words already. So, in **R5a**, she opted to translanguage using French and even English while narrating in Mauritian Kreol. An example is: '*il prend lamin piti la, li* [T: he takes the child's hand, he] *shake hands*'. Indeed, Elsa often switched to French during her Mauritian Kreol narration to ask about a word which she did not understand in the text or to interact with the researcher: '... *inn al enn lil ki appel Seychelles... Il y a ... je ne comprends pas un mot dedans 'qui s'appelle Kaskott'* [T: went to an island called Seychelles... There is... I don't understand one word in 'who is called Kaskott']'. Elsa

seems not to be used to narrating in Mauritian Kreol as she would go back to French and then recall that she should be narrating in Mauritian Kreol before continuing in that language: '*Tikoulou reste tou seul avec sa grand-mère. Depuis que*... *Depi ... ki so papa inn ale* [T: Tikoulou lives only with his grandmother. Since… since… his father left]'. As for her retelling of a story in English, she translanguaged in French as highlighted below.

- Tikoulou and her friend Ruby… is with her grandmother. Tikoulou … *j'arrive pas à dire le mot 'tout seul' en anglais* [T: I can't say the word 'alone' in English];
- Tikoulou talk to her and *il croyait qu'elle était malade* [T: he thought she was ill].

Excerpts from R5a data processing table

One interesting finding regarding the participants' use of translanguaging is that it is often determined by languages' domains of use in Mauritius. In fact, as highlighted by Grosjean's complementary principle (1997, p. 165), multilinguals use different languages 'for different purposes, in different domains of life, with different people'. Elsa's experiencing difficulties to retell the story in Mauritian Kreol (despite it being her averred dominant home language) and thus reverting to French, may be linked to classroom language uses whereby Mauritian Kreol is mostly used for informal interactions whereas French is used for lesson tasks like narrating a story for instance. Indeed, the lesson observations LO1, LO5 and LO6 carried out in this study confirm this practice with the class teacher often scaffolding from French to English and Mauritian Kreol to French, to ask questions and explain meaning of new/unfamiliar words, as illustrated in Appendix 17.

It is to be noted that the class teacher not only scaffolds from French to English but also from English to French. In fact, he gave a more familiar English word as cue to trigger the French word from his pupils' mental lexicon as noted during **LO1**: '*en anglais, on appelle ça un* [T: in English, we call it a] 'carpenter'', and this cue is enough for Celia and Alan to find the French word '*charpentier*'. The participants seem to appreciate the use of scaffolding by their teachers, be it the General Purpose teacher or the other language subject teachers. Indeed, Amelia said that when they do not understand something in French, they ask their Mauritian Kreol teacher who then explains in Mauritian Kreol (**Interview-Amelia**, lines 225-226). Similarly, Kelly stated that her Hindi teacher would write the equivalent in English or French to facilitate meaning making of some Hindi words by the pupils.

192	Kelly	*Fait comme si elle a écrit un mot en hindi, elle va écrire à côté soit en anglais ou*
193		*soit en français* [T: Let's do as if she writes a word in Hindi, she will write either in English or French next to it].

Excerpt from Kelly's interview

In his questionnaire (see Appendix 6i, Question 6), the General Purpose teacher also admitted to having 'to give them [pupils] translation in French' and pointed out that 'English texts are often explained in French and Creole for better comprehension'. Translation as part of translanguaging is likewise commonly used by my participants as noted in **R1** (to explain what they understood from the English reading comprehension passage) and in **R5a** (where many translated literally from French to English or from French to Mauritian Kreol when retelling the French story in these two other languages). Alan thus declared in **R5b** that he used literal translation to retell a story in English: '*les mots français j'ai traduit avec les mots anglais* [T: The French words, I translate them with English words]'.

This study furthermore argues that the use of translanguaging depends on the multilingual child's mental lexicon, i.e., words that s/he knows which may be in different languages or in only one language. For instance, s/he may know a given word in different languages like Alan (**Interview-Alan**, line 21): '*Il travaille dans la compagnie xxx. Il fait site agent* [T: He works for the firm xxx[59]. He is a site agent]'. Although Alan knows the French words '*chef de chantier*', he prefers to translanguage and use the English words 'site agent' while speaking in French. This may also be explained by domains of language use, as usually job titles are advertised in English in Mauritius, and thus used in everyday discourse in English itself. Similarly, Eddy (**Interview-Eddy**, line 92) and Elsa (**R5a**) used the job title 'coastguard' in English while interacting in French. There are also socio-cultural words like 'festival' which Elsa chose to keep in English while explaining what she understood from the passage in French in **R1**: '*Il y avait un* Film Festival *en juillet. Rawiyah était excité* [T: There was a Film Festival in July. Rawiyah was excited]'. Indeed, the word 'festival' is more commonly used in English and taught in that language in pre-primary and even at primary levels, under the theme 'Festivals in Mauritius'. This taught theme usually refers to the different faith-based

[59] 'xxx' has been used to maintain anonymity of the company.

celebrations in Mauritius which is a multicultural island, such as Thaipoomsam Cavadee by Tamils, Spring Festival by Sino-Mauritians, and Eid-Ul-Fitr by Muslims to cite a few examples.

Another instance of translanguaging for meaning making is when the multilingual child knows only the word in a specific language and uses it in another language like for example: '*Quand on ris à l'arrière, ça va devant* [T: When we pull it backwards, it moves forward]', with '*ris*' being the Mauritian Kreol word for 'pull' (**Interview-Alan**, line 326). Another example from **R6** is Sophie's use of 'snacks' to explain the meaning of Mauritian Kreol word '*gajak*' in French: '*c'est des snacks qu'on pose sur la table pour qu'on mange* [T: it's snacks that we serve on the table to be eaten]'. A third example is '*C'est comme dans les* cardinal point [T: It's like the cardinal point]' (**Interview-Ben**, line 288) where the referent's concept of 'cardinal point' has been taught in English only in History and Geography lessons, and it seems that Ben has no other word for this concept in his mental lexicon.

4.4.3. Use of multilingual literacies for meaning making

This study's findings demonstrate that multilingual children not only navigate among languages of their DLC as per their needs, but they are exposed to these languages through various media (television, YouTube, magazine, and other realia, etc.). This multilingual exposure forms part of their so-called 'normal' everyday life. As outlined in Chapter 2, multilingual literacies, which refer to 'the multiple ways in which people draw on and combine the codes in their communicative repertoire when they speak and write' (Martin-Jones and Jones, 2000, p. 7), may thus be considered as a multilingual strategy for meaning making as well as for enhancing one's mental lexicon. This includes multimodal resources, i.e., visual, audio, and spatial, as well as new communication technologies (such as SMS, emails, instant messaging, social media, etc.) as put forth by New Literacy Studies (Street, 2003). Examples from various reading activities carried out in this study are provided below as illustrations.

Indeed, Ben shared in **R1** that he knows the meaning of 'documentaries' as he has encountered this word while watching a documentary on television: '*ben on passe à la télé. Il y a documentaires et des fois ils écrivent en anglais* [T: well it's on TV. There are documentaries and sometimes it's written in English]'. Same for 'wildlife' in **R1**, a word which Ben relates

to the local non-governmental organisation that looks after the preservation of endangered plants and animals: '*il y a une association qui s'appelle The Mauritius Wildlife* [T: there is an association called The Mauritius Wildlife]'. As for Lily, she said in **R2** that she has inferred the meaning of '*télépathie* [T: telepathy]' while watching videos on YouTube, where she has come across this word. Another example from **R3** is 'smooth', which several participants have recognised as it is a common brand for facial tissue boxes in Mauritius, as highlighted by Amelia, Elsa, Lily and Sophie. Sean further added that it is the same facial tissue which is used in his car ('*Le* tissue *dans la voiture*') while Alan said that he has seen the word in an advertisement ('*dans les pubs*'). In **R4**, Elsa has been able to guess the meaning of 'junior' because she has encountered it previously in the local magazine *Ciné Junior*.

This study's findings additionally demonstrate that often literacy development is associated with reading textbooks or storybooks only. This may explain why Ben has been pleasantly surprised to be asked to read a flyer that is usually used to order pizzas in **R3** as highlighted by his interjection '*Heiinn*' in '*Heinnn, c'est quelque chose pour commander chez Domino's pizza* [T: Ohh, this is to order from Domino's pizza]'. This example serves to advocate the need to recognise and encourage multilingual children's ability to use multilingual literacies in order to enhance their mental lexicon and their reading for understanding.

4.5. Theme 3: Impact of language representations on reading confidence

One of the findings that emerges significantly is the power relations at play in multilingual children's rapport with languages of their DLC and the subsequent impact that language representations may have on their reading confidence. The DLC languages on which this study focuses here are English, French and Mauritian Kreol, which are common to all eleven participants. The DLC is an interesting analytical tool for this theme, as it allows the exploration of 'attitudes and emotions towards the languages, the timings of their use, the order and reasons of their use' (Aronin, 2019, p. 242). Drawing on Hornberger's (2003b) continua of biliteracy framework – which focuses on power relations between literacies in different languages and impact of context, development, media and content on literacy development –, this theme provides further insights into how language representations may act as enabling or hindering factors to multilingual children's reading confidence.

The analysis of the participants' discourse (as opposed to the previous two themes where the voiced content has been taken at face value) has shed light on the extent to which the multilingual child's language representations may have been shaped by knowledge (which, according to Foucault, comprises both '*connaissance*', i.e., academic discourse, and '*savoir*', i.e., institutional and social discourse). Foucault (2000a, p. 7) indeed defines knowledge in *The Archaeology of Knowledge* (1969) as being 'embodied not only in theoretical texts or empirical instruments but also in a whole set of practices and institutions'. Knowledge is indeed determined by economic needs, historical conditions, and power. As discussed in Chapter 3, the Foucauldian perspective on discourse analysis has been chosen to allow the unveiling of discursive formations among the participants, which manoeuvre beneath their consciousness and 'determine ahead of time what can and cannot be said, and more importantly what can be thought within a given context, domain, or historical period' (Foucault, 1994, cited in Springer and Clinton, 2015, p. 89).

Based on data collected from lesson observations, reading activities, interviews and questionnaires, this theme – which includes three sub-themes – explores the participants' discursive formations with regard to their rapport with the languages in their DLC and their reading confidence:

- language representations and language anxiety;
- mismatch between language perceptions and reading ability;
- the children's rapport with Mauritian Kreol (which holds an ambiguous status as a home language and a snubbed vernacular).

4.5.1. Language representations and language anxiety

Language anxiety has been explored in previous studies on second and foreign languages, whereby its impact on learners' self-esteem and academic achievement has been discussed (see Horwitz, 2010; Teimouri *et al.*, 2019). Horwitz (2010, p. 154) describes language anxiety as 'a situation-specific anxiety, similar in type to other familiar manifestations of anxiety such as stage fright or test anxiety'. One recent study carried out in contexts close to (namely, the Seychelles) and including Mauritius (Surajbali-Bissoonauth, 2019), focuses on language anxiety linked to the use of English as medium of instruction. However, in that study, there is

no mention of language anxiety regarding reading in English. It focuses rather on the manifestation of language anxiety at the levels of listening, writing and speaking.

(a) Language representations about English

As noted during the lesson observations, oral interactions mostly take place in French (at least from the class teacher's side) while some pupils also interact in Mauritian Kreol. An example from **LO6** illustrates pupils' reticence in English (from timid to no response), compared to French (enthusiastic response).

> One instance, during LO6, when General Purpose Teacher asked a question in English 'How many of you sing in the bathroom?', there was no answer giving the impression that pupils were timid. But when he asked the same question again in French, answers were given more enthusiastically.
>
> ***Excerpt from lesson observation 6's fieldnotes***

The reticence with English is further reiterated by the sense of obligation to speak and read in that language, as highlighted by Eddy's repetitive use of the word '*obligé* [T: compelled]' and '*faut* [T: must]' when talking about his use of English (emphasis is mine):

> - '*Mais avec mon cousin je suis **obligé** de parler anglais parce qu'il est Australien, et il parle juste anglais. Je suis **obligé**.* [T: With my cousin, I **have to** speak English as he is Australian, and he speaks only English. I **have to**]' (lines 128-129).
> - With the bank teller: '*Il **faut** qu'on parle l'anglais avec elle*. [T: We **must** speak English with her]' (line 151).
> - *'On était **obligé** de lire des questions en anglais parce que maths c'est en anglais. J'étais **obligé** de lire les questions en anglais* [T: We **had to** read the questions in English as Maths it's in English. I **have to** read the questions in English]' (lines 283-284).
>
> ***Excerpts from Eddy's interview***

The data further reveal that language anxiety occurs mostly in English among my participants. In fact, in **R1** where the children had to read aloud and explain what they understood from an English passage, I had to use prompts such as 'Are you sure you don't know this word?'/ 'Can you try to guess?' to encourage them to propose something instead of just saying 'I don't

know'. Likewise, in **R3**, many participants would simply say that they do not know the meaning of a given word. However, following some encouragement from my side, they were able to give the meaning of 'fiery', either by using lexical transfer from Mauritian Kreol ('*frir*'), or by looking for other English words ('fire', 'fried') in their mental lexicon as illustrated below.

- When asked the meaning of 'fiery', Amelia was not able to guess. Then, when asked which word she recognised in it, she rightly replied: '*c'est fort* [T: it's hot]'.
- Similarly, Lily said she did not know. Then, when asked to guess the meaning, she replied: '*C'est des ananas grillés* [T: They are grilled pineapples]'. She recognised the word 'fried' in 'fiery'.
- Sean was not able to guess too. Then, when asked which word he recognised in it, he said 'fire', '*c'est anana en feu* [T: It's pineapple on fire]'.
- As for Elsa, she replied that she has never encountered this word. However, when encouraged to look again at the word, she said that it looks like the Mauritian Kreol word '*frir* [T: fried]'. While discussing further how the word 'fiery' contained the English word 'fire', Elsa then saw the link between 'fire – *feu* – *piment* – *piment fort* [T: fire – chilli – hot chilli]'.

Excerpts from R3 data processing table

Furthermore, some participants stated that they would not be able to retell the story in English even before giving it a try as shown in the following excerpts.

- Ben: '*oui en français oui, mais en anglais non* [T: yes for French, but no for English]'
- Eddy: '*Anglais ça sera difficile… Je n'arrive pas en anglais* [T: English, it's going to be difficult… I can't do it in English]'
- Elsa: '*Hmm… Je ne crois pas je peux faire en anglais… je vais essayer je crois* [T: Hmm… I don't think I can do it in English… I will try I think]'.

Excerpts from R5a and R5b data processing tables

Most of the participants, in fact, had to be encouraged and reassured before as well as after tackling these two activities. One example is Ben who still seemed to doubt his ability to retell the story in English in **R5b** despite his narration showing clear understanding of the text.

At the end of the activity, when the researcher told Ben as way of encouragement: 'You were also able to retell the story in English', he replied: '*Un p'tit peu* [T: Just a little]'.

Excerpt from R5b data processing table

Similarly, Kelly seemed surprised that she was able to retell the story in English in **R5b**. As for Eddy, he was also able to proceed with prompts and he confided at the end of the activity having enjoyed it.

The participants' display of language anxiety regarding English was further stressed during the interviews where six out of eleven participants have rated it as the language which they find most difficult to read. As illustrated in the interview excerpts in Appendix 18, the main explanation given is their limited vocabulary in English (Alan, Amelia, Celia, Elsa and Nessa). Lack of familiarity is another reason as Elsa explained in **R5b**.

It is interesting to note from the above that the participants do not only display language anxiety, but they also demonstrate awareness of their lacunae in English that may be addressed through pedagogical action. Considering children as co-creators of knowledge in this study has allowed such data to emerge and to capture how multilingual children are managing their multilingual abilities in learning to read concurrently in two or more languages.

Reasons put forth by participants to account for their language anxiety in English seem to resonate with the discursive formation about the gap between home and school languages (e.g., Hungi and Thuku, 2010) as one of the causes of reading difficulties in English. In fact, this argument is also indicated in the class teacher's and the headteacher's responses to Questions 10 and 9 in their respective questionnaires.

- General Purpose teacher to Question 10: 'In the Mauritian context, based on children's background, many children speak Creole only at home, some speak French and rarely English. Pupils are not exposed to the language. As a result, their comprehension level is also affected'.
- Headteacher to Question 9: 'Lack of exposure'.

Excerpts from General Purpose and Headteacher's questionnaires

The above illustrations clearly posit the importance of the teacher's role in lessening language anxiety and its impact on children's reading confidence. Indeed, with more encouragement from the teacher as well as a formal acknowledgement of multilingual strategies, the participants may feel more at ease and safe in English. Nurturing their positive rapport with languages is indeed important.

It is furthermore interesting to note that despite their language anxiety in English, some participants still appreciate the importance of being proficient and literate in that language. English thus ranks first before French and Mauritian Kreol in terms of language preferences for Celia who stated in **R1** that this is because in all countries of the world, people speak English and if she goes to a country where she does not speak their language, she can speak English there. Other participants like Alan, Ben, Eddy and Amelia also concur with Celia, as can be seen in their interview excerpts in Appendix 19.

The above illustrates the pervasiveness of social (e.g., parents or adult figures such as the class teacher) and institutional (e.g., educational policy documents) discourse about the benefits of an international language versus a vernacular[60], which are being reproduced in the multilingual children's discourse. Such representation of English language has also been put forward as one of the reasons for the language *status quo* in Mauritius despite more than 50 years of independence (Kee Mew, 2017). As reiterated by literature on the status of English, 'it is **common knowledge** that English is now the dominant language of world communication, trade, diplomacy and upward social mobility' (Aronin and Singleton, 2008, p. 3, emphasis is mine). 'Common knowledge' is what constitutes social knowledge as highlighted in Foucault's '*savoir*'.

(b) Language representations about French

Compared to English, language anxiety seems to be lesser in French with nine out of the eleven participants rating it as the language which they find easiest to read in, and none as the language they find the most difficult. As illustrated in the interview excerpts in Appendix 20, the reasons provided by the participants range from the language being perceived as being

[60] Although Mauritian Kreol is a member of the family of Creole languages and speaking and reading Mauritian Kreol may help with access to some of these, such as Seychellois Creole.

'easy' (Ben, Sean, Elsa, Lily and Kelly), 'familiar' (Alan, Celia, Nessa), and 'a language where one learns many things' (Sophie). This perception may be due to the phonological and lexical proximity between French and Mauritian Kreol, and to a greater exposure to the language in the immediate environment (such as the media) and even at school.

Language anxiety in French is however apparent among some participants as revealed in **R2**, for which they had to read aloud and explain what they understood from a French passage. One example concerns Nessa who was able to infer meaning from the French passage but seemed to lack self-confidence to explain the meaning of words in her own words, maybe due to a lack of vocabulary. Prompting followed by praise in that case seemed to give her the self-confidence to express what she understood and encourage her in similar endeavours.

One such example is '*suspect*'. At first, Nessa said she did not know its meaning but when the researcher asked if she could guess the meaning, this is what she replied:
Nessa: O*n trouve quelque chose* [T: We found something].
Interviewer: *C'est quoi ce quelque chose* [T: What is this something]?
Nessa: *Les portes sont habituellement ouvertes et ils sont fermés* [T: The doors are usually open and now they are closed].
Interviewer: So it makes you think that something…?
Nessa: *Quelque chose d'inhabituel* [T: something unusual].

Excerpt from R2 data processing table

4.5.2. Mismatch between language perceptions and reading ability

Following sub-theme 4.5.1 which demonstrates the impact of language representations on reading confidence, in this sub-theme, I discuss the finding pinpointing towards a gap between some participants' reading confidence and their actual reading ability in some languages of their DLC. Indeed, an awareness of learners' perceptions and beliefs is important in helping 'to overcome problems and thus sustain motivation, while negative or unrealistic beliefs can lead to decreased motivation, frustration, and even anxiety' (Horwitz and Young, 1990; Horwitz, 200, cited in Bernat, 2008, p. 9).

The gap between language perceptions and reading ability may happen for any language of a multilingual child's DLC for different reasons as explained in the subsequent sections.

English versus Mauritian Kreol: the native speaker myth

Although Elsa seems to lack reading confidence in English compared to Mauritian Kreol, her retelling in English in **R5a** (despite some struggles to find her words) is far more detailed and fluid than in Mauritian Kreol. Indeed, Elsa kept switching to French in her Mauritian Kreol retelling of a story, as revealed by the large chunks of French, as opposed to the few Mauritian Kreol occurrences in the R5a transcript (see Appendix 21). On the other hand, as evidenced by the same transcript, there are only three instances of recourse to French (in magenta) among the large parts of English narration (in green) for the retelling in English.

Yet, when asked how she found the activity, Elsa replied that she preferred narrating in Mauritian Kreol, again pinpointing to her lacunae in English as highlighted below. It is also interesting to note that Elsa chose to retell the story in Mauritian Kreol first before proceeding with English.

> Elsa: *en anglais, je ne connais pas beaucoup de mots… quand je regarde des images, je ne peux pas trop faire des phrases en anglais. Je peux plus faire des phrases en français et langue créole. Parce que si on parle pas du tout en anglais à la maison* [T: in English, I don't know many words… when I look at the pictures, I can't really make sentences. I can make sentences better in French or Creole. Because well we don't speak English at all at home].
>
> ***Excerpt from R5a data processing table***

Elsa, in fact, believes that she does not know many words in English, and thinks that she is not able to make sentences as well as she does in French and Mauritian Kreol. She also argues that her lacunae are due to the fact that she does not speak English at home, a discourse which seems to echo academic assertions surrounding the native speaker myth in second language acquisition and bilingualism research carried out from a monolingual perspective, as discussed in Chapter 2. Indeed, according to Bloomfield (1933, cited in Davies, 2003, p. 4), 'second learners of target languages do not become native speakers of those languages. Native speakers need to get started at their mother's knee'.

Mauritian Kreol versus English: power relations between local vernaculars and international languages

Sophie stated in **R5a** that she found it less difficult to retell the story in English compared to Mauritian Kreol, explaining that it is because she has more practice in the former: '*j'ai plus de pratique en anglais et pour faire la lecture en anglais c'est un petit peu moins difficile pour moi* [T: I have more practice in English and to read in English, it's a little less difficult for me]'. Sophie even chose to retell the story in English first and then in Mauritian Kreol.

Yet, Sophie's retelling of a story in Mauritian Kreol in **R5a** is fluid and carried out confidently – she is indeed very at ease, as revealed by the tone and pitch of her voice –, and there is a clear chronological flow in the narration. As evidenced by the activity transcript in Appendix 22, this is for instance visible when one of characters is crying and explanation is given as to what happened earlier on (i.e., the dad of one of the characters went missing) and then what the characters decide to do henceforth (i.e., go look for him in Seychelles). However, this is not the case for Sophie's narration in English, as she speaks in a very low voice, pauses, and repeats herself several times (e.g., the word 'sad' is used at least ten times) while she tries to find her words. The activity transcript indeed provides only a storyline where both characters are sad, and then we find them travelling and meeting a friend.

Still, Sophie's stated perception that written languages have more value than oral ones is an example of discursive formations on power relations between local vernaculars and international languages outlined in Hornberger's oral-literate continuum in Part 2.5.1. Sophie furthermore affirmed in **R3** that Mauritian Kreol is not a very important language as some people may speak it but they do not write it: '*le créole c'est pas trop important parce que il y a des gens qui déjà parlent le créole mais ils ne savent pas écrire en créole*'. She also added in **R5a** that though Mauritian Kreol may be convenient to interact with members of her family, it is not like English, where she learns more words: '*Mais c'est pas l'anglais. L'anglais c'est bien facile parce que on apprend plus de mots et le créole c'est plus pratique pour comment dire… Là-bas, ils parlent déjà créole* [T: But it's not English. English is very easy as we learn more words and Creole it's convenient for how to say it… Over there, they all speak Creole already]'.

Mauritius Kreol versus English: Cummins' two solitudes assumption

Eddy's stated perception during his interview that his ability to speak and read is greater in English than in Mauritian Kreol (**Interview-Eddy**, lines 167, 169 and 341) is another interesting case. Indeed, the perception of his lacunae in Mauritian Kreol may be linked to what Cummins (2007) calls the 'two solitudes assumptions', a monoglossic ideology whereby students 'are expected to clearly separate languages and to move towards balanced bilingualism with equal competence in the two languages' (García and Flores, 2012, p. 234). In fact, Eddy says that when he tries to speak Mauritian Kreol, he ends up speaking French instead. He does not seem able to envisage that he may use both languages in the same sentence and thus translanguage.

French versus English: perceived language proximity between French and Mauritian Kreol compared to English

As noted during **R2**, Kelly seems to face more difficulties decoding French than English words. She may demonstrate understanding of the words' meaning but she has difficulties sounding them. During her interview, she was not able to decode French words such as '*pelleteuse* [T: excavator]' which she read as '*Pel…le...tuce*' and '*flairer* [T: smell]' as '*flalette*'. Her score in the Grade 4 examinations is also poorer in French (41 marks) than in English (80 marks).

Yet, she keeps insisting that she finds French easier to read than English based on what she perceives as lexical and phonological proximity between Mauritian Kreol (her averred home language) and French as illustrated below.

- '*parce que je connais beaucoup plus de mots en français qu'en anglais* [T: because I know more words in French than in English]' (**R5b**)
- '*Parce que je trouve que français c'est plus facile pour lire les alphabets* [T: Because I find that in French, it is easier to read the alphabets]' (**Interview-Kelly**, line 295).

Moreover, in **R2** where she had to read a French passage, Kelly was able to decode more easily words that also exist in English (due to cognate awareness) such as '*terrible* [T: terrible]' which she pronounced the English way, and '*dangereux* [T: dangerous]'. This is

indeed the only word that she read aloud correctly in the sentence: '*C'est Pyro, un mutant fou et dangereux* [T: It's Pyro, a mad and dangerous mutant]'. However, Kelly's perceived lack of exposure to English seems to contribute to her lack of reading confidence in that language: '*Pas trop bien l'anglais parce qu'il y a des mots que j'essaye euh — comme si, d'essayer avec les mots mais je sais pas* [T: Not so well in English as there are words I try hmm – like, trying out some words but I don't know]' (**Interview-Kelly**, lines 64-65).

The above findings concur with Cenoz and other researchers about the fact that 'the perception of linguistic distance and the perception of 'transferability' can be more important than objective linguistic distance (Kellerman, 1978, 1986; Odlin, 1989; Ringbom, 1986)' (Cenoz, 2001, p. 16).

4.5.3. Rapport with Mauritian Kreol

This sub-theme explores two main discursive formations underlining the participants' ambiguous rapport with Mauritian Kreol and its impact on their reading confidence in that language:

- academic and social representations of Mauritian Kreol permeating multilingual children's discourse; and
- children self-learning to read Mauritian Kreol as counter-discourse to the demeaning discourse about the language.

The finding regarding academic and social representations of Mauritian Kreol concurs with Bavoux's (2002) study, which posits that 'the discourse on social representation of Kreol languages is often articulated around three poles: the academic, the militant and the popular' (cited in Nadal and Ankiah-Gangadeen, 2018a, p. 68) in Creole contexts. The 'academic discourse' refers to 'academic representations' (i.e., research carried out on Creole languages) whereas 'popular discourse' refers to social representations on the language. As highlighted by this study's reading activities and data from the interviews, it is mainly the academic and the popular discourse rather than the militant one, that reverberates through the participants' views. This may be due to the profile of my participants. As for the finding regarding the participants' choice to learn to read Mauritian Kreol autonomously despite the prevalent demeaning discourse about the language, it has not been researched yet. As opposed to the

first finding that reveals how far social knowledge about Mauritian Kreol has been internalised by young multilinguals, the second finding comes as a form of counter-discourse arising from multilingual children's agency in their biliteracy development.

These discursive formations highlight power relations between languages and literacies in terms of written versus oral languages, marginalised vernaculars, and diglossic relations between languages in a multilingual context. These dynamic forces further shed light on enabling as well as hindering factors in the use of multilingual abilities and strategies for concurrent reading acquisition in two or more languages.

(a) Permeating academic and social representations of Mauritian Kreol in multilingual children's discourse

This study posits that parental agency matters in promoting or hindering their wards' biliteracy development. Indeed, the belittling of Mauritian Kreol mirrored in some of the participants' discourse seems to reproduce the representations of parents (or adult figures) at home. In the same line of thinking, Migge *et al.* (2010, p. 12) recall how Pidgin and Creole languages (P/C) are

> usually felt to be unable to convey socially important knowledge. Crucially, at least some parents in all P/C- communities share this view and are vehemently opposed to their children being taught in the P/C because they are convinced that this would constitute an obstacle to their social advancement.

The three discursive formations belittling Mauritian Kreol that are present in the participants' discourse as evidenced in the data are that:

- the language would hinder children from being successful at school;
- it is a vulgar language;
- it hampers the children's learning of French language due to interference.

Indeed, Sean said in **R3** that he speaks French at home but that his mother speaks Mauritian Kreol with her husband and other adults and she addresses her children in Mauritian Kreol only when she reproves them for their misbehaviour. Sean's discourse seems to echo his mother's representation that children should be encouraged to speak French instead of

Mauritian Kreol to enable them to be successful at school. Sean also claimed in his interview that speaking French (and English) has helped him to do better in his examinations: '*ça aide, comme si, à passer les examens*' (**Interview-Sean**, line 85). His mother's reaction to Mauritian Kreol may explain Sean's display of dislike for the latter in our early encounters. Indeed, when asked in **R1** if he speaks Mauritian Kreol at home, he vehemently replied 'no' with the head and told me that he does not like the language: '*J'aime pas ça* [T: I don't like it]'. In fact, it seems that it is rather the mother who does not want her children to speak Mauritian Kreol. When Sean later admitted during his interview to speaking it at home, he insisted on specifying that he does it only when necessary, as highlighted by the use of 'have to' and the reiteration of his more frequent recourse to French: '*Quand il faut parler en créole, je parle en créole. Mais, je parle plus français* [T: When I have to speak Creole, I speak Creole. But I speak French more]' (**Interview-Sean**, line 60).

As for Eddy, he explains that his mother is happy when he speaks French well: '*Ma maman est contente quand je parle bien français*' (**Interview-Eddy**, line 215). Celia also added in **R1** that her mother would tell her repeatedly to speak French, as this would help her. Although Celia said in **R3** that Mauritian Kreol is her averred dominant home language while French is one of her averred home languages, she also affirmed then that it is her choice to use French with her parents. This may be an echo of her mother encouraging her to speak French.

Lily says that she does not speak Mauritian Kreol and that she does not like to use it. According to her, speaking Mauritian Kreol is akin to being vulgar, as she explained during her interview: '*il faut pas parler grossièrement. De ne pas être comme si – ma maman m'a dit elle n'aime pas quand les personnes lui dit que je parle mal* [T: one must not speak vulgarly. Not to, like – my mum tells me that she does not like people telling her that I speak coarsely' (**Interview-Lily**, lines 197-198). Lily's discourse seems to echo representations about Mauritian Kreol as inferior and vulgar. Such a representation can also be seen in Alan's discourse when he recalls his parents' views about speaking French as '*C'est plus correct* [T: It's most appropriate]' and '*parce que mon papa et ma maman disent que le créole c'est une langue un peu vulgaire* [T: because my dad and my mom say that Creole language is a bit vulgar]' (**Interview-Alan**, lines 142-144). Indeed, the diglossic representation of French versus Mauritian Kreol based on the assumed superiority of the ex-colonial language and current language of social success ('*embourgeoisement*') seems to be still pervading minds

that remain colonised despite Mauritius being historically independent from France since 1715.

Another example is Sophie, who also claims that she does not like Mauritian Kreol (**Interview-Sophie**, Part 3, line 261). She even dissociates herself from her siblings to whom she refers as 'the others/they' who choose to speak Mauritian Kreol whereas for her part, she feels that she must speak French at school: '*Pour les autres c'est plus facile de parler le créole. Mais en classe je dois parler le français mais ils parlent le créole* [T : For the others it's easier to speak Creole. But in class I must speak French but they speak Creole]' (**R5a**). Sophie is the only one among her siblings to have dropped Mauritian Kreol as an optional language. Sophie's discourse, furthermore, contains many negative representations of Mauritian Kreol which, according to her, is '*bizarre* [T: strange]' (**R3**). Sophie goes on to advocate that it is better to be proficient in French than in Mauritian Kreol as '*le créole n'est pas trop serviable* [T: Creole is not very useful]' (**Interview-Sophie**, Part 1, line 79). The above discourse seems to echo the academic and social representations pertaining to the limitations of a vernacular compared to international languages. Sophie is moreover proud of her French accent (see Appendix 23 for the interview excerpt), thereby mirroring monolinguistic standards of language mastery, which equate to speaking it like a native (Dewaele, 2018).

Sophie further adds that Mauritian Kreol tends to impact negatively on her French. She said in **R3** that her aunt told her that if she speaks French, she would be able to learn more but if she speaks Mauritian Kreol, she will forget ('*perdre*') all her words in French. Sophie appears very adamant about her language convictions which seem to reproduce her aunt's discourse. Similarly, Elsa refers to negative interference between French and Mauritian Kreol as the reason for dropping Mauritian Kreol in Grade 4: '*Parce que tout le temps pour les examens, je mélangeais le créole et le français ensemble. Pour 'toi', j'ai mis 't-w-a' pour le français* [T: Because all the time for the exams, I mixed Creole and French. For '*toi'*, I wrote '*t-w-a*' in French]' (**Interview-Elsa**, lines 242-245). However, she later says that it is her godmother who told her that and asked her to stop her Mauritian Kreol classes (**Interview-Elsa**, line 247). Ben also confides that his grandfather has made him drop Mauritian Kreol in Grade 3 because of alleged language interference. Indeed, according to his grandfather, Ben was speaking Mauritian Kreol too much at home instead of French (**Interview-Ben**, line, 131). However, he liked the subject back then, as there were nice stories. The grandfather's (Ben),

godmother's (Elsa) and aunt's (Sophie) discourses, which are being drawn on by the three participants, echo the academic discourse about negative language interference of the L1 (often vernaculars) over the L2 (often European languages deemed more prestigious) in SLA research (refer to Siegel, 2008). As highlighted in Chapter 2, these discourses adopt a monolingual perspective on multilingualism. They are furthermore examples of parental agency influencing children's voice.

(b) Multilingual children self-learning to read Mauritian Kreol as counter-discourse to the demeaning discourse about that language

For a clearer picture of the extent of their formal engagement with developing reading skills in Mauritian Kreol, the participants have been categorised as follows.

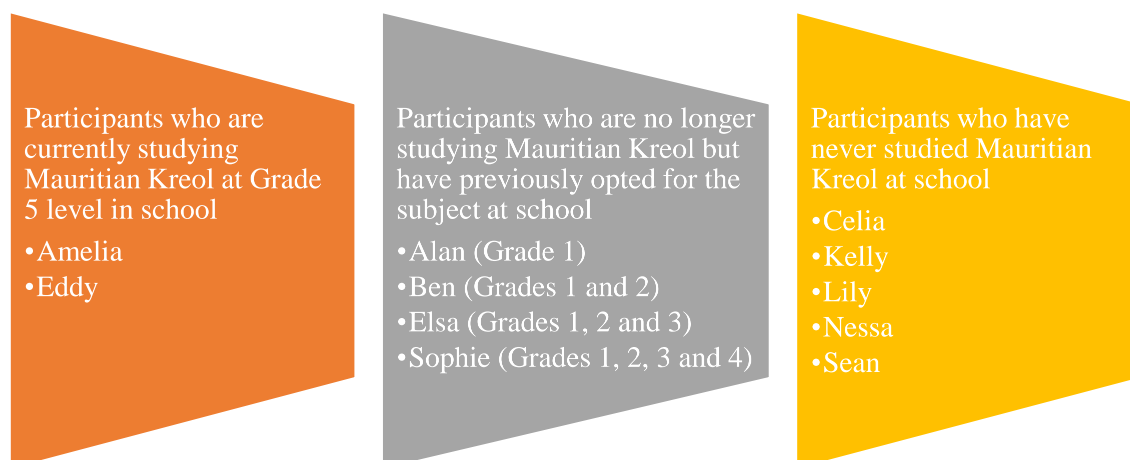


Figure 17

One unexpected finding is how Celia, Kelly, Lily, Nessa, and Sean, who have never studied Mauritian Kreol at school, have made the effort to learn to read in that language by themselves. Their predisposition to do so is somewhat entangled with their complex rapport with the language. This is due to their internalisation of negative academic and social representations of the language, as is the case for Lily and Sean (see previous discussions under 4.5.3a). While some participants consider their ability to read in Mauritian Kreol as a given, others lack confidence in their ability to read that language even though they have been able to tackle the reading activities in Mauritian Kreol.

Celia who has learnt by herself to read in Mauritian Kreol (‘*j’ai appris toute seule*’), associates her ability to do so with her ability to speak the language. She stated in **R3** that she has been able to identify the sentence as being written in Mauritian Kreol because she speaks it. Similarly, Nessa attributes her ability to read in Mauritian Kreol to the fact that she speaks the language (**R5b**). Sean, for his part, stated in **R3** that he has never learnt to read formally in Mauritian Kreol but is able to: ‘*Non j’ai jamais appris, je connais* [T: No I’ve never learnt it, I just know]’. He is indeed able to read the Mauritian Kreol story quite fluently and showed good understanding of the text in **R5b**.

Likewise, Lily claims that she speaks only French with her parents. She has learnt Mauritian Kreol by listening to her mother interacting with other people, and by looking at Mauritian Kreol words that her mother writes. Lily is an interesting case as she is literate in Mauritian Kreol but not proficient in speaking it. Indeed, she reads very fluently and even states that ‘*lire je sais* [T: read I know]’ though she also declared in **R5a** that ‘*Je ne sais pas trop parler le créole* [T: I don’t speak Creole very well]’. In fact, she has been able to tackle all the reading comprehension questions in **R7** using multilingual strategies, like lexical transfer, to link the Mauritian Kreol word with another word she knows in another language. She also uses syllable segmenting to make out unfamiliar words in that activity. Interestingly, though she found the retelling of a French story in Mauritian Kreol quite challenging in **R5a**, not being orally fluent, she also found the retelling of a Mauritian Kreol story in English easier in **R5b**. According to Lily, the language distance between the two languages has proved to be more helpful: ‘*le créole c’est pas comme l’anglais, comme si c’est plus facile de faire le créole pour aller en anglais* [T: Creole is not like English, as if it’s easier to go from Creole to English]’. Yet, Lily seems to lack confidence with regard to her proficiency in Mauritian Kreol due, according to her, to her inability to identify and explain the meaning of some words in that language. She indeed considers reading to be most difficult in Mauritian Kreol: ‘*Très difficile. Plus que l'anglais* [T: Very difficult. Even more than English]’ (**Interview-Lily**, line 394).

Kelly, for her part, looked baffled when presented with a text in Mauritian Kreol in **R5b**, exclaiming: ‘*Mais c’est créole* [T: But it’s Creole]!’. Her reaction may be due to the fact that she is not used to seeing the language in print and reading it, given the marginalised status of the local vernacular in a multilingual context. She also considers reading to be most difficult in Mauritian Kreol because she has not learnt to read and write in that language at school (**Interview-Kelly**, line 319). Yet, Kelly demonstrates a good understanding of what she has

understood from the Mauritian Kreol text. Upon completing the activity, she even seems to have enjoyed discovering that she is able to read, make meaning of the Mauritian Kreol story and retell it in English and French. Furthermore, though Kelly states that she found the passage easy in **R7** and was able to read Mauritian Kreol words in **R4**, she seems to lack confidence with regards to her Mauritian Kreol reading skills and again insisted in **R4** that she is not able to read in that language. The lack of confidence may be linked to the fact that her literacy skills in Mauritian Kreol have been developed on the margins, i.e., outside formal schooling. Contrarily to Celia and Nessa, Kelly does not believe that being able to speak the language means that she should be able to read it. She further explains that '*j'essaie de lire le mot, mais je sais pas si c'est bon. Si c'est le bon mot ? Ou bien si c'est moi qui invente ?* [T: I try to read the word, but I don't know if it's good. If it's the right word? Or is it me inventing it?]' (**Interview-Kelly**, lines 327-328). Kelly, in fact, experiences difficulties decoding some Mauritian Kreol words and sounds that are specific to the language such as [wa] in '*kitfwa*' for example. It is indeed interesting to note that she does not take being able to read in Mauritian Kreol for granted.

Concerning the other participants who have been exposed formally to Mauritian Kreol for varied periods, there seem to be some paradoxes in the perceptions of their reading abilities in that language. Elsa, who studied Mauritian Kreol from Grades 1-3, has attempted only Question 1 in **R7** and left the others blank, stating that she is not able to read and understand that language. As for Sophie, though she was able to read the Mauritian story aloud fluently in **R5b**, she does not seem to have understood it, as can be seen in her retelling in both English and French, where she tends to invent bits and pieces, declaring for instance that the queen is very ugly. As far as Eddy is concerned, he considers reading in Mauritian Kreol more difficult than in English, despite the fact that he is in his fifth year of formal study of Mauritian Kreol. His justification is that there are words that he is unable to read in Mauritian Kreol (**Interview-Eddy**, line 341). Yet, earlier during the interview, he also showed confidence in his ability to speak and read Mauritian Kreol when he claimed that he need not pursue studying that language at school, as he is able to read it (**Interview-Eddy**, line 248) or that he finds it to be easy (**Interview-Eddy**, line 229). Eddy's ambiguous rapport with Mauritian Kreol may be due to his misconceptions regarding code-mixing as being 'bad' or showing non-mastery of the language (in line with academic discourse on bilingualism): '*créole je parle moins, parce que des fois quand je dis — quand je fais une phrase en créole là, un petit bout même, je dis ça en français* [T: Creole I speak less, as sometimes when I say – when I make a sentence in

Creole, even a short one, I say it in French]' (**Interview-Eddy**, lines 159-160). It is good to note that both his averred home language and averred dominant home language are French, and not Mauritian Kreol. Yet again, during one of the reading activities, when asked which language he prefers, Eddy replied Mauritian Kreol which he finds easier. He furthermore said that he likes his Mauritian Kreol classes (**R4**) as he does not find the classwork difficult. But Mauritian Kreol is also the language in which he believes he is the least fluent.

On the other hand, Alan demonstrates a good understanding when reading Mauritian Kreol texts in both **R5b** and **R7**, despite having followed classes for a few months only in Grade 1 before quitting and continuing to learn to read Mauritian Kreol on his own. Ben also demonstrates a good understanding when sharing what he understood from the Mauritian Kreol text despite his two years of Mauritian Kreol learning only.

As for Amelia, she is one of the few participants to proudly claim that her averred (dominant) home language is Mauritian Kreol and that it is the language she believes she is most fluent in and which is the easiest to read (**Interview-Amelia**, line 375). Amelia furthermore feels positive about her Mauritian Kreol classes, stating that she learns a lot of things there. Interestingly, she confided that she decided by herself to opt for Mauritian Kreol at school as she was enrolled in Hindi class at first, but the teacher's voice frightened her. She thus requested her mother to change her optional language. This is a valuable finding as it is usually the parents who decide and have the final say for optional languages. Amelia also shares that she learns to write and '*bien parler le créole*' (i.e., speak and write well in that language) in her Mauritian Kreol classes. This highlights that she does not seem to take the language for granted but gives it the same scholarly importance as she would for French and English. In fact, Amelia is a straight 'A' student with equally good performances in all three languages in her Grade 4 examinations: Mauritian Kreol (93 marks), French (92.5 marks) and English (88.5 marks).

4.6. Conclusion

The data analysis in this chapter has put forth how multilingual children use their multilingual abilities for lexical access and meaning making of texts. Factors impacting on the multilingual children's use of these multilingual abilities have also been discussed in relation to context, development, content and media continua in Hornberger's continua of biliteracy framework.

This chapter has further examined the role played by academic, institutional, and social knowledge and discourse in encouraging multilingual children to use their multilingual abilities as strategic resources for reading in multiple languages, thus highlighting language representations as being both enabling and hindering factors.

Chapter 5. Conclusion

5.1. Introduction

Having presented and discussed my findings in the previous chapter, this present chapter will provide a summary of the findings, examine how the latter may contribute to knowledge and their implications for policy and practice, as well as propose some recommendations. It will also discuss potential limitations of this study before bringing a conclusion to this research with some reflections about my EdD journey.

For recall, this study explores multilingual children's perspective on how they use their multi-competence in learning to read in at least two languages concurrently in a multilingual context. This study's findings are based on my interpretation of what the participants chose to share with me, their own interpretation of multilingual abilities and strategies they used for lexical access and meaning making of texts, as well as my observations of their engagement with reading multilingual texts. This meta-interpretation by the participants further highlights their role as co-creators of knowledge in this research and not as mere passive objects of study.

Indeed, while discussing with my participants, I was pleasantly surprised by the abundance of sophisticated information that these ten-year-old children were able to share. This made me think of the Little Prince from the eponymous book written by Antoine de St Exupéry. *The Little Prince* (1943) is a story about the unexpected encounter of an aircraft pilot who crashes in the Sahara Desert, and a little prince who has landed on Earth after visiting six other planets. The child's innocent and naive observations bear an in-depth meaning about adult life. Similarly, my participants had much to teach me and the world about how they explore their multilingual abilities as strategic reading processes.

Since this thesis is about multilingual children's perspective, I have tried to capture their voice, full of innocence but with such deep insights, in the form of a storied account to summarise the three themes identified in my data analysis in Chapter 4.

Although all eleven participants have interesting information to share as can be seen in the previous chapter, I used only four participants for the storied account to avoid a too lengthy

text and repetitions. The filtering criteria applied were as follows: Alan has been chosen for being the only one to have French, English and Mauritian Kreol as averred home languages. Eddy has French only as averred (dominant) home language. Amelia and Kelly both have Mauritian Kreol only as averred (dominant) home language. The difference between the two is that Amelia studies Mauritian Kreol at school while Kelly has chosen Hindi as optional language.

5.2. Summary of findings in the form of a storied account

Once upon a time in the small island of multilingual Mauritius, live multilingual children blessed with dominant language constellations (DLCs) which comprise a number of languages among which they navigate for their everyday uses (such as study, leisure, socialisation, etc.). Despite what many learned people think, they often have more than one home language which is not necessarily their dominant language. This is the story of four of these multilingual children: Alan, Eddy, Amelia and Kelly.

'I don't know why grown-ups persist in thinking that we use only one language every day,' exclaims Alan. 'Often, when I am asked what language I speak at home, I don't really know what to answer. I usually reply 'French'. Yes, French is the language I speak most of the time with my parents. We also use Creole[61]. And sometimes English to crack jokes, especially with my dad. I also write and sing my own songs in French. But I feel ashamed to speak French in class. I don't know why. I prefer to play and WhatsApp my friends in Creole.'

Noddingly, Eddy adds: 'I also don't know what the correct answer should be. We use mostly French at home, with my mum and my sister. I also use French when I play with my dog. But when I am at my dad's place, I speak Creole with an aunt who lives there. And at the market too, I use Creole. But at the bank, we have to use English. I also have to play in English with my cousin. He lives in Australia and comes over regularly for the holidays. But with my friends, we play in French and English. I like to watch cartoons and listen to music in French. I have English books which I read at home. What about you Amelia?'

[61] 'Creole' has been kept in the participants' discourse as they usually refer to the language this way while they use 'KM' (i.e., *Kreol Morisien*) when talking about the subject. As mentioned previously, the official term 'Mauritian Kreol' is used in this study to refer to both the language spoken and to the subject taught at school.

Amelia exclaims proudly: ‘For me, it is only Creole at home. I also play with my friends and my two little sisters in Creole. But I like to listen to music in French, English and Tamil. There are beautiful Tamil songs at our place of worship. I pray in French and Creole. I watch cartoons in French but the movies on National TV are usually in English. So, I watch them in English.’

Kelly timidly adds: ‘For me also, it is only Creole at home. But at school, I speak French. I like to watch serials in Hindi. I listen to music and read books both in French and English. But I have more French books at home. I also play with my friends in French and Creole.’

One day, Alan, Eddy, Amelia and Kelly are browsing through local newspapers, magazines and pamphlets in the school library for a class project on the COVID-19 pandemic when they come across a meme and a reminder of the COVID-19 safety protocol in French and Mauritian Kreol as well as a trilingual advertisement[62].

‘Hey, look at these pictures! We can use them for the project!’ exclaims Alan.

Eddy starts reading them aloud, moving from one language to another easily and fluently. He then remarks smilingly: ‘My Australian cousin asked me the other day how come I could read a text with bits and pieces from several languages.’

‘Well, I think we start in the language in which we recognise the word. If the language changes mid-way, we then pronounce the word in the new language. That’s all!’ Amelia replies.

‘Yes, it’s fun also to be able to name one object in so many languages!’ adds Alan. ‘Hmm… Let’s take ‘lollipop’ in English. It becomes ‘*bonbon baton’* in Creole and ‘*sucette’* in French!’

‘But some words, they are the same in Creole, French and English like ‘information’,’ replies Kelly.

‘Yes, that’s true. I know that… but it so happens that I often read them in one language first and then I remember that we can also say it in another language,’ says Alan.

[62] Refer to Appendix 24 for the pictures.

‘Which words?’ asks Eddy.

‘There are many… let me think… hmmm… ‘delicate’, ‘fertile’ …,’ replies Alan.

‘Have you noticed that you read the word in the language where you first saw it, or you normally use it? Let’s take ‘fertile’, we saw it in our French textbook this year. We usually use it in English in the Science textbook, and the History and Geography textbooks. Isn’t it?’ asks Amelia.

‘Me, when I see a word that I am not very familiar with, I try to guess what it means or what language it is by comparing it with other languages I know,’ Eddy says proudly.

‘Same for me,’ replies Amelia before continuing, ‘There is this word ‘chunky’. I don’t know what it means but I know it is English because of the ending with ‘y’. I also try to guess what a word means by linking it with similar words I have come across before like ‘smooth’ on the facial tissue box that we use at home.’

‘I have difficulties reading some words. Words I don’t recognise as French and English, for me, they must be Creole as I can’t pronounce them in the other two languages,’ adds Kelly.

‘Yes, English, French and Creole are different. The words are not written the same. Look at ‘*forestière*’. There is the grave accent. We don’t have it in English. So, it must be French. I sometimes feel knowing the words in French makes it easier to read them in Creole. They are written almost the same way without the accents,’ confides Amelia.

‘This is fun! We have Creole ‘*ki*’ which is written differently from French ‘*qui*’, ‘*oiseau*’ becomes ‘*zwazo*’, and ‘island’ becomes ‘*zil*’ in Creole,’ exclaims Eddy enthusiastically.

Kelly ponders: ‘When I am reading, sometimes I say the word in Creole before reading it in English.’

Amelia adds: ‘Me too. But I usually do it in French to better understand a story I’m reading in English.’

Kelly and Amelia smile at each other as both agree that they also use words in English when they cannot seem to find them in French or Mauritian Kreol, or they know it only in English.

‘Well, I like watching Hindi serials, but I don’t understand everything they say. Fortunately, you know there are subtitles in English. I also learn new vocabulary in English this way!’ comments Kelly. She further adds: ‘I also like it when the Hindi teacher writes the English or French words next to the Hindi ones. I understand better when she does that.’

‘Our KM teacher also does that,’ exclaims Amelia. ‘And so does our class teacher. He writes French words next to English words.’

‘I feel that the words are all related some way or the other. We just need to be more self-confident when we see new words,’ Amelia continues. ‘It’s like the word ‘fiery’. You remember? I didn’t know what it means. But then we were asked which word we could recognise in it. And I guessed the meaning correctly!’

‘It’s just like I don’t think that I can read so well in English,’ Eddy replies.

‘Yes, I too find it more difficult to read in English,’ Alan agrees, ‘There are so many words I don’t know in English.’

‘Same for me,’ adds Kelly sadly. ‘This is because we don’t speak English at home I think.’

‘I feel though that I speak better English than Creole,’ says Eddy.

‘Oh, how come?’ Amelia asks, surprised. ‘You just said you don’t read too well in English? And that you feel somehow forced to use it with your Australian cousin.’

‘Hmm… it’s just that when I speak Creole, I end up speaking French instead,’ replies Eddy.

‘Don’t worry. It’s ok to. I use Creole words when I have to explain something in French too,’ says Alan. ‘But still, I prefer French. My dad and my mom say French is more appropriate… And Creole is vulgar.’

'Ben, Elsa and Sophie have all stopped KM classes because they were told that they are mixing French and Creole too much,' Amelia adds sadly. 'I don't think so for my part. My mum first put me in Hindi classes. But then I told her I wanted to go to KM classes. I learn to read and write Creole correctly there. I enjoy my KM classes.'

'When I look at a Creole text, at first, I think I won't be able to read or understand anything. I don't study Creole like you Amelia or you Eddy. Sometimes when I try to read a word in Creole, I don't know if it's good… if it's the right word… or if it's me inventing it? But the Creole story we were given to read last time, I found that I could do it. I was even able to retell the story in French then in English,' Kelly shares proudly.

'I study KM yes, but I still find English easier to read than Creole,' insists Eddy.

'How come?' asks Amelia.

'Well, Creole it's easy. I can read in Creole. I can speak Creole. It's just that sometimes I feel like there are words that I can't read in Creole,' says Eddy.

'I was in the KM class only for some months in Grade 1. I learnt to read Creole by myself afterwards,' Alan says, happy with himself. 'Now, let's go back to our class project before library time is over'.

5.3. Key contributions to knowledge

For recall, this study has been guided by two research questions, namely 'How do multilingual children draw from their cross-linguistic reservoir of abilities in learning to read in two or more languages concurrently?' and 'What are the factors that impact on their learning to read in two or more languages concurrently?'. Giving voice to multilingual children to share how they use their multi-competence to engage with concurrent reading acquisition has brought forth the following key contributions to biliteracy research:

a) The findings reveal the importance of exploring multilingual children's DLC for learning to read in at least two languages concurrently as they manage their DLC and use it to scaffold for lexical access and meaning making of texts.

b) The findings also highlight how colonial and monolingual legacies[63] are embedded in multilingual children's 'knowledge' about languages and the impact on their own representations of these languages and hence their reading confidence in the latter languages.
c) The findings finally put forth the dynamics of children's agency versus immediate family's / teachers' / other stakeholders' agency with regard to their biliteracy development.

Key point (a) encapsulates the way multilingual children draw from their cross-linguistic reservoir of abilities in learning to read in two or more languages concurrently and thus provides some answers to this study's Research Question 1. As for key point (b), it puts forth factors enabling and/or hindering multilingual children's learning to read in two or more languages, thus responding to Research Question 2. Key point (c) provides further knowledge to both Research Questions 1 and 2.

The importance of exploring multilingual children's DLC for lexical access and meaning making in concurrent reading acquisition in two or more languages

This research's first key contribution to biliteracy research is the use of Dominant Language Constellation (DLC) as a pedagogical tool for lexical access and meaning making of texts. Indeed, though mention has been made in Chapter 2 of multilingual affordances for exploring the DLC in language teaching and learning, studies using the DLC as an approach have not so far focused on concurrent reading acquisition in two or more languages among multilingual children.

What comes out strongly in the findings of this study (as evidenced in my data and illustrated in the above storied account) is how my participants navigate among and use languages in their DLC to scaffold for lexical access as well as for making meaning of texts in English, French and Mauritian Kreol. A summary of the multilingual abilities used by my participants as strategic reading processes (as highlighted in my data) is provided in Table 17.

[63] Which refer in this study to the superiority of colonial languages over local vernaculars, and the native speaker myth respectively.

Multilingual abilities used as strategic reading processes	
In managing languages of one's DLC for lexical access	***For meaning making of texts***
Language dominance which varies among languages of the DLC	Multidirectional lexical transfer/transfer of meaning
Scaffolding of transfer of lexical knowledge among languages of the DLC	Cognate awareness transfer
Use of metalinguistic knowledge among languages of the DLC	Use of translanguaging
	Use of multilingual literacies

Table 17

This study furthermore reveals, as discussed below, that using the DLC calls for (a) reviewing the concept of language dominance, (b) going beyond problematic concepts of L1/L2/L3 and the mother tongue debate in biliteracy development, and (c) acknowledging a fluid and multidirectional rapport between languages of the DLC for lexical access and meaning making of texts.

(a) Reviewing the concept of language dominance for multilingual children

This study reaffirms that in dynamic sociolinguistic configurations of multilingual contexts, a multilingual child does not use *only* one language (i.e., his/her averred home language) but the languages in his/her DLC for different purposes, whereby any language of the DLC may at one point be dominant depending on uses made. The data indeed show, as discussed in Chapter 4, that language dominance varies according to everyday uses the multilingual child makes of the different languages present in his/her DLC.

The present study therefore subscribes to Grosjean's (2016) understanding of language dominance as described by his complementary principle, and provides evidence that although language dominance has to do with fluency and use,

- it is not to be equated to the multilingual child's mother tongue/first language/home language,

- it may be considered as being domain-specific rather than language-specific,
- this study's findings, moreover, show that the multilingual child may use different languages for the same domain of use.

(b) Going beyond problematic concepts of L1/L2/L3 in biliteracy research and the mother tongue debate in biliteracy development

My data further support the claim that 'languages of a DLC are not arranged in any built-in hierarchy' (Aronin, 2019, p. 245). Indeed, as mentioned in my literature review, the non-hierarchical structure of the DLC is particularly useful in multilingual contexts where a multilingual speaker may find it difficult to describe his/her language competencies chronologically. This study thus argues that exploring the DLC in biliteracy development may address current preoccupations with problematic concepts of L1/L2/L3 as discussed in Chapter 2, as well as proposes to go beyond the mother tongue literacy policy debate and issues. This is elaborated hereafter.

The current research indeed suggests that advocating a mother tongue literacy policy may not meet the needs of all children in multilingual contexts where it is difficult to identify the mother tongue/L1/home language, or a multilingual child may have more than one. Indeed, the mother tongue is often used in the singular form in language policy documents. One example is South Sudan with 50 living languages, whereby the language and education policy posits the use of the learner's mother tongue as medium of instruction for the early years. Implementation-wise, the medium of instruction is reduced to 'one language chosen per state, which will most likely be one of the major languages of the state' (Spronk, 2014, p. 8). Similarly, the Mauritian education policy document seems to assume that every child has only one L1[64]: 'The L1 may be French, Mauritian Kreol, Bhojpuri or some other language' (MIE, 2015a, p. 20). Yet, my participants' dynamic linguistic profiles show that home languages are becoming increasingly plural in Mauritian households due to exposure to languages being used in various domains as well as the socio-economic aspirations of parents for their children (Sauzier-Uchida, 2009; Nadal and Ankiah-Gangadeen, 2018b) as outlined in the contextual

[64] It is interesting to note that in the Mauritian *Population Census* reports, the home language is also reported in the singular form (emphasis is mine) as highlighted again in the latest one: '90.0% of people reported to speak **Creole only** at home […] 5.1% speak **Bhojpuri only** […] 4.4% speak **French only**' (CSO, 2022b, p. 9), whereas as one of the 2022 survey's interviewees, my husband and I have filled in two home languages.

presentation of this study (refer to Part 1.3). An increasing number of Mauritian children indeed have more than one home language (Tirvassen, 2012) which they use for different purposes (such as education, leisure, socialisation, etc.) as evidenced in my data. Furthermore, as highlighted in in Chapter 1 and confirmed by this study's data, the linguistic profile of the Mauritian multilingual child cannot be easily pinned down. This explains why, as discussed in Chapter 4, this study proposes to differentiate between 'averred home languages' which are spoken at home and may comprise more than one language, and 'averred dominant home language' which refers to the language in which the multilingual child feels s/he is the most fluent among his/her averred home languages. It is also to be noted that the home languages are 'averred' (by the participants) and not 'assumed' (by researchers or any adult figure), in keeping with the multilingual child's perspective.

The Mauritian case also echoes with other dynamic multilingual contexts like South Asia, Africa and South Africa where it is difficult to order the languages sequentially as mentioned in Part 2.2. Indeed, Canagarajah (2007, p. 931, cited in Aronin, 2016, p. 154) highlights that it is hard to say which language comes first, or to identify a mother tongue or native language in South Asia and African communities which are so multilingual that 'in a specific speech situation one might see the mixing of diverse languages, literacies and discourses. It might be difficult to categorise the interaction as belonging to a single language'. Additionally, commenting a recent UNESCO report in 2014 that encourages additive bi(multi)lingual education or mother tongue-based bilingual education, Plüddemann (2015, p. 186) rightly points out that '[w]hat is less clear is what this might mean in contexts of high multilinguality'. Examining the situation in South Africa, Webb (1999, p. 358, cited in Coetzee-Van Rooy, 2008, p. 22) also denounces the 'increasing mismatch between South Africa's stated official policy on language and its gradually evolving linguistic realities'. Another issue discussed in Part 2.4, lies in the problematic concept of 'mother tongue' itself, leading to some schools teaching the standard variety of the assumed mother tongue rather than using children's actual vernacular languages (Weber, 2014) as is, for instance, the case in Singapore.

Furthermore, in contexts where reading is first acquired in languages other than the mother tongue/L1/home language like Mauritius, my data show that these languages become the benchmarks for lexical access. My findings indeed suggest that lexical access in written form seems to be more distant in Mauritian Kreol despite it being one of the averred home languages of the participants. This indeed has led some participants to identify some words

as Mauritian Kreol when they could not classify them under neither English nor French. This may be due to a lack of exposure to Mauritian Kreol in print, and to reading practice in that language as highlighted in Chapter 4 and discussed in the light of the vernacular-literary continuum of Hornberger's (2003c) continua of biliteracy framework. These findings reject the native speaker myth (which originates in contexts of traditionally powerful languages like English) as having a language as L1 does not necessarily equate to being able to read it.

Using the DLC approach in developing reading competences may thus be more appropriate in such cases, with the multilingual children working on their lexical access as they deem it fit, and not be pressured by what Edelsky (1986, 1989, cited in Dworin, 2003, p. 177) decries as monolingual myths that 'first language must serve as a base for literacy and that a fixed sequence for learning is desirable in a second language'. The findings also show that scaffolding of transfer of lexical knowledge may take place from any language of the child's DLC to another, including among third languages. In fact, in a multilingual context, some referents may have signifiers which may not necessarily belong to the averred home language of the multilingual child but to another language of his/her DLC.

(c) Acknowledging a fluid and multidirectional rapport between languages of the multilingual child's DLC for lexical access and meaning making

This study's findings argue for a fluid and multidirectional rapport between languages of the multilingual child's DLC for lexical access and meaning making. A graphic representation of the above phenomenon in Figure 18 where one of the participants' DLC (Kelly) has been used as exemplar, is being proposed by this study as illustration. In fact, the DLC is individual though it may be similar for some participants as can be seen in Part 4.3. Each circle (one for each of the languages of the DLC) evolves on its own (refer to the left figure) and may intersect with each other at different points in time as and when needed both for lexical making decision and lexical transfer (refer to the right figure). This study's visual presentation involving circles further highlights the absence of hierarchy among languages in the DLC.

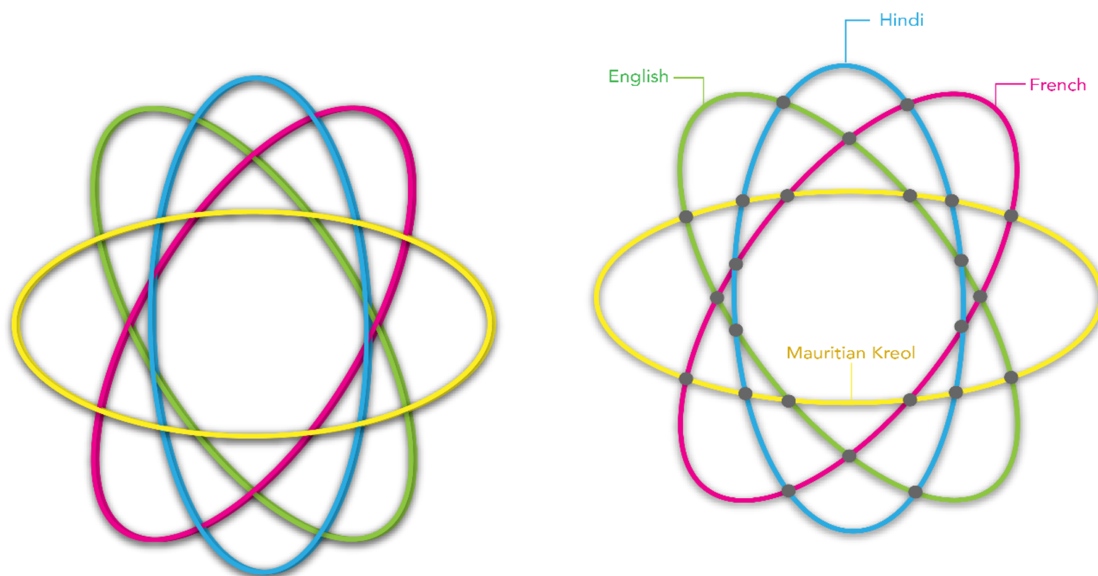


Figure 18

The proposed three-dimensional figure moves away from what this research views as:

- the ladder representation of biliteracy development in the monolingual perspective (see Figure 19), whereby the terms 'L1', 'L2' and 'L3' are used as follows: 'L3 for the language that is currently being acquired, and L2 for any other language that the person has acquired after the L1' (Hammarberg, 2001, p. 22). This is usually the case in sequential biliteracy or additive bilingualism for instance, as outlined in Chapter 2.

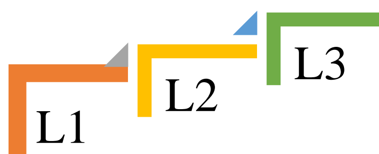


Figure 19

- and the reciprocal representation of cross-linguistic influence from L1 to L2, L2 to L3 and L1 to L3 and vice versa (see Figure 20) which is based on Cenoz *et al.*'s claim (2001).

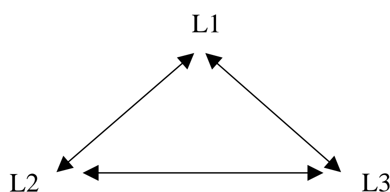


Figure 20

The current study consequently fills in a gap in biliteracy research with regards to existing bilingual programmes (including UNESCO provisions governing mother tongue-based multilingual education) which tend to introduce literacy in the L1 first to reinforce literacy in the L2 and do not aim to develop biliteracy per se (Akinnaso, 1997; García *et al.*, 2007). As previously stated, the context of Mauritius is of interest for research fields of multilingualism and biliteracy as it provides another model of bilingual education whereby literacy is introduced concurrently in English and French (both international languages and colonial legacies) which are not necessarily the averred home languages of the children. The Mauritian educational system does not cater for French and English to build on literacy developed first in a home language. Furthermore, literacy in Mauritian Kreol is introduced after English and French as from first year of primary and is not a mandatory taught language. English and French literacies also develop alongside literacy in other so-called ancestral languages as from Grade 1.

Multilingual children's 'knowledge' about languages and its impact on their reading confidence: colonial and monolingual legacies

Another key contribution to biliteracy research lies in the present study's insights into multilingual children's rapport with languages of their DLC and the impact that their language representations have on their reading confidence. It is important to point out that the review of literature has found no research, so far, on the impact of language representations on the reading confidence of multilingual children.

One unexpected finding is the extent to which academic, social, and institutional representations are embedded in multilingual children's 'knowledge' about languages and guide their own representations of these languages. Foucault's concepts of archaeology and genealogy (as explained in Chapters 3 and 4) have indeed contributed to unveil power relations in discursive constructions present among multilingual children despite their young age. These representations clearly hold undertones of both colonial legacy about the superiority of colonial (and international) languages versus local vernaculars, and monolingual legacy about the native speaker myth. These also impact eventually on multilingual children's reading confidence in these languages as evidenced by this research's findings. It is interesting to note, as argued in Chapter 4, that these legacies are being conveyed

by parents (or adult figures), and further constitute a parental influence on children's biliteracy development.

So, giving voice to multilingual children has unveiled their complex rapport with some of the languages of their DLC, namely with English (an international language) and Mauritian Kreol (a vernacular which is viewed by many Mauritians as fitting to fulfil an oral purpose only). As mentioned previously, English is a colonial language for Mauritius (as is the case in many other countries of the world) while Mauritian Kreol is considered by many as an inferior language (Harmon, 2015) due to its emergence among slaves, as explained in Chapter 1. Indeed, the contradictions noted in some participants' responses seem to be the result of internal conflicts between *expected answers* (or politically correct ones) and *what one actually thinks and feels*, as discussed in Part 4.5.3.

The academic, social and institutional representations rooted in multilingual children's 'knowledge' about languages are further examined below.

(a) Language interference from local vernaculars to international languages

The current study's data reveal that all participants view their multilingual and biliterate profiles as an asset. Yet, their discourse also echoes widespread knowledge of negative transfer / language interference, especially from vernaculars (minor / traditionally less powerful) to international languages (major / traditionally more powerful), i.e., from Mauritian Kreol to French and English for instance. This knowledge has been taken-for-granted as being the 'truth' for so long that it has become difficult to think otherwise. Indeed, parents (Nadal and Ankiah-Gangadeen, 2018b) as well as academics (Rughoonundun, 2013), educators (Auleear Owodally and Unjore, 2013) and society at large (Rajah-Carrim, 2007; Rughoonundun *et al.*, 2018) all share this knowledge about the perceived negative influence of Mauritian Kreol over the learning of French and English as discussed in Chapter 2. The same is stated regularly in CPE/PSAC examinations reports, including the latest ones (MES, 2022a, 2002b and 2002c). Yet, a study based on PSAC 2017 results shows that 'KM is not a threat to the learning of other subjects, be they content or language ones' (Rughoonundun *et al.*, 2018, p. 141).

The present study's findings reveal that often the participants' discourse seems to echo that of their parents or other adult figures such as Elsa's godmother, Ben's grandfather, or Sophie's aunt. Unless advocacy is done to change the colonial and monolingual discourse about negative impact of vernacular languages on learning languages like French and English, currently accepted knowledge about the latter will continue to be transmitted across and within generations. It will also continue to encourage resistance to innovative multilingual pedagogies that propose to break down the barriers between languages (like *Let's Learn with Timatou and Friends* multilingual textbooks introduced in 2014 and discontinued in 2016) as well as maintain the language *status quo* in language-in-education policies. Indeed, it seems that the more the country seems to develop at different levels, the more it seems reluctant to let go of its colonial legacy, with the language issue ending up being evaded in the most recent education policy documents (Kee Mew, 2017). The need to decolonise the mind seems still valid more than 50 years after the island got its independence. It is furthermore interesting to note that I have not found any study on potential negative transfer from French to English and vice versa in Mauritius, research interests being guided instead by academic, social and institutional knowledge of the negative impact of a vernacular (i.e., Mauritian Kreol) on the reading acquisition of a more prestigious language (i.e., French and English).

(b) Pervasiveness of the native speaker myth

This study's findings also evidence the pervasiveness of the native speaker myth (Bloomfield, 1933; Edelsky, 1986), whereby being a native speaker ensures that learners become readers in that language whereas not speaking the language leads to major lacunae in the reading acquisition of that language. This discourse indeed serves to undermine multilingual children's reading confidence especially in languages they are least familiar with such as English (e.g., Elsa and Nessa). On the other hand, this myth may also serve to encourage some participants who have Mauritian Kreol as one of their averred home languages to self-learn to read in the language (e.g., Celia and Nessa), as revealed by this research's data.

However, findings regarding some participants tend to challenge the native speaker myth: Lily (who has French only as her averred home language) is an interesting case as she is literate in Mauritian Kreol but not proficient in speaking it. Kelly, who has Mauritian Kreol only as her averred home language, feels that she cannot read it because she has not learnt the language at school. Furthermore, though Kelly is proficient in speaking French, she has

difficulty decoding words in French. These findings reaffirm the importance of considering the biliteracy development of a multilingual child as a continuum. As discussed in Chapter 2, the idea of continuum argues that the development is not 'necessarily continuous or gradual, [it] in fact, occur[s] in spurts and with some backtracking' (Hornberger, 1989, p. 281) nor is it unidirectional as asserted by the native speaker myth.

Yet, the participants' language anxiety impedes on their reading confidence. Indeed, though they were able to read and retell the stories in English, some of the participants were still convinced of their ineptness, citing their lack of vocabulary and familiarity/exposure to the language, among other reasons (e.g., Ben, Eddy, Elsa, Kelly).

(c) Power relations between marginalised vernaculars and prestigious languages

Although many participants feel language anxiety with regards to their reading proficiency in English, they also concur that is a necessary evil. As much as they feel obligated to use it, they also highlight its benefits for their personal and professional development as well as to connect with the world (e.g., Alan, Ben, Celia).

Beliefs, as noted in some participants' discourse (e.g., Sophie), that written languages have more value than oral ones, also reflect the power relations between local vernaculars and international languages and thus concur with Hornberger's oral-literate biliteracy continuum discussed in Chapters 2 and 4 as being another factor impacting on multilingual children's rapport with languages in their DLC.

As discussed lengthily in the sub-theme 'Rapport with Mauritian Kreol' in Chapter 4, the participants' representations of Mauritian Kreol tend to oscillate between belittling discourse that is grounded in academic, social and institutional representations, and a counter-discourse to the demeaning rhetoric about Mauritian Kreol. These findings put forth children's agency (as opposed to adults' agency which will be discussed below) in managing their multilingual profile and their concurrent reading acquisition in two or more languages.

(d) Prevalence of the 'two solitudes assumption'

As long as languages will be taught as separate languages as is currently the case in the multilingual education system of Mauritius (refer to Chapters 1 and 2), this will reinforce Cummins' (2007) 'two solitudes assumption' whereby, as discussed in Chapter 4, students are expected to have an identical competence in the two languages which they furthermore need to keep separate. This impacts on participants' reading confidence like Eddy as he believes that it is not proper to translanguage between two languages.

In fact, this study's findings demonstrate that participants would make use of translanguaging to make meaning of texts only orally (informal sphere). None used a language other than that of the passage or translanguaging when responding in writing (formal sphere) to a reading comprehension text. They even tried to answer in Mauritian Kreol for the passage in that language, even though some were not familiar with its spelling.

Children's agency versus immediate family's / teachers' / other education stakeholders' agency in favouring or hindering concurrent reading acquisition in two or more languages

It is not surprising in a study focusing on children's voice that one of the key contributions revolves around children's agency. What makes this argument of interest is how despite Mauritian public schools not being ready for a multilingual approach which encourages the teaching of languages as a continuum and not as separate languages, my participants have been seen exploring their multilingual abilities by tapping into languages of their DLC for lexical access and meaning making of texts. However, this process often takes place in the margins. My participants furthermore demonstrate awareness of languages of their DLC and ability to provide a critical appreciation of their strengths and weaknesses in learning to read in multiple languages.

Giving voice to the often-silent children has thus unveiled their under-explored agency. So, on one hand, there is the multilingual children's agency as to how they are managing their multi-competence for concurrent multilingual reading acquisition. On the other hand, there is the adults' (characterised by immediate family, teachers, and other education stakeholders) agency underpinned by misconceptions about language interference/mix-up and neo-colonial discourse about the need to valorise international (and ex-colonial) languages like English and

French over Mauritian Kreol for instance. Indeed, all participants demonstrate confidence in explaining that these three languages are different and therefore, they are neither confused about them nor do they mix them up. In fact, whenever the notion of mix up is mentioned in the data, it has overtones of an adult's discourse (grandfather, godmother, aunt). Hence, while teachers, immediate family members and other stakeholders in charge of the school curriculum and its implementation, would hold a defeatist discourse with regard to what multilingual children are not able to, the said children have put forth, through this study's data, what they can do as multilinguals!

Furthermore, while immediate family may hinder biliteracy development involving Mauritian Kreol by projecting their own language representations on their wards, this study sheds light on how multilingual children's actions may serve as counter-current to belittling discourse about the local vernacular. Indeed, the current study's findings have shown how children who never studied Mauritian Kreol at school have made the efforts to self-learn to read in that language. Similarly, had the views of children (the main recipient of the multilingual curriculum materials titled *Let's Learn with Timatou and Friends*) been solicited on the materials, these views may have differed from those of adult stakeholders. Indeed, union/parents/teachers' resistance seems to stem from their lack of understanding of multilingual education and the pervasive traces of the Mauritian colonial past in its education system.

This study therefore argues that multilingual children should be taught formally how to use their cross-linguistic abilities strategically so as not to let their innate multilingual language abilities continue to be under-explored and consequently be squandered. It is indeed high time to pass on agency to the children by empowering them in developing their metalinguistic awareness and metacognitive knowledge, among others. The participants furthermore show clear signs of self-encouragement while tackling reading comprehension texts in English and French: 'I tell myself I can do it', and they do it, as evidenced by this study's data.

5.4. Implications and recommendations of this research

Having outlined the key contributions of this study for biliteracy research, Part 5.4 will present the practical implications of the findings and make some recommendations.

At the start of this study, it has been claimed that connections among multilingualism, multilingual education, and biliteracy development are still poorly understood (Grosjean, 2010), making it hard for teachers and educational policymakers to make informed decisions on issues that directly impact children's learning. By adding to research on biliteracy which is a core concern especially given the constraints of complex multilingual contexts like Mauritius, it is hoped that this study has been able to contribute helpful insights for future research, policy, and practice, three avenues in which I am engaged as a teacher educator and a curriculum developer.

(a) At the level of policy

In response to one of the strategic objectives outlined in the Mauritian education policy document, *Education and Human Resources Strategy Plan 2008-2020* (MoEHR, 2009), to develop a language policy that would integrate multilingualism in schools and train teachers accordingly, a biliterate pedagogy may be developed using insights from this research. Indeed, this study’s findings contribute to the evidence in support of the legitimacy of a flexible multilingual education (García and Flores, 2012; Weber, 2014) whereby biliteracy would be developed not as separate language systems but as two-or-more-ways dynamic systems. Some avenues for the implementation of a biliterate pedagogy are proposed in section (b) below.

In view of achieving a biliterate pedagogy, multilingual children will furthermore have to be empowered to develop their metalinguistic awareness and metacognitive knowledge formally and not in the margins whereby their multilingual abilities remain under-explored, as discussed in key contribution (3). Metalinguistic awareness and metacognitive knowledge are useful strategies that biliteracy provides children with, not only for learning to read but also for learning in general.

(b) At the level of practice: teacher training and curriculum development

Shedding light on multilingual abilities and strategies used by multilingual children for strategic reading processes, this study provides a basis for educators to use their pupils’ DLC in lexical access and meaning making of texts, as outlined in below recommendations.

A **first recommendation** is to use the DLC as a pedagogical tool for lexical access and meaning making of texts to enhance reading for understanding. In a recent literacy empowerment project with ZEP teachers, I have encouraged them to explore their pupils' DLC to develop lexical access of French words like '*accoster* [land]', '*s'étale* [spread]' and '*vallée* [valley]' in a passage from the prescribed textbook. The ZEP teachers who are posted in different regions of the island have all been very receptive to this way of teaching reading for understanding. The latter competency, in fact, remains a major lacunae among pupils as highlighted in PSAC examiners' reports for English (MES, 2022a) and French (MES, 2022b).

Exploring a child's DLC acknowledges and enables him/her to use all the basic linguistic tools of what could be viewed as his/her language kit. This leads to a **second recommendation** to develop an individual language kit outlining the multilingual strategies used by my participants (refer to Table 17) and to encourage pupils to tick as they use them in any given passage. This may help to contribute to Cummins' (2007, p. 229) proposal to create 'a shared or interdependent space for the promotion of language awareness and cross-language cognitive processing'.

A **third recommendation** lies in the use of the storied account in Part 5.2 as a pedagogical resource in teacher training so that they may be better equipped to teach multilingual children in developing their biliteracy. The reference to The Little Prince seeks to highlight the importance of attending to children's voice. It is thus hoped that hearing it in the voice of multilingual children as to how they use their multi-competence despite and beyond negative rhetoric on interference when learning two or more languages concurrently, would have a more significant impact on educators. Similar discussions supported with concrete examples from the field have led to interesting discussions with my recent group of some 80 experienced Primary educators who now seem better inclined to adopt a more positive approach to teaching languages in a multilingual context based on what their multilingual pupils *can do* rather than what they *cannot do*. Bringing changes to educators' mindset may, hopefully, pave the way for a more positive acceptance of multilingual materials better adapted to the needs and competencies of multilingual children. Indeed, this study has shown that the root problem remains the embedded colonial and monolingual language perceptions that need to be overcome through open discussions and dissemination at the level of teacher training and curriculum development (not only for developing teaching resources but also for mounting of training courses). Though there have been laudable endeavours marked by the introduction of

modules on how to teach English and French languages in the multilingual context of Mauritius in the teacher training programmes for instance, the issue remains in the way these modules are often taught, namely with English and French isolated inputs. The pathway to dissemination has still a long way to go, not only among teachers but also teacher educators.

(c) For future research

In line with the idea of an individual language kit proposed in recommendation (3), a study may be carried out to investigate its impact on different types of readers (emergent, poor and competent). Another avenue for research would be to design an individual pathway to biliteracy based on a study carried out in several schools of Mauritius. The individual pathway to biliteracy would comprise of a booklet to make children aware of their multi-competence and strategic use of their multilingual abilities (such as those listed in Table 17) in learning to read.

5.5. Limitations of the study

This study's strength and potential limitation both lies on the fact that it is based on children's voice and the subjectivity linked to what they have chosen to share with the researcher (consciously or unconsciously), their perceptions of how they are using their multilingual abilities to learn to read in two or more languages concurrently, and the researcher interpreting the provided information.

Although my participants display a range of language and socio-economic profiles, they all come from a given region and its outskirts. It would be good to carry out a similar study with pupils from other regions of the island. Moreover, language practices being dynamic, it is good to recall that I am capturing multilingual abilities and strategies as demonstrated at a specific point in time as they continue to evolve according to the participants' reading needs and abilities.

5.6. Conclusion: some reflections on my EdD journey

Although I have been engaged with research before embarking on the Professional Doctorate in Education (EdD), it has helped shape my identity as a reflexive researcher and build my confidence in educational research. My EdD journey has been a rollercoaster ride with its share of intellectual swells and swirls (as I grew both as researcher and a teacher educator) and bumps (going through the pandemic of Covid-19, negotiating EdD 'thinking time' amidst professional constraints of a demanding full-time job, and the mental overload of being engaged in a research where I found myself constantly having to challenge my knowledge, understanding and beliefs). This study has also taught me a lot about working with children in research, namely with regard to giving them voice, ethics, and power relations, etc.

Carrying out this research has furthermore taught me a lot about my identity as a multilingual and a biliterate which I have for long taken for granted. I have also learnt a lot about/and from other multilinguals/biliterates' stories which are quite fascinating. It is not easy for an adult to walk down memory lane and recall the intricacies of managing one's multilingual abilities while the children-participants have a lot to say as they currently find themselves in the crux of this learning experience. As for the multilingual strategies/abilities demonstrated by my participants, I realise with hindsight's that I have been using them unconsciously for years. The children-participants have unfolded before me what has been lying dormant and silent in my multilingual mind.

Word count: 63,896

References

Akinnaso, F. N. (1993) 'Policy and experiment in mother tongue literacy in Nigeria', *International Review of Education*, 39(4), pp. 255-285.

Anthony, J., Blumenfeld, H., Potapova, I. and Pruitt-Lord, S. (2020), 'Language dominance predicts cognate effects and metalinguistic awareness in preschool bilinguals', *International Journal of Bilingual Education and Bilingualism*, 25(3), pp. 922-941.

Aparicio, X. and Lavaur, J.-M. (2014), 'Recognising words in three languages: effects of language dominance and language switching, *International Journal of Multilingualism*, 11(2), pp. 164-181.

Aronin, L. (2016), 'Multi-competence and dominant language constellation', in Cook V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 142-163.

Aronin, L. (2018), 'Dominant language constellations in education, language teaching and multilingualism', ECSPM Symposium entitled 'Paradigm shift in language education for the development of multiliterate and plurilingual agencies', Darmstadt, 27-27 September. Available at https://ecspm.org/wp-content/uploads/2018/10/Aronin-Larissa.pdf. Consulted on 16 March 2021.

Aronin, L. (2019), 'Challenges of multilingual education: streamlining affordances through dominant language constellations', *Stellenbosch Papers in Linguistics Plus*, 58, pp. 235-256.

Aronin, L. and Hufeisen, B. (2009), 'Introduction. On the genesis and development of L3 research, multilingualism and multiple language acquisition', in Aronin, L. and Hufeisen, B. (eds.) *The Exploration of Multilingualism*. Netherlands: John Benjamins Publishing Company, pp. 1-10.

Aronin, L. and Ó Laoire, M. (2004), 'Exploring multilingualism in cultural contexts: towards a notion of multilinguality', in Hoffman, C. and Ytsma, J. (eds.) *Trilingualism in Family, School and Community*. Clevedon: Multilingual Matters Ltd, pp. 11-26.

Aronin, L. and Singleton, D. (2008), 'Multilingualism as a new linguistic dispensation', *International Journal of Multilingualism*, 5(1), pp. 1-16.

Aronin, L. and Singleton, D. (2012), 'Affordances theory in multilingualism studies', *Studies in Second Language Learning and Teaching*, 2(3), pp. 311-331.

Aronin, L. and Vetter, E. (eds.) (2021) *Dominant Language Constellations Approach in Education and Language Acquisition*. Switzerland: Springer.

Athanasopoulos, P. (2016), 'Cognitive consequences of multi-competence', in Cook, V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 355-375.

Auckle, T. and Barnes, L. (2011), 'Code-switching, language mixing and fused lects: Emerging trends in multilingual Mauritius', *Language Matters*, 42(1), pp. 104-125.

Auleear Owodally, A. M. (2007), 'Teaching literacy in French and English in Standard 1 in Mauritius: Using the same approach or not?', in Carpooran, A. (ed.) *Appropriation du Français et Pédagogie Convergente dans l'Océan Indien*. Paris: Editions des Archives Contemporaines, pp. 189-201.

Auleear Owodally, A. M. (2008) *Building Bridges to Primary Education in Mauritius? Emergent Literacy Experiences in a Foreign Language Context: A Case Study of Preschool Children*. Unpublished PhD thesis. University of Cape Town, South Africa.

Auleear Owodally, M. (2011), 'Multilingual language and literacy practices and social identities in Sunni Madrassahs in Mauritius: A case study', *Reading Research Quarterly*, 46(2), pp. 134-155.

Auleear Owodally, M. (2012), 'Exposing preschoolers to the printed word: A case study of preschool teachers in Mauritius', *Journal of Early Childhood Literacy*, 13(1), pp. 52-97.

Auleear Owodally, A. M. (2013), 'Receptive English vocabulary in a foreign language context: A case study of preschoolers in Mauritius', *Journal of Early Childhood Literacy*, 14(2), pp. 1-42.

Auleear Owodally, A. M. and Unjore, S. (2013), 'Kreol at school: a case study of Mauritian Muslims' language and literacy ideologies', *Journal of Multilingual and Multicultural Development*, 34(3), pp. 213-230.

Baker, C. (2003), 'Biliteracy and transliteracy in Wales: Language planning and the Welsh National Curriculum', in Hornberger, N. (ed.) *Continua of Biliteracy: An Ecological Framework for Educational Policy, Research and Practice in Multilingual Settings*. Clevedon: Multilingual Matters Ltd, pp. 71-90.

Ball, S. (1998), 'Big policies/small world: an introduction to international perspectives in education policy', *Comparative Education*, 34(2), pp. 119-130.

Ball, S. (2003), 'The teacher's soul and the terrors of performativity', *Journal of Education Policy*, 18(2), pp. 215-228.

Ballgobin, D. V. (2007), ‘Langues maternelles, politique éducative et curriculum’, in Carpooran, A. (ed.) *Appropriation du Français et Pédagogie Convergente dans l’Océan Indien*. Paris: Editions des Archives Contemporaines, pp. 163-188.

Bamgbose, A. (2004), ‘Language of instruction policy and practice in Africa’. Available at http://www.unesco.org/education/languages_2004/languageinstruction_africa.pdf. Consulted on 21 March 2017.

Bartlett, L. (2007), ‘Bilingual literacies, social identification, and educational trajectories’, *Linguistics and Education*, 18, pp. 215-231.

Basit, T. (2003), ‘Manual or electronic? The role of coding in qualitative data analysis’, *Educational Research*, 45(2), pp. 143-154.

Bassey, M. (1999) *Case Study Research in Educational Settings*. Buckingham: Open University Press.

Bazeley, P. (2009), ‘Analysing qualitative data: more than ‘identifying themes’’, *The Malaysian Journal of Qualitative Research*, 2(2), pp. 6-22.

Bell, N. (2008), ‘Ethics in child research: rights, reason and responsibilities’, *Children’s Geographies*, 6(1), pp. 7-20.

Benson, C. (2004) ‘The importance of mother tongue-based schooling for educational quality’, Background paper prepared for the Education for All Global Monitoring Report 2005. The Quality Imperative, pp. 1-25.

BERA (2011) *Ethical Guidelines for Educational Research*. London: British Educational Research Association.

Bernat, E. (2008), ‘Beyond beliefs: psycho-cognitive, sociocultural and emergent ecological approaches to learner perceptions in foreign language acquisition’, *The Asian EFL Journal Quarterly*, 10(3), pp. 7-27.

Bialystok, E. (1987), ‘Influences of bilingualism on metalinguistic development’, *Second Language Research*, 3(2), pp. 154-166.

Bialystok, E. (2002), ‘Acquisition of literacy in bilingual children: A framework for research’, *Language Learning*, 52(1), pp. 159-199.

Bialystok, E. (2010), ‘Bilingualism’, *WIREs Cognitive Science*, 1, pp. 559-572.

Birks, M., Chapman, Y. and Francis, K. (2008), ‘Memoing in qualitative research’, *Journal of Research in Nursing*, 13(1), pp. 68-75.

Blackledge, A. and Creese, A. (2010) *Multilingualism. A Critical Perspective*. London: Continuum International Publishing Group.

Blommaert, J. (2010) *The Sociolinguistics of Globalisation*. Cambridge: Cambridge University Press.

Bloome, D. and Encisco, P. (2006), 'Looking out across Columbus: What we mean by 'multiple literacies'', *Theory into Practice*, 45(4), pp. 296-303.

Bono, M. and Stratilaki, S. (2009), 'The M-factor, a bilingual asset for plurilinguals? Learners' representations, discourses strategies and third language acquisition in institutional contexts', *International Journal of Multilingualism*, 6(2), pp. 207-227.

Borjian, M. (2014), 'Language-education policies and international institutions. The World Bank's vs. UNESCO's global framework', *Language Problems and Language Planning*, 38(1), pp. 1-18.

Bourke, R. (2017), 'The ethics of including and 'standing up' for children and young people in educational research', *International Journal of Inclusive Education*, 21(3), pp. 231-233.

Bourke, R., Loveridge, J., O'Neill, J. Erueti, B. and Jamieson, A. (2017), 'A sociocultural analysis of the ethics of involving children in educational research', *International Journal of Inclusive Education*, 21(3), pp. 259-271.

Braun, V. and Clarke, V. (2006), 'Using thematic analysis in psychology', *Qualitative Research in Psychology,* 3(2), pp. 77–101.

Bryman, A. (2016) *Social Research Methods*. Oxford: Oxford University Press.

Bryman, A. and Burgess, R. G. (1994a), 'Developments in qualitative data analysis: an introduction', in Bryman, A. and Burgess, R. G. (eds.) *Analysing Qualitative Data*. London and New York: Routledge, pp. 1-17.

Bryman, A. and Burgess, R. G. (1994b), 'Reflections on qualitative data analysis', in Bryman, A. and Burgess, R. G. (eds.) *Analysing Qualitative Data*. London and New York: Routledge, pp. 216-227.

Canagarajah, S. (2007), 'Lingua Franca English, multilingual communities and language acquisition', *Modern Language Journal*, 91, pp. 923–939.

Canagarajah, A. S. (2011a), 'Codemeshing in academic writing: identifying teachable strategies of translanguaging', *The Modern Language Journal*, 95(iii), pp. 401-417.

Canagarajah, A. S. (2011b), 'Translanguaging in the classroom: emerging issues for research and pedagogy', *Applied Linguistics Review*, 2, pp. 1-28.

Carpooran, A. (2003) *Ile Maurice, des Langues et des Droits*. Paris: L'Harmattan.

Carpooran, A. (2007), ‘Diglossie et pédagogie convergente à Maurice: une cohabitation difficile?’, in Carpooran, A. (ed.) *Appropriation du Français et Pédagogie Convergente dans l’Océan Indien*. Paris: Editions des Archives Contemporaines, pp. 147-161.

Carpooran, A. (2014), ‘Le créole mauricien dans sa marche vers le monde de l’écriture formelle et celui de l’univers scolaire durant la période post-2000’, in Carpooran, A. (dir.) *Langues Créoles, Mondialisation et Education*. Mauritius: CSU-ELP, pp. 109-136.

Cazden, C., Cope, B., Fairclough, N., Gee, J., Kalantzis, M., Kress, G., Luke, A., Luke, C., Michaels and S. Nakata, M. (1996), ‘A pedagogy of multiliteracies: designing social futures’, *Harvard Educational Review*, 66(1), pp. 60-92.

Celic, C. and Seltzer, K. (2011) *Translanguaging: A CUNY-NYSIEB Guide for Educators*. New York: City University of New York.

Cenoz, J. (2001), ‘The effect of linguistic distance, L2 and age on cross-linguistic influence in third language acquisition’, in Cenoz, J., Hufeisen, B. and Jessner, U. (eds.) *Cross-linguistic Influence in Third Language Acquisition*. Clevedon: Multilingual Matters, pp. 8-20.

Cenoz, J. (2009) *Towards Multilingual Education*. Bristol: Multilingual Matters.

Cenoz, J. (2013), ‘The influence of bilingualism on third language acquisition: focus on multilingualism’, *Language Teaching*, 46(1), pp. 71-86.

Cenoz, J. and Gorter, D. (2010), ‘The diversity of multilingualism in education’, *Int’l. J. Soc. Lang.*, 205, pp. 37-53.

Cenoz, J. and Gorter, D. (2011), ‘Focus on multilingualism: a study of trilingual writing’, *The Modern Language Journal*, 95(3), pp. 356-369.

Cenoz, J., Hufeisen, B. and Jessner, U. (2001), ‘Introduction’, in Cenoz, J., Hufeisen, B. and Jessner, U. (eds.) *Cross-linguistic Influence in Third Language Acquisition*. Clevedon: Multilingual Matters, pp. 1-7.

Central Statistics Office (1998) *Education Statistics 1998*. Available at https://statsmauritius.govmu.org/Documents/Statistics/ESI/1999/EI0292/ESI_0292_0002.pdf. Consulted on 10 October 2014.

Central Statistics Office (2011) *Population Census Main Results.* Available at http://statsmauritius.govmu.org/English/CensusandSurveys/Documents/ESI/pop2011.pdf. Consulted on 13 January 2017.

Central Statistics Office (2022a) *Population Census Questionnaire*. Available at https://statsmauritius.govmu.org/Documents/Census_and_Surveys/Census2022/Population%20Census%20Questionnaire%202022.pdf. Consulted on 16 December 2022.

Central Statistics Office (2022b) *Population Census Main Results*. Available: https://statsmauritius.govmu.org/Documents/Statistics/ESI/2022/EI1687/2022%20Population%20Census_Main%20Results_18112022.pdf. Consulted on 16 December 2022.

Chimbutane, F. (2011) *Rethinking Bilingual Education in Postcolonial Contexts*. Bristol: Multilingual Matters.

Chung, S. C., Chen, X. and Geva, E. (2018), 'Deconstructing and reconstructing cross-language transfer in bilingual reading development: an interactive framework', *Journal of Neurolinguistics*, 50, pp. 149-161.

Cioè-Peña, M. and Snell, T. (2015), 'Translanguaging for social justice', *Theory, Research, and Action in Urban Education*, 1. Available at https://traue.commons.gc.cuny.edu/volume-iv-issue-1-fall-2015/translanguaging-for-social-justice/. Consulted on 5 March 2018.

Clark, A. (2005), 'Listening to and involving young children: a review of research and practice', *Early Child Development and Care*, 175(6), pp. 489-505.

Clarke, V. and Braun, V. (2017), 'Thematic analysis', *The Journal of Positive Psychology*, 12(3), pp. 297-298.

Coetzee-Van Rooy, S. (2018), 'Dominant language constellations in multilingual repertoires: implications for language-in-education policy and practices in South Africa', *Language Matters*, 49(3), pp. 19-46.

Collen, L. (2016), 'Mauritian Kreol confronts English and French Hydras', in Bunce, P., Phillipson, R., Rapatahana, V. and Tupas, R. (eds.) *Why English? Confronting the Hydra*. Bristol: Multilingual Matters, pp. 159-170.

Commission of Enquiry on Education (1979) *Pre-primary and Primary Education in Mauritius. Laying the Foundations*. Mauritius.

Conteh, J. and Meier, G. (2014), 'Introduction', in Conteh, J. and Meier, G. (eds.) *The Multilingual Turn in Languages Education*. Bristol: Multilingual Matters, pp. 1-14.

Conteh, J., Copland, F. and Creese, A. (2014), 'Multilingual teachers' resources in three different contexts: empowering learning', in Conteh, J. and Meier, G. (eds.) *The Multilingual Turn in Languages Education*. Bristol: Multilingual Matters, pp. 17-40.

Cook, V. (1991), 'The poverty-of-the-stimulus argument and multi-competence', *Second Language Research*, 7(2), pp. 103-117.

Cook, V. (1992), ‘Evidence for multicompetence’, *Language Learning*, 42(4), pp. 557-591.

Cook, V. (1995), ‘Multi-competence and effects of age’, in Singleton, D. and Lengyel, Z. (eds.) *The Age Factor in Second Language Acquisition*. Clevedon: Multilingual Matters, pp. 51-66.

Cook, V. (2003), ‘Changing the first language in the L2 user’s mind’, in Cook, V. J. (ed.) *Effects of the Second Language on the First*. Clevedon: Multilingual Matters, pp. 1-8.

Cook, V. (2007), ‘The goals of ELT: reproducing native-speakers or promoting multi-competence among second language users?’, in Cummins, J. and Davison, C. (eds.) *Handbook on English Language Teaching*. Kluwer, pp. 237-248.

Cook, V. (2010), ‘The relationship between first and second language learning revisited’, in Macaro, E. (ed.) *The Continuum Companion to Second Language Acquisition*, Continuum, pp. 137-157.

Cook, V. (2016a), ‘Premises of multi-competence’, in Cook, V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 1-25.

Cook, V. (2016b), ‘Transfer and the relationship between the languages of multi-competence’, in Alonso, R. A. (ed.) *Crosslinguistic Influence in Second Language Acquisition*. Bristol: Multilingual Matters, pp. 24-37.

Cook, V. (2016c), ‘Working definition of multi-competence’. Available at http://www.viviancook.uk/Writings/Papers/MCentry.htm. Consulted on 19 May 2019.

Cope, B. and Kalantzis, M. (2006), ‘From literacy to ‘multiliteracies’: learning to mean in the new communications environment’, *English Studies in Africa*, 49(1), pp. 23-45.

Corbin Dwyer, S. and Buckle, J. L. (2009), ‘The space between: on being an insider-outsider in qualitative research’, *International Journal of Qualitative Methods*, 8(1), pp. 54-63.

Corcoll, C. (2013), ‘Developing children’s language awareness: switching codes in the language classroom’, *International Journal of Multilingualism*, 10(1), pp. 27-45.

Creese, A. and Blackledge, A. (2010), ‘Translanguaging in the bilingual classroom: a pedagogy for learning and teaching?’, *The Modern Language Journal*, 94(1), pp. 103-115.

Creese, A. and Martin, P. (2003), ‘Multilingual classroom ecologies: inter-relationships, interactions and ideologies’, in Creese, A. and Martin, P. (eds.) *Multilingual Classroom Ecologies. Inter-relationships, Interactions and Ideologies*. Clevedon: Multilingual Matters Ltd, pp. 1-7.

Creswell, J. W. (1998) *Qualitative Inquiry and Research Design. Choosing Among Five Traditions*. California: SAGE Publications Inc.

Creswell, J. W. (2007) *Research Design. Qualitative and Mixed Methods Approaches*. London: Sage Publications.

Creswell, J. W. (2009) *Research Design. Qualitative, Quantitative and Mixed Methods Approaches*. London: SAGE.

Cummins, J. (1979), 'Linguistic interdependence and the educational development of bilingual children', *Review of Educational Research*, 49(2), pp. 222-251.

Cummins, J. (2000) *Language, Power and Ideology: Bilingual Children in the Crossfire*, Clevedon: Multilingual Matters.

Cummins, J. (2005a), 'Teaching for cross-language transfer in dual language education: possibilities and pitfalls'. Paper presented at the TESOL Symposium on Dual Language Education: Teaching and Learning Two Languages in the EFL Setting, Istanbul: Bogazici University. Available at http://www.tesol.org/docs/default-source/new-resource-library/symposium-on-dual-language-education-3.pdf?sfvrsn=0. Consulted on 22 June 2017.

Cummins, J (2005b), 'Afterword', in Pahl, K. and Roswell, J. (eds.) *Literacy and Education, Understanding the New Literacy Studies in the Classroom*. London: Paul Chapman Publishing.

Cummins, J. (2007), 'Rethinking monolingual instructional strategies in multilingual classrooms', *Canadian Journal of Applied Linguistics*, 10(2), pp. 221-240.

Cummins, J. (2010), 'Introduction', in Cummins, J. and Hornberger, N. (eds.) *Encyclopedia of Language and Education Vol. 5: Bilingual Education*. Netherlands: Springer, pp. xiii-xxiii.

Davies, A. (2003) *The Native Speaker: Myth and Reality*. Clevedon: Multilingual Matters Ltd.

De Angelis G. (2007) *Third or Additional Language Acquisition*. Clevedon: Multilingual Matters Ltd.

Dewaele, J.-M. (2001), 'Application or inhibition? The interaction of L1, L2 and L3 on the language mode continuum', in Cenoz, J., Hufeisen, B. and Jessner, U. (eds.) *Cross-linguistic Influence in Third Language Acquisition*. Clevedon: Multilingual Matters, pp. 69-89.

Dewaele, J.-M. (2018), 'Why the dichotomy 'L1 versus LX user' is better than 'native versus non-native speaker'', *Applied Linguistics*, 39(2), pp. 236-240.

Djigunović, J. (2010), ‘Starting age and L1 and L2 interaction’, *International Journal of Bilingualism*, 14(3), pp. 303-314.

Dworin, J. E. (2003), ‘Insights into biliteracy development: toward a bidirectional theory of bilingual pedagogy’, *Journal of Hispanic Higher Education*, 2(2), pp. 171-186.

Edwards, V. (2009) *Learning to Be Literate. Multilingual Perspectives*. Clevedon: Multilingual Matters.

Einarsdóttir, J. (2007), ‘Research with children: methodological and ethical challenges’, *European Early Childhood Research Journal*, 15(2), pp. 197-211.

Eldén, S. (2013), ‘‘You child is just wonderful’: on ethics and access in research with children’, *Journal of Comparative Social Work*, 8(2), pp. 198-221.

Farrokhi, F. (2012), ‘Rethinking convenience sampling: defining quality criteria’, *Theory and Practice in Language Studies*, 2(4), pp. 784-792.

Faubion, J. (ed.) (2000) *Aesthetics, Method and Epistemology. Essential Works of Foucault 1954-1984 Volume 2*, London: Penguin Books.

Fishman, J. A. (1980), ‘Ethnocultural dimensions in the acquisition and retention of biliteracy’, *Journal of Basic Writing*, 3(1), pp. 48-31.

Flewitt, R. (2005), ‘Conducting research with young children: some ethical considerations’, *European Early Childhood Research Association*, special edition, pp. 1-14.

Flyvbjerg, B. (2006), ‘Five misunderstandings about case-study research’, *Qualitative Inquiry*, 12(2), pp. 219-245.

Font, N. and Lavaur, J.-M. (2004) ‘Effets de la fréquence du voisinage orthographique interlangue lors de la reconnaissance visuelle de mots chez les bilingues’, *L’Année Psychologue*, 104(3), pp. 377-405.

Foucault, M. (2000a), ‘Candidacy presentation: Collège de France, 1969’, in Rabinow, P. (ed.) *Michel Foucault. Ethics: Subjectivity and Truth. Essential Works of Foucault 1954-1984 Volume 1*, London: Penguin Books, pp. 5-10.

Foucault, M. (2000b), ‘Nietzsche, genealogy, history’, in Faubion, J. (ed.) *Aesthetics, Method and Epistemology. Essential Works of Foucault 1954-1984 Volume 2*, London: Penguin Books, pp. 369-391.

Franceschini, R. (2011), ‘Multilingualism and multicompetence: a conceptual view’, *The Modern Language Journal*, 95(iii), pp. 344-355.

Franceschini, R. (2016), ‘Multilingualism research’, in Cook, V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 97-124.

García, O. (2009) *Bilingual Education in the 21st Century. A Global Perspective*, Oxford: Blackwell.

García, O. (2014a), 'Becoming bilingual and biliterate. Sociolinguistic and sociopolitical considerations', in Addison Stone, C., Silliman, E. R., Ehren, B. J. and Wallach, G. P. (eds.) *Handbook of Language and Literacy. Development and Disorders*. New York: The Guilford Press, pp. 145-160.

García, O. (2014b), 'Multilingualism and education', in Leung, C. and Street, B. (eds.) *The Routledge Companion to English Studies*. London and New York: Routledge, pp. 84-99.

García, O. and Flores, N. (2012), 'Multilingual pedagogies', in Martin-Jones, M., Blackledge, A. and Creese, A. (eds.) *The Routledge Handbook of Multilingualism*. London: Routledge, pp. 232-246.

García, O. and Kano, N. (2014), 'Translanguaging as process and pedagogy: developing the English writing of Japanese students in the US', in Conteh, J. and Meier, G. (eds.) *The Multilingual Turn in Languages Education*. Multilingual Matters, pp. 258-277.

García, O. and Kleifgen, J. A. (2019), 'Translanguaging and literacies', *Reading Research Quaterly*, 55(4), pp. 553-571.

García, O. and Leiva, C. (2014), 'Theorising and enacting translanguaging for social justice', in Blackledge, A. and Creese, A. (eds.) *Heteroglossia as Practice and Pedagogy*. London: Springer, pp. 199-216.

García, O. and Li Wei (2014) *Translanguaging. Language, Bilingualism and Education*. Hampshire: Palgrave Macmillan.

García, O. and Menken, L. (2015), 'Cultivating an ecology of multilingualism in schools', in Spolsky, B., Inbar-Lourie, O. and Tannenbaum, M. (eds.) *Challenges for Language Education and Policy*. New York: Routledge, pp. 95-108.

García, O. and Otheguy, R. (2020), 'Plurilingualism and translanguaging: commonalities and divergences', *International Journal of Bilingual Education and Bilingualism*, 23(1), pp. 17-35.

García, O., Bartlett, L. and Kleifgen, J.- A. (2007), 'From biliteracy to pluriliteracies', in Auer, P. and Li Wei (eds.) *Handbook of Multilingualism and Multilingual Communication*. Berlin: De Gruyter Mouton, pp. 207-228.

García, O., Flores, N. and Woodley, H. H. (2012), 'Transgressing monolingualism and bilingual dualities: translanguaging pedagogies', in Yiakoumetti, A. (ed.) *Harnessing Linguistic Variation to Improve Education*. Bern: Peter Lang, pp. 45-75.

García, O., Skutnabb-Kangas, T. and Torres-Guzmán, M. E. (2006), 'Weaving spaces and (de)constructing ways for multilingual schools: the actual and the imagined', in García, O., Skutnabb-Kangas, T. and Torres-Guzmán, M. E. (eds.) *Imagining Multilingual Schools. Languages in Education and Glocalisation*. Clevedon: Multilingual Matters Ltd, pp. 3-47.

Geva, E. and Ryan, E. B. (1993), 'Linguistic and cognitive correlates of academic skills in first and second language', *Language Learning*, 43, pp. 5-42.

Gilham, B. (2000) *Case Study Research Methods*. London and New York: Continuum.

Gollop, M. M. (2000), 'Interviewing children: a research perspective', in Smith, A. B., Taylor, N. J. and Gollop, M. M. (eds.) *Children's Voices: Research, Policy and Practice*. New Zealand: Pearson Education, pp. 18-37.

Goodman, K., Goodman, Y. and Flores, B. (1979), 'Reading in the bilingual classroom: literacy and biliteracy', *National Clearinghouse for Bilingual Education*, pp. 1-34.

Gort, M. (2006), 'Strategic codeswitching, interliteracy, and other phenomena of emergent bilingual writing: lessons from first grade dual language classrooms', *Journal of Early Childhood Literacy*, 6(3), pp. 323-354.

Grix, J. (2002), 'Introducing students to the generic terminology of social research', *Politics*, 22(3), pp. 175-186.

Grosjean, F, (1982) *Life with Two Languages: An Introduction to Bilingualism*. Cambridge, Mass.: Harvard University Press.

Grosjean, F. (1985), 'The bilingual as a competent but specific speaker-hearer', *Journal of Multilingual and Multicultural Development*, 6, pp. 467-477.

Grosjean, F. (1989), 'Neurolinguists, beware! The bilingual is not two monolinguals in one person', *Brain and Language*, 36, pp. 3-15.

Grosjean, F. (1997), 'The bilingual individual', *Interpreting*, 2 (1/2), pp. 163-187.

Grosjean, F. (2010), 'The bilingual as a competent but specific speaker-hearer", in Cruz-Ferreira, M. (ed.) *Multilingual Norms*. Frankfurt am Main: Peter Lang, 2010, pp. 19-31.

Grosjean, F. (2016), 'The complementary principle and its impact on processing, acquisition and dominance', in Silva-Corvalan, C. and Treffers-Daller, J. (eds.) *Language Dominance in Bilinguals: Issues of Measurement and Operationalisation*. Cambridge: Cambridge University Press, pp. 66-84.

Grover, S. (2004), 'Why won't they listen to us? On giving power and voice to children participating in social research', *Childhood*, 11(1), pp. 81-93.

Gutiérrez, K. D., Zepeda, M. and Castro, D. D. (2010), 'Advancing early literacy learning for all children: implications of the NELP report for dual-language learners', *Educational Researcher*, 39(4), pp. 334-339.

Guba, E. G. and Lincoln, Y. S. (1994) 'Competing paradigms in qualitative research', in Denzin, N. K. and Lincoln, Y. S. (eds.) *Handbook of Qualitative Research. London:* Sage Publications, pp. 105–117.

Hall, J. K., Cheng, A. and Carlson, M. T. (2006), 'Reconceptualising multicompetence as a theory of language knowledge', *Applied Linguistics*, 27(2), pp. 220-240.

Hammarberg, B. (2001), 'Roles of L1 and L2 and L3 production and acquisition', in Cenoz, J., Hufeisen, B. and Jessner, U. (eds.) *Cross-linguistic Influence in Third Language Acquisition*. Clevedon: Multilingual Matters, pp. 21-41.

Hammarberg, B. (2010), 'The languages of the multilingual: some conceptual and terminological issues', *IRAL, International Review of Applied Linguistics in Language Teaching*, 48, pp. 91-104.

Hammarberg, B. (2014), 'Problems in defining the concepts of L1, L2 and L3', in Otwinowska, A. and De Angelis, G. (eds.) *Teaching and Learning in Multilingual Contexts. Sociolinguistic and Educational Perspectives*. Bristol: Multilingual Matters, pp. 3-18.

Harland, T. (2014), 'Learning about case study methodology to research higher education', *Higher Education Research and Development*, 33(6), pp. 1113-1122.

Harmon, J. (2015), 'Epistemology of languages – The socially constructed disputed knowledge about Mauritian Kreol: a socio-historical perspective', *Island Studies Indian Ocean/Océan Indien*, 2, pp. 46-54.

Haugen, E. (1972) *The Ecology of Language. Essays by Einar Haugen. Selected and Introduced by Anwar S. Dil*. Stanford: Stanford University Press.

Heese, M. (2012), 'The ecology of literacy: a metaphor for empowerment', *Stellenbosch Papers in Linguistics Plus*, 29, pp. 158-171.

Hélot, C. and Ó Laoire, M. (2011), 'Introduction: from language education policy to a pedagogy of the possible', in Hélot, C. and Ó Laoire, M. (eds.) *Language Policy for the Multilingual Classroom. Pedagogy of the Possible*. Bristol: Multilingual Matters, pp. xi-xxv.

Hélot, C. and Young, A. (2006), 'Imagining multilingual education in France: A language and cultural awareness project at primary level', in García, O., Skutnabb-Kangas, T.

and Torres-Guzmán, M. E. (eds.) *Imagining Multilingual Schools. Languages in Education and Glocalisation*. Clevedon: Multilingual Matters Ltd, pp. 69-90.

Herdina, P. and Jessner, U. (2002) *A Dynamic Model of Multilingualism. Perspectives of Change in Psycholinguistics*. Clevedon: Multilingual Matters Ltd.

Hill, M. (2006), 'Children's voices on ways of having a voice', *Childhood*, 13(1), pp. 69-89.

Hoffman, C. and Ytsma, J. (2004), 'Introduction', in Hoffman, C. and Ytsma, J. (eds.) *Trilingualism in Family, School and Community*. Clevedon: Multilingual Matters Ltd, pp. 1-6.

Hookoomsing, V. Y. (1993), 'L'île Maurice et ses langues: un paysage revu et corrigé', *Notre Librairie*, 114, pp. 26-31.

Hornberger, N. (1989), 'Continua of Biliteracy', *Review of Educational Research*, 59(3), pp. 271-296.

Hornberger, N. (1990), 'Creating successful learning contexts for biliteracy', *Penn Working Papers in Educational Linguistics*, 6(1), pp. 1-21.

Hornberger, N. (2000), 'Multilingual literacies, literacy practices, and the continua of biliteracy', in Martin-Jones, M. and Jones, K. (eds.) *Multilingual Literacies. Reading and Writing Different Worlds*. Amsterdam/Philadelphia: John Benjamins Publishing Company, pp. 353-368.

Hornberger, N. (2002a), 'Biliteracy and schooling for multilingual populations', *International Journal Soc. Lang.*, 155/156, pp.137-142.

Hornberger, N. (2002b), 'Multilingual language policies and the continua of biliteracy: an ecological approach', *Language Policy*, 1(1), pp. 27-51.

Hornberger, N. (2003a), 'Introduction', in Hornberger, N. (ed.) *Continua of Biliteracy: An Ecological Framework for Educational Policy, Research and Practice in Multilingual Settings*. Clevedon: Multilingual Matters Ltd, pp. xii-xxii.

Hornberger, N. (2003b), 'Continua of biliteracy', in Hornberger, N. (ed.) *Continua of Biliteracy: An Ecological Framework for Educational Policy, Research and Practice in Multilingual Settings*. Clevedon: Multilingual Matters Ltd, pp. 3-34.

Hornberger, N. (2003c), 'Multilingual language policies and the continua of biliteracy: an ecological approach', in Hornberger, N. (ed.) *Continua of Biliteracy: An Ecological Framework for Educational Policy, Research and Practice in Multilingual Settings*. Clevedon: Multilingual Matters Ltd, pp. 315-339.

Hornberger, N. (2004), 'The continua of biliteracy and the bilingual educator: educational linguistics in practice', *International Journal of Bilingual Education and Bilingualism*, 7(2 and 3), pp. 155-171.

Hornberger, N. (2009), 'Multilingual education policy and practice: ten certainties (grounded in indigenous experience)', *Language Teaching*, 42(2), pp. 197-211.

Hornberger, N. and Link, H. (2012a), 'Translanguaging and transnational literacies in multilingual classrooms: a biliteracy lens', *International Journal of Bilingual Education and Bilingualism*, 15(3), pp. 261-278.

Hornberger, N. and Link, H. (2012b), 'Translanguaging in today's classrooms: a biliteracy lens', *Theory into Practice*, 51, pp. 239-247.

Hornberger, N. and Skilton-Sylvester, E. (2000), 'Revisiting the continua of biliteracy: international and critical perspectives', *Language and Education*, 14(2), pp. 96-122.

Horwitz, E. (2010), 'Foreign and second language anxiety', *Language Teaching*, 43(2), pp. 154-167.

Hungi, N. and Thuku, F. W. (2010), 'Variations in reading achievement across 14 southern African school systems: which factors matter?', *International Review of Education*, 56, pp. 63-101.

Jean-François, E. B. and Korlapu-Bungaree, R. (2012), 'The introduction of Mauritian Kreol in the national curriculum: moving from social justice strategy towards bilingual/multilingual education', Paper presented at the Mauritius Institute of Education MA Research Conference.

Jean-François, E. B. and Mahadeo-Doorgakant, Y. (2013), 'Vers une prise en compte de la compétence translinguistique des apprenants dans le système éducatif mauricien', *Glottopol*, 22, pp. 47-66.

Jessner, U. (2008a), 'Teaching third languages: findings, trends and challenges', *Language Teaching*, 41, pp. 15-56.

Jessner, U. (2008b), 'A DST of multilingualism and the role of metalinguistic awareness', *The Modern Language Journal*, 92(2), pp. 270-283.

Jiménez, R. T., García, G. E. and Pearson, P. D. (1996), 'The reading strategies of bilingual Latina/o students who are successful English readers: opportunities and obstacles', *Reading Research Quaterly*, 31(1), pp. 90-112.

Jules, T. D. and Ressler, P. (2017), 'Is 'small' always small and 'big' always big? Re-reading educational developments in small (and micro) states', in Jules, T. D. and Ressler, P.

(eds) *Re-reading Education Policy and Practice in Small States*. Franfurt am Main: Peter Lang, pp. 23-40.

Kee Mew, E. (2016), *A Narrative of the Reading Learning Experiences of Bi/Multilinguals*. EdD Stage I. University of Brighton, United Kingdom.

Kee Mew, E. (2017), *Understanding Multilingualism and Biliteracy in a Postcolonial Multilingual Context: An Inquiry into Policy Discourse*. EdD Stage I. University of Brighton, United Kingdom.

Kellerman, E. (1983), 'Now you see it, now you don't', in Gass, S. and Selinker, L. (eds.) *Language Transfer in Language Learning*. Rowley: Newbury House, pp. 112-134.

Kerwin, J. T. and Ordaz Reynoso, N. (2021), 'You know what I know', *Demography*, 58(1), pp. 1-29.

Koda, K. (2008), 'Impacts of prior literacy experiences on second-language learning to read', in Koda, K. and Zehler, A. M. (eds.) *Learning to Read across Languages: Cross-linguistic Relationships in First-and Second-language Literacy Development*. NJ: Routledge, pp. 68-96.

Kramsch, C. J. (1998) *Language and Culture*. Oxford: Oxford University Press.

Kramsch, C. and Whiteside, A. (2008), 'Language ecology in multilingual settings. Towards a theory of symbolic competence', *Applied Linguistics*, 29(4), pp. 645-671.

Krevelj, S. L. (2021) 'Studying crosslinguistic interaction in multilingual production through the Dominant Language Constellation', in Aronin, L. and Vetter, E. (eds.) *Dominant Language Constellations Approach in Education and Language Acquisition*. Switzerland: Springer, pp. 211-229.

Krulatz, A. M. and Duggan, J. (2018) 'Dominant language constellations approach in education and language acquisition', *Reading in a Foreign Language*, 30(1), pp. 29-48.

Lado, R. (1964) *Language Teaching: A Scientific Approach*, New York: McGraw-Hill.

Lambert, W. E. (1981), 'Bilingualism and language acquisition', *Annals of the New York Academy of Sciences, 379,* pp. 9–22.

Lasagabaster, D. and García, O. (2014), 'Translanguaging: towards a dynamic model of bilingualism at school', *Cultura y Educación*, 26(3), pp. 557-572.

Lemhöfer, K., Dijkstra, T. and Michel, M. (2004) 'Three languages, one ECHO: Cognate effects in trilingual word recognition', *Language and Cognitive Processes*, 19(5), pp. 585-611.

Leone, T., Sochas, L. and Coast, E. (2021), 'Depends who's asking', *Demography*, 58(1), pp. 31-50.

Li Wei (2016a), 'Consequences of multi-competence for sociolinguistic research', in Cook, V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 165-182.

Li Wei (2016b), 'Epilogue: multi-competence and the translanguaging instinct', in Cook, V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 533-543.

Little, S. and Little, T. (2021), 'An un/familiar space: children and parents as collaborators in autoethnographic family research', *Qualitative Research*, pp. 1-17.

Lo Bianco, J. (2014), 'Naturalising the Mutltilingual Turn', in Conteh, J. and Meier, G. (eds.) *The Multilingual Turn in Languages Education*. Bristol: Multilingual Matters, pp. xv-xvi.

Lo Bianco, J. and Aronin, L. (2020), 'Introduction: the dominant language constellations: a new perspective on multilingualism', in Aronin, L. and Lo Bianco, J. (eds.) *Dominant Language Constellations. A New Perspective on Multilingualism*. Switzerland: Springer, pp. 1-15.

Lukhele, B. B. S. (2013), 'Exploring relationships between reading attitudes, reading ability and academic performance amongst primary teacher trainees in Swaziland', *Reading and Writing*, 4(1), pp. 1-8.

Mahadeo Doorgakant, Y. D. (2012), 'Language educational policy in Mauritius: Nationalistic vs Nationistic Choice', Athens: ATINER'S Conference Papers Series, pp. 99-130.

Mahadeo-Doorgakant, Y. (2017) *The Development of the Linguistic Repertoire of Primary School Learners within the Mauritian Multilingual Educational System*. Unpublished PhD thesis. University of Kwazulu-Natal, South Africa.

Manan, S. A. and David, M. K. (2014), 'Mapping ecology of literacies in educational setting: the case of local mother tongues vis-à-vis Urdu and English languages in Pakistan', *Language and Education*, 28(3), pp. 203-222.

Martin, C. (2010), 'Creating the tools for multilingualism: a school-based action research project', *The Language Learning Journal*, 38(2), pp. 159-174.

Martin-Jones, M. and Jones, K. (2000), 'Introduction: multilingual literacies', in Martin-Jones, M. and Jones, K. (eds.) *Multilingual Literacies. Reading and Writing Different Worlds*. Amsterdam/Philadelphia: John Benjamins Publishing Company, pp. 1-16.

Martin-Jones, M., Blackledge, A. and Creese, A. (eds.) (2012) *The Routledge Handbook of Multilingualism*. London: Routledge.

Martinez, D. C. and Caraballo, L. (2018), 'Sustaining multilingual literacies in classrooms and beyond', *Journal of Adolescents and Adult Literacy*, 62(1), pp. 101-104.

Mason, J. (1994), 'Linking qualitative and quantitative data analysis', in Bryman, A. and Burgess, R. G. (eds.) *Analysing Qualitative Data*. London and New York: Routledge, pp. 89-110.

Mathias, M. B. and Masaazi, M. F. (2012), 'Challenges to African development: the medium of instruction in Uganda's Education System', *Pedagogy, Culture and Society*, 20(3), pp. 435-450.

Mauritius Examinations Syndicate (2016) *CPE Reports 2015*. Available at http://mes.intnet.mu/English/Pages/Examinations/primary/cpe/cpe_reports2015_persubject.aspx. Consulted on 13 January 2017.

Mauritius Examinations Syndicate (2020) *PSAC 2019 Grade 6 Modular Science Examiner's Report*. Available at https://mes.govmu.org/mes/?page_id=5489. Consulted on 18 July 2020.

Mauritius Examinations Syndicate (2022a) *PSAC 2020-2021 English Examiner's Report*. Available at https://mes.govmu.org/mes/?page_id=5489. Consulted on 5 December 2022.

Mauritius Examinations Syndicate (2022b) *PSAC 2020-2021 French Examiner's Report*. Available at https://mes.govmu.org/mes/?page_id=5489. Consulted on 5 December 2022.

Mauritius Examinations Syndicate (2022c) *PSAC 2020-2021 Science Examiner's Report*. Available at https://mes.govmu.org/mes/?page_id=5489. Consulted on 5 December 2022.

Mauritius Institute of Education (1977) *Proposed Reform and Reorganisation of the Mauritian School System*. Mauritius.

Mauritius Institute of Education and Ministry of Education and Human Resources (2012) *Addendum to National Curriculum Framework Kreol Morisien Stds 1-6*. Mauritius.

Mauritius Institute of Education (2015a) *National Curriculum Framework. Grades 1 to 6*. Mauritius.

Mauritius Institute of Education (2015b) *National Curriculum Framework. Nine-Year Continuous Basic Education*. Mauritius.

McTavish, M., Streelasky, J. and Coles, L. (2012), 'Listening to children's voices: children as participants in research', *IJEC*, pp. 249-267.

Meisel, J. (1983), ‘Transfer as a second language strategy’, *Language and Communication*, 3, pp. 11-46.

Merriam, S. B. (1998) *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bash Publishers.

Mgijima, V. D. and Makalela, L. (2016), ‘The effects of translanguaging on the bi-literate inferencing strategies of fourth grade learners’, *Perspectives in Education*, 34(3), pp. 86-93.

Midgley, K. J., Holcomb, P. J. and Grainger, J. (2009) ‘Language effects in second language learners and proficient bilinguals investigated with event-related potentials’, *Journal of Neurolinguistics*, 22(3), pp. 281-300.

Migge, B., Léglise, I. and Bartens, A. (2010), ‘Creoles in education: a discussion of pertinent issues’, in Migge, B., Léglise, I. and Bartens, A. (eds.) *Creoles in Education: An Appraisal of Current Programs and Projects*. Amsterdam: John Benjamins Publishing Company, pp. 1-30.

Miller, J. and Glassner, B. (2011), ‘The ‘inside’ and the ‘outside’: finding realities in interviews’, in Silverman, D. (ed.) *Qualitative Research*. London: SAGE, pp. 131-148.

Ministry of Education, Arts and Culture (1990) *Proposal for Structural Reform (High-Level Committee on a Proposed Nine-Year Schooling System)*, also known as the *Ramdoyal Report*. Mauritius.

Ministry of Education, Culture and Human Resources (2009) *Education and Human Resources Strategy Plan 2008-2020*. Mauritius.

Ministry of Education and Human Resource Development (1997) *White Paper. Pre-primary, Primary and Secondary Education*. Mauritius.

Ministry of Education and Scientific Research (1998) *Action Plan for a New Education System in Mauritius*. Mauritius.

Ministry of Education, Science and Technology (1996) *Policy Educational Reforms*. Mauritius.

Mohanty, A. K. (2006), ‘Multilingualism of the unequals and predicaments of education in India: mother tongue or other tongue?’, in García, O., Skutnabb-Kangas, T. and Torres-Guzmán, M. E. (eds.) *Imagining Multilingual Schools. Languages in Education and Glocalisation*. Clevedon: Multilingual Matters Ltd, pp. 262-283.

Mühlhäusler, P. (1996) *Linguistic Ecology*. London: Routledge.

Nadal, P. and Anacoura, R. (2014), 'Linguistic vulnerability and the recognition of indigeneous languages: the case of Kreol in Seychelles and Mauritius', *Island Studies Indian Ocean/Océan Indien*, 1, pp. 40-45.

Nadal, P. and Ankiah-Gangadeen, A. (2018a), 'Parental choice in the learning of Mauritian Kreol at school: the motivational factors', *Aportal*, 2(1), pp. 64-87.

Nadal, P. and Ankiah-Gangadeen, A. (2018b), 'The study of Mauritian Kreol at school: dynamics and lessons from the Catholic primary education sector', *Créoles: Enjeux Educatifs et Culturels. Actes du XVIème Colloque International des Etudes Créoles*, pp. 90-106.

Nadal, P., Ankiah-Gangadeen, A. and Kee Mew, E. (2017), 'Navigating between outward-looking socioeconomic aspirations and inward-looking international education drives for SIDS. Can Mauritius sail out of cross-currents?', in Jules, T. and Ressler, P. (eds.) *Re-reading Educational Policy and Practice in Small States. Issues of Size and Scale in the Emerging 'Intelligent Society and Economy'*. Frankfurt am Main, Germany: Peter Lang, pp. 195-216.

Ng, P. C. (2011), 'Language planning in action: Singapore's multilingual and bilingual policy', *Ritsumeikan Journal of Asia Pacific Studies*, 30, pp. 1-13.

Nowell, L., Norris, J., White, D. and Moules, N. (2017), 'Thematic analysis: striving to meet the truthworthiness criteria', *International Journal of Qualitative Methods*, 16, pp. 1-13.

O'Neill, J. (2014), 'Voice and the ethics of children's agency in educational research', *New Zealand Journal of Educational Studies*, 49(2), pp. 219-232.

Oozeerally, S. and Hookoomsing, H. (2021), '*Timatou and Friends*: a case-study of the life and death of a primary level curriculum project in Mauritius. A beautiful or ugly failure?', *Kaléidoscope Créole*, 2, pp. 28-56.

Otwinowska-Kasztelanic, A. (2011) 'Awareness and affordances: Multilinguals versus bilinguals and their perceptions of cognates', in De Angelis, G. and Dewaele, J.-M. (eds.) *New Trends in Crosslinguistic Influence and Multilingualism Research*. Bristol: Multilingual Matters, pp. 1-18.

Ouzoulias, A. (2004) *Favoriser la Réussite en Lecture: Les Maclé*. Paris : Retz.

Paganini, N. and Stöber, S. (2021), 'From the researched to co-researchers: including excluded participants in community-led research on urban agriculture in Cape Town', *The Journal of Agricultural Education and Extension*, 27(4), pp. 443-462.

Peedoly, K. (2017), ‘Une lecture éco-didactique du manuel *J’apprends avec Timatou et ses amis*: le rejet d’un manuel utilisant le kreol morisien comme langue d’échafaudage au primaire’, *Kaléidoscope Créole*, 1, pp. 51– 63.

Perryman, J. (2012), ‘Discourse analysis’, in Briggs, A. *et al.* (ed.) *Research Methods in Educational Leadership and Management*. London: SAGE, pp. 309-322.

Petzold, J. and Ratter, B. M. W. (2019) ‘More than just SIDS: local solutions for global problems on small islands’, *Island Studies*, 14(1), pp. 3-8.

Phillipson, R. (1992) *Linguistic Imperialism*. Oxford: Oxford University Press.

Plüddemann, P. (1997), ‘‘Additive’ and ‘subtractive’: challenges in education for multilingualism’, *Per Linguam Journals*, 13(1), pp. 18-28.

Plüddemann, P. (2015), ‘Unlocking the grid: language-in-education policy realisation in post-apartheid South Africa’, *Language and Education*, 29(3), pp. 186-199.

Police-Michel, D. (2007), ‘Pour un partenariat cohérent français/anglais/créole dans le cursus du secondaire à Maurice’, in Carpooran, A. (ed.) *Appropriation du Français et Pédagogie Convergente dans l’Océan Indien*. Paris: Editions des Archives Contemporaines, pp. 203-221.

Prinsloo, D. (2007) ‘The right to mother tongue education: a multidisciplinary, normative perspective’, *Southern African Linguistics and Applied Language Studies*, 25(1), pp. 27-43.

Proctor, C. P. and Mo, E. (2009), ‘The relationship between cognate awareness and English comprehension among Spanish-English bilingual fourth grade students’, *TESOL Quaterly*, 43(1), pp. 126-136.

Prosper, A. and Nomlomo, V. (2016), ‘Literacy for all? Using multilingual reading stories for literacy development in a Grade one classroom in the Western Cape’, *Per Linguam*, 32(3), pp. 79-94.

Punch, K. F. (2009) *Introduction to Research Methods in Education*. London: SAGE.

Punch, S. (2002), ‘Research with children, the same or different from research with adults’, *Childhood*, 9(3), pp. 321-341.

Rajah-Carrim, A. (2007), ‘Mauritian Creole and language attitudes in the education system of multiethnic and multilingual Mauritius’, *Journal of Multilingual and Multicultural Development*, 28(1), pp. 51-71.

Ramdoyal, R. (1977) *The Development of Education in Mauritius 1710-1976*. Port Louis (Mauritius): Imprimerie Commerciale.

Reyes, I. and Moll, L. (2007), 'Bilingual and biliterate practices at home and school', in Spolsky, B. and Hult, F. (eds.) *The Handbook of Educational Linguistics*. Oxford: Blackwell Publishing Ltd, pp. 147-160.

Reyes, I., Kenner, C., Moll, L. and Orellana, M. (2012), 'Biliteracy among children and youths', *Reading Research Quaterly*, 47(3), pp. 307-327.

Ringbom, H. (2001), 'Lexical transfer in L3 production', in Cenoz, J., Hufeisen, B. and Jessner, U. (eds.) *Cross-linguistic Influence in Third Language Acquisition*. Clevedon: Multilingual Matters, pp. 59-68.

Ritchie, J. and Spencer, L. (1994), 'Qualitative data analysis for applied policy research', in Bryman, A. and Burgess, R. G. (eds.) *Analysing Qualitative Data*. London and New York: Routledge, pp. 173-194.

Robillard, D. de (1993), 'L'Ile Maurice: un laboratoire d'étude de la francophonie à travers la problématique du 'français régional mauricien'?', *N° Spécial de Culture et Pédagogie*, 10-11, Port-Louis: Association mauricienne des enseignants de français, pp. 63 -83.

Rogers, R., Labadie, M. and Pole, K. (2016), 'Balancing voice and protection in literacy studies with young children', *Journal of Early Childhood Literacy*, 16(1), pp. 34-59.

Rughoonundun, N. (1993),'Les langues à l'école mauricienne', *Notre Librairie*, 114, pp. 32-35.

Rughoonundun, N. (2014), 'Le chemins de l'écriture en milieu scolaire multilingue créolophone', *XIIIe Colloque des Etudes Créoles* (Mauritius, 5-9 November 2012), Vacoas: Editions Le Printemps, pp. 161-193.

Rughoonundun, N. and Jean-François, E. B. (2013), 'L'entrée dans l'écrit des enfants mauriciens en situation multilingue', *Travaux et Documents*, 45, pp. 145-160.

Rughoonundun-Chellapermal, N. (2007) *Famille, Enfant, Ecole: les Représentations de l'Ecole et de l'Ecrit d'Enfants Entrant dans l'Ecrit en Langues Etrangères. Etudes de Cas Conduites auprès d'Enfants Scolarisés Agés de 4 A 8 Ans*. Unpublished PhD thesis. Université de Toulouse-Le-Mirail, France.

Rughoonundun-Chellapermal, N. (2011), 'Bilingualité et acquisition d'une langue étrangère. Le développement du lexique nominal courant en situation de trilingualité émergente en contexte de scolarité en langues étrangères sans apprentissage formel de la L1', Paper presented at the 25th CIEF International Conference Aix-en-Provence.

Rughoonundun-Chellapermal, N. (2013), 'Views and beliefs of academics over the Kreol Language', Proceedings of the MIE/University of Brighton: From Research to Professional Practice. The Value of Reflexivity.

Rughoonundun-Chellapermal, N. (2017), ‘Autopsie de l’échec d’un projet d’éducation multilingue’, *Cahiers Internationaux de Sociolinguistique*, 12(2), pp. 155-177.

Rughoonundun-Chellapermal, N., Fokeera-Wahedally, S., Beekharry, T. and Singh Angateeah, K. (2018), ‘Kreol Morisien as a taught language in the Mauritian primary education curriculum: insights from the first edition of the Primary School Achievement Certificate (PSAC) examination’, *Créoles: Enjeux Educatifs et Culturels. Actes du XVIème Colloque International des Etudes Créoles*, pp. 132-146.

Rutgers, D. and Evans, M. (2017), ‘Bilingual education and L3 learning: metalinguistic advantage or not?’, *International Journal of Bilingual Education and Bilingualism*, 20(7), pp. 788-806.

Saldaña, J. (2009) *The Coding Manual for Qualitative Researchers*. London: Sage.

Saldaña, J. (2011) *Fundamentals of Qualitative Research*. Oxford: Oxford University Press.

Sauzier-Uchida, E. (2009), ‘Language Choice in Multilingual Mauritius: National Unity and Socioeconomic Advancement’, *Journal of Liberal Arts*, Waseda University 126, pp. 99-130

Scheurich, J. J. and McKenzie, K. B. (2005), ‘Foucault’s methodologies. Archaelogy and genealogy’, in Denzini, N. K. and Lincoln, Y. S. (eds.) *The Sage Handbook of Qualitative Research*. London: Sage publications, pp. 841-868.

Schiller, W. and Einarsdóttir, J. (2009), ‘Special issue: listening to young children’s voice in research – changing perspectives/changing relationships’, *Early Child Development and Care*, 179(2), pp. 125-130.

Schnoor, O. (2012), ‘Early childhood studies as vocal studies: examining the social practices of ‘giving voice to children’s voices’ in a crèche’, *Childhood*, 20(4), pp. 458-471.

Schwinge, D. (2010), ‘Conceptualising biliteracy within bilingual programs’, in Cummins, J. and Hornberger, N. (eds.) *Encyclopedia of Language and Education Vol. 5: Bilingual Education*. Springer Netherlands, pp. 51-63.

Shoba, J. A. and Chimbutane, F. (2013), ‘Introduction. Ideological and implementational spaces for multilingual educational policy and practice in the Global South’, in Shoba, J. A. and Chimbutane, F. (eds.) *Bilingual Education and Language Policy in the Global South*. New York: Routledge, pp. 1-10.

Shohamy, E. (2006), ‘Imagined multilingual schools: how come we don’t deliver?’ In García, O., Skutnabb-Kangas, T. and Torres-Guzmán, M. E. (eds.) *Imagining Multilingual Schools. Languages in Education and Glocalisation*. Clevedon: Multilingual Matters Ltd, pp. 171-183.

Shohamy, E. (2011), 'Assessing multilingual competencies: adopting construct valid assessment policies', *The Modern Language Journal*, 95(3), pp. 418-429.

Siegel, J. (2008), 'Pidgin in the classroom', *Educational Perspectives*, 40 (1 and 2), pp. 55-65.

Silverman, D. (2013) *Doing Qualitative Research. A Practical Handbook*. London: SAGE.

Singleton, D. and Aronin, L. (2007), 'Multiple language learning in the light of the theory of affordances', *International Journal of Innovation in Language Learning and Teaching*, 1(1), pp. 83-96.

Sonck, G. (2005), 'Language of instruction and instructed languages in Mauritius', *Journal of Multilingual and Multicultural Development*, 26(1), pp. 37-51.

Spalding, V. (2012), 'Child-led research: children's voice and educational profile value', *Centre for Education Research and Policy*, pp. 1-26.

Spolsky, B. (2004) *Language Policy*, Cambridge: Cambridge University Press.

Spronk, T. (2014), 'Addressing the challenges of language choice in the implementation of mother-tongue bases bilingual education in South Sudan', *Multilingual Education*, 4(16), pp. 1-10.

Spyrou, S. (2011), 'The limits of children's voices: from authenticity to critical, reflexive representation', 18(2), pp. 151-165.

Springer, R. A. and Clinton, M. E. (2015), 'Doing Foucault: inquiring into nursing knowledge with Foucauldian discourse analysis', *Nursing Philosophy*, 16, pp. 87-97.

Stake, R. E. (1995) *The Art of Case Study Research*. London: Sage.

Stephens, D. (2009) *Qualitative Research in International Settings. A Practical Guide*, London: SAGE.

Street, B. (2003), 'What's 'new' in New Literacy Studies? Critical approaches to literacy in theory and practice', *Current Issues in Comparative Education*, 5 (2), pp. 1-19.

Su, I. (2016), 'Pragmatic transfer in foreign language learners: a multi-competence perspective', in Cook, V. and Li Wei (eds.) *The Cambridge Handbook of Linguistic Multi-competence*. Cambridge: Cambridge University Press, pp. 298-320.

Surajbali-Bissoonauth, C. (2019) *An Exploration of Educational Language Policy on Selected Learning Experiences in Two Post-colonial Small Island Developing States*. Unpublished EdD thesis. University of Brighton, United Kingdom.

Swain, M. (1983), 'Bilingualism without tears', in Clarke, M. and Handscombe, J. (eds.) *On TESOL '82: Pacific Perspectives on Language Learning and Teaching*. Washington, DC: TESOL, pp. 35-46.

Teimouri, Y., Goetze, J. and Plonsky, L. (2019), 'Second language anxiety and achievement. A meta-analysis', *Studies in Second Language Acquisition*, 41, pp. 363-387.

Tirvassen, R. (1990), 'Le problème de la langue d'enseignement à l'Île Maurice: une approche socio-politique', in Jouannet, F. *et al.* (eds.) *Langues*, *Economie et Développement Tome 2*. Paris: Didier Érudition, pp. 183-200.

Tirvassen, R. (1993), 'Le bilinguisme créole français des enfants à l'Île Maurice', in Lumamwu, F. *et al.* (eds.) *Les Enfants*, *les Langues*, *l'Ecole: les Cas du Congo et de Maurice.* Paris: Didier Érudition, pp. 75- 152.

Tirvassen, R. (1999), 'La problématique du choix des langues d'enseignement dans des pays indépendants : l'anglais dans la politique de l'école mauricienne', *DiversCité Langues*, IV. Available at http://www.uquebec.ca/diverscite. Consulted on 5 May 2015.

Tirvassen, R. (2002) *Langues et Développement: Ecole et Plurilinguisme dans le Sud-ouest de l'Océan Indien*. Paris: L'Harmattan.

Tirvassen, R. (2005), 'Le créole et l'école primaire mauricienne: faut-il relativiser l'éclairage offert par la sociolinguistique ?', *Le Créole dans l'Ecole: Paroles Nomades*, 28(2), pp. 91-117.

Tirvassen, R. (2012) *L'Entrée dans le Bilinguisme*, Paris : L'Harmattan.

Tirvassen, R. and Ramasawmy, S. J. (2017), 'Deconstructing and reinventing the concept of multilingualism: a case study of the Mauritian sociolinguistic landscape', *Stellenbosch Papers in Linguistics Plus*, 51, pp. 41-59.

Tupas, R. (2015), 'Inequalities of multilingualism: challenges to mother tongue-based multilingual education', *Language and Education*, 29(2), pp. 112-124.

UNESCO (1953) *The Use of Vernacular Languages in Education*. Paris: UNESCO.

UNESCO (2003) *Improving the Quality of Mother Tongue-based Literacy and Learning. Case Studies from Asia, Africa and South America*. Bangkok: UNESCO.

UNESCO (2013) *The Status of the Zones d'Education Prioritaires Project in Mauritius and its Challenges*. Beijing: UNESCO.

Velasco, P. and García, O. (2014), 'Translanguaging and the writing of bilingual learners', *Bilingual Research Journal: The Journal of the National Association for Bilingual Education*, 37(1), pp. 6-23.

Wagner, C. (2020), 'Reading identities across language contexts: the role of language of text and talk for multilingual learners', *Journal of Early Childhood Literacy*, pp. 1-27.

Wagner, D. A., Spratt, J. E. and Ezzaki, A. (1989), ‘Does learning to read in a second language always put the child at a disadvantage? Some counterevidence from Morocco’, *Applied Psycholinguistics*, 10, pp. 31-48.

Warriner, D. (2012), ‘Multilingual literacies’, in Martin-Jones, M., Blackledge, A. and Creese, A. (eds.) *The Routledge Handbook of Multilingualism*. London: Routledge, pp. 508-520.

Weber, J.-J. (2014). *Flexible Multilingual Education. Putting Children’s Needs First*. Clevedon: Multilingual Matters.

Weinreich, U. (1953) *Languages in Contact*. The Hague: Mouton.

Williams, C. (2000), ‘Bilingual teaching and language distribution at 16+’, *International Journal of Bilingual Education and Bilingualism*, 3(2), pp. 139-148.

Wright, S. (2004) *Language Policy and Language Planning. From Nationalism to Globalisation*. New York: Palgrave Macmillan.

Yin, R. (2003) *Applications of Case Study Research*. 2nd Edition, London: SAGE publications.

Yin, R. (2009) *Case Study Research. Design and Methods*. London: SAGE publications.

Yin, R. (2012) *Applications of Case Study Research*. London: SAGE publications.

Yin, R. K. (2013), ‘Validity and generalisation in future case study evaluations’, *Evaluation*, 19(3), pp. 321-332.

Zaidah, Z. (2007), ‘Case study as a research method’, *Jurnal Kemanusiaan*, 9, pp. 1-6.

Zhang, D., Chin C.-F. and Li L. (2017), ‘Metalinguistic awareness in bilingual children’s word reading: a cross-lagged panel study on cross-linguistic transfer facilitation’, *Applied Psycholinguistics*, 38, pp. 395-426.

Appendix 1

Examples of two posters for the COVID-19 and plastic ban sensitisation campaigns using translanguaging

Appendix 2

Informed consent form distributed to parents/responsible parties (in French)

University of Brighton

<u>Une étude sur la lecture en milieu scolaire</u>

4 avril xxx

Cher parent,

Dans le cadre de mon doctorat en éducation, je conduis actuellement une étude sur les stratégies de lecture que des enfants développent quand ils apprennent à lire dans au moins deux langues en même temps.

Lors de cette étude, des activités de lecture seront animées avec les enfants de Grade 5, en consultation avec l'enseignant de la classe. Les discussions autour des activités seront enregistrées à l'aide d'un enregistreur audio.

Veuillez noter que ces activités font partie du cursus scolaire de votre enfant car elles visent à les amener à prendre conscience des stratégies de lecture et donc à les aider à améliorer leurs compétences en lecture-compréhension. Soyez assuré que ces activités n'affecteront pas les classes de votre enfant.

Votre enfant pourra, s'il le désire, cesser sa participation en cours de route sans aucun souci. Toute donnée sera traitée sous le couvert de l'anonymat et utilisée pour les seuls besoins de cette étude.

Si vous souhaitez avoir des d'informations supplémentaires, vous pouvez me contacter sur ekeemew@hotmail.com ou le xxx.

En vous remerciant.

Cordialement,

Evelyn Kee Mew Wan Khin

– –

☐ J'accepte que mon enfant participe aux activités de lecture.

☐ Je n'accepte pas que mon enfant participe aux activités de lecture.

Nom de l'enfant: …………………………………………………………………….

Nom du parent: ……………………………………………………………………

Signature: ……………………………………………………………………….

Date: …………………………………………

Translated version of the informed consent form for parents/responsible parties

University of Brighton

A study on reading at school

4 April xxx

Dear parent,

In the context of my Professional Doctorate in Education, I am currently conducting a study on reading strategies that children develop when they learn to read in at least two languages simultaneously.

As part of the study, reading activities will be conducted with Grade 5 pupils, in consultation with the class teacher. Post-reading activities discussions will be recorded using an audio-recorder.

Kindly note that these activities form part of your child's school curriculum as they aim to make pupils aware of reading strategies and therefore help them improve their reading for understanding. Please rest assured that these activities will not affect your child's classes.

Your child may choose to stop his participation at any point in time. Data collected will remain anonymous and will only be used for the purpose of this study.

If ever you would like some additional information, you may contact me on ekeemew@hotmail.com or on xxx.

Thanking you.

Kind regards,

Evelyn Kee Mew Wan Khin

– –

☐ I give my consent for my child to participate in the reading activities.

☐ I don't give my consent for my child to participate in the reading activities.

Name of the pupil: ……………………………………………………………………….

Name of parent: ………………………………………………………………………

Signature: ……………………………………………………………………………….

Date: ……………………………………………

Appendix 3

An excerpt of field notes of lesson observations

Lesson observation 1 (LO1): English reading lesson p. 28, 'Mysterious creatures in the river', 10h50-11h40

- Pupils answer both in French and in Mauritian Kreol (MK).
- Teaching strategies used: Teacher asks questions in French to check understanding of meaning of words in the text: e.g., '*Que veut dire* sweating?' and so on. And pupils would reply in French or MK: e.g., sweating – *transpirer*; cool – *froid*; shade – *onbraz* (MK); silly – *stupide*, *bête*; drag – *rise* (MK word for '*tirer'*) *hors de l'eau* (Ben, while several other pupils used the French word '*tirer*'); bank – '*au bord*', then '*la berge*' (Ben). Teacher would explain new/unfamiliar words in MK, then French and then English. In fact, he would write the words in French above the English words in the passage and encourage his pupils to do so: e.g, swim (*nager*), pull (*tirer*), see (*voir*), bite (*mordre*)
- Note: To analyse how far the answers are in French or MK and why?
- Teacher would confirm the answers in French if ever they are given in MK for ex. *onbraz* – *ombre*.
- Pupils knew that the word 'pain' was what one felt '*quand on vous mord*' (Question 1bii focuses on this later on). Most pupils stated that the best place to be was in the water though it is written 'river' in the passage (line 2) but Lily was the only one to say aloud '*la rivière*'. One of the pupils read the English word 'push' using the French [y] sound for the letter 'u'. Interestingly, for Question 1bii, Elsa replied that the opposite of 'happiness' was '*tristesse*' (Note: same ending but different languages). Elsa had some difficulties with the inferential questions.
- Teacher encourages pupils to use metacognitive strategies when he asked: '*Qui a dit ça?*: I'm telling you there is something in the river *Comment on va savoir qui a dit ça*?'
- Use of inferential question: 'Why they were disappointed?' Sean replied '*Parce qu'ils ont pas pu se rafraîchir*', others replied '*Parce qu'ils ont pas pu se baigner'*, the answer being '*se rafraîchir*' because of the word 'refreshing' in the passage.

1st reading – chorus reading
2nd reading – teacher + explanation
3rd reading – one child at a time
4th reading – correction of the questions that the pupils have already done

- Positioning: I chose to position myself to the upper front right where the teacher's table normally is so as to have a good view of the pupils and their reactions/response. This position has a lesser view on the teacher and a better view of the pupils who are my objects of study. Whereas when I observe classes as a teacher educator, I usually position myself in the back to have both a good view of the teacher and the pupils, but mostly on the teacher whom I have come to assess.
- Sampling: After my first lesson observation, my tentative selection reads as follows:
    - (a) Alan: Reads aloud well in English; seems to have a good understanding of the meaning of English words (due to a rich lexical repertoire or ability to grasp meaning of words in context); keen to provide answers to Teacher's questions. Sometimes, he answers in MK to explain.
    - (b) Amelia: One of her response based on what is written in the passage 'One of the crocodiles feels something bite its tail'.

- Note: Interesting how understanding is better explained in French or MK by the pupils. The movement from one to another or even from two languages to English. This appears to be constantly done in the English lesson.

Appendix 4

An excerpt of analysis of Grade 4 end-of-year examinations scripts (for reading comprehension questions only)

Participants	English			French		Mauritian Kreol	
	1A (MCQ) 6 marks (2 per answer)	1B (True or false) 6 marks (2 per answer)	IC (Short-answer questions) 12 marks (3 per answer)	1A (Short-answer questions) 12 marks (2 per answer)	1B (MCQ) 8 marks (2 per answer)	1A (MCQ) 10 marks (2 per answer)	1B (Short-answer questions) 15 marks (3 per answer)
Alan	Obtained full 6 marks	- Obtained 2 marks out of 6 - Got only (1) right	- Obtained 3 marks out of 12 - Got only (a) right - Did not attempt (c)	- Obtained full 12 marks - Was able to infer for (d)	- Obtained 6 marks out of 8 - Only (e) was marked incorrect		
Ben	Obtained full 6 marks	Obtained full 6 marks	- Obtained 0 mark - Ben tends to copy from the text without answering the questions	- Obtained 10 marks out of 12 - Was able to infer for (d) - Only (e) was marked as incorrect.	Obtained full 8 marks		
Eddy	Obtained full 6 marks	Obtained 2 marks out of 6 - Got only (1) right	- Obtained 0 mark - Eddy also tends to copy from the text without answering the questions	- Obtained full 12 marks - Was able to infer for (d)	Obtained full 8 marks	- Obtained 4 marks out of 10 – Got (b) and (d) right	- Obtained 6 marks out of 15 - Got (1) and (3) right
Sean	Obtained full 6 marks	Obtained full 6 marks	- Obtained 3 marks out of 12 - Got only (d) right	- Obtained 10 marks out of 12 - Was able to infer for (d) - Only (e) was marked as incorrect.	- Obtained 6 marks out of 8 - Only (e) was marked incorrect		
Amelia	Obtained full 6 marks	Obtained full 6 marks	- Obtained 9 marks out of 12 - Only (c) was marked as incorrect. However, for this question, Amelia did not lift the answer from the passage but chose to infer.	- Obtained full 12 marks - Was able to infer for (d)	Obtained full 8 marks	- Obtained 8 marks out of 10 - Only (a) was marked as incorrect	- Obtained 12 marks out of 15 - Only (4) was marked as incorrect

Appendix 5

Interview questions and prompts
(***Note: The questions were asked in French to the participants***)

The aim of this individual interview is to capture the participants' general profile and learning reading experiences at home/school/in their immediate environment. *Note: the interview will be conducted in the language in which the participants feel more at ease and the questions will be simplified whenever required.*

A. Socio-familial situation

1. Where do you live?
2. What do your parents do for a living?
3. Do you have any brother or sister? Age?

B. Multilingual profile

4. What languages do you speak?

5. In which language are you most fluent? Least fluent? Why?

6. In which language do you …?
   Prompt: *domain of use of each language, ex. in which language do you play, pray, speak at home/in class/with your friends, watch TV, listen to music, etc.*
   Note: *The focus would be more on domains of use of the different languages in the participants' repertoire as I have already asked them about their home languages and their language preferences.*

7. How does it feel to be able to speak all these languages?
   Prompt*: the child's understanding of what it is to be a multilingual. How does s/he define herself/himself as a multilingual?*

8. Does it help to know many languages? How? Give me some examples.

9. What do you study as optional language? Do you like your optional language classes? Why? (***Note****: Only to those who study an optional language*)

C. Learning reading experiences

10. Do you remember how you first learnt to read?
    Prompts*: (i) In which language? (ii) Was it at home or at school? (iii) Who helped you? / With whom? (iv) Which book?*

11. Are there books at home? What kind of books?
    Prompts*: what kind of books (Books? Books with illustrations? Cartoons? Others?), What books do your parents/siblings read? In which language(s) are the books?*

12. Do your parents/siblings usually read to/with you? In what language(s)? What kind of books?

13. (a) Where do you usually read? (***Prompts***: school? library?)
    (b) At what time of the day do you prefer reading?
    (c) What kind of books do you read?

14. Do you prefer to read in a particular language? Which one? Why?

15. In which language do you find it easier to read? Why?

16. In which language do you find more difficult to read? Why?

Give some words from each language (English, French and Mauritian Kreol) for the participants to read. Specify the language before proceeding.

17. Do you know this word? Can you read it? What cues did you use to read it?
    Prompts*: Let the participant explain how did s/he proceed to read the word, guess its meaning as well as potential difficulties encountered.*

18. Are the three languages (English, French and Mauritian Kreol) similar or different according to you?
    Prompts*: How are they similar? How are they different? In terms of sounds, words, etc.?*

19. Anything else you would like to add?

Appendix 6 (i)

Questionnaire for the General Purpose[65] teacher

A. <u>Some background information</u>

1. For how many years have you been a General Purpose teacher?

2. List of schools where you have taught.

3. Teaching qualifications (with dates, if possible) and professional workshops/seminars that you have followed:

B. <u>Subject-specific details</u>

4. What are the reading competencies that pupils need to develop in French and English according to you?

5. Describe the strategies that you use to develop reading competencies in French and English.

6. Do you use different strategies for French and English? Yes ☐ No ☐
Please explain how and why.

7. Do the textbooks help pupils develop their reading competencies? If so, how and to what extent?

8. Do you use reading activities other than those in the textbook in class? In which language(s) are the reading activities normally carried out? Why?

9. List the different reading difficulties encountered by pupils.

10. Basing yourself on your experience, are the reading difficulties
specific to French only? ☐ specific to English only? ☐ same for both French and English? ☐
Please explain.

11. What could be the causes of these difficulties according to you?

12. How can these difficulties be addressed according to you?

13. In your experience, are pupils able to use words they know in one language to help them understand words in another language? If so, please give some examples to illustrate.

14. In your experience, are pupils able to transfer reading strategies they have developed in one language and apply them in another language? If so, please give some examples to illustrate.

15. In your experience, how do pupils manage having to learn to read in two or more languages at the same time?

16. What do you do to help pupils develop strategies when learning to read in two or more languages at the same time?

17. In your experience, in which language(s) do pupils tend to learn to read first? Why?

[65] For recall, the General Purpose teacher is the main class teacher and teaches core subjects like English, French, Mathematics, and non-core subjects like Science, History and Geography.

18. Some people think that children learn to read <u>differently</u> in different languages, others disagree. What do you think?

19. Some research posit that learning to read in more than one language places the child at an advantage while others argue to the contrary. How do you react to that based on your own teaching experience?

20. Anything else you would like to add?

Appendix 6 (ii)

Questionnaire for the Mauritian Kreol teacher

A. <u>Some background information</u>

1. For how many years have you been a Mauritian Kreol teacher?

2. List of schools where you have taught/are teaching Mauritian Kreol:

3. How you been a General Purpose teacher before? ☐ Yes ☐ No
(a) If yes, for how many years?
(b) List of schools where you have worked as a General Purpose teacher:

4. Teaching qualifications (with dates, if possible) and professional workshops/seminars that you have followed:

B. <u>Subject-specific details</u>

5. What are the reading competencies that pupils need to develop in Mauritian Kreol according to you?

6. Describe the strategies that you use to develop reading competencies in Mauritian Kreol.

7. Basing yourself on your own teaching experience, are the strategies used different from
(a) French? Yes ☐ No ☐

(b) English? Yes ☐ No ☐
Please explain how and why.

8. Do the textbooks help pupils develop their reading competencies in Mauritian Kreol? If so, how and to what extent?

9. List the different reading difficulties encountered by pupils in Mauritian Kreol.

10. Basing yourself on your own teaching experience, are the reading difficulties
specific to Mauritian Kreol only? ☐ same as for French? ☐ same as for English? ☐
Please explain.

11. What could be the causes of these difficulties according to you?

12. How can these difficulties be addressed according to you?

13. In your own teaching experience, are pupils able to use words they know in one language to help them understand words in another language? If so, please give some examples to illustrate.

14. In your own teaching experience, are pupils able to transfer reading strategies they have developed in one language and apply them in another language? If so, please give some examples to illustrate.

15. In your own teaching experience, how do pupils manage having to learn to read in two or more languages at the same time?

16. Some people think that children learn to read <u>differently</u> in different languages, others disagree. What do you think?

17. Some research posit that learning to read in more than one language places the child at an advantage while others argue to the contrary. How do you react to these claims based on your own teaching experience?

18. Anything else you would like to add?

Appendix 6 (iii)

Questionnaire for the Headteacher

1. Number of girls and boys in your school:

2. Number of girls and boys in Grade 5:

3. In your school, what language(s) are normally used for the following purposes? Please state why.
(a) as medium of instruction

(b) for communication purposes

4. What optional languages are offered at your school? Please indicate the number of pupils who have opted for each of these languages at Grade 5 level in xxx[66].

5. According to you, what are the reading competencies that Grade 5 pupils need to develop in
(a) French
(b) English
(c) Mauritian Kreol
(d) other optional languages?

6. Describe the strategies that are encouraged in your school to develop reading competencies in (a) French, (b) English, (c) Mauritian Kreol, (d) and other optional languages.

7. Basing yourself on your experience, list the different reading difficulties encountered by pupils.

8. Basing yourself on your experience, are the reading difficulties
specific to French only? ☐
specific to English only? ☐
specific to Mauritian Kreol only? ☐
same for French and English? ☐
same for French, English and Mauritian Kreol? ☐

Please explain.

9. What could be the causes of these difficulties according to you?

10. How can these difficulties be addressed by your school?

11(a). In your experience, are pupils able to use words they know in one language to help them understand words in another language? Please state why.

11(b). If you have answered yes to 11(a), please give some examples to illustrate.

12(a). In your experience, are pupils able to transfer reading strategies they have developed in one language and apply them in another language? Please state why.

12(b). If you have answered yes to 12(a), please give some examples to illustrate.

[66] 'xxx' has been used to maintain anonymity of the school.

13. Some pupils learn to read in only English and French while other pupils also learn to read in a third language which may either be Mauritian Kreol or an Asian Language/Arabic. According to you, how do these pupils manage having to learn to read in two or more languages at the same time?

14. What can your school do to support pupils in developing strategies when learning to read in two or more languages at the same time?

15. Some people think that children learn to read differently in different languages, while others disagree. What do you think?

16. Some researchers posit that learning to read in more than one language places the child at an advantage while others argue to the contrary. Based on your own experience, how do you react to this affirmation?

17. Anything else you would like to add?

Appendix 7

An excerpt of analysis of lesson observations

Features observed during French and English lessons	Some examples (LO1 refers to Lesson observation 1, LO2 to Lesson observation 2 and so on)	Coding
• Pupils answer both in French and Mauritian Kreol	• cool → *froid* (LO1) • shade → *ombraz* (LO1) • drag → *rise hors de l'eau* (Ben, LO1) • greet → *saluer* (Sean, LO5) • joined → *zwenn* – *rejoindre* (Celia, LO5) • Class teacher: 'Why they were disappointed?' Sean replied: '*Parce qu'ils ont pas pu se rafraîchir*[67]' (LO1)	Translanguaging for meaning making
• Pupils seem better disposed to explain meaning of English terms in their own words in French. This is not the case for French terms which they explain in French itself. • It has also been noted how some pupils feel the need to find the word in Mauritian Kreol or French 1st to make sure they have understood the meaning before proceeding with answering the question in English.	• 'pain' is explained as '*quand on vous mord*[68]' (LO1) • Alan is able to explain that 'lollipop' means '*sucette*' but also '*bonbon-baton*'[69] (LO3) • '*ingrédients*' is explained as '*ce qu'on utilise*' [70] (Celia, LO3) • Class teacher: 'What is the past tense of 'teach'?'. Ben answered: '*montre*' (LO5) which is the translation of the English word in MK • Teacher: 'What is the past tense of 'bring'?'. Elsa answered: '*prendre*' (LO5) which is the translation of the infinitive English verb in French	
• Class teacher translanguages using as cue an English word to trigger the French word from the pupils	• '*en anglais, on appelle ça un*[71] 'carpenter'' and this cue was enough for Celia and Alan to find the answer in French '*charpentier*' (LO1)	
• Pupils use words from their mental lexicon which is a continuum for all the languages of their multilingual repertoire	• Elsa stated that the opposite of 'happiness' is '*tristesse*[72]' (LO1) • Almost every pupil stated that 'fence' meant 'fencing', which though an English word (materials used for building fence), it is in fact used here as the Mauritian Kreol referent (LO6)	Lexical transfer for meaning-making

[67] My translation: 'Because they were not able to refresh up'.
[68] My translation: 'When you get bitten'.
[69] French and Mauritian Kreol words to refer to lollipop in English.
[70] My translation: 'Ingredients' and 'what you use' respectively.
[71] My translation: 'In English we call it a'.
[72] My translation: 'sadness'.

Appendix 8 (i)

An excerpt of Data Processing Table for Reading Activity 1 (R1)

<table>
<tr><td colspan="4">Activity 1. Reading aloud and with understanding an English passage

The text chosen is an unseen text as it had not been worked out in class yet and was taken from the pupils' Grade 5 prescribed English textbook.</td></tr>
<tr><td>Sampled pupils</td><td>Reading aloud (sounding the words)</td><td>Explaining meaning of some words (strategies used to guess their meaning)</td><td>Explaining what they have understood in the text</td></tr>
<tr><td>Alan</td><td>• Reads with a French accent and seems to identify common words in both languages 1st in French before quickly correcting himself and reading it in English: ex. 'a' (line 4, para 1). Contrarily to Elsa, he read 'Festival' as a French word. Same for 'immediately' namely the 'a'. Again with word 'and' (line 3, para 3) which he reads as 'et' first before correcting himself.
• He reads at a quicker pace than Elsa for instance though still word by word.
• Stumbles too on the pronunciation of 'rehearsing'. Hesitates with word 'charts', 'chatting' (same as Elsa), pronounces the 'have', 'behave' as the verb 'have'.
• 'Shoot' read as 'shot' and then when asked to re-read it again, he reads 'shot' and then 'shoot'.
• Has difficulty to sound the word 'heroine' which he reads as 'herone'.
• Reads 'walked' as 'walking'.
• Reads 'suddenly' as 'studdenly'.
• Reads 'thrilled' as 'threadly'.
• Reads 'wrap' as 'rape'.</td><td>• Words he doesn't know: ex. 'Fair'
• Shooting – 'cela veut dire qu'on est en train de faire un film'. Shooting – 'un film d'action'. Upon explaining the text, he would easily translate 'shooting' by 'faire un film'.
• Doesn't' know word 'rehearsing'. Researcher: 'Have you ever seen this word?'. Alan: 'C'est le film'.
• Script – 'un papier où tu dois lire par cœur'
• While explaining the text, he rightly translated among others 'playing the role: joue le rôle d'un professeur', 'noticed- noter' etc. Has a good lexical bank of words in French.
• However, he does not know 'curtains – contient' which he relates to French word 'contenu' (Transfer). Release – au revoir
• Keeps the word 'chart' as the English word 'chart' (Translanguaging? Or doesn't know the meaning of the word?)
• When asked if he can guess the meaning of word 'heroine', he replies 'action' in French. Despite prompts to help him link it with words in other languages, still he was unable to.
• Words he says he does not know: heroine.
• As for 'suddenly', he was able to say the French word 'soudain'</td><td><u>Para 1</u>
• Was able to explain with confidence though line by line his understanding of the text in French. Again like Elsa, Alan uses translation from English to French. This strategy gives to see the richness of the bank words of the pupil and in which language, the lexical access is done more rapidly. Ex. teacher – professeur, excited- excite, learn – apprendre, this - ça. Alan's understanding is very good.
• Alan says Miss Monica is both teacher and an actress.
• Rawiyah is a boy (x). Researcher: 'How does he know?' Alan is not able to explain how he knows.

<u>Para 2</u>
• Able to give appropriate ex of 'equipment': 'des maquillages, des vêtements'
• Researcher: 'Were the children happy? How do you know?' 1st para: the word 'excited'; Researcher: 'what about in para 2?'; Alan: 'They immediately sat down at their desks'
• 'Picture is up?' – He cannot explain. So, he would use the words in English.</td></tr>
</table>

Appendix 8 (ii)

An excerpt of Data Processing Table for Reading Activity 2 (R2)

Activity 2. Reading aloud and with understanding a French passage **The text chosen is an unseen text as it had not been worked out in class yet and was taken from the pupils' Grade 5 prescribed French textbook.**			
Sampled pupils	***Reading aloud (sounding the words)***	***Explaining meaning of some words (strategies used to guess their meaning)***	***Explaining what they have understood in the text***
Nessa	• Supect (middle 's' is not pronounced) • Read '*Proximitié*' and then autocorrected to '*proximité*' • '*scène*' read as '*séance*' • '*sauver'* read as '*sauveur*' • Hesitates before 'X-men' but does read it correctly. In fact, she has never heard of them.	• Words that she does not know: '*dirigeant*' (can she guess? She replies '*vers*'. How does she know? No answer. Upon prompting if she has seen the word before, she replies 'yes'; '*péril*' (can she guess? Nessa: 'no') • My pointing to words: '*suspect*' (At first, Nessa said she did not know what it meant but when the researcher asked if she could guess the meaning, this is what she replied: '*on trouve quelque chose*'. Researcher: '*C'est quoi ce quelque chose ?*' Nessa: '*Les portes sont habituellement ouvertes et ils sont fermés*'. Researcher: 'So it makes you think that something…', Nessa: '*quelque chose d'inhabituel*'. [We have here an example of a child who is able to infer meaning from the text but lacks confidence as she is not readily able to explain in her own words, maybe due to lack of appropriate vocabulary. However, with prompting from the researcher, she was able to put in words what she has understood from the text.] Use of praise. Same for '*proximité*' (*à peu près*); '*stupeur*', '*mutant*' (*dangereux*), '*affaibli*' (*quelque chose qui passe*). When prompted, she says she does not know – lack of confidence. Researcher: is there another word that she recognises within this word? Nessa – 'no', '*télépathie*' ('no'), 'rejetée' ('*Comme si jeter quelque chose*'), '*mate'* ('*peau avec une couche d'épaisseur*'), '*exclure*' ('*rejeter*'), '*reconnaissant*' ('*rencontrer quelqu'un, être gentil avec la personne*'). Researcher: 'Why should we be grateful?' Pupil: 'no answer'	• Her understanding of paragraph 1: '*Le professeur est emprisonné dans des flammes*' (good vocabulary – '*prisonnier des flammes – emprisonné'*). Upon prompting: '*Après*', she merely replies '*C'est tout*'. So only gives one main idea of the 1st paragraph. • Her understanding of paragraph 2: Pupil: '*Le prof a accueilli Tornade dans sa maison*'. Researcher: 'why ?' Pupil : '*Je ne sais pas*'.

Appendix 8 (iii)

An excerpt of Data Processing Table for Reading Activity 3 (R3)

Activity 3. Authentic texts **Two authentic texts were used for this activity: Authentic Text 1 (AM 1) is taken from a common tissue paper box with English and French words whereas Authentic Text 2 (AM 2) is a Pizza flyer which came out during the Ramadan period where Mauritians of Muslim faith were fasting. This text contains a mixture of English (E), French (F), Mauritian Kreol (MK), Italian and one Arabic word.**			
Sampled pupils	*How far are the sampled pupils able to move from one language to another in a given text? (in terms of ease, pronunciation/sounding the words and understanding of meaning)*	*How is metalinguistic awareness manifested among the sampled pupils?* *(ex. How do they know it is x language? How is it different from y language?)*	*What strategies do sampled pupils use to guess the meaning of words?*
Eddy	**AM 1 (E and F):** Read 'smooth' (E) *ULTRA DOUX ET RESISTANT DOUBLE EPAISSEUR* (F) **AM 2 (E, F, MK, Italian, Arabic):** • Domino's Pizza. Have a blessed iftar (E) • *Manz enn pizza avek so fromaz* (MK), *100% Mozzarella* (F) • Fiery (pronounced as F though he recognised the word as E); *zanana* (MK) • *Quattro formaggio* (is able to sound both words) • Chicken (E) *forestière* (F)	**AM 1:** Is able to identify that 'smooth' is in English. To the question 'How do you know?', he replies that it looks like an E word. **AM 2 (E, F, MK, Italian, Arabic):** • He finds reading the sentence in MK to be easy as he is studying the language as an optional language • Recognises 'fiery' as an English word and '*zanana*' as MK. • He recognises '*quattro formaggio*' to be Italian. Though he admits he has never heard Italian being spoken, he knows it is Italian. Reason given, this is not the way it would have been said in Mauritius, i.e., in the other languages present in Mauritius, E, F, MK • When asked which language it is, he replies that '*forestière*' is F. Researcher:'How do you know?', Eddy: '*Parce qu'il y a e accent grave*'. **Metalinguistic awareness**	**AM 1 (E and F):** Although he states that he does not know the meaning of the word, he guessed 'smooth' to mean '*mou*' and explains that he thinks so because there is '*mooth*' in the word?? **AM 2 (E, F, MK, Italian, Arabic):** • Does not know the meaning of '*iftar*'. • Explains the MK sentence as '*Manger le pizza avec son fromage*' (literal translation into F). • When asked the meaning of 'fiery', Eddy replies it means '*anana frit*' //el Elsa; 'fiery' resembles the F word '*frit'*. When asked if he meant '*frit'* in F or '*fri*' in MK, he replied that '*fri'* in MK would mean '*fruit'* in F and that he meant '*friture'*, thus the French word '*frit*'. **Metalinguistic awareness** • He says that '*quattro*' means '*trop beaucoup*', basing himself on the resemblance between '*quattro*' and the English word 'quantity' (from his **bank of words**); '*formaggio*' as 'fromage'. • He guessed the word '*forestière*' to mean '*poulailler*'.

Appendix 8 (iv)

An excerpt of Data Processing Table for Reading Activity 4 (R4)

Activity 4. Short newspaper article **Moving from word to text level, another authentic text, a short newspaper article of about 100 words was used for this activity. The article uses a mixture of English (E), French (F) and Mauritian Kreol (MK).**			
Sampled pupils	*How far are the sampled pupils able to move from one language to another in a given text? (in terms of ease, pronunciation/sounding the words and understanding of meaning)*	*How is metalinguistic awareness manifested among the sampled pupils? (ex. How do they know it is x language? How is it different from y language?)*	*What strategies do sampled pupils use to guess the meaning of and understand the text?*
Amelia	• Moves easily from F to MK then back to F and again to MK and back to F and then to E. • Reads '*lors*' by pronouncing the final 's' sound which is more characteristic of MK. • Amelia reads: 'The (E) Ravenala (F) Attitude (E) Hotel (E)'. As most of the other pupils, she is aware that it is all in E though she tends to use F pronunciation for 'Ravenala'.	• She has been able to identify all 3 languages present in the text and point to examples to illustrate. • She identified the E part because of the word 'the': *'Il y a* 'the' *dedans'*.	• Was able to correctly explain that '*zoli lepok*' as '*ça se passe très longtemps'*, using inference instead of literal translation. • Is able to explain the gist of the story using her own words: One example is '*avant il n'y avait pas de jeu video*' for '*à l'époque, les jeux videos n'existaient pas*'.

Appendix 8 (v)

An excerpt of Data Processing Table for Reading Activities 5a and 5b (R5a and 5b)

<table>
<tr><td colspan="5">Activity 5. Use of translanguaging as a reading strategy
Reading activity 5 comprises two parts:
5(a) where sampled pupils read a story in French (F) and then retell it in English (E) and in Mauritian Kreol (MK). The text chosen is an episode of Tikoulou's adventures Enquête aux Seychelles[73]. Tikoulou is a Mauritian child character from children picture books of the same name.</td></tr>
<tr><td>Sampled pupils</td><td>In which order did the pupils choose to retell the story and why?</td><td>How far are they able to retell the story in their own words in English and in French?</td><td>How far do pupils use translanguaging as a reading strategy?</td><td>What other strategies do the pupils use to retell the story they have read in a given language in two other languages?</td></tr>
<tr><td>Elsa</td><td>(1) MK
(2) E

Elsa took about 5.38 min to read the text before starting to retell the story. Up to 13.02 Elsa narrated the story in MK/F. Then up to 19.25 in E, followed by some questions with regards to how she tackled the activity.</td><td>• MK retelling [Note: The highlighted parts are as follows: French (magenta), English (green) and Mauritian Kreol (yellow). Interruptions in the retelling where Elsa interacts with the researcher (turquoise blue)]:

Tikoulou reste tou seul avec sa grand-mère. Depuis que… Depi … ki so papa inn ale … inn al enn lil ki apel Seychelles… Il y a … je ne comprends pas un mot dedans 'qui s'appelle Kaskott'. Il a vu Kaskott … Linn trouv Kaskott ki ti pa parey… Tikoulou a … Tikoulou inn demand Kaskott ki … kinn ariv li. Li … li … Kaskott a télé… il a eu … mo kapav dir sa en français ? Kaskott a eu … vient d'avoir son papa au téléphone… ils ont dit s'il y a … Tikoulou va emmener son ami à la place… Kaskott avait … Il fallait avoir d'aide pour lui. Tikoulou a vu une affaire bizarre. Son ami l'a demandé : tu sais… tu sais ce que c'est Tikoulou ? Son ami hein… Tikoulou inn dir non je n'ai aucun idée… Linn pann kone kiete sa. L'ami… l'ami de… l'ami de Ruby, l'ami de Ti…, Ruby, l'ami de papa qui nous attend à l'aéré…</td><td>• Clearly Elsa is not used to narrating in MK as she would go back to F and then recalls that she should be narrating in MK and moves back to MK.
• Elsa would use F to ask me about a word which she did not understand in the text.
• Translanguaging when talking to me: ex. 'mo kapav dir sa en français?'
• And Elsa switches to MK in her narration, and then again to F.
• At some point, she was about to say the word 'coastguard' in E but then used a F word 'sauvegarde' which does not mean the same thing though (coastguard – garde-côte). Elsa again uses translanguaging: 'shake hands'.</td><td>• Elsa was mostly retelling the French text in her own words in F again instead of narrating the story in MK.
• Elsa finds it difficult to find her words in E (she stopped at least twice to ask me). She is very hesitant. Keeps repeating herself while she looks for the words in E. She closes her eyes, trying to look for the words in her bank of words. High level of concentration seems to be needed here.
• At some point, Elsa said that she could not find the words in English and proceeded to say them aloud in French (see the two words highlighted in magenta) first. This enabled Elsa to translate them back into English (in green) as she became more confident in retelling the story: 'I am looking for my dad. Please [conduire] Please can you drive me'.</td></tr>
</table>

[73] My translation: 'An investigation in Seychelles'.

5(b) where sampled pupils read a story in Mauritian Kreol and then retell it in English and in French. The text chosen is an excerpt of about 165 words from ***Yev, zako & dimyel larenn***[74], a children short story found in ***Tizar ar so 8 frer***[75] by ABAIM, However, the text is not written in the official Mauritian Kreol orthography, having been published back in 2003.				
Sampled pupils	*In which order did the pupils choose to retell the story and why?*	*How far are they able to retell the story in their own words in English and in French?*	*How far do pupils use translanguaging as a reading strategy?*	*What other strategies do the pupils use to retell the story they have read in a given language in two other languages?*
Eddy	(1) E (2) F • Is proficient in written MK • Chooses to read in silence	• **English retelling:** [*'Comment on dit reine en anglais*' //el Kelly]. We have a queen in this story. This queen is rich and […] millionaire. They have a *royaume* and a […] They have soldiers [There were soldiers] and […] they have bees […] The queen have many rupees. She is very rich. And she have gold […] and we have bee soldiers. They protect the queen. […] They have a reservoir […] A sous [?] humane is the director of this reservoir. *Samem tou* [said in MK when asked in English: 'Anything else?'] • **French retelling:** *Il y avait une reine, il y avait mouches du miel et après il y avait des soldats et il y avait une dame qui était la gardienne de ces choses-là […] du réservoir. […] Après il y avait des moulins de canne, après il y avait carreau du thé. Il y avait des usines. Et après, la reine était riche. Elle avait de l'or, beaucoup d'argent. C'est tout.*	• Keeps the French word '*royaume*' as does not know it in English. • For the French retelling, Eddy was not so concentrated on the task as he had to leave for his MK class. He kept some MK words in the narration. Was it done on purpose or because he did not have time to look for the words in French? • The French version is much more fluid.	• Metalinguistic awareness: '*pour 'tout', au lieu de 'ou', ils ont mis 'tu'*'. • Seems to be more in the interpretation (being rich means the queen has money and gold whereas the story mentions that richness is linked to honey) • Found the activity '*un peu bien* [T: somehow nice] ' • Found both F, MK and E to be easy.

[74] My translation: 'Hare, monkey and the queen bee'.
[75] My translation: 'Tizan and his 8 brothers'.

Appendix 8 (vi)

An excerpt of Data Processing Table for Reading Activity 6 (R6)

Activity 6. Ecology of literacy and language dominance ***This activity comprises word recognition/lexical access in English (E), French (F), Mauritian Kreol (MK)as well as some pseudo-words. Some words also exist in all three languages. The aim of this activity is to see in which language the participants choose to identify the words and what are the cues that they have used to do so. The word cards were not always given in the same order.***					
Words	**Identified as a French word**	**Identified as an English word**	**Identified as a MK word**	**Identified as a word in another language**	**Cues used and other remarks (in terms of power relations, interactions with other languages in the mind of the multilingual child, interactions with society – i.e., functions as medium of communication)**
delicate	Elsa and Alan (read as a F word), Ben, Eddy, Sophie, Celia, Sean	Lily, Amelia, Nessa	Kelly		• Elsa said '*j'ai déjà entendu*' //el Sophie: '*j'ai l'habitude d'entendre ce mot là*'. Researcher: in F ?: '*délicat*' pronounced the French way. Researcher: 'same?' Nessa: '*c'est presque pareil*'; Researcher: '*qu'est-ce qui change?*'; Nessa : '*le t au lieu de t-e'* , '*ça se prononce différemment*'. • Alan: '*en anglais ça s'écrit pas comme ça*' • Lily: 'delicate *c'est en anglais, délicat* [pronounced in F]'; Researcher: 'how do you know it is E?' Lily: '*parce qu'il y a des mots en anglais dedans, je sais*'. Researcher: '*quelle est la partie qui te dit que c'est en anglais ?*' Lily: '-cate [pronounced in E]' • Researcher: 'in F?'; Amelia: '*délicat'* • Ben: '*parce qu'il y a -cate dedans*' • Eddy : '*parce qu'on ne peut pas dire* delicate (pronounced in E)'. • Sophie: '*Il y a ça dans une chanson*' • Kelly: '*quand on épelle ça veut dire déguelasse*' [it is the MK meaning] • Sean: '*on dit* 'delicate' *en anglais*'. He pronounces the word in E here. He says that the word is pronounced the same in E and F and written the same way in both languages.

Appendix 8 (vii)

An excerpt of Data Processing Table for Reading Activity 7 (R7)

Act 7. Written reading comprehension comprising three texts in English (E), French (F) and Mauritian Kreol (MK) Unseen texts taken from children literature					
The English text of 126 words has been adapted from the fable 'The dog's shadow' found in the book 151 Aesop's Fables. The answers are reproduced verbatim from the children's written answers.					
Why questions (1) infer from word 'hungry' (line 1) (2) infer from situation 'dog stole a piece of meat from butcher', therefore the butcher ran after the dog (lines 1-2)	*What question (3) is a direct question with the answer given in the text (line 7): 'when it jumped into the water, its own piece of meat fell and was carried away by the river'*	*How question (4) requires inference and empathy and that the pupil be able to justify his/her answer*	*Continue the story (5) verifies the pupil's understanding of the story*	*Vocabulary question (6)*	*Metacognitive questions (7) easy (8) difficult (9) strategies used to tackle difficulties encountered*

Q1
- 'Because it/the dog was/is hungry' (Alan, Elsa, Ben, Sophie, Lily, Sean, Amelia, Celia)
- 'It jumped into the water to steal the meat' (Nessa)
- 'In a butcher's shop' (Kelly) – answered 'where' and not 'why' question
- No answer (Eddy)
 	
Q2
- 'Because he was angry to the dog' (Alan)
- 'Because the dog stole a piece of meat' (Elsa, Nessa, Sophie, Sean, Amelia, Celia) / To get the (Ben) / 'Because the dog
	Correct answers
	- 'The dog was surprised but it did not found the meat and dog' (Elsa) //el 'The butcher was surprised because there were no dog and no meat' (Nessa) – correct except for the butcher // 'Is meat fell and was carried away by the river' (Eddy) //el 'There was no dog and no meat' (Sean) //el Amelia (see below) //el 'There was no meat' (Kelly)
	- 'The river carry the piece of meat' (Ben) //el Amelia: 'The piece of meat was carried away by the river as
		Good inference due to empathy
		- Hungry and sad (Sophie, Ben); sad (Lily, Elsa, Amelia, Eddy, Alan); surprised (Kelly)
		
		No inference made
		- Celia, Sean (blank)
		
		No justification given
		- Sophie, Sean (blank), Alan
		
		Correct justification
			- 'The dog go out of the river and go away' (Alan)
			- 'He return to the butcher to have another piece of meat' (Ben) //el 'Then the dog go to the butcher to get a piece of meat again' (Eddy)
			- 'The hungry dog was sad and went to his favourite street' (Amelia)
			- 'The dog was very sad' (Celia) //el 'The dog was very sad at the end' (Elsa) //el 'The hungry dog was very very sad' (Kelly)
				Hungry
				- 'want to eat' (Alan) //el 'wanted to eat' (Kelly)
				- 'when we are impatient to have food' (Ben)
				- 'eat' (Sean)
				- 'He didn't eat for many days' (Amelia)
				- 'When you are eating' (Celia)
				- 'want to eat something' (Elsa)
				- 'Eat too much' (Lily)
				- 'when you eating' (Nessa)
				
				Relieved
				- 'saw its own' (Alan)
					Found 'easy'
					- 'When the story started' (Alan)
					- 'Question 1' (Ben)
					- 'The questions' (Eddy)
					- 'surprise' (Sean)
					- 'Once there was a hungry dog' (Amelia)
					- 'The text was easy and beautiful' (Celia)
					- 'I find it easy I will tell your some words: jumped, piece, unfortunately…' (Elsa)
					- 'I find easy when I read the story because I love to read' (Kelly)
					- 'Piece, reflection, steal' (Lily)
					- 'To read the text' (Nessa)
					- 'The texte is very easy' (Sophie)

will catch a piece of meat' (Eddy) – unfortunate use of the word 'catch'? / 'Because the dog will take piece of meat' (Lily) - 'The butcher saw it and run after the dog' (Kelly) – recopied from the text	there was no dog and no meat' - Verbatim from the text: 'Its own piece of meat fell and was carried away by the river' (Celia) //el 'The meat fell and was carried away by the river' (Lily) **Incorrect answer** - 'It saw its own reflection in the cater with a piece of meat' (Alan) – not correct - 'The dog steal the meat' (Sophie)	- 'Because he have no meat' (Lily) - 'Because there were no meat and one piece fell into the river' (Kelly) //el 'because the meat fell in the water' (Elsa) //el 'Its own meat carried away by the river' (Celia) //el 'because his own eat is carried away by the river' (Eddy) - 'because he was hungry and the piece of meat was carried away by the river' (Amelia) - 'because had nothing to eat' (Ben) **Incorrect answers** - Copy from the text: 'Its own piece of meat fell and was carried away by the river' (Nessa)	- 'The dog feel sad and go away' (Lily) - 'The dog have a piece of meat' (Nessa) – not sure she has understood the story well - 'I give the dog food. The dog stole the meat because it was hungry' (Sophie) **Blank** - Sean	- 're take' (Ben) //el 'restart' (Celia) - 'It stopped running as he is not seeing the butcher' (Amelia) - '*relever quelque chose*' (Elsa) – in French - 'fell something in the heat' (Kelly) - 'When we don't have any problem' (Lily) **Greedy** - 'so fast' (Alan) - 'ready' (Ben) - 'When it has one piece of meat he want for his friend' (Amelia) - 'A people who eat many foods' (Celia) – looks like a literal translation - '*gourment'* (Elsa) – in French - 'unfortunately' (Kelly) - 'When we are happy' (Lily) **Blank** - all 3: Eddy - (b) & (c): Sean, Nessa	**Found 'difficult'** **- '**It end of the story I find it difficult' (Alan) - 'Question 6c' (Ben) - 'To explain what you understand' (Eddy) – may explain why he left them blank - 'reflection' (Sean) - 'One day, it stole a piece of meat from a butcher's shop' (Amelia) - 'The questions' (Celia) - 'I find many word difficult the words is relieved, butcher, until,…' (Elsa) - 'Nothing' (Kelly) - 'Butcher, greedy' (Lily) - 'Explain what you understand' (Nessa) - 'The text is not difficult' (Sophie) **Strategies used to tackle difficulties encountered** - 'I broke one word' (Alan), i.e. decoding/segmenting - 'I read again and again and then I have the answer' (Ben) //el 'We looked again and again' (Sean) //el 'I read the passage again' (Celia) - 'Because I don't know what to write' (Eddy)

Appendix 9

An excerpt of analysis of Reading Activity 5a (R5a)

Coding	Comments and examples
Multilingualism as a scaffolding tool	• While retelling the story in English, **Amelia** got stuck as she could not find the words in English. So, I asked her in English what word that she was looking for and she replied in French: '*Le monsieur les a emmenés près de la mer pour voir un monsieur qui pêche*'[76]. Narrating that part in French seemed to enable her to narrate it in English. When I asked her if she wanted to say it in English now, she readily agreed and went back to narrating the story in English. • At some point, **Elsa** said '*je ne trouve pas les mots'*[77] but proceeded by herself to say them aloud in French. This enabled her to say them in English as she became more confident 'I am looking for my dad. Please [*conduire*[78]] Please can you drive me'; 'Tikoulou and Ruby [*regarde*] look everywhere'. • Scaffold from French ⟶ English. Another example is '*comme si pour un examen-là, si je ne connais pas,* 'international', *je regarde, je regarde le mot, après je le dis en français*'[79]. • Similarly, **Sophie** switches from English to French as scaffolding to find the words in English '*Tikoulou explique… Tikoulou dit que*[80]… Tikoulou says'.
Translanguaging for lexical access	• **Elsa** uses translanguaging to retell the story: (i) in MK. An example is: '*il prend lamin piti la, li*[81] *shake hands*'. She often switches to French during her MK narration to ask me about a word which she did not understand in the text or to interact with me: '… *inn al enn lil ki apel Seychelles… Il y a … [je ne comprends pas un mot dedans 'qui s'appelle Kaskott*'[82].' [**Domains of use**: MK for everyday conversation vs French for narrating a story]. In fact, Elsa was mostly retelling the French text in her own words in French instead of narrating the story in MK. Clearly, she is not used to narrating in MK as she would go back to French and then recalls that she should be narrating in MK and moves back to MK '*Tikoulou reste tou seul avec sa grand-mère. Depuis que… Depi … ki so papa inn ale*[83]'. (ii) in English: 'Tikoulou and her friend Ruby… is with her grandmother. Tikoulou … [*j'arrive pas à dire le mot 'tout seul' en anglais*][84]'; 'Tikoulou talk to her and *[il croyait qu'elle était malade]*[85]'.
Impact of participants' rapport with/ representations of languages on their reading confidence	• Interestingly, **Elsa's** retelling in English (despite her struggles to find the words in English) was more detailed than in Mauritian Kreol whereby she kept switching to French. Yet, when I asked her how she found the activity, **Elsa** replied that she preferred narrating in MK and French as *'en anglais, je ne connais pas beaucoup de mots… quand je regarde des images, je ne peux pas trop faire des phrases en anglais. Je peux plus faire des phrases en français et langue créole. Parce que si on parle pas du tout en anglais à la maison*[86]'. This illustrates her lack of reading confidence in English.

[76] My translation: 'the man took them near the sea to see a man who was fishing'.
[77] My translation: 'I don't find the words'.
[78] My translation: 'drive'.
[79] My translation: 'like for an exam, if I don't know the word 'international', I look at, I look at the word and then I say it in French'.
[80] My translation: 'Tikoulou explains… Tikoulou says that…'
[81] My translation: 'He takes the child's hand and he'
[82] My translation: 'they went to an island called Seychelles… There is … [I don't understand one of the words 'which is called Kaskott']
[83] My translation: 'Tikoulou lives alone with his grandmother. Since… since his dad went away'.
[84] My translation: 'I don't know how to say the word 'alone' in English'.
[85] My translation: 'he thought that she was sick'.
[86] My translation: 'in English, I don't know many words… when I look at pictures, I can't really make sentences in English. I can make sentences in French and in Creole. Because we don't speak English at all at home'.

Appendix 10

An excerpt of an interview transcript analysis

Line	Speaker	Utterance
172	Lily	Français
173	Interviewer	Pourquoi ?
174	Lily	Je ne sais pas. [rires] Comme si, quand - quand maman met un film en français,
175		je suis – comme si je suis dans le film.
176	Interviewer	Hm. Peut-être parce que tu comprends mieux ? Tu parles mieux ? C'est
177		comme si dirait tu es là. Tu es à côté-là. Tandis l'anglais est—il faut réfléchir ?
178	Lily	Non. Comme si, maman met subtitle en anglais.
179	Interviewer	Tu fais — Tu lis ? Tu triches ? [rires] Non, c'est bien—
180	Lily	Non, c'est en anglais.
181	Interviewer	Ouais. Ça veut dire c'est en français mais les subtitles sont en anglais ?
182	Lily	Non les deux sont en anglais.
183	Interviewer	Ah. D'accord. C'est bien ça. Et tu écoutes de la musique ?
184	Lily	Oui.
185	Interviewer	Dans quelle langue—Quel genre de musique tu écoutes ?
186	Lily	Anglais.
187	Interviewer	Quel genre de musique ça ?
188	Lily	La musique américaine.
189	Interviewer	D'accord. Tu aimes bien ? Qu'est-ce que tu écoutes en français ?
190	Lily	En français ? Il n'y a pas beaucoup.
191	Interviewer	D'accord. Est-ce que tu aimes pouvoir parler toutes ces langues-là ?
192	Lily	Oui.
193	Interviewer	Parce que là tu baignes beaucoup dans le français, beaucoup dans l'anglais,
194		un petit peu en créole, tu aimes ?
195	Lily	Non.
196	Interviewer	Pourquoi tu n'aimes pas ?
197	Lily	

Comments:

EK Evelyn Kee Mew Wan Khin
A marked preference for French
28 April 2021, 10:01
Reply

EK Evelyn Kee Mew Wan Khin
Translanguaging
Reply

EK Evelyn Kee Mew Wan Khin
Language exposure at home
Reply

EK Evelyn Kee Mew Wan Khin
Strong reaction to MK

Appendix 11

An excerpt of cross-analysis of the 11 interview transcripts

Coding	Comments and examples
Multilingual children's language perceptions (based on what Foucault calls '*savoir'*) and their impact on reading confidence + Parental agency in biliteracy development (their representations either promoting or acting as deterrent)	• **Ben**: Superiority of the colonial language and language of social success 'embourgeoisement': French is his preferred language, stating that '*C'est plus correct'* [87]; '*parce que mon papa et ma maman disent que le créole c'est une langue un peu vulgaire*[88]' //el **Sophie** • **Celia:** - When asked during one of the reading activities why she speaks French with her parents and MK with her siblings, she replies that her mother would tell her repeatedly ('*toujours*') to speak in F as this would help her… [social climbing] During R3, when asked whether she chooses to speak MK or French with her parents, she replied this time that it is her choice to speak to them in F (might be the result of her mother telling her it is for her good as shared earlier). - Celia stated that her order of language preferences was as follows: English first, then French, then MK then Hindi. E comes first because in the all countries of the world *('dans tout le monde entier')*, people speak English and if she goes to a country where she does not speak their language, she can speak English there. **Kelly:** keeps saying that she finds French easier to read than English (during reading activities and the interview): '*Le français est plus facile que l'anglais, moi je dis*'. That's an interesting comment given her academic performance in French which is much poorer than in English and her performance in Reading Activity 2. **Nessa**: '*J'aime pas trop parler l'anglais*[89]' (line 126) as compared to speaking French and MK as '*j'ai l'habitude*[90]' (line 130). It is a question of being at ease and feeling safe. Comfort zone. Rapport with the languages that impact on reading in that language
Multilingual children's use of translanguaging for: (a) lexical access (b) meaning-making of texts (written, multi-modal)	**Lexical access** • **Alan:** A characteristic of everyday discourse: ex. '*Il travaille dans la compagnie xxx. Il fait **site agent***' (line 21). In fact, despite knowing the French word '*chef de chantier*' (line 25), Alan opted to translanguage and use the English word 'site agent'. Although an example from verbal interaction and not a reading activity, this is an illustration how in a monolingual discourse, lexical access would be in one language only whereas in a multilingual discourse, lexical access depends on the multilingual's mental lexicon, i.e. words that s/he knows which may be in different languages or in only one language, i.e. s/he may know the word in different languages for a referent as in Alan's example or know only the word in a given language e.g. '*Quand on **ris** à l'arrière, ça va devant*' ('*ris*' is the MK word for 'pull', Alan, line 326) //el **Eddy** Another example of how languages co-habit in the language repertoire where one knows how to name a job 'coastguard' (line 92) in English and not necessarily in French. **Making-meaning of word/sentence/text** • **Elsa:** *'si comme si en anglais je dis,* 'I believe you', *euh, euh, je suis, euh, ayo je sais pas comment dire ça en français là* 'I believe you'. *Mo krwar an twa*' [91] (lines 530-531). An example of using translanguaging from E to MK (not finding the word in French) to explain meaning of a word

[87] My translation: 'It is much appropriate'.
[88] My translation: 'As my dad and my mum say that MK is a vulgar language'.
[89] My translation: 'I don't like speaking English much'.
[90] My translation: 'I'm used to'.
[91] My translation: 'Read I can'.

Appendix 12

An excerpt of cross-analysis of questionnaires filled in by General Purpose (GP) and Mauritian Kreol (MK) teachers, and Headteacher (HT)

Coding	Comments and examples
Use of other languages as scaffolding	• GP teacher shared having 'to give them translation in French' while 'English texts are often explained in French and Creole for better comprehension' • 'KM and French are used also to enhance pupils' (HT)
A separatist view of languages	• 'Pupils are encouraged to answer in English (during English classes) and in French (during French classes)' (GP teacher) • 'English for the teaching of English, Maths, Science and History & Geography. French for the teaching of French' (HT)
Reading in MK considered as a given ability to all speakers of that language	• 'It seems that pupils get to better understand what they read in KM as the element of language acquisition and vocabulary building since childhood that could help them acquire reading skills and read with understanding' (HT)
Teacher role and other stakeholders' agency	• Insufficient awareness of pupils' ability to transfer reading strategies they have developed in one language to another: 'Very often we can see pupils using the **syllabic method** to read words'; 'They use also their past experiences or groupwork where they ask themselves or members of the group questions to develop their vocabulary in the second language they are learning' (GP) • Insufficient understanding of biliteracy development: To the question about whether children learn to read differently in different languages: - 'Learning of a language is the **same I think**, but everything depends on the level of reading or exposure the child gets' (GP teacher) - 'I agree to some extent as they are learning their **first and second languages** at the same time. Having a mental grammar in the first language will surely make it easier to learn a second language' (HT). However, it is not the case for those who have MK as their L1 and who have not opted for that language to study at school. Furthermore, it is not clear to which languages do the 'first and second languages' refer to here.
Multilingualism and biliteracy taken for granted	To the question regarding pupils' managing with learning to read in two or more languages at the same time: • 'I guess they **have been used** to it but I do believe that exposure to these languages in class, at school level or at home **help greatly** in the language acquisition process.' (GP teacher) • 'Most adults **routinely** use two or three languages in their **daily life**. There is a **lot of exposure** at home, at work and for children at school. It seems that it's **easy** for them to switch very easily for example from Kreol to French or from French to KM. Due to our cultural and **sociolinguistic environment** seem to favour the acquisition of two or more languages'. (HT) • Interestingly, only MK and French are mentioned as languages to which children are more exposed in the environment in HT's response.
Multilingualism/biliteracy viewed as an asset	• 'I do agree to the fact that a child learning to read in more than one language places him at an **advantage**. The child would be able to interact with other people more easily and understand and make himself understood also' (GP teacher) **//el similar discourse by participants during interviews** • 'It is indeed a fact that students who are able to read in more than one language develop **strong skills**. They communicate well and seem to approach problem-solving more easily. They collaborate more easily in group works. These strong skills surely impact on a child's **self-esteem**' (HT) • MK teacher again chose not to answer this question

Appendix 13

List of averred home languages versus averred dominant home language

Participants	Languages in the DLC	Averred home language(s)	Averred dominant home language
Alan	French, Mauritian Kreol, English	French, Mauritian Kreol, English	French
Ben	French, Mauritian Kreol, English	French, Mauritian Kreol	French
Eddy	French, Mauritian Kreol, English	French	French
Sean	French, Mauritian Kreol, English, Hindi	French, Mauritian Kreol	French
Amelia	French, Mauritian Kreol, English, Tamil	Mauritian Kreol	Mauritian Kreol
Celia	French, Mauritian Kreol, English, Hindi	French, Mauritian Kreol	Mauritian Kreol
Elsa	French, Mauritian Kreol, English	Mauritian Kreol	Mauritian Kreol
Kelly	French, Mauritian Kreol, English, Hindi	Mauritian Kreol	Mauritian Kreol
Lily	French, Mauritian Kreol, English	French	French
Nessa	French, Mauritian Kreol, English, Hindi	Mauritian Kreol	Mauritian Kreol
Sophie	French, Mauritian Kreol, English	French, Mauritian Kreol	French

Appendix 14

Languages in the DLC / Domains of use	French	English	Mauritian Kreol	Hindi	Tamil
Averred dominant home language (i.e., language where the participants believe they are most fluent orally and which they use most often)	Alan, Ben, Eddy, Sean, Lily, Sophie		Amelia, Celia, Elsa, Kelly, Nessa		
Other averred home languages	Celia	Alan *(for jokes)*	Alan, Ben, Sean, Sophie		
Used to interact with parents at night only *(but discontinued since)*		Sean			
Interact with aunt *(who lives with divorced father)*			Eddy		
Interact with an older cousin	Nessa				
Language for internal functions such as praying	Alan, Ben, Eddy, Sean, Amelia, Lily, Sophie	Eddy	Sean, Amelia, Celia	Nessa	
Creativity expressed *(music)*	Alan				
Watch cartoons on TV	Ben, Eddy, Sean, Amelia, Celia, Lily, Nessa	Lily			
Watch movies/serials/shows	Amelia, Sophie	Amelia, Lily (*uses subtitles to facilitate understanding*)		Kelly	
Listen to music	Ben, Eddy, Amelia, Celia, Kelly, Sophie	Amelia, Celia, Kelly, Lily, Nessa	Ben, Sophie		Amelia *(church songs)*
Play with friends	Ben, Eddy, Sean, Kelly, Lily, Nessa	Eddy (*sometimes*)	Alan, Ben, Eddy, Amelia, Celia, Kelly, Lily, Sophie		
Play with siblings	Eddy, Elsa *(role-play teacher)*, Sophie	Elsa *(role-play teacher)*	Amelia, Celia, Sophie		
Play with dog	Eddy				
Interact / play with family members from abroad (e.g., cousin from Australia)		Eddy			
Education/Studies	All	All	Eddy, Amelia	Sean, Celia, Kelly	
Reading for leisure	Sean, Amelia, Celia, Elsa, Kelly, Lily, Sophie	Eddy, Sean, Amelia, Celia, Elsa, Kelly, Lily, Sophie			
Social media such as WhatsApp			Alan		
At the bank		Eddy			
At the market			Eddy		

Appendix 15

286	Interviewer	[…] *Est-ce qu'il y a des livres chez toi ?* [T: Are there books at your place?]
287	Eddy	*Des livres ?* [T: Books?]
288	Interviewer	*Oui.* [T: Yes]
289	Eddy	*Beaucoup*. [T: Many]
290	Interviewer	*Quel genre de livre ?* [T : What kind of books?]
291	Eddy	*Euh, Kiribou. Euh, La Cabane Magique. Tous les livres d'anglais*. [T: Hmm, *Kirikou*. Hmm, *The Magical Hut*. All the English books.]
292	Interviewer	*Tu as plus de livres en anglais ou en français ?* [T: You have more English or French books?]
293	Eddy	*Plus de livres en anglais*. [T: More English books]
294	Interviewer	*Pourquoi ?* [T: Why?]
295	Eddy	*Parce que je peux pratiquer mieux l'anglais*. [T: Because I can practice English better]

Excerpt from Eddy's interview

140	Interviewer	*Quels sont les livres que tu as chez toi ?* [T: What books do you have at home?]
141	Sean	*Harry and the bucket – and the bucket full of dinosaurs.*
142	Interviewer	*Après, qu'est-ce que tu as à lire ?* [T: Then, what is there to read?]
143	Sean	*Asterix and Obelix in Spain.*
144	Interviewer	*C'est— Tous les livres que tu as sont en anglais ? Tu as des livres en français ?* [T: It's – All the books that you have are in English? Do you have French books?]
145	Sean	*Juste un seul.* [T: Only one]
146	Interviewer	*Tu as beaucoup de livres en anglais alors. OK ? Tu aimes lire en anglais ? Qu'est-ce que tu préfères lire ? En français ou en anglais ?* [T: You have many books in English then. Right? Do you like to read in English? What language do you prefer reading? In French or in English?]
147	Sean	*Lire en anglais.* [T: Read in English]

Excerpt from Sean's interview

206	Interviewer	*Oui. Est-ce que tu as des livres chez toi ?* [T: Yes. Do you have books at home?]
207	Celia	*Oui.* [T: Yes]
208	Interviewer	*Quel livre tu as ?* [T: What book do you have?]
209	Celia	*Tous les deux, anglais et français.* [T: Both, English and French]
210	Interviewer	*Qu'est-ce qu'il y a plus ?* [T: What do you have more?]
211	Celia	*Anglais, parce que mon papa m'a dit de pratiquer beaucoup d'anglais.* [T: English, because my dad told me to practice English a lot].

Excerpt from Celia's interview

361	Interviewer	*Et tu as des livres pour lire aussi ?* [T: Do you have reading books too?
362 363 364	Elsa	*Des livres d'histoire j'ai au moins cinq à la maison. Mais, j'ai dit à mon grand-père, 'il faut que tu retournes ça. Prendre des autres livres'. Il va – il va emmener encore des livres pour moi.* [T: Storybooks I have at least five at home. But, I told my grandpa 'You must return all these. Take other books'. He will – he will bring even more books for me].
365	Interviewer	*D'accord. Quel livre de lecture tu as lu ? En quelle langue c'était ?* [T: Ok. What storybooks have you read? In which language?]
366	Elsa	*En anglais et en français.* [T: In English and French]

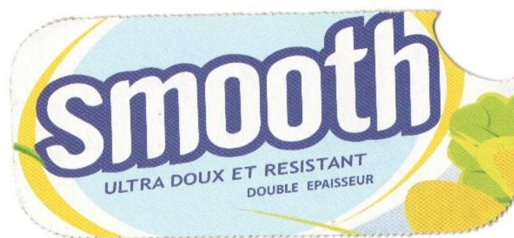
Excerpt from Elsa's interview

284	Interviewer	*Les livres que tu as chez toi, c'est en quelle langue ?* [T: The books you have at home, in what languages are they?]
285	Kelly	*Français. J'ai pas beaucoup d'anglais. J'ai que…un ou deux anglais.* [T: French. I don't have many English books].

Excerpt from Kelly's interview

Appendix 16

Authentic materials used for Reading Activity 3



Authentic material used for Reading Activity 4

Emlyn réalise son clip

Lauréate de la première édition de *Konpoz to Lamizik*, Emlyn s'est vu offrir l'opportunité de réaliser le clip de son titre *Zoli Lepok*. Lors du lancement du clip jeudi dernier au The Ravenala Attitude Hotel, la jeune chanteuse a expliqué que *«c'est un clip sans effets spéciaux, qui montre la simplicité d'antan à travers des jeux d'enfants. A l''époque, les jeux vidéo n'existaient pas. Lorsqu'on a tourné le clip, j'ai revécu mon enfance»*. Le clip *Zoli Lepok* est en effet frais et rempli d'émotions. Une vidéo qui vous rappellera sans conteste votre enfance.

Appendix 17

An excerpt of analysis of the lesson observations

Features observed during French and English lessons	**Some examples** ***(LO1 refers to Lesson observation 1, LO2 to Lesson observation 2 and so on)***
• General Purpose Teacher asked questions in French to check understanding of meaning of words in an English text.	• French → English: *Que veut dire*[92] 'sweating'? (LO1); *Que veut dire* 'waiting'? (LO5)
• General Purpose Teacher confirmed answers given in Mauritian Kreol by reformulating them in French. He gives the equivalent in French but does not use metalanguage in any of the three languages to explain meaning of words.	• *onbraz* – *ombre*[93] (LO1)
• General Purpose Teacher explained new/unfamiliar words in Mauritian Kreol, then give their equivalent in French and finally in English. But he mostly scaffolds from French to English.	• accueillir – welcome (LO5)
• General Purpose Teacher writes the words in French above or next to the English words in the passage and encourages pupils to do same to remember the meaning of words.	• swim (*nager*); pull (*tirer*); bite (*mordre*) (LO1) • 'choose' *veut dire* '*choisir*' (LO5)
• Language interactions are mostly done in French at least from the General Purpose Teacher's side as some pupils also tend to interact in Mauritian Kreol.	• One instance, during LO6, when General Purpose Teacher asked a question in English: 'How many of you sing in the bathroom?', there were no answer giving the impression that pupils were timid. But when he asked the same question in French '*Combien d'entre vous chantez dans la salle de bain?*', answers were given more enthusiastically.

[92] My translation: 'What does 'sweating' mean?'.
[93] Both words refer to 'shade'.

Appendix 18

English viewed by participants as the language which they find most difficult to read

- Alan: '*Parce qu'il y a des mots que je ne connais pas* [T: Because there are words that I don't know]' (line 240).
- Amelia: '*Comme si, l'anglais je ne comprends pas très souvent* [T: Like, English I don't very often understand]' (line 368).
- Celia: '*L'anglais, je ne connais pas trop les mots* [T: English, I don't know too many words]' (line 250).
- Elsa: '*je ne comprends pas beaucoup de mots en anglais* [T: I don't understand many words in English]' (lines 497-498).
- Nessa: '*Il y a des fois des mots que je comprends pas* [T: There are sometimes words that I don't understand]' (line 254).

Excerpts from the individual interviews

Appendix 19

- Alan: '*comme si, s'il y a une personne qui sort d'un — d'étranger. Même si il parle l'anglais ou soit le français, le français je sais je vais pouvoir parler et en anglais* [T: like, if someone comes from abroad. Even if he speaks English or French I know I can speak and in English]' (lines 149, 151-152).
- Ben: '*Je peux communiquer avec d'autres gens* [T: I can communicate with other people]' such as his uncle from England (line 85).
- Eddy: '*Parce que, j'arrive à commu - communiquer avec les autres* [T: I can communicate with others]' (line 214).
- Amelia: '*si les gens parlent juste l'anglais ou juste le français, je peux, comme si, parler avec eux, communiquer* [T: if people only speak English or only French, I can, like, speak to them, communicate]' (lines 199- 201).

Excerpts from the individual interviews

Appendix 20

French viewed by participants as the language which they find easiest to read

- Alan: '*Parce que j'ai l'habitude de parler le français et d'écrire français* [T: Because I am used to speaking French and writing in French]' (line 235).
- Ben: '*français a l'air plus facile pour moi* [T: French seems easier to me]' (line 229).
- Sean: '*C'est plus facile* [T: It's easier]' (line 222).
- Celia: '*Je connais plus le français* [T: I know French better]' (line 248).
- Elsa: '*parce que en français il y en a plus beaucoup de choses que je comprends. Tandis qu'en anglais, je ne comprends pas beaucoup de choses* [T: because in French there are many more things that I understand. While in English, I don't understand many things]' (lines 492-493).
- Kelly: '*Parce que je trouve que français c'est plus facile pour lire les alphabets là* [T: Because I find French easier to read the alphabets]' (line 295).
- Lily: '*Parce que je comprends un peu plus* [T: Because I understand a little more]' (line 387).
- Nessa: '*J'ai plus l'habitude avec le français* [T: I'm more used to French]' (line 243).
- Sophie: '*Puisque l'anglais j'apprends les choses et le français aussi* [T: Because in English I learn new things and with French too]' (Part 3, line 171).

Excerpts from the individual interviews

Appendix 21

Excerpt from R5a - Elsa

Note: The highlighted parts are as follows – French (magenta), English (green) and Mauritian Kreol (yellow). Interruptions in the retelling where Elsa interacts with the researcher (turquoise blue).

Elsa's retelling in Mauritian Kreol	Elsa's retelling in English
Tikoulou reste tou seul avec sa grand-mère. Depuis que… Depi … ki so papa inn ale … inn al enn lil ki apel Seychelles… Il y a … je ne comprends pas un mot dedans 'qui s'appelle Kaskott'.[94] *Il a vu Kaskott … Linn trouv Kaskott ki ti pa parey… Tikoulou a … Tikoulou inn demand Kaskott ki … kinn ariv li. Li … li … Kaskott a télé… il a eu … mo kapav dir sa en français?*[95] *Kaskott a eu … vient d'avoir son papa au téléphone… ils ont dit s'il y a … Tikoulou va emmener son ami à la place… Kaskott avait … Il fallait avoir d'aide pour lui.* *Tikoulou a vu une affaire bizarre. Son ami l'a demandé : tu sais… tu sais ce que c'est Tikoulou ? Son ami hein… Tikoulou inn dir non je n'ai aucun idée… Linn pann kone kiete sa. L'ami… l'ami de… l'ami de Ruby, l'ami de Ti…, Ruby, l'ami de papa qui nous attend à l'aéré… Quand ils ont regardé ça, ils ont vu la fumée qui sort… qui sort de l'île…* *A la sortie de l'aéroport, Tikoulou et Kaskott rencontrent une jeune homme. Le jeune homme… c'était Ruby, le responsable… qui était le responsable du programme. Et son papa al laba Seychelles. Son papa était* coast … *sauvegarde. Il surveillait les tortues aux Seychelles. Le monsieur a dit qu'il eski inn bien deroule dans l'avion. Les enfants ont répondu oui, nous sommes passés au-dessus de l'île. Une île qui s'appelle île au diable.* *Ruby … il prend lamin piti la, li* shake hands *hein ti ena bann dimoun derier ki ti pe atann zot pase. Tikoulou et Ruby sont venus aux Seychelles pour venir voir son papa parce que ils étaient inquiets. Ruby était inquiet pour son papa. C'est pour ça qu'il est venu.* *Zot pass kot enn lamer. Tikoulou avek Ruby ti dan enn loto rouge bien joli. Ti ena enn monsieur ki ti pe kondir devan…C'est la capitale … la capitale de l'île Seychelles s'appelle Victoria. Ils sont partis voir là-bas. Ruby a dit euh le monsieur qui kondire nou pe al sers mo papa. Il part à la recherche de son papa.*	Tikoulou and her friend Ruby… is with her grandmother. Tikoulou … *j'arrive pas à dire le mot 'tout seul' en anglais*[96] Tikoulou and her grandmother, they are alone in the house. Her friend Ruby, she is … she is sad. Tikoulou… Tikoulou… Tikoulou talk to her and *il croyait qu'elle était malade…* She go to the aeroplane. She… she flew the aeroplane and she… and Tikoulou and Ruby saw the… saw the explosion in … in a… in a island. Ruby say at Tikoulou … Ruby told at Tikoulou… Ruby say 'Do you see this explosion?' Tikoulou say 'I don't see an explosion'. Tikoulou and her friend Ruby looked at this explosion. A man say 'Hello friend how are you?' Ruby and Tikoulou said 'Thank you'. The man say at Tikoulou. Tikoulou and her … his friend Ruby talk to the man… Ruby and Tikoulou say… talk to the man: *il y a des mots que je ne connais pas… 'je suis à la recherche de mon père'*[97] I am looking for my dad. Please *conduire* Please can you drive me… Tikoulou and Ruby *regarde* look everywhere and see the … they saw many vehicles, boats, trees, euh,. The man drives the children… The man drives the children in a car red. … The man say the capital of Seychelles is Victoria

[94] My translation: 'I don't understand one of the words 'who is called Kaskot''.
[95] My translation: 'Can I say it in French?'
[96] My translation: 'I'm not able to say the word 'alone' in English'.
[97] My translation: 'There are words I don't know… 'am looking for my father''.

Appendix 22

Excerpt from R5a - Sophie

Note: The highlighted parts are as follows – French (magenta). Interruptions in the retelling where Sophie interacts with the researcher (turquoise blue).

Sophie's retelling in Mauritian Kreol	Sophie's retelling in English
Kaskott ek Tikoulou. Kaskott ti pe plore so papa ti sientifik spesialits ek Tikoulou inn dir koumsa wi… Kaskott inn dir wi Tikoulou to ena rezon li bizin sûrement led. Ek Kaskott ti pe plore parski so papa ti telefon li lor so telefon ek li pa ti pe reponn. Kan Kaskott ti pe koze, li pa ti pe reponn. Lerla bannla inn donn enn bon explikasion me Kaskott pe inkiete parski so papa. Li pe panse so papa malad. Tikoulou pe … ki kapav papa Kaskott ena enn problem. Tikoulou inn dir koumsa si nou ale nou cav gete kinn arive. Lerla Kaskott inn dir wi to ena rezon. *Lerla bannla inn ale. Lerla bannla pe kontan. Bannla dan avion. Lerla limensite la bleu me selman Tikoulou ek Kaskott euh lor la rout pou Seychelles. Soudain me selman kan li ariv sa hublot…ein… enn enn petit lil li ver kouma confettis lors limensite bleu. Sa kout sa, lerla linn get … swa Kaskott inn dir enn detay inattendu… lin dir fer atensyon parski ena lafime lafime bien nwar parski lalimier kouma dir s'échappait et sa lor lil euh lerla Kaskott inn dir Tikoulou to kone Tikoulou lerla Tikoulou inn dir non li pena lide. Kaskott inn dir bel bizar. Lerlal Tikoulou inn dir wi bien bizar. Lerla zot pou demand enn explikasion Ruby.* *Lerla kamarad so papa ki pe atan zot pou zot larive. La sa de zenfan sa toule trwa zot bien existe parski zot pe al Seychelles lerla sa kamarad zot papa sa misie la… lerla Tikoulou ek Kaskott bien kontan pou retrouv so papa. Ena bokou dimounn ki bien egsiste parski la zot pe aler. Lerla sa de zenfan bien egsiste parski Kaskott pou retrouv so papa. Tikoulou pe akompagn Kaskott me Tikoulou osi bien kontan parski so kamarad Kaskott. Zot toulede… lerla Tikoulou pa kontan kan li trouv so kamarad mosad. Savedir Tikoulou inn fer li gagn sourir. Sa kout la bannla inn vinn Seychelles. Inn ekrir enn gro Bienvenue dans Seychelles*	Tikoulou… Kaskott… The father of Kaskott… Kaskott is very sad and cause her father is … is… is… Kaskott is sad… very sad for her father and Tikoulou… Tikoulou … Tikoulou … Tikoulou … *comment je vais dire ça*[98] Tikoulou … arrived and decided to ... Tikoulou decided to… to… to… *le* father Kaskott is a specialist… a tortoise marine… Kaskott is a … is… phoned her father. And Kaskott father is very very sad because Kaskott is … is… is… very sad because she wants her father. Tikoulou decided to… to research and … Tikoulou … Tikoulou say yes we are. You are reason. And Tikoulou … Tikoulou … Tikoulou … come to Kaskott and Kaskott is… Kaskott is sad and Tikoulou … Tikoulou is sad because Tikoulou her friend and her grandmother Kaskott leave after… Tikoulou leave grandmother and grandmother is… decided… is sad because Kaskott is sad and Kaskott is very sad because her father… Suddenly Tikoulou say 'Kaskott you are in Seychelles'… Suddenly, the sky is blue and Tikoulou say attention because smoke… brightly the smoke is black and Tikoulou… her… her father her friend arrived because her *expli*… Tikoulou *explique… Tikoulou dit que* T says attention because the smoke is very very black and … the… is blue and the island green and Tikoulou *explique* and Kaskot *explique* to friends because her *explication* because the smoke is very very black. And Tikoulou and Kaskott and the smoke is dangerous because my sister say in the class and is very dangerous and children is the island du Diable is *comme* and the … and the… and they are happy because her friend because the reason Tikoulou has no shoes and her … and the brother of the children is very excited because… and the … is bad… and the… her… the boy look at the picture and Tikoulou is very excited because her friend is very excited. And Kaskott say… Kaskott…Tikoulou her friends are happy very happy. Tikoulou and Kaskott are in transport. And the sea has more … and the man arrived and Tikoulou and Kaskott is very excited because the man… Kaskott her friend is Tikoulou and Tikoulou and Kaskott is very excited.

[98] My translation: 'how will I say this'.

Appendix 23

Excerpt from Sophie's interview

114	Sophie	*Puisqu'elle me dit, 'Ah quel accent ! Quel accent !'* [T: Then she (i.e. her aunt) tells me: 'What an accent! What an accent!']
115 116	Interviewer	*C'est vrai tu parles avec un accent. Tu fais des efforts pour faire ça ou ça vient naturellement ?* [T: You do speak (referring to French) with an accent. Do you work on it or does it come naturally?]
117	Sophie	*Non. Ça vient naturellement.* [T: No. It comes naturally]

Appendix 24

Pictures mentioned in the storied account

Picture 1

Picture 2

Picture 3