English within the Language *Complexus* of the Mauritian Preschool Environment: Insights from a Research Project[1]

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Abstract

Mauritius, a small island in the Indian Ocean, is relatively well-known for its linguistic and cultural diversity, often leveraged in marketing discourses. However, the coexistence of languages on the island is far from harmonious. The prevailing polyglossic dynamics, rooted in the colonial heritage of French and English, contribute to an environment where language-related power dynamics come into play (see Carpooran 149). Simultaneously, the constitution categorises the population based on ethnic groups, adding another layer of complexity to the linguistic landscape, with different groups identifying closely with their respective (claimed) languages.

In the pre-primary educational landscape, English is one of the "target" languages, alongside French, and serves as the medium for other areas outlined in the National Curriculum Framework 2023. Drawing from a funded research project conducted between 2016 and 2017 in 13 pre-primary schools across Mauritius, this contribution adopts a reflexive, *post-facto* stance to discuss the role of English within observed teaching-learning practices.

The findings indicate that, despite children's observed ability to navigate various language systems fluently, teachers consistently centre their practices around target languages, including English, with marked efforts at re-orienting productions in Mauritian Creole or instances of language alternation. These observations are analysed through Cummins's BICS/CALP distinction and complexity theory frameworks, particularly the notion of complexity reduction that constrains authentic multilingual practices within institutional settings.

Maurice, petite île de l'océan Indien, est assez reconnue pour sa diversité linguistique et culturelle, souvent mise en avant dans les discours marketing. Toutefois, la coexistence des langues sur l'île est loin d'être harmonieuse. Les dynamiques polyglossiques dominantes, enracinées dans l'héritage colonial français et anglais, contribuent à un environnement où les rapports de pouvoir liés à la langue entrent en jeu (voir Carpooran 149). Parallèlement, la constitution catégorise la population selon des groupes ethniques, ajoutant une couche de complexité supplémentaire au paysage linguistique, chaque groupe s'identifiant étroitement à sa langue (revendiquée) respective.

Dans le paysage éducatif préscolaire, l'anglais constitue l'une des langues « cibles », aux côtés du français, et sert de medium pour les autres domaines définis dans le National Curriculum Framework 2023. S'appuyant sur un projet de recherche financé mené entre 2016 et 2017 dans 13 écoles préscolaires à travers Maurice, cette contribution adopte une posture réflexive et *ex-post facto* pour discuter du rôle de l'anglais au sein des pratiques d'enseignement-apprentissage observées.

Les résultats indiquent que, malgré la capacité observée des enfants à naviguer aisément entre différents systèmes linguistiques, les enseignants se concentrent systématiquement sur leurs pratiques autour des langues cibles, dont l'anglais, avec des efforts marqués pour réorienter les productions en créole mauricien ou les instances manifestant une certaine diversité sur le plan formel.

Ces observations sont analysées à travers la distinction BICS/CALP de Cummins et les cadres théoriques de la complexité, notamment la notion de réduction de complexité qui contraint les pratiques multilingues authentiques dans les contextes institutionnels.

Keywords

English, sociolinguistics, complexity, education, pre-primary, Mauritius
anglais, sociolinguistique, complexité, éducation, préscolaire, Maurice

Mauritius, a small island state in the Indian Ocean, presents a paradoxical linguistic landscape. Despite English serving as the *de facto* official language and primary medium of instruction, the 2022 Housing and Population Census reports English as the home language of merely 0.6% of the population, a decline from 2.6% in 2011. This contrasts sharply with Mauritian Creole

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(Kreol Morisien, KM), spoken at home by 90.0% as sole code, Bhojpuri 5.1%, and French 4.4%. The school-society language gap remains substantial.

This linguistic configuration reflects complex polyglossic dynamics rooted in colonial heritage, where language-related power hierarchies persist (Carpooran 149). Local representations reproduce a stratified economy of languages: English carries high institutional and prestige capital with limited oral embeddedness; KM dominates ordinary communications as an affective, mostly spoken language in informal settings; French mediates classroom interactions, situated in an intermediate zone as a semi-formal, semi-affective language. Carpooran's status/function framework captures this mismatch: English [Official-*de facto*]/written +++; oral −; high prestige; French: semi-official, oral ++; KM: oral +++; written −].

Drawing from a funded research project conducted in 2016-2017 across 13 pre-primary schools in Mauritius ("Vers une modélisation complexe des pratiques (socio)langagières dans les écoles pré-primaires à Maurice: pistes, perspectives et implications", Mauritius Institute of Education), this contribution adopts a reflexive, post-facto stance to examine English within observed teaching-learning practices. Adopting an abductive approach, it addresses two research questions:

RQ1. How is English functionally allocated in pre-primary communication sequences?

RQ2. How do these allocations interact with children's plurilingual repertoires and with institutional complexity reduction?

Theoretical Framework and Methodology

The study mobilises a complexity-driven epistemology, viewing the pre-primary classroom as a complex, nested ecosystem rather than a sum of discrete "codes". Complex Dynamic Systems Theory (CDST) integrated with critical sociolinguistic approaches informs my analysis. Larsen-Freeman's reconceptualisation of language as a complex adaptive system has steered applied linguistics toward understanding language phenomena as emergent, nonlinear, and context-dependent. CDST principles reveal that multilingual classrooms constitute complex adaptive systems where language practices emerge from dynamic interactions between institutional policies, teacher beliefs, student agency, and contextual factors.

The integration of complexity theory with sociolinguistic analysis addresses limitations of linear approaches to language education research (Oozeerally 2013). As Blommaert argues, this theoretical synthesis moves beyond assumptions of stabilised speech communities toward understanding dynamics of contemporary multilingual realities. In the Mauritian context, this integration proves particularly relevant given the island's complex linguistic ecology where Kreol Morisien, French, English, and heritage languages interact in educational settings.

Within this situational complexity, the policy-practice gap remains indicates manifest tensions with an approach that appears to converge towards complexity reduction. The National Curriculum Framework (NCF) Pre-Primary (2010) organizes "Communication, Language and Literacy" as discrete competences, a representational choice that reads disjunctively according to Morin's DRU (*disjunction-reduction-unidimensionnalisation*) notwithstanding holistic claims. Classroom formats consequently converge toward language management (allocation, translation) instead of mobilisation of plurilingual repertoires for inquiry.

I borrow Cummins's BICS/CALP distinction and analytical lens to examine topic selection alongside metalinguistic affordances under ritualisation, clarifying why some English-mediated tasks align with children's repertoires while others remain abstract. This also follows Bourdieu's problematisation of legitimacy, which extends beyond institutional authority to symbolic domination that naturalises hierarchy (KM marginal; French as buffer; English as aspirational target), often misrecognised as pedagogical necessity.

I also draw from research on metalingualistic awareness (MeLA) in multilingual preschool to

analyse observed patterns. Bialystok's framework distinguishes between analysis of linguistic knowledge and control of linguistic processing, showing bilingual children often demonstrate enhanced abilities to manipulate language forms. Recent Mauritian research also suggests children routinely mobilise a Dominant Language Constellation (DLC) to secure lexical access, treating cross-language "interference" as productive learning and using translation as natural scaffolding (Kee Mew Wan Khin 2023).

Research Design

The original study adopted a complexity case study design (Hetherington 75), following an observing-participation posture (*participation observante*; Blanchet) rather than staging observation externally. Fieldwork combined two visits per site (one month apart), with observation grids maintaining cross-site coherence while accommodating researcher subjectivities; 13 schools were selected purposively.

Thematic analysis adopted an abductive approach, with individual teacher-child interaction sequences serving as primary units of analysis. Data coding was conducted collectively by the research team, with preliminary themes emerging from repeated patterns across sites. This abductive process iteratively developed theoretical explanations for observed linguistic configurations, moving between empirical patterns and complexity theory frameworks. Given the exploratory nature and collective research approach, coding procedures prioritised identifying recurrent configurations of English usage, aligning with complexity-driven epistemology privileging emergent patterns over predetermined analytical categories.

Findings

For this paper, five emerging themes were retained: English in ritual practices, English as target language, English within instructional dynamics, experience-mediated English occurrences, and normalisation of code alternation and plurilingualism.

English in Ritual Practices

Across all schools, English appeared in ritual practices alongside French, notably during morning routines:

Extract 1 (School 12):

[OBS][TCHR] teacher: Mettez-vous en ligne, les mains derrière le dos (Get in line, your hands behind your back)

[OBS][TCHR] teacher: Sit down, Line up [singing of national anthem in English]

Extract 2 (School 13):

[OBS][TCHR] teacher: Joignez les mains. Commencez à chanter: gloire à toi l'Ile Maurice (Join your hands. Start singing: glory to you Mauritius) [followed by the national anthem in English]

[OBS][TCHR] teacher: Three cheers for Mauritius!

[OBS][CHILD] children: Hooray!

[REC][TCHR] teacher: Now we will do the attendance. Those who are present you will have to say yes, those who are absent you say absent.

As evidenced by extracts 1 and 2, English was used by the teacher to signal the attendance call; despite having a functional purpose, it remained confined to memorised question-response dynamics as attendance was limited to name recognition. Nonetheless, it can be argued that the

children were exposed to (albeit limited) instruction in English in more authentic moments of interaction. This controlled deployment of English raises questions about learners' linguistic agency and participation within these ritualised sequences. Rather than representing a transitional pedagogical stage, these practices appear to constitute an instructional norm that positions English as ceremonially significant while maintaining French as the primary mediating language. English remained confined to "serious", "professional" communication, which corroborates Carpooran's (151) interpretation of English being a formal language with low degrees of affectivity.

English as Target Language

Teachers emphasised English as target language, with translation and French recourse as scaffolding strategies when children exhibited comprehension difficulties. English appeared primarily for specific learning objectives per syllabus prescriptions, derived from the National Curriculum Framework Pre-primary 2010. All observed interactions remained teacher-led, with significant attention to vocabulary acquisition via repetition-based strategies.

Extract 3 (School 1):

[REC][CHILD] children: Good morning miss [Jane]
[REC][TCHR] teacher: How are you?
[REC][CHILD] children: I am fine, thank you
[REC][TCHR] teacher: Now we will make the prayer, join your hands good
[REC][CHILD] children repeating prayer after teacher
[OBS][TCHR] teacher-led prayer in English [Oh Lord, thank you for the day that has just begun. Help us to work, to play and to have lots of fun]
[OBS][TCHR] teacher repeats each sentence for children to recite as the prayer is in English

A slightly different pattern appeared in the observation data set of school 6. While the teacher led the prayer in English, translation in French, instead of repetition in English, was used as a scaffold to bring children to understand the meaning and better memorise the prayer; the same strategy was used for the National Anthem following the prayer. In this case, however, the whole of the national anthem was sung in English, followed by its French version.

Strong teacher intervention, which almost exclusively initiated and controlled English interactions, relegated children to relatively passive roles limited to repetition and response. This created conditions for mechanical language assimilation with minimal spontaneity. While children demonstrated ability to repeat phrases indicating basic vocabulary acquisition, autonomous language production in English remained difficult.

English Within Instructional Dynamics

From the recorded data set at school 1, the focus on vocabulary within an English-as-target-language framework appeared to consolidate the observation that English occurs in mechanistic and unspontaneous fashion.

Extract 5 (School 1):

[REC][TCHR] teacher: Have a nice day
[REC][CHILD] children: Thank you miss [Pamela]
[REC][TCHR] teacher: What day is today?
[REC][CHILD] children: Today is…
[REC][TCHR] teacher: Yesterday was Tuesday, today is?
[REC][CHILD] children: Wednesday
[REC][TCHR] teacher: Now we will say the day of the week

[REC][CHILD] children reciting the days of the week
In this case, while the children could not identify the day of the week based on deictic markers (today), they were able to do so when given additional cues from the teacher, whereby they inserted "Wednesday" into the weekly sequence following "Tuesday". This further accentuates the observation that English was being learned through repetition and memorisation. This pattern was extrapolated to the teaching of the notion of "months", whereby French was used as a support and scaffolding language to facilitate understanding, which would likely not have been possible through English only.

Extract 6 (School 1):
[REC][TCHR] teacher: Can you tell me which month we are? Quel mois on est? Qui peut me dire? (What month is it? Who can tell me?) We are in the month of February. Now we will say the months of the year.
Like the case for days of the week, children were unable to identify the current month based on deictic indicators. The answer was given by the teacher herself, who subsequently initiated the repetition of the sequence related to the months of the year; children were able to enunciate the sequence, which indicates prior memorization.
Similar patterns were observed in school with French occurring as a support and scaffolding language.

Extract 7 (School 1):
[OBS][TCHR] teacher: Qui peut me dire months-la c'est quoi ça? On a écrit la, Wednesday 16th février, February. Ça c'est quoi ça, c'est le mois le mois de l'année, pas la semaine, le mois de l'année. Combien de mois [Sheila] a dit on a? (Who can tell me what are the months? We wrote there, Wednesday 16th February, February. What is that, it's the month the month of the year, not the week, the month of the year. How many months did [Sheila] say we have?)
[OBS][CHILD] child: 7 jours. (7 days)
[OBS][TCHR] teacher: Non le mois. (No the month)
[OBS][CHILD] child: 12 jours (12 days)
[OBS][TCHR] teacher: Non 12 mois pas 12 jours. (No 12 months not 12 days)
[OBS][TCHR] teacher: There are 12 months in a year. Allez commencez, (Okay start) January, February, March, April, May, June, July, August, September, October, November and December
[OBS][CHILD] children repeating after teacher
English appeared through key vocabulary items inserted into relevant sequences (days, months) representing concepts being learned, within manifestly heterogeneous production akin to code-mixing. Without recourse to complete sequences, children exhibited confusion, unable to associate "month" with the appropriate number (twelve months per year). French remained the matrix language and language of communication and explanation.
This translation-based pedagogical approach reflects broader didactic traditions across the Indian Ocean region, where colonial educational legacies continue to shape multilingual classroom practices. In contexts where multiple language systems coexist in learners' environments, such metalinguistic mediation strategies represent locally adapted responses to linguistic realities, though they may simultaneously reinforce curricular constraints that privilege European languages over local linguistic repertoires. The prevalence of such practices across Mauritius, and comparable dynamics observed in neighbouring territories like Réunion, suggests systemic rather than idiosyncratic pedagogical orientations rooted in historical language hierarchies.
Similar dynamics were observed in schools 3 and 12, with English appearing in quasi-algorithmic, predefined interactional patterns, and mostly used to reach learning goals within

question-response interactions, themselves articulated around memorised information. The nature of such information, as it emerged in the data sets, was primarily sequential. The inability of the children to locate the correct day of the week, as well as the correct month of the year further based on deictic cues from the teacher, further reinforce the hypothesis that days or months may have been learned through constant repetition of the relevant sequences. This may also indicate that English, as a target language, does not necessarily occur in spontaneous, natural communication settings, which appears to be related to the issue of complexity reduction (see below).

Experience-Mediated English Occurrences

While teachers maintained repetition and translation-based strategies with French as scaffolding language, learner responses differed with topic shifts, indicating contrast between pedagogical continuity and learner variability.
In contrast to the observations pertaining to calendar topics, i.e. days of the week and months of the year, the topic of weather seemed to elicit less rigid responses.

Extract 8 (School 2):
[OBS][TCHR] teacher: Ça c'est le mois de l'année c'est ça que [Doris] vous dit, this is the months. Allez maintenant c'est quoi weather, si [Doris] vous dit c'est quoi weather? C'est le…? (That's the month of the year that's what [Doris] is telling you, this is the months. Okay now what is weather, if [Doris] asks you what is weather? It's the…?)
[OBS][CHILD] child: Le temps (The weather)
[OBS][TCHR] teacher: Le temps oui, c'est quoi weather? (The weather yes, what is weather?)
[OBS][CHILD] child: Le temps (The weather)
[OBS][TCHR] teacher: Allez bon regarde là, regarde. Là c'est quoi ça, qu'est-ce qu'on voit? (Okay good look there, look. There what is that, what do we see?) [teacher pointing to a picture of the sun]
[OBS][CHILD] child: Soleil (Sun)
[OBS][TCHR] teacher: Soleil. Maintenant comment on dit le soleil en anglais? (Sun. Now how do we say the sun in English?)
[OBS][CHILD] child: Sun
[OBS][TCHR] teacher: Ça c'est quoi ça, la pluie, comment on dit la pluie en anglais? (That what is that, the rain, how do we say the rain in English?)
[OBS][CHILD] child: Rain
[OBS][TCHR] teacher: Comment on dit la pluie [Julie]? (How do we say the rain [Julie]?)
[OBS][CHILD] child: Rain
[OBS][TCHR] teacher: [Julie]
[OBS][CHILD] child: Rain
[OBS][TCHR] teacher: Comment on dit nuage? Non on vient de dire là, cloud, comment on dit nuage? (How do we say cloud? No we just said there, cloud, how do we say cloud?)
[OBS][CHILD] child: Cloud
[OBS][TCHR] teacher: Comment on dit le vent quand il y a le vent? (How do we say the wind when there is wind?)
[OBS][CHILD] child: Wind
[OBS][TCHR] teacher: Wind, comment on dit le vent? (Wind, how do we say the wind?)
[OBS][CHILD] child: Wind
As it can be observed from the data set, the same instructional pattern was adopted for the teaching of the weather. Contrastingly, with respect to the teaching of months, key concepts associated to weather were more easily identified by the learners. With a translation-based Q-R

strategy, the teacher successfully elicits responses from the learners, who are able to carry out bidirectional translation (from English to French and French to English) of notions like "*soleil*", "*pluie"*, "weather", "wind".

This differential engagement pattern aligns with Cummins's distinction between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). Weather-related vocabulary likely forms part of children's developing BICS repertoire through sustained media exposure, immediate experiential relevance, and cross-linguistic environmental presence, giving these terms higher "social currency" in children's daily linguistic practices. Conversely, calendar-related concepts require more technical, decontextualised knowledge characteristic of CALP development, evidenced by children's reliance on sequential memorisation rather than conceptual understanding. However, it is crucial to note that this BICS-CALP distinction serves here as an analytical tool rather than a deficit framework, illuminating how children's lived experiences shape differential engagement with curricular content across languages. This ecological perspective suggests that topic selection in multilingual primary settings can function as both a pedagogical and sociolinguistic lever, potentially either reinforcing or challenging existing language hierarchies depending on how experiential relevance is leveraged in curriculum design.

Normalisation of Code Alternation and Plurilingualism

English systematically appeared alongside other language systems, indicating normalised plurilingual practices. It displayed a certain reticence to the use of Creole, which is the most spoken language in Mauritius (see also Oozeerally and Hookoomsing 2024 for a more detailed discussion on this aspect of the research). While English was systematically used for instructional purposes, as well as for learning objectives in terms of syllabus requirements, French was commonly used as the matrix language, communication language, and for scaffolding within same interaction sequences, as evidenced by extract 9 below (School 1).

Extract 9 (School 1):

[REC][TCHR] teacher: Allez viens toi ici, donne-moi ta chaise. Voilà. Tout le monde voit le tableau, dis-moi qu'est-ce qu'on a fait en mathematics hier? Lève la tête, comment j'ai dit qu'il faut s'asseoir? (Okay you come here, give me your chair. There. Everyone sees the board, tell me what did we do in mathematics yesterday? Lift your head, how did I say you have to sit?)
[REC][CHILD] child: Gros et petit (Big and small)
[REC][TCHR] teacher: Oui comment on dit gros? (Yes how do we say big?)
[REC][CHILD] child: Big
[REC][TCHR] teacher: Comment j'avais dit quand il y a beaucoup ensemble? (How did I say when there are many together?)
[REC][CHILD] child: A set
[REC][TCHR] teacher: Pour les sacs la bas qu'est-ce qu'on va dire? (For the bags over there what are we going to say?)
[REC][CHILD] children: A set of big bags
[REC][TCHR] teacher: Pour les livres, les gros livres qu'est-ce qu'on va dire? (For the books, the big books what are we going to say?)
[REC][CHILD] children: A set of big books
[REC][TCHR] teacher: Allez je montre comme-ci les petits ballons, là, qu'est-ce qu'on va dire? (Okay I show like this the small balls, there, what are we going to say?)
[REC][CHILD] children: A set of big balls
[REC][TCHR] teacher: Comment on dit petit? (How do we say small?)
[REC][CHILD] children: Small

[REC][TCHR] teacher: Comment on va dire ça? (How are we going to say that?)
[REC][CHILD] children: A set of small balls
[REC][TCHR] teacher: Small veut dire quoi? (Small means what?)
[REC][CHILD] children: Petit (Small)
[REC][TCHR] teacher: Donc aujourd'hui tous les jours on a fait comme ça. Aujourd'hui on va faire ça au tableau. Allez, regardez bien au tableau et puis on va faire dans cahier. Comment on va faire a set of big balls. Quand il y a sets c'est comment, il y a beaucoup, alors on va faire big balls (So today every day we did it like that. Today we are going to do that on the board. Okay, look carefully at the board and then we are going to do it in the notebook. How are we going to do a set of big balls. When there are sets it's how, there are many, so we are going to do big balls)
[REC][TCHR] teacher: Comment on dit chaise? (How do we say chair?) A set of small chairs.
[REC][CHILD] children: Set of small chairs
[REC][TCHR] teacher: Allez on va faire ça, regardez un ti coup-là, c'est quoi ça? (Okay we are going to do that, look for a little moment there, what is that?)
[REC][CHILD] child: A set of small house[sic]
[REC][TCHR] teacher: Maintenant regarde ici, C'est quoi là? (Now look here, what is there?)
[REC][CHILD] child: A set of big house[sic]
[REC][TCHR] teacher: C'est quoi ça? (What is that?)
[REC][CHILD] child: A set of big boys
[REC][TCHR] teacher: Maintenant regarde là (Now look there)
[REC][CHILD] child: A set of big table[sic]
[REC][TCHR] teacher: Allez on regarde sur le tableau et me montrer, asseyez-vous là, commencez [Jessica], a set of big balls, on lui dit qu'est que ça veut dire balls (Okay we look at the board and show me, sit down there, start [Jessica], a set of big balls, we tell her what does balls mean)
[REC][CHILD] children: Ballons (Balls)

While it appears that the teaching sequence was initiated in French, "mathematics" was used and pronounced in English. Throughout this interactional space, English remained confined to a limited form of question-based instructional strategy, with children repeating answers through memorised expressions. In other terms, English responses were triggered by specific questions, and the responses were restricted to what was expected; it is unclear whether the children had assimilated the concepts or whether they were reproducing memorised terms, as it has been observed for other topics as well (see above). From the observations, this controlled use of English suggests that teachers adhere to an instructional norm where English is viewed as the main language of instruction. Mathematics content was delivered in English, as per the syllabus and prevailing practices, with all subjects taught in English except French and optional languages. However, it is interesting to note that the fulcrum to the English responses remains the questions asked in French. The teacher has recourse almost exclusively to French as the mediating language between the child and the targeted knowledge. By virtue of its semi-formalism and semi-affectivity (Carpooran 151), it was successfully used as a "scaffold" to move to a more formal, study-focused content while conserving a level of affectivity, accessibility and intelligibility for the children to navigate instructions as well as (semi-formal) contextual parameters. In other terms, French also "set the scene" for more "serious" learning, bringing about a specific spatial configuration. A significant observation remained the "naturalness" of code alternation as well as translation strategies, with the significant presence of French alongside English. It also appeared that the children understand language boundaries and are able to translate answers in the correct, expected language, despite the expressions likely stemming from memorisation and repetition. This may be indicative of a developing

metalinguistic awareness. However, this inference requires some nuancing as repetition-based sequences were prominent across observed cases.

On the Absence of English

English was relatively absent in some observed phases and interactions outside immediate classroom settings. No English instances occurred in schools 4 and 9, mostly because observation phases coincided with vocabulary and play-based exercises in French, confirming specific English use within target-language teaching and teaching of other subjects like mathematics. It remained absent as a language for communication, unlike French for instance. Another noteworthy observation is the low occurrence of English outside the classroom and ritualised spaces. Only two instances of English utterances were recorded among children during two separate play time slots:

Extract 10 (School 2):

[OBS][CHILD] child: Vinn play avek mwa (Come play with me)
[OBS][CHILD] child: Ready...Go!

While this may suggest English presence in children's language practices outside school (Oozeerally and Hookoomsing 12), it must be noted: in the first instance, English appears as single word in clearly KM utterance; in the second, the utterance represents common formula initiating play sequences.

Hence, while it is legitimate to draw hypotheses on the presence of English during play time, the data, at this point, does not allow further inferences to be made as observations during play sessions were limited, most of them being coincidental as "residual" playtime overlapping class time. The observation and problematisation of language practices during playtime could be a potential avenue for future research.

Discussion

Drawing from the findings above, this section discusses some theoretical implications. The findings are first interpreted through the lens of sociolinguistics, before being read against some aspects of complexity theory.

English in the Pre-Primary Classroom

English appears to occupy a specific position in the pre-primary classroom. First, it is confined to ritualistic practices, often used during morning greetings and prayer times, alongside French (Oozeerally and Hookoomsing 17). Second, it is practiced with relatively low spontaneity within the classroom, representing one of the target languages for vocabulary building, and the language for constructing knowledge in other subjects like mathematics. This also corroborates Carpooran's interpretation of the sociolinguistic dynamics at play in the Mauritian landscape, with English representing the language of formality, and little to no affectivity associated therewith. The low level of spontaneity among children when it comes to English, combined with the limited question-response strategies employed by teachers reinforce this state. In contrast, French is systematically used as a mediating language, often functioning as a scaffold and as a support language to assist learning. In the absence of KM in the observed practices, French serves as the "buffer" language, given that it is a language of semi-formality and semi-affectivity (Carpooran 151). As opposed to KM, which is circumvented altogether by teachers in all observed instances, French also functions as the "legitimate language" (Bourdieu 43) in the classroom. This legitimacy operates not merely through institutional authority, but through

symbolic domination whereby the hierarchical ordering of languages becomes naturalised and misrecognised as pedagogically necessary rather than socially constructed. The systematic marginalisation of KM while favouring French for scaffolding purposes reproduces broader patterns of linguistic capital distribution, where access to prestige varieties becomes a mechanism of educational stratification. French thus holds higher institutional power while English remains positioned as the target language, appearing in more controlled and structured circumstances. Hence, English is not a primary communication medium. Despite some evidence suggesting that English might be present in the communicational dynamics among children during playtime (see above), this remains largely negligible in the observations and recordings. The relatively problematic situation of English, as concluded by Stein, and the observation that English has a secondary place in actual communication according to Auleear Owodally, have remained unchanged so far, as per the observations pertaining to the research project in question.

The Classroom as Heterogeneous Space

The siloed English place appears somewhat contradictory to complex, heterogeneous practices characterising classroom spaces. Interactions revealed sophisticated language practices where French served as matrix language, with English embedded for specific academic and instructional purposes. Within syllabus-foregrounded constraints, teachers created plurilingual spaces mostly using translation as strategy, notably asking questions in French or English and expecting responses in English or French. While this translation-based strategy aligns with broader didactic traditions in Mauritius, notably in primary and secondary sectors where same patterns are used for teaching various subject areas, curriculum plays an important role constraining plurilingual practices.

Both languages are validated as legitimate meaning-making resources. In this sense multilingualism becomes the default mode, with English occupying specific, regulated space. Likewise, language choices are negotiated according to the parameters of the plurilingual classroom. Here, plurilingual and pluricultural competencies are understood as "the ability to use languages for the purposes of communication and to take part in intercultural interaction, where a person, viewed as a social actor has proficiency, of varying degrees, in several languages and experience of several cultures" (Coste et al. 5) in a nonlinear and non-additive manner. The data indicates that children display plurilingual competence, as they can understand and shift between language systems with the help of the teachers who use questioning as prompts. This also foregrounds a certain level of metalinguistic awareness.

Metalinguistic Awareness Development

Learners' ability to manage different language systems, specifically English and French, underscores metalinguistic awareness development. For Skutnabb-Kangas, metalinguistic awareness is the ability to recognise, identify, and reflect on languages other than first language. The observed practices, notably the bidirectional translation approach, also aligns with Bialystok's work on metalinguistic awareness among multilingual children, where she defines metalinguistic awareness as the ability to think on the properties and functions of language. Among the two components of Bialystok's framework, i.e. linguistic analysis which implies the knowledge of language structures, including the understanding of phonological, syntactic and semantic dimensions, and executive control, which involves cognitive processes that regulate thought and action, evidence from the study suggests that the children have developing competencies for linguistic analysis. This is shown by their ability to distinguish English and French, as well as their capacity to enunciate responses in the correct language when prompted

by the teachers. In contexts like Mauritius, where multiple language systems coexist in learners' environment, this form of metalinguistic distinction may be fostered early and through informal exposure as much as through formal instruction. However, as discussed above, there appears to be an interesting asymmetry in how students engage with different semantic fields: while weather-related terms show higher successful engagement, calendar-related concepts demonstrate more confusion and require more scaffolding.

Understanding Asymmetric Engagement Related to Different Conceptual Universes

As evidenced by the discussion above, a certain level of asymmetry has been noted in children's English and French responses with respect to the topic: while calendar-related concepts give rise to confusion and require more teacher support, weather-related concepts are more successfully dealt with. This seems to support Cummins's distinction between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). BICS refer to the language skills for everyday communication and include a level of fluency that enables the speaker to meaningfully engage in social interaction, understand vocabulary and negotiate familiar contexts in an efficient manner. Hence, BICS are context-dependent and rely on situational information as well as social interactions for understanding. On the other hand, CALP implies language skills required for academic success, encompassing higher order thinking and the capacity to produce more complex texts across different subjects. CALP are thus based on deeper understanding of language structures and is based on more abstract thinking as opposed to BICS. In the context of the study, the children have developed a level of familiarity with the topic of weather because they have, in all likelihood, encountered the semantic field in their everyday life, as weather remains a common topic in media, in both English and French. Weather terms may thus also have a higher "social currency" in children's daily life through media exposure, immediate experiential relevance as well as cross-linguistic environmental presence. Hence, this specific vocabulary may already form part of their BICS. In contrast, the confusions manifested with calendar-related topics suggest the requirement of a higher degree of technical knowledge, further evidenced by the mechanistic way they were able to locate days and months within the whole sequence repeated by the teacher. In this sense, the differential engagement patterns seem to support Van Lier's ecological perspective on language learning, where learning is deeply embedded in learners' lived experiences. This also sheds light on how English (and French) may be incorporated to more meaningful interactions through careful choice of topics. This may also be linked to curriculum design in multilingual settings, where topic selection can act as both a pedagogical and sociolinguistic lever, shaping learning outcomes as well as learning hierarchies in the classroom. It is important, however, to note that the BICS-CALP dichotomy is not being used to promote any form of deficit theory (Khatib and Taie 387) but as a theoretical tool to aid the understanding of the differential learning phenomenon as observed during the classes.

Insights Into Complexity Theory

While this contribution focuses primarily on a sociolinguistic interpretation of the observations, this section briefly lays some foundation stones for the conceptualisation of language practices within a complexity-driven perspective, as an epistemological alternative to view complex language-mediated behaviours, especially in plurilingual, heterogeneous contexts. Additionally, it also suggests the incorporation of complexity thinking in the design of teacher education programmes, as well as the curriculum. This is potentially a valuable pathway to align with complex language practices that are reduced within the classroom, as observed across all schools.

Nested Complex Adaptive Systems

In the first place, the classroom interactions indicate key properties of nested, complex adaptive systems, as observed by Byrne as well as Cameron and Larsen-Freeman. Classrooms (and schools) tend to demonstrate a certain degree of self-similarity insofar as (socio)linguistic practices correspond to the "macro-social systemic structure." For instance, teachers unconsciously replicate "verticalizing" representations particularly in relation to the allocated prestige of predominantly francophone practices, whether on phonological, syntactic, or discursive levels. In primary education systems across the Indian Ocean, these hierarchies often echo colonial legacies and continue to shape teaching norms and expectations. The insistence by teachers to shift away from any Creole productions towards French and English demonstrates a centripetal pressure, representing a pressure towards the centre, as discussed by Calvet, as well as Oozeerally and Hookoomsing (15) toward the prestige languages (Carpooran 141). This centripetal pressure is present in a generalised manner within a diglossic conception where there is a tendency to converge toward French (see also Robillard, who speaks of "*néo-francophonie*") for scaffolding and communicational purposes, within an English-centric environment in terms of content learning. Classroom interactions and language learning patterns also seem to align with key properties of nested, complex adaptive systems (Oozeerally 36), with various levels of self-organisation:

1. classroom dynamics [broader sociolinguistic system]:
    1. configured around the replication of macro-social systemic structures,
    2. policy and curriculum-related constraints.
2. teachers [individual cognitive system]:
    1. replication of macro-social systemic structures,
    2. language choices circumventing Creole, use of French for support and scaffolding,
    3. predominance of English for content-teaching
3. learners [individual cognitive system]:
    1. interactions constrained by teacher language choices, linguistic behaviour adapted to the prompts and questions of teachers.
    2. non-linear progression of learning (easier mastery of more complex weather vocabulary compared to simpler calendar terms)
    3. Students collectively constructing understanding through repetition and interaction
    4. Sensitivity to initial conditions (prior exposure to concepts significantly affecting learning outcomes)

Attractor States

The data also reveal the presence of different attractor states, as discussed by (Robillard 105; Oozeerally 34). An attractor is a set, "a determined zone" toward which points in a dynamic system appear to be drawn (Robillard 105). When the system is chaotic, it is referred to as a strange attractor. According to Robillard, strange attractors are "the graphical visualization of chaotic behaviours" (Robillard 266). While they do not allow, following the general principle of chaos theory, for precise prediction of an object's position, they do, however, enable one to "forecast the zone in which the point cannot venture" (ibid.). Thus, it is at least possible to delineate certain tendencies. From the data discussed in this contribution, two sets of attractors seem to emerge:

1. Language attractors: within the classroom, English and French, through the intervention and mediation of the teachers, are strong attractors and most of the interactional sequences are in these languages, with French being a support-scaffold attractor, and English being a target language and conceptual learning attractor

2. Differential learning: The differential success between weather and calendar terms suggests different attractor states in the learning system:

- Weather concepts showing stronger, more stable attractor states: BICS attractor
- Calendar concepts demonstrating weaker, less stable attractor patterns: CALP attractor

The Issue of Complexity Reduction

The observations, as discussed in this contribution, shed light on what essentially appears to be complexity reduction, governed by the "principles of disjunction, reduction and abstraction" (Morin 18) where characteristics and dynamics of complex systems, often implying rich interactions between diverse elements that often share recursive relationships in feedback loops (Hetherington 74) are constrained, minimised, decreased and, finally, reduced. Morin strongly denounces the paradigm of simplification that characterise mainstream (scientific) knowledge generation, where objects are systematically dissociated from their environment, with the concomitant erasure of their relationships, leading to a fragmented conception of the world. In the case of this study, the language practices seem to follow the principles of complexity reduction: complex practices involving Creole are set aside, with a generalised insistence on English and French. Additionally, the occurrences of English also follow the same principle, with little to no spontaneity, exacerbated by a focus on limited question-response patterns initiated by teachers. From this perspective, any potential form of complex language interactions is constrained, and language becomes an SDH object. Robillard qualifies mainstream, reductionist views of language as "stable, decontextualized, homogeneous" (112) objects as opposed to a more complex view where languages are "unstable, contextualised, heterogeneous and historicised" phenomena. This complexity reduction is pervasive in policy documents and curriculum material (National Curriculum Framework Pre-Primary) where the focus remains on the acquisition of performance-oriented competencies in terms of vocabulary and morphosyntax, among others. Additionally, this also pertains to broader tensions in multilingual primary education systems in the Indian Ocean, where curriculum design often reproduces historical hierarchies, sometimes marginalising the most socially embedded languages despite their learning potential. The observed practices are hence consubstantial to policy.

Methodological Considerations and Future Research

The present analysis acknowledges several methodological limitations that shape the interpretation of findings. The reliance on repetition-based interaction sequences may not fully capture children's spontaneous linguistic competencies, particularly given the limited observation of informal play contexts. Future research endeavours could investigate language practices across extended observation periods, including systematic documentation of playground interactions, peer collaborative activities, and home-school linguistic transitions. Such expanded observational contexts would provide more comprehensive understanding of how English functions within children's broader linguistic repertoires beyond formal instructional settings.

Conclusion and Recommendations

The study, as discussed in this contribution, foregrounds a (socio)linguistic configuration where English is confined to a specific, regulated space, within a default plurilingual mode. Language choices are contextually negotiated, and always teacher-led. This reveals that broader

sociolinguistic patterns are replicated in the classroom, with a clear hierarchy and functional distribution of language:

1. Creole is erased altogether
2. English is confined either to ritualised practices or target-language, syllabus-oriented, teacher-led practices, often in reductive question-response dynamics, and always alongside French
3. French is used as a matrix, communicational, support and scaffolding language

The classroom configuration is also aligned with complexity reduction, with limited opportunities for authentic language use. Controlled production, as observed, may also impact learner agency, and while the classroom as a system displays relatively high stability, it is also subject to low adaptability. Strong attractor patterns, at the same time, also potentially restrict the emergence of new patterns, despite children showing the propensity for plurilingualism and the development of metalinguistic awareness. The sociolinguistic analysis revealed the linearity and reductive way languages occur within the pre-primary classroom and suggest the need for a shift in the way languages (and teaching) are approached. Some of these aspects are discussed in the recommendations below:

1. Review of mainstream philosophical and political frameworks

A complexity-based approach to education could pave the way towards moving away from linear, reductive thinking towards complexity thinking, with a focus on relationships between different elements rather than isolated communication. Education is thus understood in terms of interconnected networks, with multilateral and interactive relationships between learners, teachers and the environment. Complexity, as a framework, may potentially provide multiple lenses through which to view the classroom interaction, revealing the complex interplay between individual learning, social interaction, and broader sociocultural contexts. Such a framework rehabilitates complex plurilingual practices as legitimate communication forms, implying the investment of plurilingual competencies among teachers and learners.

2. Teacher training

An epistemological shift towards complexity thinking also implies a comprehensive review of teacher training programmes, where trainee educators can be equipped with theoretical tools for navigating multilingual complexity rather than managing linguistic diversity through reductive practices. This includes reconceptualising language modules to provide critical insights into different theoretical conceptions of language, from mainstream “techno-positivist” approaches that treat languages as discrete, stable objects, to more contextually responsive, complexity-based frameworks that acknowledge the inherently dynamic and contextualised nature of multilingual practices. Such pedagogical reorientation would enable trainee teachers to develop their own metalinguistic, pragmatic and experiential awareness, fostering greater receptivity to children’s complex language practices as legitimate communicative resources rather than pedagogical challenges requiring correction or elimination.

3. Curriculum development

In the same line, it would be necessary for the curriculum to move towards more transdisciplinary approaches. While the current curriculum strives towards providing a certain level of cross-disciplinarity, languages are not sufficiently problematised insofar as there are no explicit indicators on how language learning may happen even though topics being studied are not necessarily language-forward (e.g. numeracy activities). A curriculum design that recognises the place of language in learning experiences in a complex, integrated and experiential manner would contribute to the overall revamping of pre-primary teaching-learning dynamics.

These recommendations would allow the setting up of learning spaces that could foster a more naturalistic setting for the co-occurrence of English alongside other languages like Creole and French; with increasing exposure to English-mediated resources in media, including ICT, it is

not unreasonable to encourage more child-initiated interactions where English is allowed to emerge in a more spontaneous manner, as opposed to the mechanistic dynamics observed in the data above. Leveraging existing multilingual competencies necessarily implies the rehabilitation of English in a more natural communication setting.

While this research showcases that there are no meaningful changes in the practice of English within mainstream pre-primary schools, it advocates for a plurilingual, complexity-based framework where the language competencies of learners and teachers may be leveraged for meaningful learning.

These observations must also be situated within broader socioeconomic trajectories that increasingly stratify linguistic access in Mauritius. The concurrent growth of fee-paying, English-medium institutions alongside mainstream multilingual schools is producing what might be termed parallel linguistic economies, where language choice becomes inextricable from educational capital and social mobility. This bifurcation reinscribes long-standing inequalities in access to language capital: English proficiency functions as a gateway to educational privilege. In this light, the complexity reduction observed in mainstream pre-primary settings may inadvertently widen disparities, as children from different socioeconomic backgrounds encounter fundamentally different linguistic learning ecologies that tend to reproduce rather than disrupt existing hierarchies.

The classroom ecologies I describe thus unfold along diverging tracks: fee-paying English-medium pathways on the one hand, and mainstream multilingual schools on the other. With the NCF-PP (2024) endorsing child-centred, integrated pedagogy, my reading is that a complexity-aware, plurilingual enactment, validating KM for meaning-making and calibrating English/French beyond ceremonial slots, would both honour the new framework and counteract stratification in early linguistic opportunity. It is also important to note the momentum of an English-medium niche: typically private, fee-paying schools (often linked to international networks) that are rapidly consolidating. Two prominent examples in the island's North (International Preparatory School and Northfields) were, in 2024, brought under Imagine Education as part of a merger-and-expansion move. English in the Mauritian system therefore appears to be evolving in two parallel environments with distinct characteristics. This constitutes an emerging research field for fine-grained, complexity-attentive inquiry capable of shedding new light on the ongoing reflections about languages in Mauritius, and English in particular.

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